



Prehistoric and Romano-British Activity and Saxon Settlement at Hoo Road, Wainscott, Kent

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**Wessex Archaeology, Portway House, Old Sarum Park,
Salisbury SP4 6EB
tel: 01722 326867 fax: 01722 337562
email: info@wessexarch.co.uk
www.wessexarch.co.uk**

Prehistoric and Romano-British Activity and Saxon Settlement at Hoo Road, Wainscott, Kent

by Nicholas Cooke and Rachael Seager Smith

with contributions by Phil Andrews, Alistair J. Barclay, Jessica M. Grimm, Kayt Marter Brown, P. A. Harding, Grace Perpetua Jones, Lorraine Mephram, Christopher Phillpotts†,

Chris J. Stevens and Sarah F. Wyles

and illustrations by S.E. James

Summary

Excavations undertaken by Wessex Archaeology in advance of the development of land off Hoo Road, Wainscott, Kent, revealed evidence for activity dating from the Late Neolithic to post-medieval periods. Earlier work immediately to the north of the site undertaken as part of the construction of the Wainscott Northern Bypass revealed evidence for a small amount of prehistoric activity (principally Late Neolithic and Bronze Age in date), two successive Romano-British enclosures, and two associated structures and a Mid/Late Saxon enclosed settlement (Clark et al. 2009).

Following evaluation of the entire site, five targeted excavation areas were opened, revealing a palimpsest of archaeological features and deposits. The earliest evidence of human activity recovered comprises a small quantity of worked flint, likely to date to the Late Neolithic or Early Bronze Age, whilst two Early Bronze Age pits were excavated, one containing a diagnostic assemblage of struck flint and the second sherds of pottery from at least four Beaker vessels and a broken saddle quern. Radiocarbon determinations obtained from cereal grains recovered from this pit returned dates of 2460–2200 cal. BC and 2400–2140 cal. BC respectively (3850±30 BP, SUERC-32989; 3810±30 BP, SUERC-33331).

A small number of Middle Bronze Age features, comprising two gullies and several discrete features, were also excavated. These contained small quantities of Deverel-Rimbury pottery, animal bone and burnt and worked flint. Radiocarbon dates obtained from two of the pits confirmed a Middle Bronze Age date for this activity: 1530–1410 cal. BC (3205±30 BP, SUERC-33332) and 1610–1420 cal. BC (3220±30 BP, SUERC-33333) respectively.

A poorly dated metalled trackway crossing much of Area 2 on a broadly north-east to south-west alignment is likely to date to the Late Iron Age or Romano-British period. This comprised a broad metalled track laid in a hollow and flanked for most of its length by two ditches. Although this trackway was not recorded in the Four Elms site to the north, the larger of the two Roman enclosures was clearly laid out to respect its alignment. Finds from the deposits sealing the

metalling and from the fills of the flanking ditches included sherds of Iron Age and Romano-British pottery and metalwork. Coins recovered from the site suggest Romano-British activity continued well into the second half of the 4th century AD.

Following this, there appears to have been a hiatus of activity, before the landscape was once again settled, in the Early/Mid-Saxon period. This activity is associated with organic-tempered pottery, and can probably be broadly dated to the late 6th and 7th centuries. A broad trackway aligned roughly north-west to south-east across Area 2 and into Area 1 was flanked by enclosures, one containing a rectangular structure, whilst two sunken-feature buildings were also excavated. Charcoal recovered from one of these sunken-feature buildings was submitted for radiocarbon dating, and returned a date of cal. AD 550–650 (1460±30 BP, SUERC 33334). A third sunken-feature building was excavated in Area 3, further to the south-east, possibly within a ditched enclosure. Finds recovered from these features comprise a largely domestic assemblage, with loomweights and ironworking slag pointing to small-scale industry. A series of poorly dated large pits, closely paralleled on the Four Elms site, are thought likely to be contemporary, and may have been used as cess pits or rubbish pits.

The dispersed settlement of the Early/Mid-Saxon period appears to have shifted to two main foci in the Mid-/Late Saxon period – the enclosed settlement with the large timber hall previously excavated on the Four Elms site and an enclosure only partially exposed in Area 3. Whilst no structures were identified within the enclosure itself, the finds recovered from the fills of the enclosure ditch point to a settlement of some status, with a number of silver sceattas, a bracteate die, vessel glass, lava querns and millstones and small quantities of possibly imported pottery hinting at a site exploiting a wide network of trade links. It seems likely that one or both of these sites were directly associated with the management of one of the large Late Saxon estates which later dominated the area.

There is little evidence to extend the occupation of either of these Mid-/Late Saxon sites much beyond the ninth century, although a series of later linear features first identified on the Four Elms site and interpreted as selions or narrow strip fields, continue into Area 2. These are not well dated, although pottery recovered on the Four Elms excavations suggests a date of c. 1050–1150. The alignment of the ditches in Area 2, however, suggests that these ditches may flank a shifting trackway rather than narrow fields.

The bulk of the post-medieval material recovered was derived from a systematic metal detector survey of the site, and includes 84 items of lead shot, probably for carbines, muskets and small field pieces. Although the origin of this assemblage is not clear, it is thought most likely to relate to field exercises undertaken by the garrison of nearby Upnor Castle.

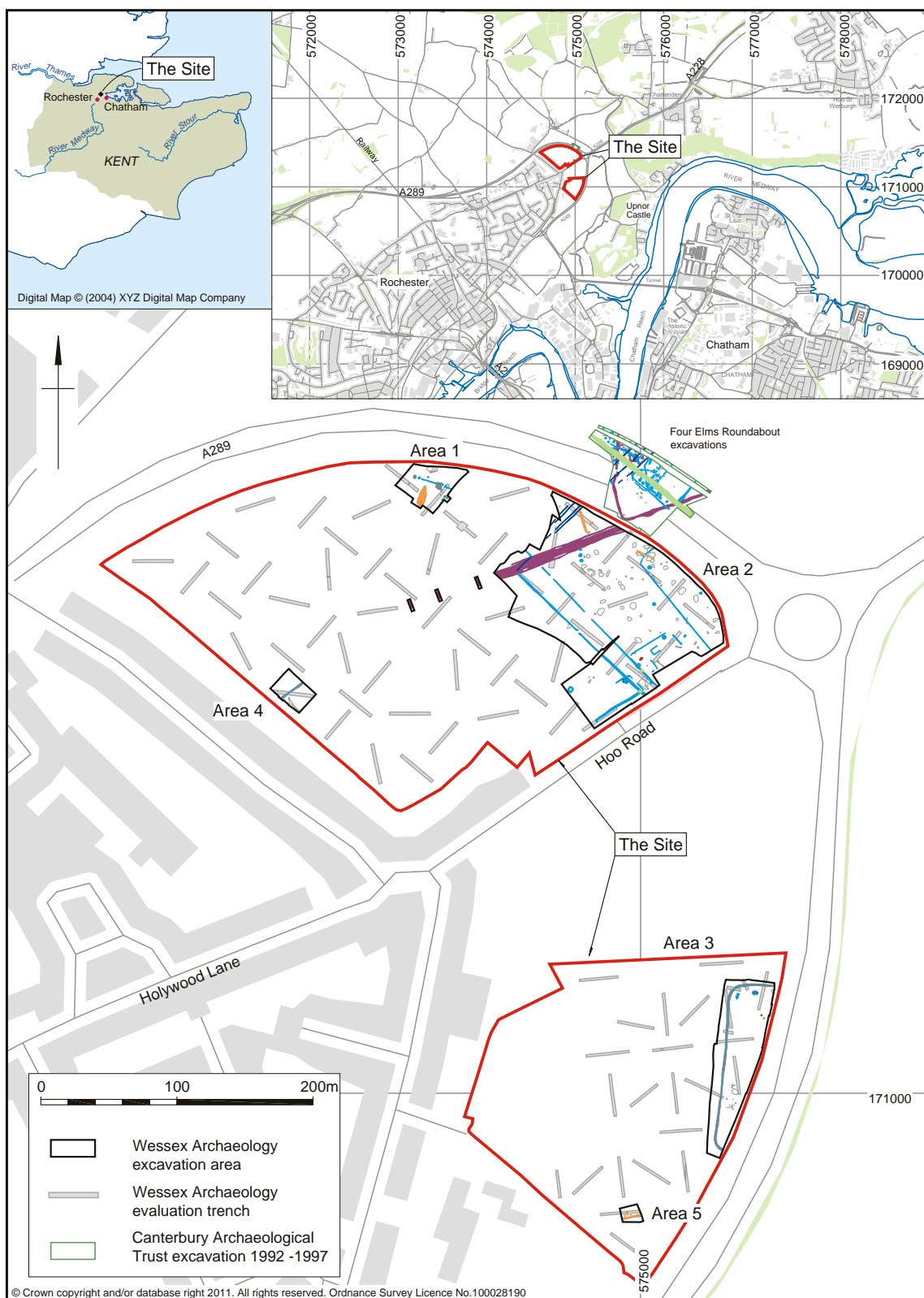


Figure 1: Site location plan

Project background

Wessex Archaeology was commissioned by CgMs Consulting to undertake a programme of archaeological work on land off Hoo Road, Wainscott, Kent ('the site', Figure 1). This work was required in order to meet an archaeological condition placed on outline planning consent for the residential redevelopment. An archaeological evaluation comprising 80 machine excavated trial trenches was undertaken in 2007 (Wessex Archaeology 2007).

The site lay directly to the south of the Four Elms site excavated by the Canterbury Archaeological Trust (Clark *et al.* 2009) during the construction of the Wainscott Northern Bypass between 1992 and 1997. These excavations revealed evidence for prehistoric activity (characterised by quantities of prehistoric pottery and worked flint), a Roman enclosure and two associated structures (one of which was stone built, and interpreted as a corn-drier or malting oven) and a Mid-/Late Saxon settlement enclosure. The latter contained a substantial post-built 'hall' and numerous pits, whilst a second group of Saxon pits lay to the west. Traces of other structures were also identified, and the initial enclosure was subsequently modified. The finds recovered from the site suggest that this settlement dated to the Mid-Saxon period (*c.* 750–850), although small quantities of organic-tempered wares, generally dated to the Early Saxon period, were found residual in later contexts. Three parallel ditches, dug early in the medieval period, were interpreted as rare survivals of arable strip fields or 'selions'.

As a result of the archaeological evaluation, the Local Planning Authority (LPA) on the advice of Kent County Council's Archaeology Officer, requested the targeted excavation of five areas of significant archaeological potential identified during the evaluation (shown on Figure 1). The results of these excavations are presented in this report.

Location, geology and topography

The site was centred on National Grid Reference (NGR) 574950 171200 and comprised two parcels of land, one (of 8 ha) to the north and one (3 ha) to the south of Hoo Road, on the eastern outskirts of Wainscott, a village on the north-eastern edge of Strood. Together, the two parcels formed a rough semi-circle bisected by the Hoo Road and bounded to the north and east by the Wainscott Bypass and to the west by the built-up area of Wainscott. Until recently, both areas had been used as agricultural land. Three areas – Areas 1, 2 and 4 – were targeted for excavation within the northern parcel and two – Areas 3 and 5 – in the southern parcel (Figure 1).

The northern parcel of land sloped downwards from 13 m above Ordnance Datum (aOD) at its south-western corner to approximately 6 m aOD in the north-east, near the Four Elms roundabout site. The southern field also sloped from north to south, with ground levels varying

from 10 m aOD at its northern end to 7 m aOD to the south. There were no significant topographic features within the site.

The solid geology of the area comprises Cretaceous Chalk, but the drift geology of the area is relatively complex. Thanet sands outcrop within the site with overlying bands of alluvium on the northern edge, at the bottom of the slope, and Head brickearth at the top of the slope to the south (British Geological Survey 1:50,000 series, sheet 272). The subsoil of the area consists of reworked brickearth overlying well-sorted, rounded gravels and sands, of alluvial origin and probably related to ancient river activity of Upper Pleistocene date (Clark *et al.* 1997, 4).

Removal of ploughsoil deposits (0.25 m in thickness) in the northern area revealed a mid-brown clay colluvial layer up to 0.5 m thick and of post-Saxon date. This lay above a thin deposit (not more than 0.2 m deep) of natural brickearth, overlying a sequence of natural clay and gravel deposits of the Thanet Beds.

In the southern field (Areas 3 and 5), the soil sequence consisted of ploughsoil (0.3 m thick), overlying a clayey silt subsoil with moderate flints (0.1 m thick) above the natural sands and gravels. Localised areas of post-Saxon colluvium filling undulations in the ground were also noted in this area.

Archaeological and historical background

The main source of evidence for human activity in Kent during the Palaeolithic period (*c.* 500,000–10,000 BC) has been generally poorly-provenanced flint tools recovered during the late 19th and early 20th centuries. In west Kent, findspots cluster along the gravel terraces associated with the Thames and Medway valleys, although this in no way suggests that activity was confined to these river courses (Scott 2004, 7–8). Locally, finds include fragments of mammoth tusk and other degraded bone recovered during works on the Wainscott Northern Bypass (Clarke *et al.* 2009, 7), and a Middle Pleistocene biface recovered from fieldwalking at the western end of the Bypass scheme (Wilson and McNabb 2009)

Evidence for Mesolithic activity in the area is rare, although Early Mesolithic bone and antler tools have been found at Cliffe Creek, Higham and Erith (Scott 2004, 8–9). Neolithic activity is less scarce with a group of Kentish Neolithic long-barrows 10 km to the south in the Medway valley, and causewayed enclosures known at Burham and Chalk (Ashbee 2004, 11), whilst the occupation site identified at Ebbsfleet (Burchell and Piggott 1939; Sieveking 1960) is the major type-site for a distinctive style of Middle Neolithic pottery.

The Bronze Age saw a dramatic expansion in settlement, again showing a marked preference for coastal locations, river valleys and estuary foreshores (Yates 2004, 13). Bronze Age settlements are common on either side of the lower Medway, especially the brickearths of the southern part of the Hoo peninsula. Locally, considerable quantities of prehistoric lithic material

(predominantly of Late Neolithic or Early Bronze Age date) and small quantities of Middle Bronze Age pottery were recovered from the adjacent Four Elms roundabout site, largely residual in later features (Clark *et al.* 2009, 7; Wilson and McNabb 2009, 36). Elsewhere, four probable Bronze Age ring-ditches are visible on aerial photographs to the west of Wainscott (Clark *et al.* 2009, 4)

During the Early and Middle Iron Age (700–100 BC), settlement in west Kent was far less dense than in the east of the county (Parfitt 2004, 17), although by the Late Iron Age (100 BC–AD 43) settlement was more evenly spread (*ibid.* 18). No evidence for Iron Age activity was encountered along the Wainscott Bypass, but settlements have been excavated at Cobham (Tester 1961) and at Rose Court Farm on the Isle of Grain (Philp 2002, 139–143), while a possible religious site is known at Stoke (Parfitt 2004, 17).

The Roman conquest of Kent had little immediate impact on the settlement pattern, with isolated farmsteads set within ditched enclosures common in the rural landscape. Villas gradually developed, becoming especially common in the Medway and Darent valleys (Andrews 2004, 20). Villas are known locally at Cobham (Tester 1961), Frindsbury (Arnold 1889) and Strood (Taylor 1932). Earth ramparts were constructed around the Roman town at Rochester (*Durobrivae*) during the third quarter of the 2nd century AD and replaced in stone during the early/mid-3rd century (Andrews 2004, 21), although the town itself may have developed from a Late Iron Age predecessor.

Locally, occupation continued at Rose Court Farm, attested by a scatter of 2nd century AD cremation burials and around 60 Late Romano-British inhumation burials, extending well into the 4th century (Philp 2002, 141). The main Roman features on the Four Elms roundabout site consisted of a small ditched enclosure and a square building, probably a malting or crop-drying oven (Clark *et al.* 2009). This was superseded by a larger ditched enclosure, covering about 0.5 ha (*ibid.*, 147–8). The pottery and coins, however, indicated that both phases date from the late 2nd–3rd centuries.

Two eighth century charters contained in a cartulary manuscript now housed in the Kent Archives Office, Maidstone (*Textus Roffensis*, DRc/R1), contain references to royal grants of land at Isingham, Kent. The first of these (S105, ff. 123v–125r) records Offa, King of Mercia granting 20 *sulungs* (1942 ha) at Isingham to Eardwulf, Bishop of Rochester in AD 764 (a *sulung* was a unit of land-holding peculiar to Kent. It was equal to 240 acres/97.1 ha). The second (S33, ff.125r–126v), dated to *c.* AD 761–764, also records the grant of 20 *sulungs* at Isingham and swine-pastures in the western Weald by Sigereð, king of half Kent, to Eardwulf, Bishop of Rochester, with confirmation by King Eanmund. The nearest historic farm to the site is Isingham Farm, and it is probable that this represents a late medieval successor to the earlier Anglo-Saxon estate.

Evidence from the Four Elms roundabout site indicates significant settlement activity (Clark *et al.* 2009) possibly associated with this estate. Pottery from the excavation spanned the period AD 400–850, with an emphasis on the Mid-Saxon period (*c.* 750–850; Cotter 2009, 43). A

rare, Mid-Saxon bow-sided timber hall was constructed within an enclosure associated with groups of pits, just to the east of the earlier Roman settlement. Another enclosure, wooden buildings and rubbish pits lay to the west, directly overlying the Roman remains.

Methodology

The primary aim of the 2007 archaeological fieldwork on the site was to characterise, excavate and record the archaeological remains encountered and to disseminate the results of the investigations, placing their findings within an appropriate local and regional context.

As a result of the evaluation trenching, five excavation areas were opened (Figure 1):

- Area 1, covering 0.11 ha situated on the northern edge of the site, targeted a small concentration of features, mostly of Saxon date.
- Area 2, comprising an area of 1.46 ha on the north-eastern edge of the site, focused on a scatter of pits and ditches thought to be of Romano-British and Saxon date, representing a continuation of the activity found on the adjacent Four Elms roundabout site (Clark *et al.* 2009).
- Area 3, roughly rectangular in shape and covering 0.37 ha on the south-east edge of the site, examined part of a Saxon enclosure, sealed by colluvium.
- Area 4, a small rectangular area covering 0.05 ha, was targeted on prehistoric features.
- Area 5, a small area in the southern field (amounting to 0.02 ha), was targeted on prehistoric features.

These five excavation areas were stripped using 360° tracked mechanical excavators working under constant archaeological supervision. Machining ceased as soon as significant archaeological deposits were identified or the top of the natural was reached, whichever was the higher.

The stripped surfaces, including the features exposed, and the spoil heaps were scanned with a metal detector for metal finds of all types and the spoil heaps were visually inspected for artefacts of other materials. All the archaeological deposits were then cleaned and excavated by hand. The site was surveyed with a Leica 1200 series GPS unit using an RTK network with a 3D accuracy of 30 mm or below. All survey data was recorded in OS coordinates using the OSGB36 (02) transformation.

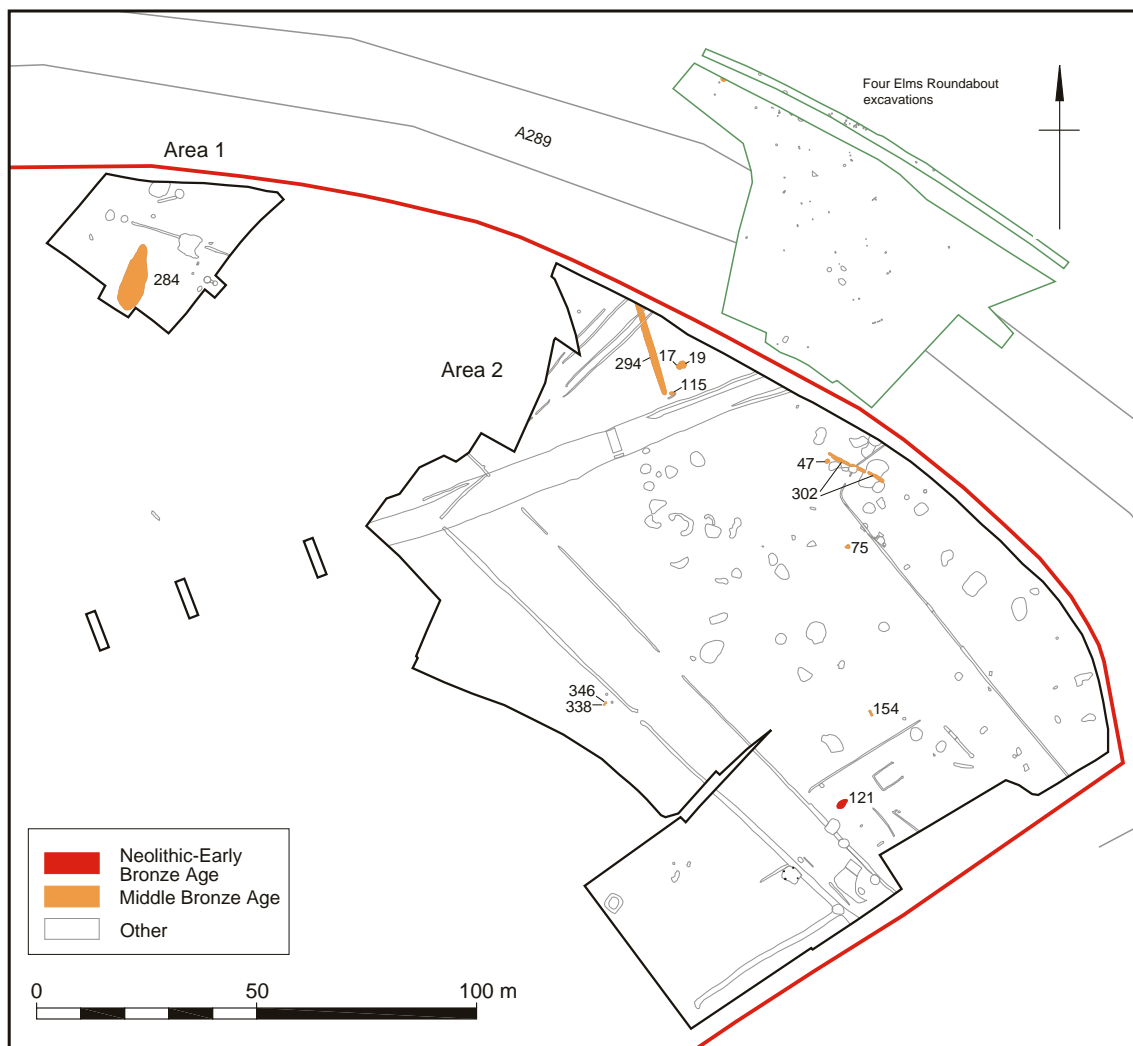


Figure 2: Prehistoric features in Areas 1 and 2

Archaeological results

The excavations on the site were undertaken in June and July 2007, and revealed several phases of activity, dating from the earlier prehistoric through to the post-medieval periods.

Palaeolithic

A badly degraded mammoth tooth was found below the subsoil and on the surface of the natural gravel on the southern edge of Area 3. Fragments of a mammoth tusk and degraded bones were recorded on the earlier excavations on the Wainscott Northern Bypass.

Neolithic–Early Bronze Age

Two pits are clearly early prehistoric in date (Figures 2 and 3). Pit 121 was oval in plan, with moderately sloping sides and a concave base. Although no pottery was recovered, this feature contained a large quantity of struck flints (51 pieces), all in mint condition. The collection comprised mostly flakes but included a few blades and one retouched piece. Very little core preparation was apparent but there was some tentative evidence for soft hammer technology, indicative of a Neolithic–Early Bronze Age date.

Pit 234 in Area 3 was also oval in plan, with steeply-sloping sides and a flat base (Figure 3, Plate 1). Sherds from at least four Beakers, belonging to Clarke's East Anglian group, part of a saddle quern and the largest group of worked flints recovered from the site (57 pieces, including an end scraper) were found in its fill. Two cereal grains recovered returned radiocarbon dates of 2460–2200 cal. BC and 2400–2140 cal. BC respectively (3850±30 BP, SUERC-32989; 3810±30 BP, SUERC-33331).

In addition to these features, quantities of worked flint were recovered, being largely residual in later features (see below). Although much of this is largely undiagnostic, some elements of the assemblage suggest activity on the site in the Early Neolithic period. No features associated with this activity can be identified with any confidence.

Middle Bronze Age

Hollow 284 was roughly oval in shape, 15 m long, 5 m wide and up to 0.2 m deep with gently sloping sides and a flat base. It contained a single, gradually accumulated fill containing sherds of Middle/Late Bronze Age flint-tempered pottery, worked and burnt flint. Small quantities of post-medieval material were recovered from its upper surface. At the southern end of this hollow, the fill

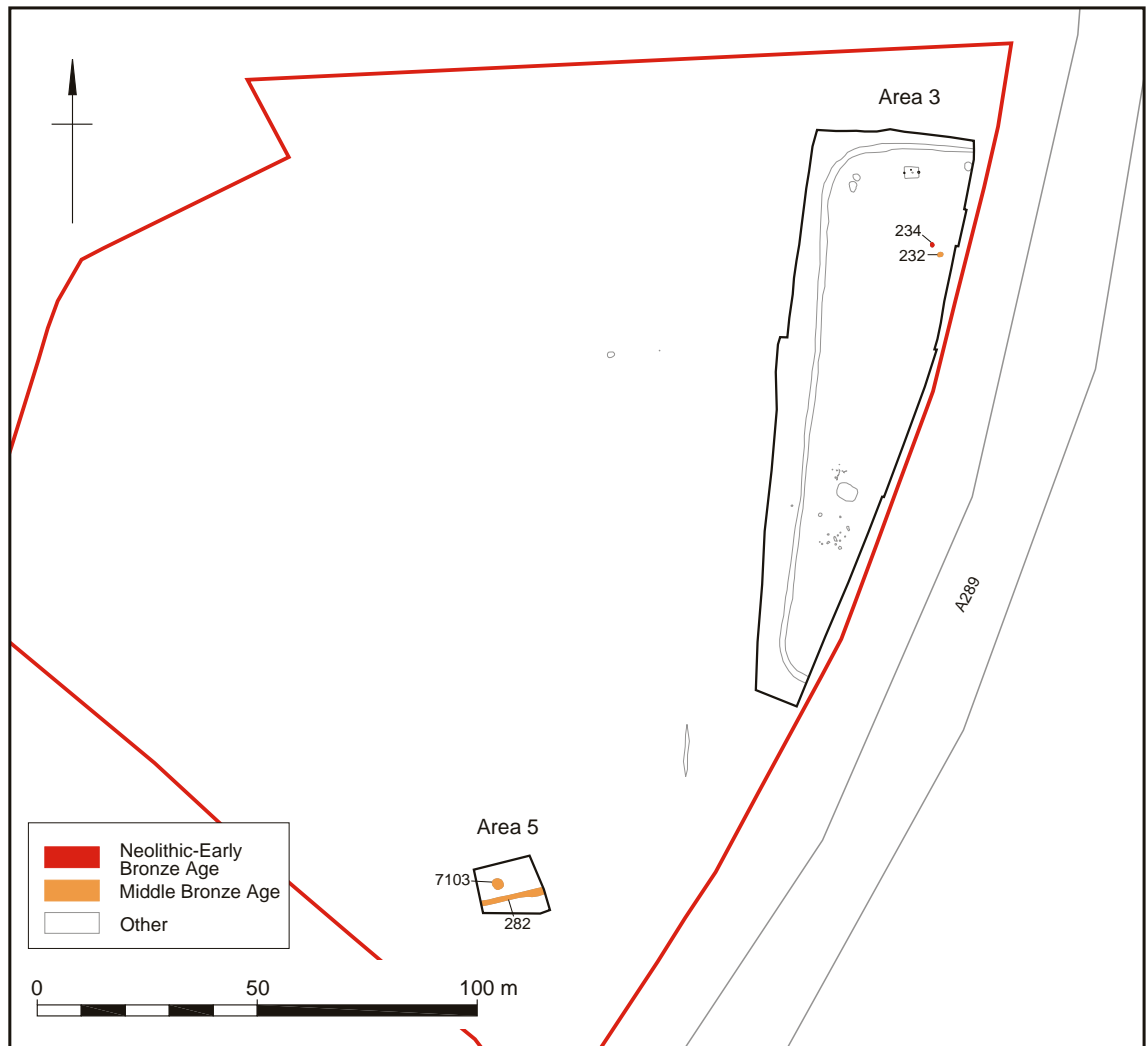


Figure 3: Prehistoric features in Areas 3 and 5

sealed a pit (191) approximately 1m across and with a shallow, U-shaped profile, from which no finds were recovered.

Gully 294, at the northern edge of Area 2, was aligned north-north-west to south-south-east. It was traced for a distance of 22 m, continuing to the north beyond the limits of the excavation, and was up to 1.4 m wide and 0.4 m deep with moderately sloping sides, a flat base and a shallow rounded terminal at the southern end. It contained numerous pieces of burnt and worked flint, animal bones and flint-tempered Deverel-Rimbury pottery.

Gully 302 was aligned north-west to south-east and lay close to the eastern edge of Area 2. It was some 14 m long and comprised three short lengths of ditch with moderately sloping sides, concave bases and very shallow, tapering terminals. All three lengths were filled with similar slowly accumulated silty clay fills. It is possible that this discontinuous ditch was originally a single ditch, which has suffered significant subsequent truncation.

Pits 17 and 19 were intercutting, with pit 17 cut by pit 19, which contained two sherds of flint-tempered pottery. Both were irregular in shape, with moderately sloping sides, irregular bases and filled with similar deposits.

Pits 47 and 75 both appear to have been small rubbish pits. The former was oval with steeply sloping sides and a flat base. Its charcoal-rich fill contained pottery sherds from one small and two large vessels, all in the Deverel-Rimbury tradition, as well as a flint core and waste flakes, a piece of briquetage and various other small, abraded fired clay fragments. Pit 75 was pear-shaped. Its basal fill, a pale grey-brown silty clay, was virtually sterile, while the charcoal-rich upper fill contained worked and burnt flint, a piece of fired clay hearth lining and a rim, base and decorated body sherds from at least three globular and two bucket urns probably belonging within the latest part of the Deverel-Rimbury ceramic tradition. Radiocarbon dates obtained gave a date of 1530–1410 cal. BC (3205±30 BP, SUERC-33332) for pit 47 and 1610–1420 cal. BC (3220±30 BP, SUERC-33333) for pit 75.

Pits 338 and 346 were both sub-circular. Each contained the remains of single, deliberately deposited vessels dated to the Middle Bronze Age. Pit 338 contained a small cup/tub-shaped vessel, whilst a sloping shouldered jar was found in an inverted position in pit 346 (Plate 2).

Neither pit 232 nor pit 7103 was well dated. The former, an oval pit in Area 3 with gently sloping sides and a flattish base, contained six very fresh flint flakes and one small sherd of pottery. Pit 7103 lay in Area 5. It was much larger, 2.5 m in diameter and 1 m deep, with a steep-sloping U-shaped profile. Its relatively sterile fills contained several small pieces of pottery, a scrap of fired clay and two struck flints.

A small number of other features may also be contemporary (pits 115 and 154 in Area 2 and ditch 282 in Area 5). Although none of these is well dated, the small quantities of finds recovered suggest a prehistoric date. Their function is uncertain, although pit 115 appears to have

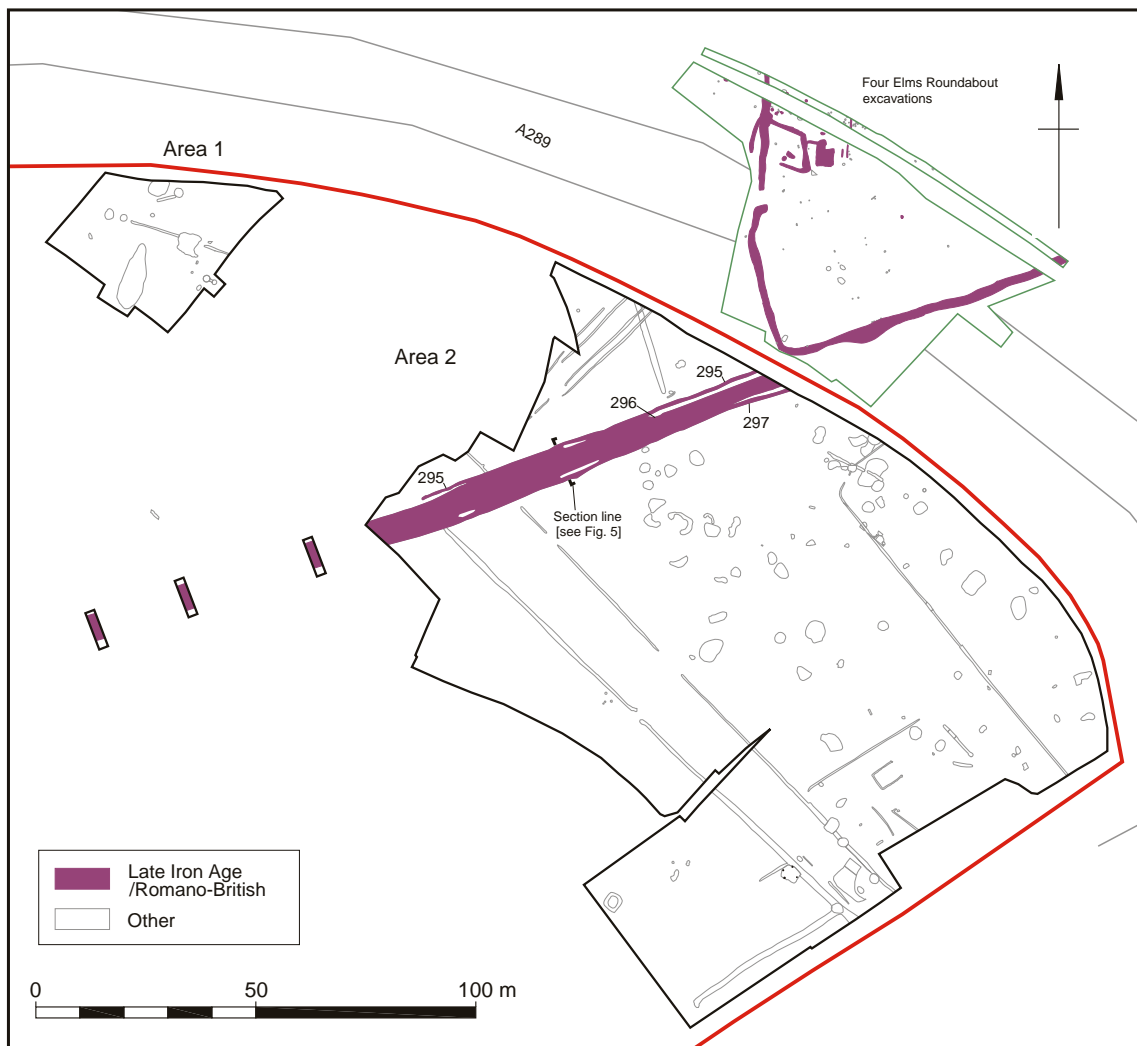


Figure 4: Late Iron Age/Romano-British activity in Area 2

been used as a small hearth or oven, judging from the reddening of the sides and base of the feature. Finds from its fill included numerous orange-brown burnt clay particles and two small flint flakes.

Late Iron Age and Romano-British

A metallated trackway (296) aligned north-east to south-west, flanked for much of its length by two ditches (295 and 297), crossed Area 2 (Figure 4, Plate 3). Its alignment closely corresponds with the southern edge of the enclosure (dated to the 2nd–3rd century AD) excavated on the adjacent Four Elms roundabout site. Nearly 100 m of the trackway was recorded in the excavation area, with targeted test trenches establishing its alignment for a further 40 m up slope to the south-west.

The metallated trackway was set within a hollow 3.3 m wide and up to 0.3 m deep (Figure 5). The basal fill of this hollow in some areas comprised a layer of trampled natural sealed beneath a layer of moderately compact flint gravel. Elsewhere the gravel metalling appears to have lain directly on the base of the hollow. Finds from the trample and metalling comprised small quantities of burnt and worked flints, and a single intrusive piece of post-medieval/modern lead-shot. The metallated surface was generally sealed by silting deposits up to 0.3 m thick. Artefacts from these comprised worked and burnt flint and later prehistoric pottery, although small quantities of Romano-British pottery, ceramic building material, a copper alloy brooch and an iron knife were also recovered.

The northernmost of the flanking ditches (295) terminated within the excavation area, after 80 m. This was 0.6 m wide and had a shallow U-shaped profile. The southern ditch, 297, was wider (0.8 m) and slightly deeper, with a steeper, V-shaped profile. The artefacts from these ditches were largely of later prehistoric date, but four small pieces of Late Iron Age or early Romano-British pottery were also recovered.

Although not conclusively dated, trackway 296 and its associated ditches may have originated during the later prehistoric period, perhaps during the Iron Age, and continued in use for some considerable period of time; the Romano-British enclosure excavated to the on the Four Elms roundabout site to the north-east clearly seems to have respected its alignment.

Early/Mid-Saxon

The bulk of the remaining features in Areas 1, 2, 3 and 4 probably date to the Saxon period, although not all can be dated artefactually (Figures 6 and 9). Ditches, pits and structural remains appear to indicate that the settlement identified in the Four Elms roundabout excavations was extensive, if dispersed. The finds recovered suggest settlement in both the Early/Mid-Saxon period (probably ranging from the late 6th into the 7th century) and the Mid–Late Saxon period (8th–9th centuries).

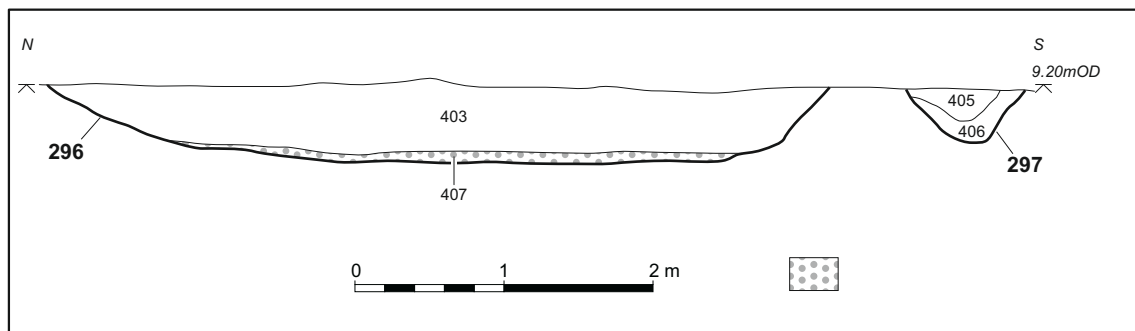


Figure 5: Section through Late Iron Age/Romano-British trackway 296 and flanking ditch 297

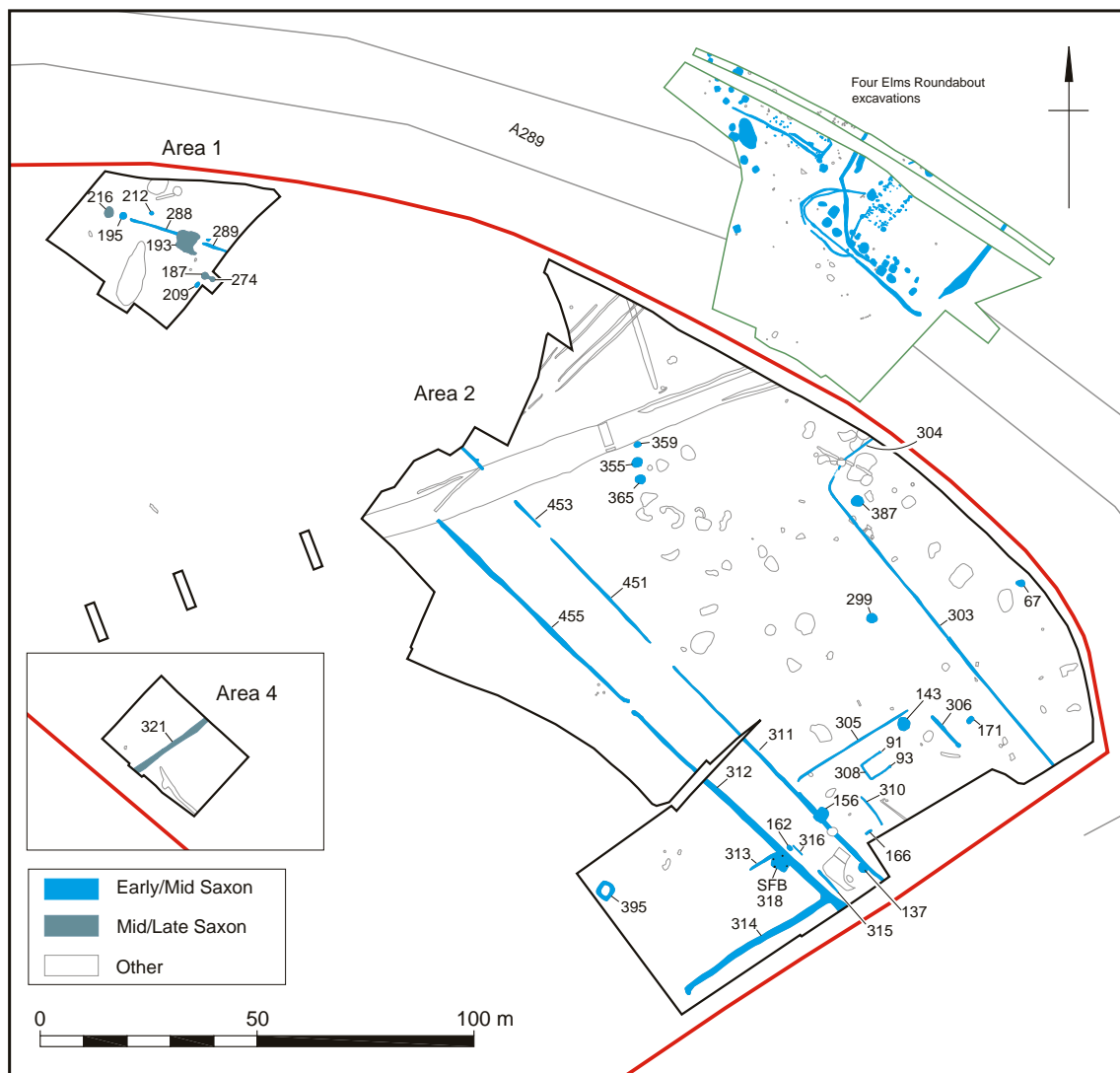


Figure 6: Early/Mid-Saxon and Mid-/Late Saxon settlement in Areas 1, 2 and 4

Most of the Saxon features appear to be associated with the organic-tempered and handmade sandy-tempered pottery of the Early/Mid-Saxon period, with only a small but significant group of features associated with the later shell-tempered pottery. The main group of Early/Mid-Saxon features lay in Areas 1 and 2, closest to the earlier Four Elms roundabout excavations, and comprise a series of rectilinear enclosures associated with a trackway, two structures and numerous pits.

Area 1

Two lengths of ditch excavated in Area 1 (288 and 289) may represent a continuation of the northern trackway ditch (311, 451 and 453) excavated in Area 2, although they lie on a slightly different alignment. Three pits in this area (195, 209 and 212) are also probably Saxon in date. However, only one of these, 209, an oval pit measuring 1.25 m long, 0.75 m wide and 0.55 m deep, was well dated, containing sherds of Early/Mid-Saxon pottery.

Area 2

The trackway identified in Area 2, which extends for 140 m on a north-west to south-east alignment appears to have determined the orientation of the surrounding features, with all of the enclosures in this area respecting it. The edges of this track were defined by two broadly parallel, discontinuous ditches approximately 11–15 m apart.

The southern of the two ditches which defined the trackway comprised two lengths of ditch stretching over more than 130 m (recorded as 312 and 455), separated by a single causeway 2.1 m wide. The dimensions of this ditch varied, and it was up to 1.5 m wide and 0.45 m deep in places. Small quantities of pottery indicate an Early/Mid-Saxon date. Towards the south-eastern end of ditch 312 were two ditches that ran broadly perpendicular to the line of the trackway, hinting at enclosure of this area. The shorter of these, 313, was 7.5 m long, 0.6 m wide and c. 0.15 m deep. To the south-east, ditch 314 was a more substantial feature, 39 m long, up to 1.5 m wide and 0.45 m deep. Neither feature was well dated, with the only pottery comprising a residual sherd of Romano-British date from ditch 314. The stratigraphic relationships between these ditches and 312 were not clearly established, due to the similarities between the fills and the truncation of the intersection between 312 and 314 by post-medieval pit 103 (see below). It is possible, however, that they relate to two short stretches of gully excavated within the trackway itself. Both 315 and 316 lie broadly parallel to ditch 312. The north-western and south-eastern extents of these gullies extend no further than 313 and 314 respectively, and it is possible that all four features relate to each other. A gap of over 5 m separates 315 and 316, but both lie on the same alignment, and are likely to be related; neither is well dated.

The area defined by these four boundary features contained a sunken-feature building (318) and a single, shallow Saxon pit (162). Sunken-feature building 318 comprised a sub-rectangular

hollow, 4 m long, 3.5 m wide and 0.15 m deep on a north-west to south-easterly alignment (Figure 7). It was associated with two pairs of opposing postholes set towards the outer edges of the hollow. Postholes 146 and 150 lay along the main axis of the hollow, whilst 144 and 148 lay on an axis to the north-west of the centre point of the longer sides. All four postholes were of similar form: c. 0.25 m in diameter and 0.25 m deep with almost vertical sides and flattish bases. Finds recovered from the building include fragments of iron slag and almost 1 kg of Early/Mid-Saxon pottery from the fill of the main hollow and a single sherd of similar date from posthole 144. The northern edge of hollow 318 clearly cut the upper silts of ditch 312, suggesting that it belongs to a slightly later phase of activity. Charcoal recovered from the fill of this building returned a date of cal. AD 550–650 (1460±30 BP, SUERC 33334).

Pit 162 was, shallow, oval and lay 2 m to the north-east of the structure. It was 1.4 m long, 0.9 m wide and only 0.15 m deep, and contained a single fill from which a few sherds of Early/Mid-Saxon pottery and pieces of undiagnostic ironworking slag were recovered.

A further feature of note in this area was a small sub-rectangular ditched enclosure aligned north-east to south-west (395) close to the south-western edge of Area 2. This was defined by a ditch 0.7 m wide and 0.1 m deep with shallow sloping sides and an irregular base (Plate 4). The enclosure measured approximately 4.6 m by 3.6 m and enclosed an internal area measuring 2.5 x 2.1 m. Similar Saxon ditched enclosures often contain inhumation burials, but no traces of internal features were found within 395. It is possible that the gully held the footings of a small structure, but no evidence to support this was recorded. A small number of sherds of Early/Mid-Saxon pottery were recovered from the fill of this enclosure, along with a Romano-British jar base, perhaps deliberately trimmed to form a flat disc, as well as iron slag, struck flint and a piece of Romano-British ceramic building material.

The northern trackway ditch, variously recorded as 311, 451 and 453, appears to have been dug with two causeways to allow access to the north-east (the north-westernmost ‘gap’ shown in plan corresponds with the line of the earlier Late Iron Age-Romano-British trackway and may largely reflect the difficulty in tracing the line of the ditch rather than an actual causeway). This trackway ditch was a relatively shallow feature, generally only 0.2–0.3 m in depth, despite being up to 1 m wide in places, but may have marked a more substantial boundary such as a hedge. Sherds of pottery recovered from both 311 and 451 were exclusively in organic-tempered fabrics, indicating an Early/Mid-Saxon date.

Two ditched enclosures were recorded to the north-east of this ditch. The first appears to have used the trackway ditch as its south-western boundary. The full extent of this enclosure was not established, as it continued beyond the south-eastern extents of Area 2. The north-western and north-eastern edges of the enclosures were defined by two gullies (305 and 306 respectively). These too were relatively insubstantial, measuring 0.5 m and 0.6 m wide and only c. 0.15 m deep. They did not form a continuous boundary, with gaps in both the northern and western corners of the

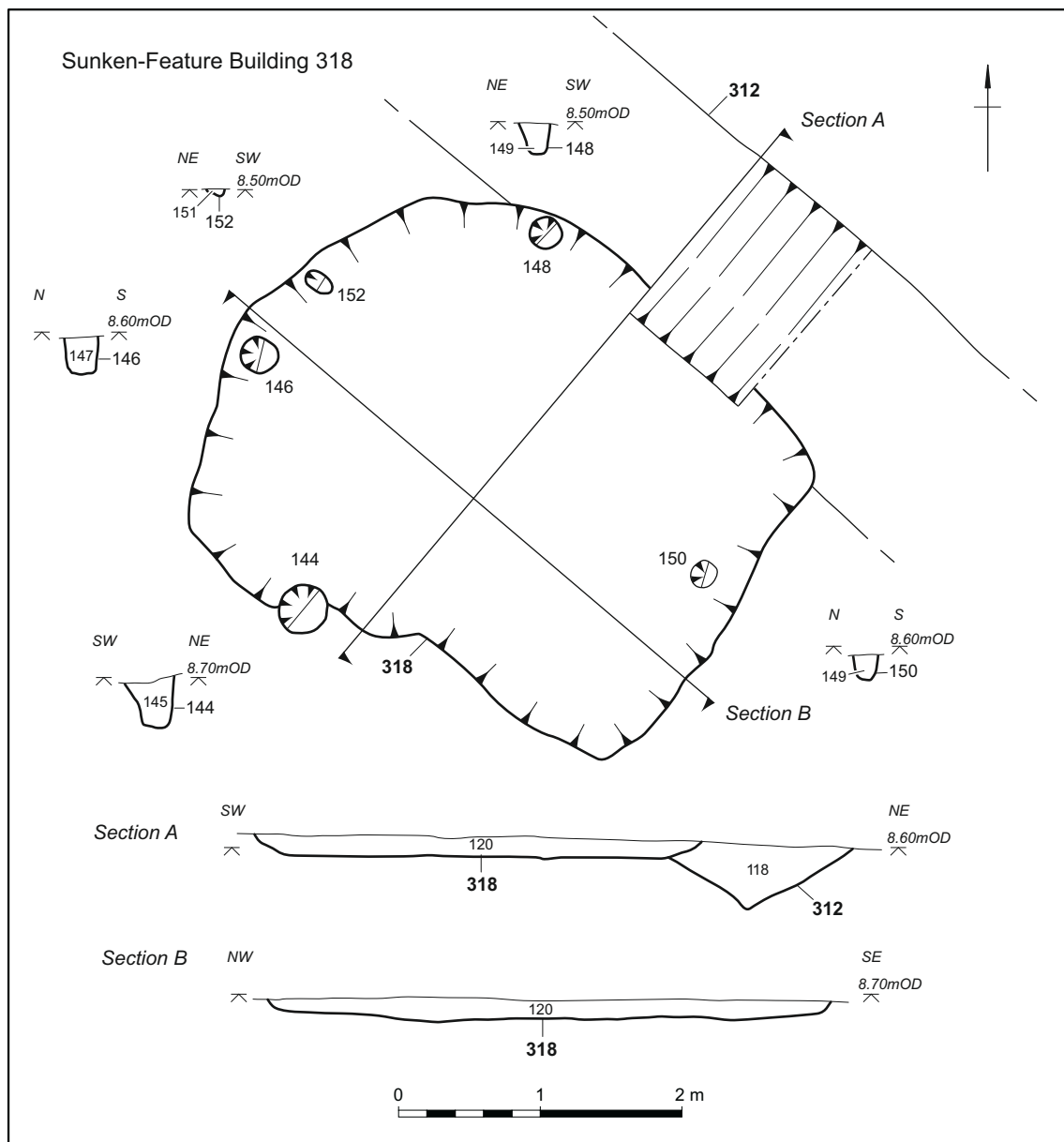


Figure 7: Sunken-feature building 318

enclosure, whilst 306 did not extend as far south-east as the edge of excavation. A sherd of organic-tempered pottery was recovered from the fill of gully 305.

Within this enclosure lay a number of features, including the remains of at least one structure. This took the form of a single continuous gully (308) approximately 0.3 m wide and 0.08 m deep. It is likely that this marks the line of three walls of a structure aligned north-east to south-west, and at least 5.5 m long and 4 m wide. The gully probably held a timber which supported the walls of this structure, although no corresponding gully was recorded on the north-eastern side. Two postholes (91 and 93) were associated with this gully. No artefacts were recovered from either the fills of the gully or the postholes.

Other features in this area include two further gullies (166 and 310) set broadly perpendicular to each other which may represent the remains of a second structure, broadly aligned north-west to south-east. A large pit (143) in the northern corner of this enclosure, 2.6 m in diameter and 1.2 m deep contained a series of organic- and charcoal-rich deposits, may have been used as a cess pit. The only artefact recovered from this feature was a worked flint from the upper fill.

A large sub-rectangular hollow (156) cut through the silts filling the trackway ditch. This hollow was aligned approximately north-east to south-west and was 3.5 m long, 2.7 m wide and 0.12 m deep with shallow sloping sides and a flat base. Pottery, a fragment of an iron nail and pieces of iron slag were recovered from its only fill. Although this lacks the characteristic postholes of a 'classic' sunken-feature building, it is possible that this hollow represents the remains of a further structure. Examples of sunken-feature buildings without postholes are known (Tipper 2006, 71–2). A small flat-bottomed pit (137), also dug through the silted trackway ditch 12 m to the south-east of hollow 156, contained similar sherds of organic-tempered pottery, and may have been contemporary with the structure.

The second enclosure lay close to and extended beyond the north-eastern edge of the site. It too was aligned on the trackway, and was defined by two gullies (303 and 304) with an entrance in the north-western corner. A line of five postholes (posthole group 70, not shown in plan) spanned this entrance, which was only 2.30 m across, suggesting that at some point it had been closed by a fence. Boundary gullies 303 and 304 were relatively insubstantial, both measuring 0.5–0.8 m wide and 0.05–0.30 m deep. Sherds of organic-tempered pottery were recovered from the fill of ditch 303, suggesting an Early/Mid-Saxon date.

A group of poorly dated pits (67, 143, 171, 299, 355, 359, 365, and 387) were excavated in Area 2, all of which were similar in both form and depositional sequence. They were generally sub-circular or oval with steeply sloping or almost vertical sides and flattish bases. They differed in size from *c.* 1.2 m to 2.6 m in width, and were all dug through the overlying brickearth deposits to a depth of *c.* 0.90–1.20 m, and stopping when the gravel was reached. The lower fills of these pits generally comprised dark organic-rich deposits interspersed with layers of redeposited natural, with

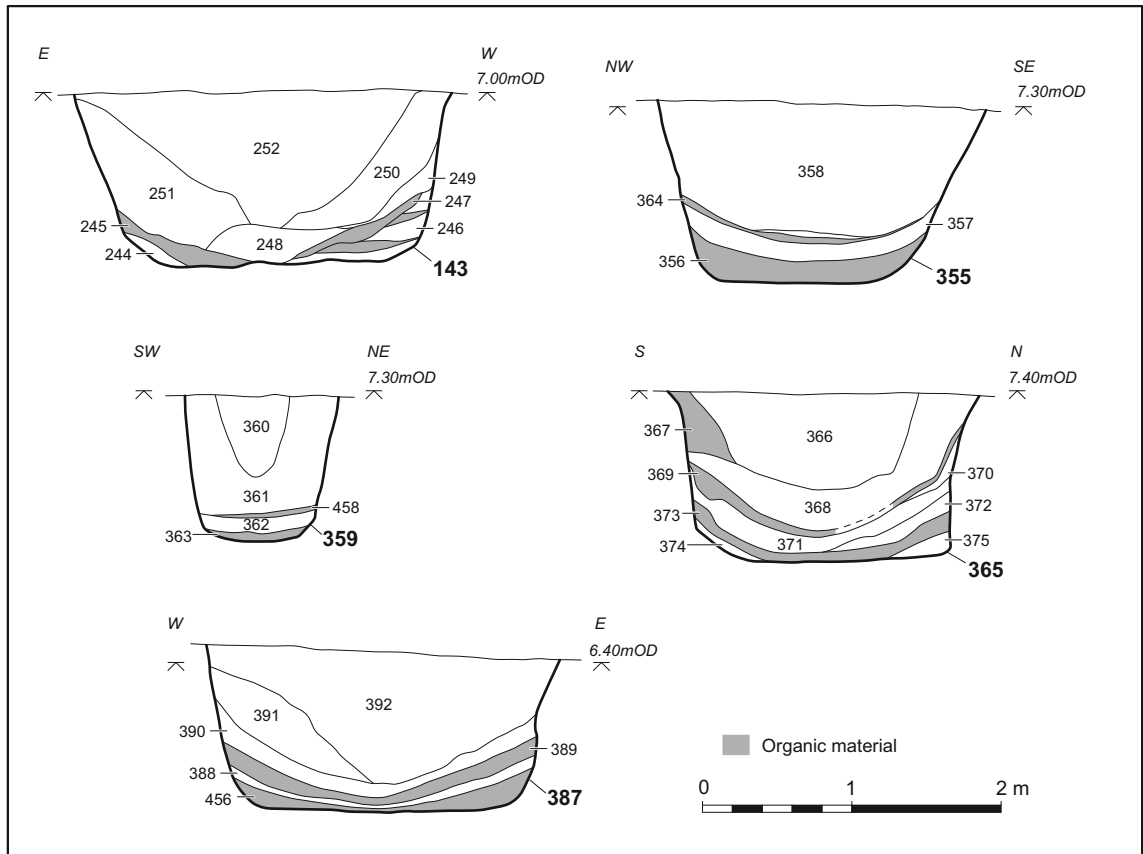


Figure 8: Probable Saxon pits

the upper fills comprising episodes of deliberate backfilling culminating in gravel-rich top fills (see Figure 8).

Artefacts from these pits were scarce and largely confined to worked flints recovered from the upper fills. Two flint blades were found in the uppermost fill of pit 143 while a finely-worked blade was recovered from the basal deposit in pit 171, with three other flints found in the uppermost fill. The majority of these worked flints were undiagnostic, but the blade from pit 171 is likely to be Early Neolithic. Although a number of fills contained charcoal, only one, the upper fill of pit 355, produced sufficient material to provide a radiocarbon date. This returned a Mesolithic date, 7070–6710 cal. BC (8008±45 BP, NZA-29409).

The date of these pits is not clear, although the Mesolithic date is clearly anomalous. A number of similar features on the Four Elms roundabout site, also with very little dating evidence, were interpreted as Saxon (Clark *et al.* 2009, 19 and fig. 11). The pits from Area 2 are also likely to be Saxon, and their fill sequences and lack of finds are similar to some Saxon cess pits.

Area 3

The final group of Early/Mid-Saxon features lay in Area 3 (Figure 9). It is not clear whether the later enclosure in this area (ditch 319, see below) represents a re-cutting of an earlier enclosure, but it is clear that all three features of this date lay within the area of the later enclosure ditch. These comprised a further sunken-feature building (320) and two associated pits (253 and 256).

Sunken-feature building 320 (see Figure 10, Plate 5) comprised a sub-rectangular hollow (235) aligned roughly east–west, 3.2 m long, 2.4 m wide and 0.1 m deep with shallow sloping sides and a flat base. Two postholes, 237 and 240, both *c.* 0.2 m in diameter and 0.3 m deep, lay at the eastern and western ends of the hollow respectively. Two smaller postholes were located within the hollow – posthole 267 in the centre of the structure in line with postholes 237 and 240, and a smaller posthole closer to the northern edge (270). Packing stones in 267 surrounded a post pipe some 0.11 m in diameter. Fifty-three sherds of Saxon organic-tempered pottery and fragments from several loomweights, animal bones, worked flints and scraps of metal were found in the fill of 320.

Two pits to the west of this structure are likely to have been associated with it. Pit 253 was roughly oval, 1.8 m wide and 1.3 m deep with very steeply sloping sides; two Saxon pottery sherds were found in its basal fill. Pit 256 was oval, 2.3 m across and 1.3 m deep. It contained almost 1 kg of iron slag as well as animal bones and iron nails.

Mid-/Late Saxon

Only a small number of features can be dated with confidence to the Mid-/Late Saxon period. These comprise several discrete features in Area 1, an enclosure ditch in Area 3 and a ditch in Area 4.

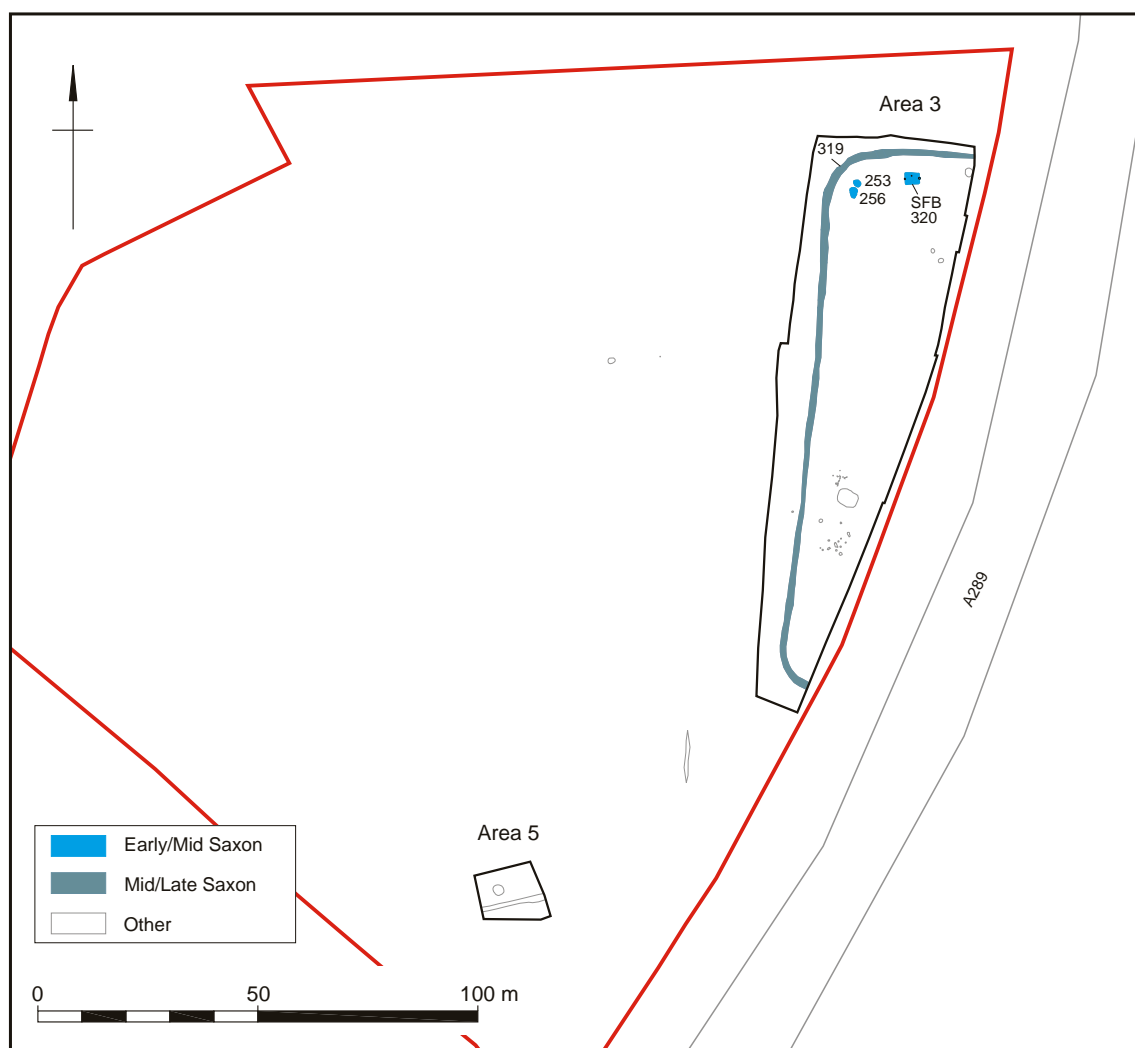


Figure 9: Early/Mid-Saxon and Mid-/Late Saxon settlement in Areas 3 and 5

Area 1

Four features in Area 1 indicate some activity at this time (Figure 6). These comprise three pits and a tree throw. Pits 187 and 274 lay adjacent to each other close to the south-eastern edge of Area 1 and appeared to comprise two deeper pits linked by an interconnecting channel. Pit 187 was the larger of the two, 1.4 m in diameter, with steep almost vertical sides. It was not bottomed, with excavation ceasing at 2 m for safety reasons. Pit 274 was smaller, at 1 m in diameter and 0.85 m deep. Both features contained sherds of shelly-tempered and organic-tempered pottery, the former suggesting a Mid-/Late Saxon date. It is not clear what function either feature performed, although the depth of 187 suggests that it may have been a well or waterhole.

Tree throw 193 was a substantial feature cutting the upper silts of the eastern end of Early/Mid-Saxon gully 288. It was irregular in plan, and in places up to 0.6 m deep. Artefacts recovered from the fill included sherds of organic-tempered, shelly-tempered and imported greyware pottery, over 4 kg of iron slag and a sceatta (ON 49), struck in the early years of the 8th century AD.

The fourth feature in this area was a large oval pit (216), 2.5 m long, 1.9 m wide and 0.75 m deep with moderately sloping sides and a flat base. Pottery recovered from its two fills included both organic- and shelly-tempered wares.

Area 3

The western edge of a Mid-/Late Saxon enclosure was identified in Area 3 (Figure 9). This was defined by ditch 319, 1.5 m wide and up to 0.7 m deep with a steeply sloping V-shaped profile. The enclosure was apparently laid out on a north–south or east–west alignment and measured at least 120 m north to south internally. Its eastern extent was not established, with only a maximum of 30 m of the interior revealed in excavation. There were no gaps which might indicate an entrance and one of the excavated segments in the centre of the western side showed that the ditch had been recut on at least one occasion, but this was not apparent elsewhere.

Overall, ditch 319 produced an unusually large and varied assemblage of finds, including pottery spanning the Early/Mid-and Mid-/Late Saxon periods, Mid-/Late Saxon vessel glass, worked bone, lava quern fragments, numerous iron tools and knives, a pair of copper alloy tweezers, a bracteate die, an Early Saxon button brooch and six sceattas (Plate 6). Numerous residual artefacts, including later prehistoric pottery and worked flints, Romano-British pottery, ceramic building material and metalwork (including a brooch) were also found. These finds suggest that the enclosure may have been in use earlier in the Saxon period, and the ditch recut in the Mid-/Late Saxon period. The bulk of the finds recovered are, however, of this later date, and clearly point to a relatively high status settlement associated with this enclosure. Unfortunately, no

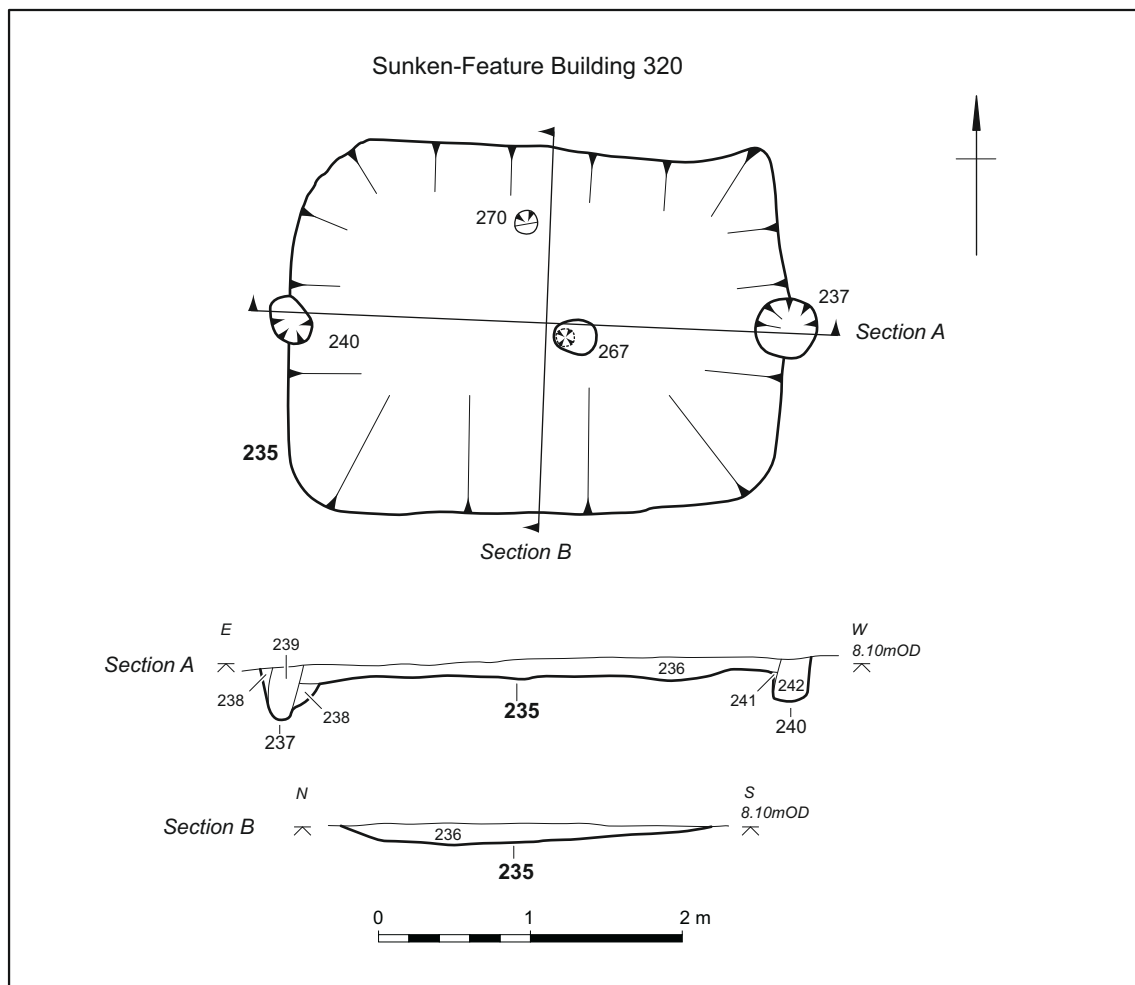


Figure 10: Sunken feature building 320

evidence for contemporary structures was identified. The only archaeological features within the enclosure, apart from the earlier sunken-feature building and its associated pits are a small number of undated postholes (416, 418, 420, 422, 424, 426, 428, 432, 434, 436 and 442; not numbered on plan) and several tree throws. Although the postholes hint at the presence of a structure, its form and date could not be established with any certainty, and it is possible that associated structural remains lay within the unexcavated area of the enclosure.

Area 4

The only other feature containing Mid-/Late Saxon pottery was an isolated ditch (321) in Area 4 (Figure 6). Over 20 m of this ditch was exposed, with both ends continuing beyond the limits of the excavation. Ditch 321 was up to 1.4 m wide and 0.25 m deep, with shallow sloping sides and an irregular base. It contained a single fill, from which sherds of shell-tempered pottery were recovered.

Medieval and later features

A group of shallow, discontinuous parallel ditches (290–293, 448–450 and 454) in the north-western corner of Area 2 probably date to the Late Saxon or early medieval period (Figure 11). These were aligned north-east to south-west, and clearly truncated the fills of prehistoric ditch 294. Very little artefactual evidence was recovered from them, but they clearly represent the continuation of a group of ditches on the adjacent Four Elms roundabout site, which were assigned a Late Saxon or early medieval date (ditches F3, F9, F21 and F308c, dated to AD 1050–1150, Clark *et al.* 2009, 29). These had previously been interpreted as defining a series of strip fields based on their spacing within the excavated area. However, it is clear from the recent excavations that these ditches converge, and are perhaps more likely to define a trackway with the multiple ditches perhaps indicating that it migrated over time.

Three post-medieval pits were also located on the southern edge of Area 2. Pit 97 (oval in plan, 1.7 m wide and 0.35 m deep), contained 17th century pottery and medieval/post-medieval roof tile fragments. Pit 103, at the intersection of ditches 312 and 314, was larger, 2.8 m across and 0.7 m deep, and contained a wide range of post-medieval artefacts. The third pit, 124, cutting ditch 311, also probably belongs to this group of later features. Post-medieval material was found in its upper fill, but it was noted on the Four Elms roundabout site that many of the Saxon pits had remained open long enough for their contents to slump and for later material to be deposited in the resulting hollows (Clark *et al.* 2009, 77). Although excavated to a depth of 1.95 m, pit 124 was not bottomed, and no further artefacts recovered so it cannot, therefore, be dated with any certainty.

Amongst the assemblage of metalwork recovered during a metal detecting survey of the site were 84 pieces of lead shot, 4–18 mm in diameter, probably dating to the 17th or 18th century. The different sizes of shot recovered suggest both carbine and musket shot.



Figure 11: Medieval and post-medieval activity in Areas 1, 2 and 4

Undated features

A number of features remain undated, generally because no chronologically diagnostic artefacts were recovered from them. These features mostly consist of small, relatively isolated pits along with a small number of postholes and short stretches of ditch. Perhaps the most significant of the undated features is a group of postholes within the bounds of ditch 319 in Area 3 (see above).

Finds

Coins

by Nicholas Cooke

A total of 47 coins and a jeton were recovered, ranging in date from the Roman through to the post-medieval and modern periods. In general the coins are in fair condition. Most of the copper alloy coins show signs of post-depositional corrosion, although the majority could be identified to period. The 12 silver coins recovered are generally in good condition, with only occasional signs of corrosion and wear. Only five coins (four copper alloy and one silver) could not be assigned a date.

Roman coins

Thirteen Roman coins were recovered, all of copper alloy and all but one metal detector finds from the ploughsoil in Areas 1, 2 and 3. Four could only be given broad dates, based on their size and shape (see Table 1). The remaining nine include two *sestertii* of Trajan and Commodus, three radiate *antoniniani* of the late 3rd century AD (two ‘Barbarous’ copies and the second of Carausius) and four 4th century coins. The *sestertius* of Trajan had been deliberately pierced for suspension – similarly pierced coins are known from other Saxon sites, often in burials (Moorhead 2006). As a group, the coins form a fairly normal small assemblage for a Roman site in use into the 4th century, although the only Romano-British feature excavated was the metalled trackway. With the exception of one coin of Hadrian, all of the coins (21 in total) from the Four Elms roundabout site fell within a narrow date range of AD 260–290 and were interpreted as indicative of abandonment somewhere around 290 (Anderson 2009, 44–5). The later coins from the 2007 excavations suggest that coin use continued in the area, at least on a modest scale, into the late 4th century.

Saxon

Seven Saxon silver sceattas were recovered, six from enclosure ditch 319 in Area 3, and one from a Saxon feature (193) in Area 1. Sceattas were struck in the late 7th and 8th centuries and represent the first post-Roman silver coinage minted in Britain. They were all in excellent condition with

little wear or corrosion and all date to the first half of the 8th century. Although our understanding of the circulation and use of these sceattas is not well developed, the recovery of a group of seven suggests a site of some status. Whilst the condition of the coins from ditch 319 might suggest that they represent a small, dispersed hoard, the fact that they were found along the length of the ditch, and at some depth, suggests that this is unlikely to be the case.

Medieval

A hammered silver 'long cross' penny, probably struck for Edward I (1272–1307), was found in the ploughsoil of Area 2. A single continental jeton, probably minted in Nuremburg in the 15th century, was found in post-medieval pit 103.

Table 1 Roman, Saxon and medieval coins

<i>Ruler</i>	<i>Object (Context)</i>	<i>Type</i>	<i>Condition</i>	<i>Issue (AD)</i>	<i>date</i>	<i>Reference</i>
Roman						
Trajan	41 (25)	Sestertius. Pierced for suspension to show portrait	Corroded	96–117	–	
Commodus	314 (329)	Sestertius. Reverse uncertain	Very worn	180–192	–	
Radiate copy	85 (29)	Antoninianus. Barbarous copy struck on very small flan	Corroded	270–296	–	
Radiate copy	16 (1502)	Antoninianus. Barbarous copy. Reverse from Pax. Stylised engraving on reverse	Corroded	270–296	–	
Carausius	83 (29)	Antoninianus, Pax Auggg type. Mint Mark: S P / MLXXI (London)	Corroded	286–293		RIC V (b), Carausius, 141
Constantine I	310 (328)	AE2 Soli Invicto Comiti type. Mint Mark: T F / PTR (Trier)	Worn	313–315		RIC VII, Trier, 39
House of Constantine	327 (401)	AE3 Constantinopolis type. Possibly a copy	Corroded	330–345		?copy as LRBC I, 52
Valens	5 (23)	AE3 Securitas Reipublicae type	Corroded	364–378		? Copy as LRBC II, 82
House of Valentinian	93 (26)	AE3 Gloria Romanorum type	Corroded	364–378		As LRBC II, 78
Unknown	86 (29)	AE4 illegible	Corroded	C3–C4	–	
Unknown	216 (1502)	AE3 illegible	Corroded	C3–C4	–	
Unknown	252 (327)	AE3 illegible (? Constantinopolis issue?)	Corroded	C4	–	
Unknown	349 (441)	AE4 illegible. Poss. a female bust on obverse (Helena?Theodora?)	Very worn	C4	–	
Saxon						
Unknown	49 (194)	Silver sceatta. Stylised ‘Porcupine’ obverse with ‘Standard’ reverse	Slightly worn	c. 720–730		Blackburn 1986, Type E. Early secondary copy of Var. G, with long snout. Laterally reversed. Cf. Metcalf and Op den Velde 2009–10, 603
Unknown	122 (275)	Silver sceatta. ‘Porcupine’ obverse with variation on the ‘Standard’ reverse	Slightly worn	c. 700–720		Blackburn 1986, Type E. Metcalf and Op den Velde 2009–10, 3498–3509
Unknown	123 (275)	Silver sceatta. Winged victory obverse, Man with 2 crosses reverse	Slightly worn	c. 690/700–710		Blackburn 1986, Type L. See also North, 1994, 75. ‘Victory’ type, Metcalf 1994, Var 3; as BMC 110 = Type 22
Unknown	353 (414)	Silver sceatta. Porcupine obverse. Runes reading Aethli/raed on reverse	Unworn	c. 725–735		Blackburn 1986, Type E. ‘Æthilraed’ type, Metcalf and Op den Velde, 2009–10, 3550
Unknown	354 (414)	Silver sceatta. 2 men with crosses obverse. Fantastical animal on reverse	Unworn	c. 720–735		Blackburn 1986, Type N. Metcalf 1974, plate 1, 9–10
Unknown	359 (414)	Silver sceatta. Sphinx or female centaur with outstretched wings on obverse. Wolf head whorl on reverse	Slightly worn	c. 730–740		Blackburn 1986, Type S1a.
Unknown	365 (414)	Silver sceatta. 2 men with 2 crosses on obverse. Fantastical animal on reverse.	Unworn	c. 720–735		Blackburn 1986, Type N Cf. Metcalf 1974, plate 1, 12–2, 14
Medieval						
Edward I	287 (328)	Silver penny, minted in London	Very worn	1272–1307	–	
Unknown	51 (104)	Cu Alloy jeton, Rose/Orb type, struck in Nuremburg	Worn	C15	–	

Post-medieval and modern

The remaining coins date to the post-medieval and modern periods, the majority recovered from the ploughsoil of Area 2. The earliest of these is a silver penny of Charles I. Coins of George II (a half penny), George III (a half penny and a penny), George IV (a farthing), Victoria (seven farthings, a

half penny, a penny and a sixpence), Edward VII (a farthing), George V (a farthing and two pennies) and George VI (a farthing) were recorded, along with a German five pfennig piece, minted in 1914.

Metalwork

by Grace Perpetua Jones and Rachael Seager Smith

Romano-British

A small number of objects of Romano-British date were identified but virtually all were residual in later features or layers (Table 2). Almost all were of copper alloy, although a fragment from an iron knife blade may also date to this period.

Personal objects

Four incomplete copper alloy brooches were recovered. A small two-piece Colchester brooch came from trackway 296 (ON 326, 34 mm in length), with a larger example recovered from the colluvium (ON 315, 58 mm in length). Both have a central rib down the length of the bow. Notched decoration is also visible at the top of the bow of the smaller brooch, but it is not possible to ascertain if this continued, due to damage and corrosion of the bow. Both brooches date to the middle years of the 1st century AD (post-Conquest). A flat disc brooch, of 2nd century date, was residual in Saxon ditch 319 (context 414, ON 356, Figure 12.1). It measures 27 mm in diameter and has 10 peripheral lugs, three of which are now missing. The interior is decorated with concentric rings of enamel in sunken recesses, however only traces of this remain. Small spots of red in the outer ring suggest these may have been inset cells of red, perhaps into white. Red is also visible in the second ring. A small inner circle may have been inset with a coloured enamel/glass or left open. The form is similar to an example from Belton, Norfolk (Hattatt 2000, fig. 204, 1563). A small fragment from the bow of an early Romano-British brooch was recorded from the ploughsoil (ON 108).

A zoomorphic mortar from a cosmetic grinder was recovered from the ploughsoil (context 328, ON 290, Figure 12.2), however the pestle was not found. This crescent-shaped object is decorated with an animal's head at one end, with prominent eyes and triangular-shaped ears, suggesting that it represents a horse rather than one of the more common bovine heads. It is 81 mm long, 7 mm wide and 11 mm high. A small suspension loop, measuring 10 x 6 mm, is located on the underside on the mortar, at the opposite end to the head. This is also quite unusual as most were end-looped or suspended from the centre of the underside. The mortar is of V-shaped section with some traces of wear.

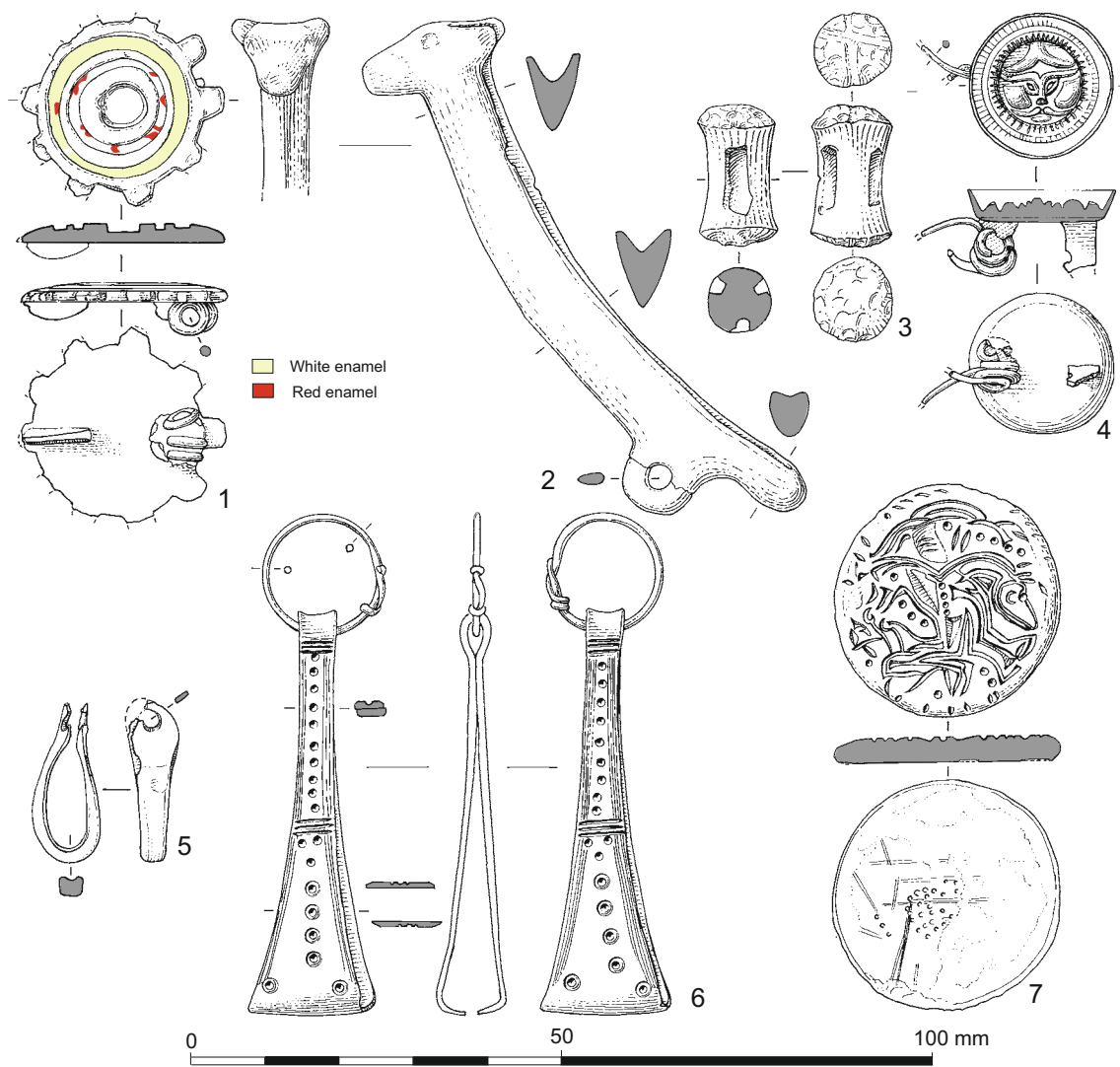


Figure 12: Romano-British and Saxon metalwork

Tools

An undiagnostic triangular knife blade fragment was recorded from trackway 296 (ON 390).

Recreational items

A gaming piece was recovered during metal detecting (context 441, ON 351, Figure 12.3). It is a small spool-shaped object (a slightly waisted cylinder), 18 mm long and 11mm in diameter, with three regularly spaced grooves made in the sides of cylinder, thereby resembling a fish vertebra.

Objects associated with transport

A possible harness fitting resembling a stylised ox head with a loop below (ON 81, layer 29), is paralleled by an object from a first century level at Lullingstone (Meates 1987, 74, fig. 30, 158).

Summary

The assemblage is small and largely residual, yet contains several interesting pieces. The mortar (ON 290) is relatively unusual, in terms of its decoration and the position of the suspension loop. There is evidence to suggest that such cosmetic sets were used to prepare powdered minerals to colour the eyelids and face and were often chosen as grave goods or temple offerings (Jackson 2011, 266). Furthermore, Jackson (2011, 267) has suggested ‘it is possible that they were used by those who wished to express or emphasise a British or Romano-British identity’.

These objects add to the small assemblage of Roman material from the Four Elms roundabout site, which comprised two personal items (a bracelet and a hobnail); household items (a bucket handle mount and knife); a reaping hook and structural ironwork (Riddler 2009a, 45–7).

Table 2 Summary of metal objects of post-medieval or modern date, and undated items.

<i>Functional group</i>	<i>Type of object</i>	<i>Cu alloy</i>	<i>Iron</i>	<i>Lead</i>
Fastenings and fittings	Decorative finial	1		
	Decorative strip	3		
	Fitting	9		
	Mount	8		
	Nail	91	64	
	Rivet	1		
	Rod	1		
	Stud	1		
	Tack		1	
Household	Vessel	1		
Metalworking	Waste	4		2
Horticultural/agricultural	Spadeshoe		1	
	Harrow tine		1	
Weights and measures	Weight			5
Personal	Brooch	3	1	
	Buckle	2	3	
	Buckle plate	1		
	Button	139		
	Finger ring	1		
	Pendant	2		
	Heel iron		2	
	Strapend/lace tag	1		
	?Instrument part	6		
Recreational	Gun cartridge	5	1	
	Shot			84
	Cannonballs		5	
Military	Thimble	1		
Textiles	Cloth seals			16
	Spur	1		
Transport	Horseshoe		1	
	Sheet	4	5	3
Uncertain	Bar		1	
	Collar		1	1
	Disc			3
	?Ferrule			
	Fitting			5
	Strip	3	19	1
	Cylindrical handle		3	
	Curved strip		1	
	?Printing block			2
	Rolled strip			1
	Wire		3	
	Unidentified	3	4	1
Total		292	117	124

Anglo-Saxon

A moderate assemblage of Anglo-Saxon metal objects was recovered, almost all from ditch 319 in Area 3 (Table 2). Datable objects from this ditch suggest a Mid-/Late Saxon date for the

assemblage, in the 8th century, broadly contemporary with that of the adjacent Four Elms roundabout site (Clark *et al.* 2009). Earlier elements were also present, including a button brooch of late 5th–6th century date, and the Romano-British objects. In terms of function the assemblage is relatively wide-ranging, including personal items, household objects, tools, structural ironwork and a rare bracteate die.

Personal objects

A copper alloy cast button brooch was recovered from ditch 319 (context 414, ON 355, Figure 12.4). It is 18 mm in diameter and 4 mm high, and is decorated with the image of a highly stylised human mask with rounded eyes, vertical nose and a wide mouth, surrounded by a ring of notched decoration. Traces of gilding are present around the edge of the face. This type of brooch is predominantly found in Southern Britain and occasionally in France, and broadly dates to the late 5th–6th century (Welsh 1985). From the position of button brooches found in graves, these appear to have been placed around the neck and shoulder, as miniature cast saucer brooches, although there are also examples of brooches found at the wrist and pelvis and some may, therefore, have been used as substitutes for clasps (*ibid.*). It is possible that the button brooch may be an insular response ‘to the introduction of the clasp-wearing fashion from Scandinavia’ (*ibid.*, 142).

An iron pin (ditch 319; part of ON 399) is heavily corroded and with part of the head missing. An x-radiograph indicates it was decorated with two grooves around the shaft and had a rounded head, probably inlaid with a small spot. Iron pins are a common find on Mid-Saxon settlements (Riddler 2009b, 48, after Addyman and Hill 1969, 65). A suspension loop, made from a thin copper alloy rod, was also recovered from ditch 319 (context 414, ON 138, Figure 12.6). Bent to form an oval loop, with terminals flattened, expanded and centrally perforated, it is comparable to a loop from *Hamwic* (Hinton 1996, 12, fig. 5, 32/173), probably used to suspend items from a belt or girdle (*ibid.*, after Rogers 1993, 1352).

An unusually well preserved pair of copper alloy tweezers (ON 361, ditch 319, context 414, Figure 12.6, Plate 7) has broad arms, inturned and triangular in form, with almost identical decoration on each side. Both blades are divided into two sections by three incised horizontal lines, aligned parallel with the blades above and below which are various arrangements of stamped dts and ring-and-dot motifs. The top of each blade is defined by three more horizontal incised lines, a twisted wire suspension loop moves freely through the top. The edges of the blade are defined by more faintly incised lines. It is similar to an example from West Stow, Suffolk (West 1985, fig. 238.24). Riddler (2009b, 48–50) notes that tweezers with splayed arms such as these are not seen before the 6th century, and examples with more exaggerated ends tend to be later in date.

Of the 10 iron knives or blade fragments of Anglo-Saxon date, seven came from ditch 319. Most have a slightly angled back and straight cutting edge (ON 105, 338 (context 414): Figure 13.8, 358, 363, 372; West Stow group D, West 1985; Evison 1987, type 5). One appears to be straight-

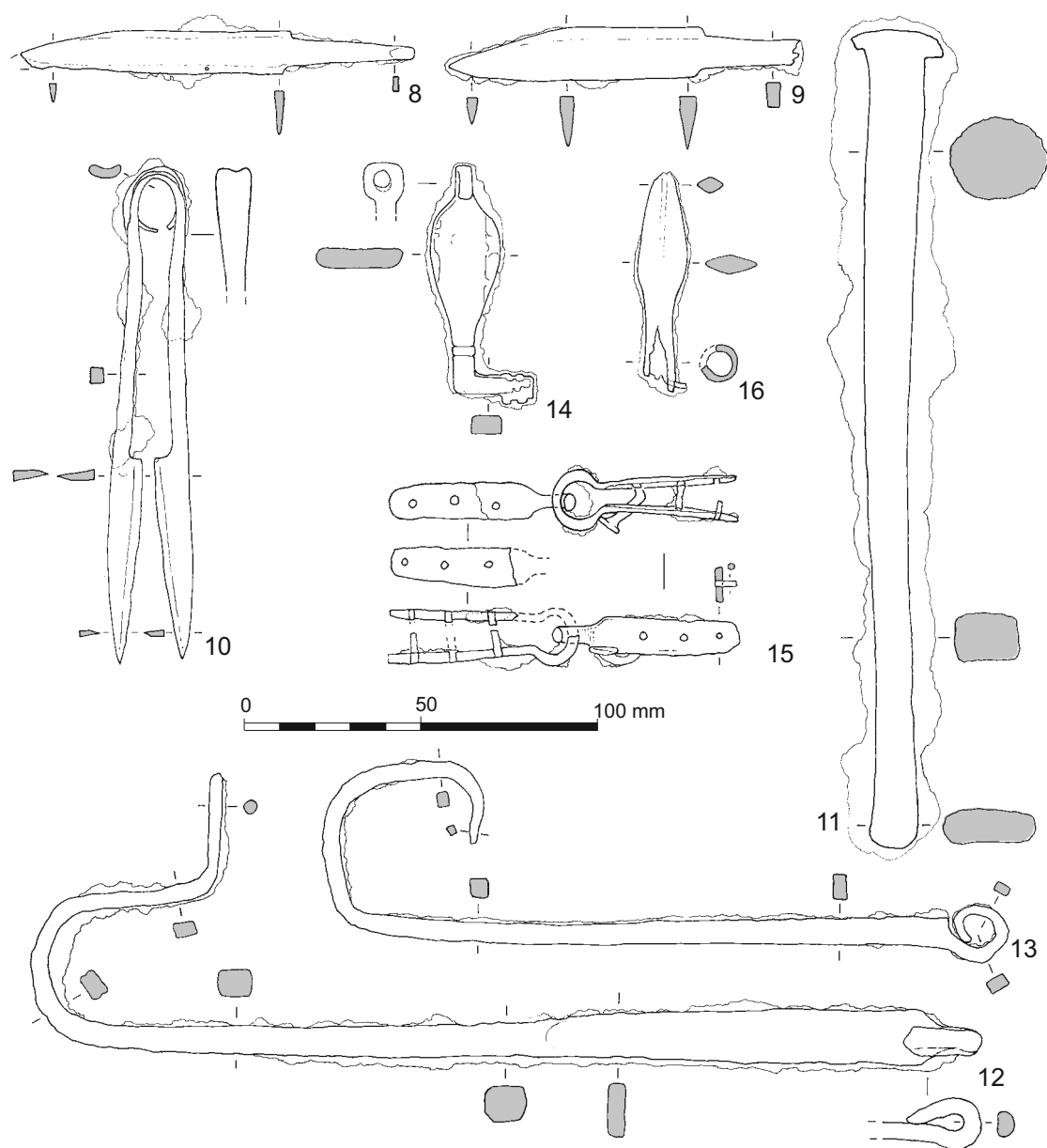


Figure 13: Saxon and medieval metalwork

backed, although the blade is now bent (ON 78; West Stow group A). The seventh example from this ditch is the tip of a knife blade or pair of shears (ON 80). Knives from other features were also classified as West Stow group D (ON 48, Figure 13.9, tree-throw 193 and ON 343, layer 441). Another example from post-medieval pit 124 is probably residual in this feature (ON 90).

Three pairs of iron shears were identified; one from Mid-/Late Saxon ditch 319 (context 275, ON 124, Figure 13.10), one from Mid-/Late Saxon pit 187 (ON 103) and one unstratified. Pair ON 124 are complete, although now in three pieces. They are small, 135 mm in length, with a U-shaped spring, up to 18 mm wide; the blades are a maximum of 12 mm wide. ON 103 are incomplete, comprising only the U-shaped spring (up to 19 mm wide) and two rod fragments; the blades are missing. The third pair would have been large, but only one blade and part of the arm survive. The blade is c. 135 mm in length and 30 mm wide, with the tip missing, and the original length of the shears can be estimated at 200 mm. Shears would presumably have been used for a range of purposes, however evidence from graves at Dover Buckland and Shudy Camps, Cambridgeshire suggests shears were used by women for spinning and weaving. One woman in the Dover Buckland cemetery had been buried with an unborn foetus in the birth position and the shears held between the hands at the edge of the pelvis, indicating 'that they were intended in this instance for midwifery function' (Evison 1987, 113).

Household objects

Two joining iron strip fragments, 17 mm wide, are slightly curved and may have been bucket or barrel hoops, although not enough is present to ascertain their diameter if this identification is correct (ON 125, Saxon ditch 319). Six pieces of iron binding, 8 mm wide, come from a single circular object c. 110 mm in diameter (ON 387, ditch 319). They were found with nine nail/shank fragments and a square washer. A section of iron binding was also recovered from a Saxon context in the adjacent Four Elms roundabout site (Riddler 2009a, 47–8).

Tools

A chisel (ON 89, Figure 13.11), with burred head and square-sectioned shaft, was found unstratified. It measures 230 mm in length and 15 mm wide. It is similar to an example from a Saxon pit at Hurst Park, East Molesey, Middlesex (Montague 1996, fig. 49.3), and to three from Thetford, Norfolk (Goodhall 1984, fig. 115. 5–7), although these were slightly more squat than the Wainscott example.

Structural ironwork

Three latchlifters were recovered from ditch 319. All are made from rectangular-sectioned bars, the largest 260 mm in length, 17 mm wide and 6 mm thick with one end bent into a U-shape and other hooked into a small suspension loop (context 414, ON 357, Figure 13.12). A second bar of similar

size (240 mm in length, 17 mm wide and 6 mm thick) is bent at right-angles for 60 mm and then downwards again at 90°; this end section appears to be oval in shape and may be perforated for attachment, however this area is masked by corrosion and the object is incomplete (ON 109). The third is smaller, 190 mm in length, with one end bent almost into a square 50 x 45 mm internally and a suspension hook on the other end (context 275, ON 79, Figure 13.13). Similar objects were recorded from a grave at Shudy Camps, Cambridgeshire (Lethbridge 1936, fig. 11.1, 2). A much smaller latchlifer was recorded from a sunken-featured building at West Stow, Suffolk (West 1985, fig. 173.1).

Two iron keys were recovered, from ditch 319 (ON 120) and pit 195 (context 196, ON 102, Figure 13.14). Both have flat, oval plates, with a rectangular-sectioned, right-angled rod at one end; details of the teeth/notches are obscured by corrosion. The largest key, measuring 80 mm in length, is broken at the other end, but a suspension loop survives on the smaller key (66 mm in length).

Fastenings and fittings

Two flat iron plates, held together with three rivets and an iron ring at one end, were recorded from ditch 319 (context 414, ON 362, Figure 13.15), associated with three fragments from an identical object. They would have formed a pair of interlinked iron loops, designed to hold straps in place, similar to an example from West Stow (West 1985, fig. 129.2, SFB 37). Each loop measures 53 mm in length, with plates up to 13 mm wide. Quite a substantial iron staple was also recovered from the ditch, measuring 50 mm long and 9 mm wide, the arms bent under at right-angles, one end curling, indicating a timber 100 mm thick (ON 118). Other fittings from this ditch include a second staple (ON 117, 59 mm long); four small rivets, 11–14 mm in length (ON 137); the top of a round-headed nail or stud (ON 371); five iron strip fragments with slightly ridged exterior, 16–20 mm wide and 3–4 mm thick, possibly part of a binding, found with part of a chain link; an L-shaped spike and two nail fragments (ON 399).

A twisted iron rod fragment, splayed at one end with a trace of a perforation, may have been part of a suspension system (ON 111, pit 265). Saxon pit 137 contained a large group of nails (22 pieces, 40–70 mm in length) and shanks (30 fragments, ON 398). A round-headed nail and two shank fragments came from ditch 314 (ON 389). Iron nail shank fragments came from ditch 309 and pits 156, 256 and 209.

Metal working

A bronze disc with a bracteate-type motif was discovered during metal detecting of the spoil-heaps of Area 2 (context 327, ON 255, Figure 12.7, Plate 8). It measures 30 mm in diameter, is 4 mm thick and weighs 18 g. One face is decorated with incised lines and punched dots, depicting a galloping horse across the centre, above which is probably a human head with flowing hair, representing Woden (D. Hinton, pers. comm.). This surface is worn around the edge; compact and

powdery corrosion is also present. The other side is mostly plain, with compact corrosion, however an area of tiny, punched rings are visible just off centre. The edge is slightly bevelled. This disc appears to have been a die for a bracteate pendant; such finds are extremely rare, with one example from Postgården in northern Jutland and two from Britain, in Essex and Norfolk (Behr 2010, 37, 52). The lines and dots in negative relief would have appeared 'as raised contour lines bordering the body parts that would be at the same level as the base' (*ibid.*, 52). Bracteates were pendants, usually made from gold foil, probably worn as amulets. Most are found in southern Scandinavia and northern Germany, while the English finds come predominantly from Kent but also other eastern counties, and 'as far west as Oxfordshire and Warwickshire' (*ibid.*, 35). As a die, this object suggests the production of bracteates in Kent and indicates the significance of this class of object: 'as already the making of a copper-alloy die constituted a considerable expenditure both in terms of workmanship and in material' (*ibid.*, 68).

Miscellaneous

Miscellaneous iron objects from ditch 319 include a rectangular strip measuring 90 x 10 x 5 mm (ON 126); a slightly tapering, square-sectioned rod bent twice through 90° (ON 136); a thin, square-sectioned rod fragment, bent through 90° three times and flattened at one end, perhaps part of a fitting (ON 115); a chain link (ON 396); two sheet fragments (ON 341, 391a); three tapering rods, measuring 70–100 mm in length and 3–5 mm thick, probably the shanks from pins or needles (ON 339, 340, 370); and an unidentified lump (ON 119). A trapezoidal-shaped piece of sheet iron, measuring 60 x 45 mm, was recovered from ditch 321 (ON 54) and a square-sectioned rod fragment, bent at right-angles, from Saxon pit 256 (ON 395). The corner is flattened, suggesting this rod may have been part of a rectangular buckle frame, and probably intrusive in this feature. A piece of thin, riveted sheet silver, now in a number of small fragments, was recovered from ditch 311, possibly from a workbox or pendant.

Medieval

Three copper alloy buckles were recorded from the ploughsoil of Area 2, two D-shaped and one rectangular. The D-shaped examples are both small with cast pins; ON 215 measures 15 x 13 mm and ON 337 17 x 12 mm. They are not closely datable and may have been used *c.* AD 1250–1650, for personal dress (*cf* Whitehead 1996, 19.54 and 18.40 respectively). The third, ON 36, is a single-looped rectangular buckle with a barrel moulding, ornate outer edges, narrowed and off-set strap bars and two lobed knobs flanking a recess for a sheet metal roller (now missing) (*cf* Whitehead 1996, 9.11). It dates *c.* 1250–1400.

The cast copper alloy foot from a bronze cooking vessel, of medieval or post-medieval date, was discovered during metal-detecting of the spoil heap. It is of plano-convex profile with one fluted side, created by four grooves; the underside is flat. A transverse collar, 6 mm wide, is present

30 mm above the base. The surviving height is 46 mm, the foot was 28 mm wide and up to 19 mm thick. At 108 g, the alloy must have a high lead content.

An iron arrowhead, measuring 62 mm in length and 15 mm wide, was recovered from layer 329 and is of medieval date (context 329, ON 318, Figure 13.16). Two small iron nails were recorded from surface 317.

Post-medieval, modern and undated

Copper alloy

A total of 293 copper alloy objects are of post-medieval and modern date, or could not be closely dated. Most are personal items or fastenings/fittings (Table 2). The majority were recovered during metal detecting of unstratified layers, with the exception of a tiny disc stud from ditch 311 and a folded strip from ditch 303. The objects include a thimble; Scout's, Butlins' and a toy 'Sheriff's' badges; two pendants; a spur rowel; a finger ring; 139 buttons, decorative strap fragments; furniture mounts and fittings; studs; rods; strips; sheet metal fragments and 91 handmade nails.

Silver

A silver cone-shaped object, possibly from a pen, was recorded from the colluvium (ON 35).

Iron

Post-medieval pit 103 produced a range of iron objects including a horseshoe fragment of wide web with two countersunk, rectangular holes (ON 46); a rectangular-framed buckle (ON 44); a large nail (ON 45) and a curved strip, 135 mm in length, with tapering ends, that may have been used to bind a vessel or bucket, held in place by four evenly spaced countersunk nail holes (ON 43). Also recovered from this pit were two plain spectacle framed buckles (probably of late 17th–18th century date), 12 nail/shank fragments, a wire fragment, a tack and a tiny annular brooch, 14 mm in diameter (ON 397). The brooch is heavily corroded; the x-radiograph suggests it may have been annular rather than penannular and a diagonal break in the ring appears to be accidental. The pin appears to be looped around the ring although this is a trait more typical of penannular brooches. Its small size suggests it was used to fasten delicate items of clothing, perhaps undergarments. It is probably of medieval or post-medieval date.

An iron spadeshoe was recovered from post-medieval pit 97 (ON 3). This is square-bottomed, 180 mm wide and a minimum of 65 mm wide, one arm extends 165 mm, the other 190 mm. Iron 'shoes' were in use from at least the Romano-British period, and were used to reinforce the edge of a wooden spade, helping to protect the spade and allow a deeper cut. An iron harrow tine was recorded from the ploughsoil (ON 130). Five small (35–50 mm diameter) iron cannon balls were also found, all probably dating to the late 17th or 18th century. The very approximate ratio of

weight of shot to weight of cannon is 1:250; these balls would therefore have been fired by artillery of 42–100 kg. These are likely to have been fired by small ‘Field Pieces’ – such as a robinet, which was mounted on a two-wheeled carriage, and fired a 2 inch (5 mm) diameter ball of a little under 1 lb (0.45 kg) in weight.

Pit 124 contained a group of nine nails and eight rod/shank fragments. Other finds from this pit (upper layer 125) included a collar, *c.* 35 mm in diameter and 30 mm high, a couple of wire and some sheet fragments, and three pieces from a hollow cylindrical handle, 16 mm diameter, 1.5 mm thick; one end is closed and rounded (ON 400). An object with an oval-shaped body and a suspension loop was heavily corroded but may have been formed of two plates riveted together. The date of this group of objects is uncertain.

Nineteen slightly curved iron strip fragments (*c.* 35 mm wide and 4 mm thick) may have come from a barrel hoop (ON 77, unstratified). Other iron strip fragments from layer 287, measure 34 mm wide and are slightly bent and twisted in some areas; their original use and date are not known (ON 4).

Lead

The lead objects were mainly found during metal-detecting. No items were definitely assigned a Roman or Saxon date. Most common are pieces of shot (84), 4–18 mm in diameter and probably of 17th or 18th date. The larger pieces (17–18 mm diameter) are musket shot, the smaller probably for carbines, a weapon mostly used by dragoons during this period. A larger (30–35 mm diameter), roughly-made sphere from trench 50 (ON 235) may also have been used as a projectile from a larger weapon, but it is uncast and may just represent a ball of waste metal.

The assemblage also includes 16 cloth seals, one from the upper fill of pit 124 and the others from the ploughsoil in Areas 2 and 3. These items formed an essential part of the textile industry’s quality control system from the late 13th or 14th century onwards, a mark or seal being put on each satisfactory bale of cloth, and although the system ended in 1724, similar seals were used as labels on cloth into the 19th century (Egan 1985).

A bell-shaped weight (493 g; 1lb 1³/₈ oz) with part of iron suspension loop was found in the ploughsoil of Area 2 (context 327). Other possible weights included rectangular (127 g; 4½ oz) and square (90 g; 31¹/₈ oz) blocks from the colluvium in Area 2 and a circular object with a flat base and a domed upper surface (65g; 2¼oz) from Saxon ditch 319. Three flat discs, perhaps representing counters or gaming pieces, were also identified but the remainder of the assemblage mainly consisted of lead waste scraps and sheet-metal off-cuts.

Metalworking debris

by Phil Andrews

Approximately 8.86 kg of ironworking debris was recovered (Table 3), virtually all from probable or certain Saxon contexts, with just 2 g from pit 284 and 16 g from post-medieval pit 97.

The majority of this debris is likely to derive from iron smelting, with 4587 g coming from tree-throw 193 and 1323 g from enclosure ditch 319. Other features contained less than a kilogram of material each, and only three of these produced more than 200 g.

There is 640 g of relatively dense slag with some evidence of a 'ropey' flow structure on the upper surface, characteristic of smelting (from contexts 180, 224, 336). A further 1288 g has no such flow structure evident but is fairly dense, and also likely to derive from smelting (from contexts 211, 386), as is a large, somewhat irregular 'lump' of slag from context 194 (tree-throw 193). The latter piece measures 170 x 150 x 100 mm and weighs 4274 g, and is perhaps the remains of a furnace bottom.

There are also two dense, sub-oval pieces of slag with fairly flat upper surfaces and slightly curved lower surfaces. This slag may have been tapped from a furnace, though it is more likely that it accumulated in the base of a furnace and that both pieces represent furnace bottoms. The larger of the pieces (from context 275) measures 150 x 130 x 50 mm and weighs 1012 g, while the smaller (from context 215) measures 140 x 105 x 35 mm and weighs 682 g. Neither of these pieces closely resembles the generally more vesicular, hemispherical smithing hearth bottoms which formed in the base of smithing hearths.

A total of 675 g of debris (from contexts 98, 120, 163, 188, 190, 194, 208, 213, 275) is undiagnostic and could be the result of either smelting or smithing; it includes a few pieces of fuel ash slag not necessarily derived from ironworking. However, the absence of any complete or fragmentary smithing hearth bottoms amongst this small assemblage lends further support to the suggestion that the majority of ironworking debris derives from smelting rather than smithing.

In addition to the slag, there is also a very small quantity (293 g) of possible iron ore, in the form of several ferruginous nodules, from context 194 (tree-throw 193).

Much of the slag has a slightly abraded/weathered appearance and is certainly residual in the contexts in which it was found (ditches, pits, a tree-throw and an SFB), but there is no reason to expect that it is not of Mid-Saxon date, though a Romano-British origin cannot be entirely ruled out. The tiny quantities of debris from late prehistoric and post-medieval features are likely to be intrusive and residual respectively in these contexts.

The earlier excavations on the adjacent Four Elms roundabout site produced a further 2.98 kg of ironworking slag (though whether smelting or smithing is not clearly indicated) with all of the debris coming from contexts of Saxon and medieval date (Clark *et al.* 2009, 53).

The evidence for ironworking, specifically smelting, in the Mid-Saxon period at Wainscott is welcome but not unexpected as evidence for iron production and the manufacture of iron objects during this period is now attested from a relatively small but increasing number and variety of rural as well as urban sites. For example, the late 8th–early 9th century furnaces excavated at Ramsbury, Wiltshire (Haslam 1980) remain an important example of a rural smelting site, while Romsey, Hampshire is likely to have been the source of much of the iron used at the late 7th–mid-9th century urban centre of *Hamwic* (Andrews 1997, 222). In Kent there is currently little evidence for iron production at this time, and a 9th century site at Millbrook in the Ashdown Forest in the Weald remains the only Saxon site yet identified in this area amongst the large number of Romano-British and medieval smelting sites (Tebbutt 1982). Furthermore, the evidence from this and other sites indicates that furnaces from which the slag could be tapped were not re-introduced in Britain following the Roman period until the 9th century.

Although the quantity of ironworking debris recovered at Wainscott is not large, particularly in terms of what might be expected for smelting evidence, and no furnace remains (or furnace lining) were present, it is of some significance and certainly indicates at least one episode of iron production in the vicinity, probably during the 8th century.

Table 3 Metalworking debris by context

<i>Context</i>	<i>Feature</i>	<i>Group</i>	<i>Type</i>	<i>Date</i>	<i>Weight (g)</i>	<i>Debris ident.</i>
98	97	–	Pit	P-Med	16	Undiagnostic
120	119	318	SFB	Early/Mid-Saxon	60	Undiagnostic
163	162	–	Pit	Early/Mid-Saxon	119	Undiagnostic
180	179	313	Ditch	Early/Mid-Saxon	169	Smelting
188	119	187	Ditch	Mid/Late Saxon	93	Undiagnostic
190	189	284	Pit	Middle Bronze	2	Undiagnostic
				Age		
194	193	–	Tree-throw	Mid-/Late Saxon	20	Undiagnostic
194	193	–	Tree-throw	Mid-/Late Saxon	4274	Smelting?
194	193	–	Tree-throw	Mid-/Late Saxon	293	Iron ore
208	207	288	Ditch	Early/Mid-Saxon	50	Undiagnostic
211	209	–	Pit	Early/Mid-Saxon	668	Smelting?
213	212	–	Pit	Early/Mid-Saxon	2	Undiagnostic
215	214	322	Ditch	Undated	682	Smelting
224	207	288	Ditch	Early/Mid-Saxon	110	Smelting
275	264	319	Ditch	Mid-/Late Saxon	311	Undiagnostic
275	264	319	Ditch	Mid-/Late Saxon	1012	Smelting
336	335	455	Ditch	Early/Mid-Saxon	361	Smelting
386	–	–	–	Undated	620	Smelting?
Total					8862	

Pottery

by Lorraine Mephram and Alistair J. Barclay (early prehistoric)

The complete pottery assemblage amounts to 605 sherds (8164 g) and includes material of early prehistoric, late prehistoric, Romano-British, Saxon, medieval and post-medieval date. Only the

prehistoric (170 sherds) and Early/Mid-Saxon material (301 sherds) is discussed here; details of pottery of other periods is included in the project archive.

Early prehistoric

A total of 19 sherds of Beaker and Early Bronze Age pottery were recovered from three separate features. The majority (14 sherds) was recovered from a single pit and is described in more detail below. The other five sherds are less diagnostic, small and generally in a worn condition. Four sherds (11 g) (context 46, ditch 302) comprise a plain base fragment and three body sherds from at least two thin-walled Beaker vessels. Two of the sherds have indeterminate impressed decoration. With the exception of one decorated sherd that is grog-tempered, all the sherds occur in fabric GFA1 (see Table 4 and pit 234 below). It is not possible to assign these sherds to a Beaker style. The remaining sherd (20 g) from pit 602 (is plain and occurs in a grog and flint tempered fabric. It is relatively thick-walled (12 mm) and possibly derives from either a Collared or Biconical Urn of Early Bronze Age date.

Table 4 Summary of the Beaker pottery from fill 233, pit 234

<i>Vessel</i>	<i>Count</i>	<i>Weight(g)</i>	<i>Description</i>	<i>Fabric</i>
1	5	107	Rim, body & base sherds from ?barbed wire impressed globular beaker	GFA1 Hard fabric sub-angular
2	1	43	Base from a globular beaker	FG1 Hard fabric with common calcined flint (1–5 mm) and rare large grog (4 mm)
3	1	40	Finger-tip impressed body sherd	GFA1
4	1	15	Finger-nail impressed body sherd	GFA1
–	6	16	6 relatively small & abraded sherds, 1 with finger-nail impressions & 1 with cuneiform impressions	GFA1
Total	14	221		

Fourteen sherds (excluding fresh breaks) from a minimum of four vessels (221 g) were recovered from fill 233 of pit 234 (Table 4) (Figure 14.1–4). The most complete vessel (Figure 14.1) has an everted rim, is globular in shape (Clarke’s form III) with zonal decoration consisting of poorly executed horizontal bands of ‘barbed wire’ or comb impressions and incised cross hatch. Its base is slightly raised and concave in profile. A second base fragment decorated with coarse comb impressions (Figure 14.2) is also from a globular vessel. Two further vessels (Figure 14.3–4) have paired finger-tip or nail-impressed decoration. With the exception of vessel 2, which is manufactured from a calcined flint-tempered fabric, all of the pottery is made from a fabric that contains varying quantities of grog, calcined-flint and quartz sand. A further six sherds could be

from these or perhaps another two vessels. Variation in the decoration, firing and fabric indicate that the four pots do not form an homogeneous group and were possibly not the work of a single potter. The association of finger-nail rusticated, possible ‘barbed wire’ and coarse comb-impressed decorated pottery is not uncommon (Clarke 1970, 148).

Stylistically the pottery can be placed within Clarke’s East Anglian group (1970, 146) which, as the name suggests, is concentrated around north Kent, the Thames Estuary and the east coast and its hinterland (1970, 329–30 and 560: map 4). Pottery of this character is slightly later than the earliest Beaker pottery in Britain with a likely date range of 2250–1900 cal. BC (see Needham 2005).

Table 5 Pottery fabric totals (late prehistoric and Saxon)

<i>Fabric Code</i>	<i>Description</i>	<i>No. sherds</i>	<i>Weight (g)</i>
F1	V. coarse, flint-tempered; common calcined flint <5 mm, poorly sorted; rare quartz	48	861
F2	V. well sorted, flint-tempered; moderate–common calcined flint <1.5 mm; rare quartz.	11	55
F3	Coarse, flint-tempered; sparse–moderate calcined flint <3 mm, poorly sorted	12	36
F4	Well sorted, flint-tempered; common, calcined flint <2 mm, well sorted	77	754
F5	Thin-walled, fairly well sorted flint-tempered; sparse calcined flint <2 mm (mainly <1 mm)	3	7
	<i>sub-total later prehistoric</i>	<i>151</i>	<i>1713</i>
Q400	Fine sandy; common fine quartz (<0.125 mm), well sorted	9	72
Q401	Medium-grained sandy; common rounded quartz <1 mm (mainly <0.5 mm)	1	18
Q402	Imported greyware; sparse, well sorted, rounded quartz <0.25 mm; grey surfaces, oxidised core; hard fired	1	16
Q403	Imported greyware; moderate, well sorted, subrounded quartz <0.25 mm; grey surfaces & core; oxidised margins; hard fired	1	162
Q404	Imported greyware; sparse, well sorted, rounded quartz <0.25 mm; grey surfaces & core; oxidised margins	1	21
F400	Coarse, flint-tempered; sparse patinated flint <2 mm	1	10
S400	Coarse, shelly; common crushed fossil shell (platey frags) <3 mm, frequently leached out, leaving voids	90	2095
V400	Organic-tempered; common organic inclusions <5 mm (EMS4)	191	1515
V401	Organic-tempered with sand; moderate organic inclusions <5 mm; sparse, rounded quartz <0.5 mm	6	65
	<i>sub-total Saxon</i>	<i>301</i>	<i>3974</i>
	OVERALL TOTAL	452	5687

Table 6 Correlation of late prehistoric fabrics and forms

<i>Fabric</i>	<i>Type 1</i>	<i>Type 2</i>	<i>Type 3</i>	<i>Type 4</i>	<i>Dec.</i>	<i>TOTAL</i>
F1	1	3	–	–	–	4
F2	–	–	1	1	–	2
F4	–	–	5	11	2	18
TOTAL	1	3	6	12	2	24

Late prehistoric

This chronological group (151 sherds; 1713 g) consists exclusively of sherds in flint-tempered fabrics, in varying degrees of coarseness (fabrics F1–F5). Fabric totals and brief descriptions are given in Table 5.

There are 24 diagnostic sherds amongst this group, comprising 22 rim sherds and two decorated body sherds. The rim sherds fall into four types, based on profile:

Type 1: Simple, rounded rim, but overall vessel form unknown.

Type 2: Plain, upright rim, thick-walled vessel of straight-sided, bucket-shaped form (Figure 14.5–6).

Type 3: Short, upright or slightly everted rim on rounded body, relatively thin-walled (Figure 14.7).

Type 4: Plain, upright rim, vessel forms as R2, but smaller and thinner-walled (Figure 14.8–9).

The two decorated body sherds, both in fabric F4, carry applied cordons, and are likely to belong to thick-walled vessels with rims of type 2. The correlation of rim/vessel form to fabric type is given in Table 6. The large, bucket-shaped jars (type 2) and the finer, more rounded vessels (type 3) are both well paralleled within Middle Bronze Age Deverel-Rimbury style assemblages. Although this ceramic tradition is not well represented in north Kent, comparable examples, including both coarsewares and finewares, have been found at Iwade (Hamilton and Seager Thomas 2005, fig. 31), Coldharbour Road, Gravesend (Barclay 1994), and from Cobham Golf course, near Rochester, on the route of the Channel Tunnel Rail Link (Barclay *et al.* 2006, fig. 3.3). There are further parallels amongst other CTRL assemblages further to the south, at Tutt Hill and Beechbrook Wood, near Ashford (*ibid.*). In all of these assemblages, the Deverel-Rimbury style vessels appear almost exclusively in flint-tempered fabrics, although there is evidence at Gravesend for the use of grog and possibly shell as additional tempering agents. The appearance of ‘new’ tempering agents (particularly grog), used alongside flint, is now recognised as being characteristic of the transition between Middle and Late Bronze Age ceramic styles (*ibid.*, 57–60, 78–9). There is no sign of this at Wainscott, but the smaller bucket-shaped jars (type 4) could be accommodated within this transitional phase. There are similar vessels, for example, from the two CTRL assemblages which most clearly included transitional ceramics – Tutt Hill and Beechbrook Wood (*ibid.*, fig. 3.4). There are certainly no jars of indisputably Late Bronze Age style, such as the hooked rim or shouldered forms. Overall, the transitional Middle/Late Bronze Age ceramic phase in Kent is thought to date prior to the 10th century cal. BC (*ibid.*, 58).

There are hints of a possible ceramic sequence at Wainscott. The groups from pit 47, which included all three of the examples of large bucket-shaped jars (type 2) (Figure 14.5–6) and pit 346 (one fineware globular jar: Figure 14.7), could be seen as more firmly rooted in the Middle Bronze Age. In contrast, those from pit 75, which contained five examples of the smaller bucket-shaped

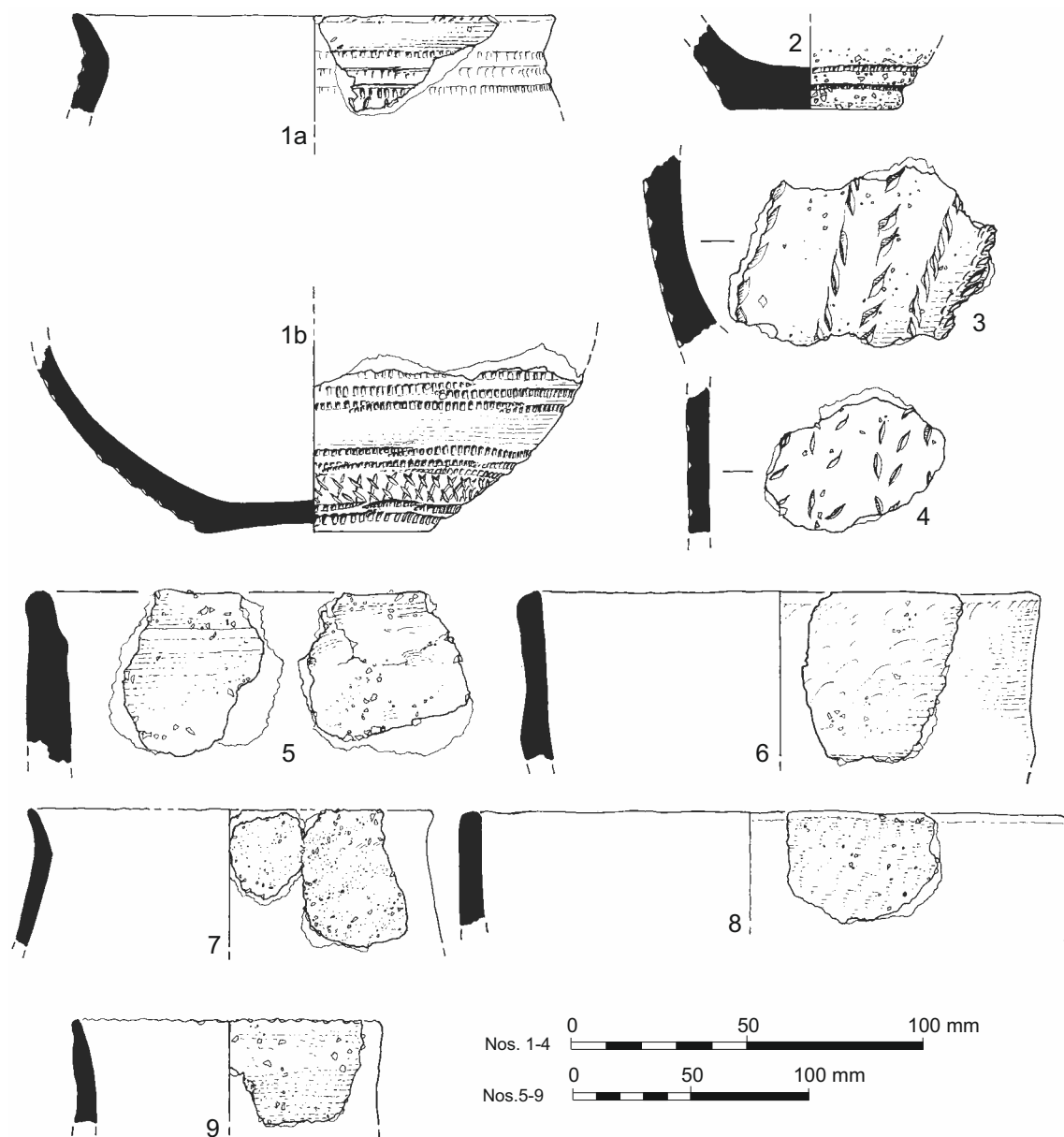


Figure 14: Prehistoric pottery

jars (type 4) (Figure 14.8), and pit 338 (one small bucket-shaped jar: Figure 14.9), and could therefore fall slightly later in the sequence. However, this supposition is not supported by the radiocarbon dating (Stevens and Barclay, below). Dates were obtained for both pits: 1530–1410 cal. BC for pit 47 (SUERC-33332) and 1610–1420 cal. BC for pit 75 (SUERC-33333), and are sufficiently similar as to suggest that both pits can be related to a single phase of settlement within the area at the beginning of the Middle Bronze Age. It is likely, then, that other vessels of type 4 from the site are also of Middle Bronze Age date, although there remains the possibility that some elements of the assemblage could still belong within the transitional Middle/Late Bronze Age phase.

Pits 47, 75, 338 and 346 are the only features that produced sufficient diagnostic material to indicate a closer date range, and only the two larger groups, from pits 47 (34 sherds, mean sherd weight 23.4 g) and 75 (29 sherds, mean sherd weight 17.5 g), can, with relative confidence, be interpreted as having undergone little post-depositional movement. Other flint-tempered sherds were recovered from several other features, but none produced more than eight sherds, and only one feature contained any diagnostic pieces (pit 19; fineware globular jar). Grouped together, the pottery from all these features has a mean sherd weight of 4.7 g, and cannot be regarded as providing secure dating.

Saxon pottery

The Saxon assemblage amounts to 301 sherds (3974 g), and includes material of Early/Mid-Saxon and Mid-/Late Saxon date. Nine fabric types have been defined for this group, which fall into five groups: organic-tempered (2 fabrics); handmade sandy (2 fabrics); wheelthrown sandy, probably imported (three fabrics), shelly (1 fabric) and flint-tempered (1 fabric). Totals and brief descriptions are given in Table 5.

Early/Mid-Saxon

The Early/Mid-Saxon group comprises sherds in organic-tempered and handmade sandy fabrics. There is little here that is clearly diagnostic. Of the 19 rims present, only six can be assigned more closely to vessel form.

Type 5: Straight-sided or slightly convex vessel with plain rim (not illustrated; three examples)

Type 6: Convex bowl with slightly out-turned rim (Figure. 15.10).

Type 7: Short everted rim on a rounded body (Figure. 15.11)

Type 8: Short everted rim on a weakly shouldered form (Figure. 15.12).

Bases have rounded angles; there is also one shallow pedestal base. Only one sherd (fabric Q400) is burnished, and there is no decoration present.

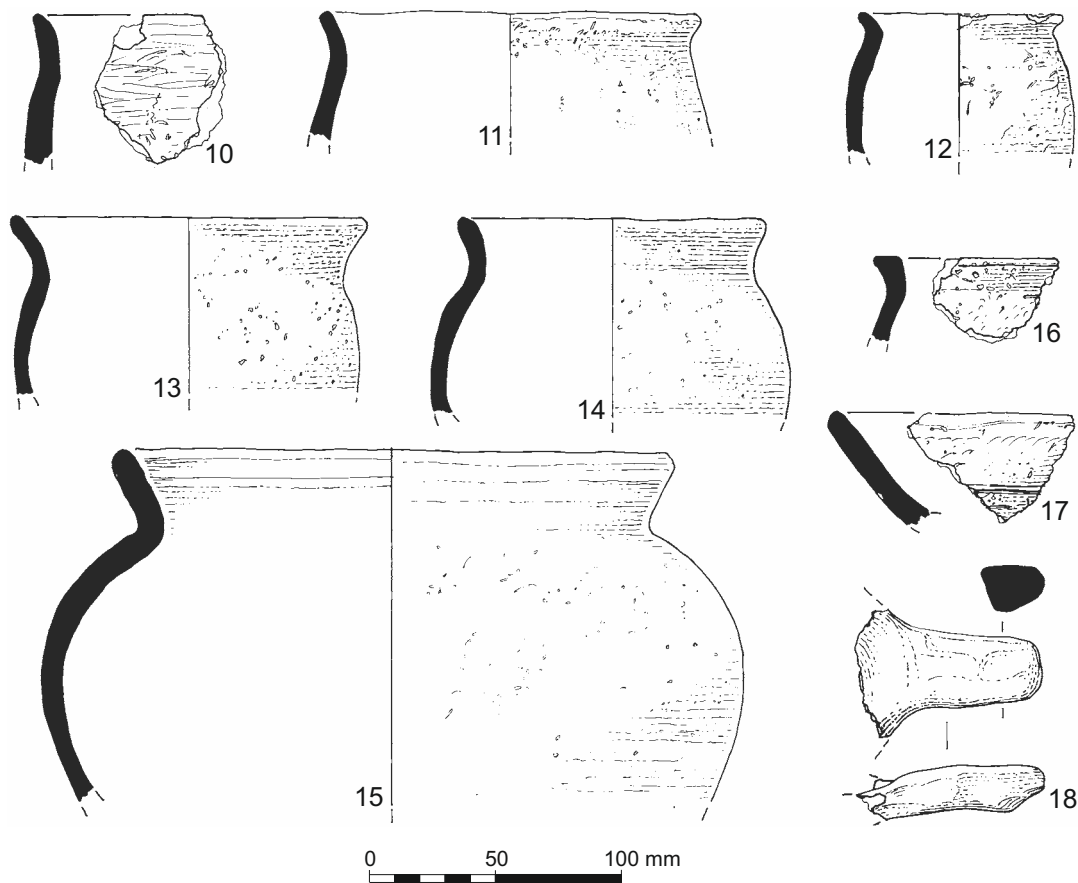


Figure 15: Saxon pottery

The vessel forms are not particularly chronologically distinctive, but the predominance of organic-tempered wares amongst this group may help to narrow down the date range. The published information for north Kent suggests that the fabric types in use during the Early Saxon period were either organic-tempered or sandy (Pollard 1988, 161; Tester 1956; Philp 1973, 155, 161; Raymond 2003, 38). In Canterbury, however, where the Saxon ceramic sequence runs from the 5th century, evidence suggests that the organic-tempered fabrics did not constitute a significant part of the assemblage until the later 6th century, remaining predominant until at least the end of the 7th century (Macpherson-Grant and Mainman 1995, 852). There is no sign at Wainscott of the range of non-local fabrics identified at the nearby site at Northfleet, on the CTRL route, and associated with radiocarbon dates placing the assemblage in the 5th or 6th century (Mephram 2011).

Mid-/Late Saxon

Shell-tempered wares (fabrics S400, S401) make up nearly all of the Mid-/Late Saxon group. These two fabrics are visually very similar, and can really only be distinguished on the basis of the size and frequency of the shell inclusions. In both cases the shell is marine and consists largely of platey fragments of oyster; the fragments in S400 are in general more finely crushed and more frequent, and the vessels thinner-walled. The distinction is, however, difficult to sustain, even under microscopic (X10) examination. Four other fabrics are each represented by a single sherd – one tempered with patinated flint (F400), and three wheelthrown greywares, probably Continental imports (Q402 – Q404).

There is a restricted range of vessel forms, defined on the basis of the rim sherds. All except one example occurred in the shelly wares; the correlation of fabric to form is given in Table 7.

Type 9: Jar with simple, everted rim and convex body (Figure 15.13–14)

Type 10: Jar with upright or slightly everted rim, and rounded body (Figure 15.15)

Type 11: Jar with short, thickened rim (Figure 15.16)

Type 12: Flared dish with plain rim (Figure. 15.17)

Type 13: Straight, solid handle with rounded end, presumably from open form (Figure. 15.18)

Table 7 Correlation of Mid/Late Saxon fabrics and forms

Fabric	Type 9	Type 10	Type 11	Type 12	Type 13	Total
F400	1	–	–	–	–	1
S400	8	–	–	–	–	8
S401	–	7	6	1	1	15
Total	9	7	6	1	1	24

Bases have rounded base angles throughout; one example, in S400, has a central deliberate post-firing perforation. There is no sign of any surface treatment beyond a fairly cursory smoothing of surfaces, and there is no decoration of any kind. Jars of type 9 are smaller than those of type 10, although the sample is very small – three measurable examples of type 9, all 140 mm in diameter, compared to one measurable example of type 10 (180 mm)

Fabrics and vessel forms have parallels in Mid- and Late Saxon assemblages, although there is a general dearth of published assemblages of this date range from Kent, particularly for the Mid-Saxon period. Shelly wares appear in the county from the 8th century, and continue into the Late Saxon period; in the Canterbury type series, the fabric types MLS4 and LS2 are used respectively for Mid- and Late Saxon shelly wares, but the distinction between the two is recognised to be somewhat arbitrary (Macpherson-Grant and Mainman 1995, 823–4). However, in the latter case, the Mid-Saxon shelly wares contain shell inclusions that are larger and sparser than their Late Saxon counterparts, while at Wainscott the picture seems to be reversed – fabric S400, containing slightly finer and more common shell, occurs exclusively in the smaller, simpler vessels of type 9, which are more closely paralleled in the Mid-Saxon sequence, while fabric S401 is used for the rounded vessels of types 10 and 11, as well as the two less common forms (dish and handled vessel), which may have closer affinities with Late Saxon forms.

At *Sandtun*, West Hythe, the Mid-Saxon shelly wares (dated to the 9th century) included both more coarsely tempered examples as well as those which were ‘profusely shell-tempered’; the latter were originally thought to be imported, but subsequent analysis suggests that this is unlikely (Gardiner *et al.* 2001, 209, illus. 22; Blackmore 2001, 203–7; 2010, 181). The illustrated forms provide parallels for the Wainscott jars of types 9 and 10, and for the flared dish (Gardiner *et al.* 2001, illus. 24, 36, 37).

The site at Wainscott, however, is closer to London than to the east Kent coast, and comparisons with the London material may be more pertinent. The Mid-Saxon shell-tempered wares (MSS), which have a date range of late 8th–9th century, are thought to be mostly imported from Kent. There are few illustrated vessels to which to compare the Wainscott examples (Blackmore 1988, fig. 22, nos 26–7; 1989, fig. 31, nos 52–5), but the Mid-Saxon sequence generally includes jars comparable to type 9. Parallels can be found, however, amongst the Late Saxon shelly wares (LSS), for jars of types 10 and 11, and the flared dish. This ware is dated *c.* 900–1050 (Vince and Jenner 1991, 49–51, figs 2.23 and 2.24).

From the immediately adjacent site at Four Elms roundabout, the Mid-Saxon wares (dated *c.* 750–850) were minimal (13 sherds), and included only sparsely shell-tempered wares (MLS4 and MLS4C); the forms illustrated appear more crudely made than those from the present site, and the fabrics contain rare flint and sandstone or ironstone, not seen in the examples from the current site (Cotter 2009).

Alongside the shelly wares there is one sherd in a fabric tempered with patinated flint (F400), a rim sherd from a jar of similar form to the shelly wares (type 9). The wheelthrown greywares are not very easy to tie down; a wide range of imported wheelthrown greywares has been found in Mid-Saxon *Lundenwic* (e.g. Blackmore 2003, 238–9), and examples are also known from Canterbury and from other sites in Kent (largely from cemetery sites) in the Mid-Saxon period (Evison 1979), but greywares continued to be imported into the Late Saxon period and beyond. None of the sherds seen at Wainscott is diagnostic, although one is from a ‘corrugated’ shoulder (*ibid.*, fig. 16).

Discussion

From the discussion above it is clear that there is a ceramic sequence within the Saxon assemblage, although the precise dating of the Mid-/Late Saxon component remains somewhat uncertain.

Certainly there seems to be a spatial distinction between the Early/Mid-Saxon organic-tempered wares, and the Mid-/Late Saxon wares. The two sunken-feature buildings 318 (108 sherds) and 320 (42 sherds) produced only organic-tempered wares, indicating a date for these features (or, more likely, for their abandonment) no earlier than the later 6th century, extending into the 7th century. This is supported by a radiocarbon date from SFB 318 of cal. AD 550–650 (SUERC-33334).

In contrast, the group from ditch 319 (82 sherds), enclosing SFB 320, consists largely of shelly wares, as well as the single flint-tempered sherd and the wheel-thrown greyware with ‘corrugated’ decoration. This group, however, included sherds of both S400 and S401, and jars of types 9 and 10, as well as the flared dish and the unusual handle (Figure 15.13–15, 17–18). A smaller group from ditch 321 in Area 4 (12 sherds) contained only sherds of S401, including the only two examples of type 11 jars (Figure 15.16; the two rims may come from the same vessel).

None of the other features yielded more than seven sherds, but the shelly wares are confined to three pits (187, 216, 274) and a tree-throw (193). Organic-tempered wares were also found in some of the same features as the shelly wares (in small numbers, and probably residual), but occurred unaccompanied by other wares in the trackway (ditches 311, 312, 451, 455), as well as ditch 288 and enclosure ditch 303. Quantities of pottery found in all these features, however, are very small, and their use as dating evidence must remain tentative. Nevertheless, one of the trackway ditches (312) was cut by SFB 318, supporting an Early/Mid-Saxon date for the former.

Other datable finds from the site comprise seven sceattas of early 8th century date (Cooke, above), and five glass vessel fragments, two decorated, of Mid-Saxon type (8th/9th century). Most of these finds came from ditch 319, with one coin from tree-throw 193, and a glass fragment from ditch 308. The date range of these finds would support an interpretation for the Mid-/Late Saxon pottery assemblage, on analogy with the *Sandtun* assemblage, as entirely of Mid-Saxon date (8th–

9th century), although the possibility that there could be some later elements of 10th or even 11th century date cannot be entirely ruled out.

Glass

by Rachael Seager Smith

A group of four vessel fragments from ditch 319 (context 275) are of Mid-Saxon date; all are body fragments and include two that are decorated, one with an applied same-colour trail and the second with applied reticella rods (opaque white and yellow spirals). Comparable vessel glass from Southampton (*Hamwic*), for example, was dated to the 8th/9th century (Hunter and Heyworth 1998, 20, pl. 1). A fifth piece, a bowl rim in very dark green (appearing black) glass from segment 113 of ditch 308 can also be paralleled at *Hamwic* (*ibid.*, 19, fig. 14, 169/3058, 169/3069, 15/446 and 30/112). While recent discoveries have begun to indicate that glass was a much more common artefact in the Saxon period than was previously thought, the occurrence of these pieces at Wainscott is nevertheless of interest, and implies a site with access to trading networks. Small quantities of post-medieval/modern glass were also recovered.

Ceramic building materials, fired clay and stone

by Rachael Seager Smith and Kayt Marter Brown

A total of 117 fragments (18,547 g) of ceramic building material were recovered, of which over half are of Romano-British date, the remainder comprising post-Roman roof tiles. Identifiable Romano-British types include fragments from *tegula* and *imbrex* roof tiles, some of the thinner brick types (e.g. *bessalis* and *lydion*) and box flue tiles. The fabrics appear comparable with the more common types identified on the Four Elms roundabout site and two overfired bricks, fused together due to a firing mishap, may provide further support for local tile production (Harrison 2009).

Of the 164 fragments of fired clay (2,530 g), the bulk consists of small, featureless pieces in a variety of oxidised, slightly sandy fabrics. Associated finds indicate that much of this material is of Saxon date. The only identifiable objects are pieces of Saxon loomweights. Fragments from at least two weights from SFB 320 are an Early Saxon, annular type (Hurst 1959, 24), and occur in an organic-tempered fabric. The approximate diameter of these weights, 100–120 mm, is comparable to the large group from Mucking, Essex (Hammerow 1993, 67). An incomplete Late Saxon bun-shaped loomweight was recovered from pit 209 and a perforated fragment of uncertain date and origin came from ditch 311.

Amongst the 83 stone fragments recovered, the only prehistoric portable stone object consisted of a sandstone saddle quern fragment (pit 234), associated with Beaker pottery (Plates 1

and 9). A tiny fragment of unworked sandstone was associated with transitional Mid–Late Bronze Age pottery in pit 75.

Apart from seven fragments of unworked heathstone found in Saxon ditches the rest of the stone assemblage is dominated by fragments from lava rotary querns and/or millstones, imported from the Rhineland. These comprise predominately small, featureless fragments, although the relative thinness (24 mm and 28 mm) of the two largest pieces suggests that they, at least, probably derive from millstones. The majority occurred in Saxon contexts (pit 274 and ditches 312, 319 and 322), but the querns themselves could be of either Roman or Anglo-Saxon date. Similarly degraded fragments were found on the Four Elms roundabout site (Riddler 2009a, 46; 2009b, 53) and they are common on other Roman sites in north Kent, including Springhead and Northfleet (Roe 1999; Shaffrey 2011), Farningham (Black 1987, 117) and at Joydan’s Wood, Bexley (Tester and Caiger 1965, 182).

Flint

by P.A. Harding

A relatively low density of worked flint, comprising 529 pieces, was recovered from 103 excavated contexts (Table 8). Stratified contexts of Middle–Late Bronze Age date frequently produced artefacts in a fresh condition, while later prehistoric, post-Roman and unstratified deposits were often characterised by material with heavy post-depositional edge damage. Nodules were apparently obtained from local surface sources with limited use of Bull head and marbled (bi-zoned) flint, both of which occur naturally in north Kent.

The assemblage comprises a hard hammer struck flake industry, typical of that prevalent in Britain from the Late Neolithic onwards. Only 39 (7%) blades were found, most accidental by-products of flake production. This is reflected in the almost total absence of blade and bladelet cores.

The low density of worked flint suggests only minimal Mesolithic, Neolithic and Early Bronze Age activity at the site. Individual pieces, principally a bladelet core from a Middle/Late Bronze Age ditch (16) but also blades from residual contexts 114 and 334 and a notched blade, possibly indicating failed microburin technique (from context 5510), may provide a hint of Mesolithic activity in the area. Similarly an Early Neolithic presence is demonstrated most clearly by a leaf arrowhead from a Late Saxon/early medieval ditch. This total may be supplemented by a number of well made flakes with abraded striking platforms and rejuvenation tablets.

Fifty-seven pieces of stratified worked flint were recovered from Beaker pit 233, including a scraper, flakes and poorly worked cores. A similar quantity of material was recovered from a less precisely dated ‘later prehistoric’ pit 122. Thereafter small groups were found in a number of ditch fills ranging in date from the Middle Bronze Age onwards. These groups are characterised by

robust flakes, poorly worked cores, limited retouch pieces and hard hammer percussion. This technology is typical of the Middle/Late Bronze Age technology across much of Britain in the later 2nd millennium and early 1st millennium BC.

Table 8 The worked flint (totals in italics)

<i>Period/feature type</i>	<i>No. contexts</i>	<i>Bladelet Cores</i>	<i>Flake Cores</i>	<i>Broken Fragments</i>	<i>Blades</i>	<i>Broken Blades</i>	<i>Broken Bladelets</i>	<i>Flakes</i>	<i>Broken Flakes</i>	<i>Rejuvenation Tablets</i>	<i>Chips/micro debitage</i>	<i>Scrapers</i>	<i>Other Tools</i>	<i>Projectile Points</i>	<i>Edge Damaged</i>	<i>Debitage</i>	<i>Miscellaneous Retouched</i>	<i>TOTAL</i>
Beaker pit 121	–	–	–	–	1	1	1	22	25	–	–	–	–	–	–	–	1	51
Beaker pit 234	–	–	7	3	1	1	1	28	13	–	–	1	–	–	–	2	–	57
<i>Beaker</i>	2	–	7	3	2	2	2	50	38	–	–	1	–	–	–	2	1	108
Early Prehistoric pits	–	–	–	–	2	2	–	5	1	–	–	–	–	–	–	–	–	10
<i>Early Prehistoric</i>	4	–	–	–	2	2	–	5	1	–	–	–	–	–	–	–	–	10
MBA pit 48	–	–	1	–	–	–	–	7	11	1	–	–	–	–	–	–	–	20
MBA pit 75	–	–	1	1	1	–	–	9	5	–	–	–	–	–	–	–	1	18
<i>Middle Bronze Age</i>	2	–	2	1	1	–	–	16	16	1	–	–	–	–	–	–	1	38
M/LBA ditches	10	1	–	1	1	1	–	30	40	–	1	1	–	–	–	2	1	79
M/LBA pits	2	–	–	–	–	–	–	6	2	–	–	–	–	–	–	–	–	8
<i>Middle/Late Bronze Age</i>	12	1	–	1	1	1	–	36	42	–	1	1	–	–	–	2	1	87
Later prehist. ditches	9	–	1	2	–	–	–	22	17	1	–	–	–	–	–	5	3	51
Later prehist., pits	3	–	–	–	1	–	–	8	4	–	–	–	–	–	–	–	–	13
Later prehist., other	5	–	4	1	0	1	–	12	10	–	–	1	–	–	–	1	3	33
<i>Later prehistoric</i>	17	–	5	3	1	1	–	42	31	1	–	1	–	–	–	6	6	97
<i>Saxon</i>	34	–	2	1	5	7	–	44	35	1	–	1	–	–	–	2	2	100
<i>L Saxon/early medieval</i>	2	–	–	–	–	–	–	2	–	–	–	–	–	1	–	–	–	3
<i>Post-medieval</i>	2	–	–	–	–	1	–	1	1	–	–	–	–	–	–	–	–	3
<i>Undated</i>	13	–	1	–	1	6	–	20	25	–	–	–	1	–	1	–	1	56
<i>Topsoil</i>	15	–	–	–	3	1	–	15	3	–	–	1	1	–	1	–	2	27
<i>Total</i>		1	17	9	16	21	2	231	192	3	1	5	2	1	2	12	14	529

The modest assemblage is reminiscent of that found during archaeological excavations in advance of the Wainscott Northern Bypass (Clark *et al.* 2009). Small, often poorly stratified, flint assemblages (Wilson and McNabb 2009) demonstrated prehistoric activity from the Lower Palaeolithic period onwards. The material was characterised by a hard hammer struck, flake-based industry using multi-platform cores and unspecified retouched flakes that were considered to be of Neolithic/Early Bronze Age date. Nothing was considered to relate specifically to Middle or Late Bronze Age activity despite the presence of a scatter of Middle Bronze Age pottery. The

excavations reported here have confirmed a low level presence during the Neolithic period into the Early Bronze Age, but suggest that Middle/Late Bronze Age flint working associated with settlement and field boundaries may have formed a greater component of the material culture than previously considered likely.

Unworked burnt flint

Unworked burnt flint was found in relatively small quantities in a variety of features, ranging in date from the Middle Bronze Age to the Saxon period. Although intrinsically undatable, burnt flint is generally interpreted as indicative of prehistoric activity, so may well be residual in the Roman and later contexts.

Animal bone

by Jessica M. Grimm

In total, the assemblage consists of 1202 bones (conjoining fragments demonstrably from the same bone were counted as one bone in order to minimise distortion). These comprise mammals, bird and fish bones; no amphibians are present and fragments identifiable only as 'large' or 'small mammal' were included in the unidentified bone category. Because many features on the site contained residual material, it was not possible to study the assemblage chronologically in any detail.

Most of the bones survive in fair condition, although it was noted that some contexts had fared better or worse than this, with the least well-preserved bones often being very light in weight. Overall, the assemblage contains a high proportion of mandibles and many loose teeth, generally interpreted as a sign of poor preservation and reworking.

The identifiable bones derive from cattle (239 bones), pig (122), sheep/goat (121), horse (15), dog (10), roe deer (2), bird (10) and fish (47). The birds include the remains of chicken and goose, while the fish bones are from cod. Based on the abundant dental information, most cattle were quite old at time of slaughter, whereas the sheep and pig remains represent all ages. A wide range of skeletal elements is present, suggesting that the animals were butchered nearby. The butchery marks consist of fine cut and large chopping marks, indicative of the presence of food waste; Saxon pit 256 in particular contained the butchered articulating vertebrae (three thoracic and three lumbar) of a pig. The gnawed bones show that dogs had access to them prior to deposition.

In addition, part of a mammoth tooth (ON 342) was found in the natural gravel (440) at the southern end of Area 3. Part of a mammoth tusk and other much degraded fragments of bone, possibly of Upper Pleistocene date, were also found on the route of the Wainscott Northern Bypass (Clark *et al.* 2009, 7).

Worked bone

Four worked bone objects were recovered, all of Early/Mid-Saxon date, from ditch 319. These comprise fragments of three composite combs. One of the two groups of fragments from context 275 is from a double-sided comb but the others (from 275 and 266) are insufficiently complete to enable the identification of form. The fourth object is a pin beater, of which only one pointed end survives (context 265).

Marine shells

by Sarah F Wyles

All the marine shells are from oysters, probably obtained locally on the north Kent coast. The majority were from Saxon ditch 319 (82, weight 639 g) with smaller quantities from post-medieval pit 103 (3, 21 g) and a colluvial layer 24 (20, 242 g). All three assemblages include measurable right and left valves but no group was sufficiently large to provide a statistically reliable sample.

Palaeo-environmental remains

Charred plant remains

by Chris J. Stevens and Sarah F. Wyles

Although 20 samples were taken during the excavations, the quantity of material in most of them was very low and only four were deemed worthy of full analysis. The selected samples were sorted under a x10 – x40 stereo-binocular microscope and the sorted and extracted material identified, quantified and recorded in Table 9. The nomenclature follows that of Stace (1997).

Beaker pit 234

The sample from Beaker pit 234 was associated with a broken saddle quern. However, very little material was recovered from this feature other than a few grains of probable barley (*Hordeum vulgare*), some parenchyma and a single fragment of hazelnut (*Corylus avellana*) shell.

Dated cereal remains for this period are extremely rare in south-east England and such material might otherwise easily be dismissed as potentially intrusive, especially given the high numbers of roots in the deposit and the presence of grain-sized, uncharred modern seeds of ivy-leaved speedwell (*Veronica hederifolia*). However, two radiocarbon dates confirmed the antiquity of the barley. The presence of the probable fragment of saddle quern may indicate the processing and grinding, along with the cultivation, of barley, within this part of north Kent in the period 2460–2400 to 2200–2140 cal. BC (3850±30 BP, SUERC-32989; 3810±30 BP, SUERC-33331).

The evidence is generally in keeping with many sites of this date, where cereal grains are sparse, but radiocarbon dating confirms the presence of cereal cultivation within the mid–late 3rd millennium.

The presence of a single fragment of hazelnut may indicate the exploitation of wild foods alongside the cultivation of cereals. Such exploitation is seen on other very similar sites of this date, for example Beechbrook Wood, just north of Ashford, and Thanet, where, while only a single grain of barley was recovered, remains of apples and hazelnuts were far more numerous (Giorgi 2006).

Charred cereals are generally indicative of domestic activity and testify to the likely presence of settlement waste on the site.

Middle Bronze Age pits

The two samples from pits 47 and 75 were broadly similar, containing charred grains of hulled wheat (*Triticum dicoccum/spelta*), several of which were identifiable as emmer wheat (*T. dicoccum*), several barley grains, and also a single grain of rye (*Secale cereale*). Chaff was poorly represented and comprised mainly occasional glume bases and spikelet forks of emmer wheat. However, a single glume base of spelt wheat (*T. spelta*) was identified from pit 75 along with two seeds of flax (*Linum usitatissimum*).

Although few of the glume bases were identifiable, emmer is better represented and only a single spelt glume was recovered. Spelt wheat, while once thought to be a Late Bronze Age introduction, can clearly be seen to be present within Middle Bronze Age deposits from both this site and Princes Road, Dartford at a similar date (Pelling 2003). Flax also appears to be a relatively common Middle–Late Bronze Age crop in Kent, being recovered from both Princes Road, Dartford (*ibid.*) and Saltwood Tunnel, Folkestone (Stevens 2006).

While chaff was quite under-represented, weed seeds were more numerous, with smaller seeds of fat-hen (*Chenopodium album*), blinks (*Montia fontana* subsp. *chondrosperma*), stitchwort (*Stellaria media*), dock (*Rumex* sp.), clover (*Trifolium* sp.), and self-heal (*Prunella vulgaris*) present. In addition, there were larger seeds of knotgrass (*Polygonum aviculare*), black bindweed (*Fallopia convolvulus*), vetch/tare (*Vicia/Lathyrus* sp.) black mustard (*Brassica* cf. *nigra*), cleavers (*Galium aparine*) and sedge (*Carex* sp.). Most of these seeds are of relatively common species associated with cultivation, but the presence of at least blinks and sedge indicate the cultivation of some wetter, lower-lying soils.

The radiocarbon dates on charred grains of hulled wheat indicate the deposits to be broadly contemporaneous, dating to 1530–1410 cal. BC (3205±30 BP, SUERC-33332) and 1610–1420 cal. BC (3220±30 BP, SUERC-33333) for pits 47 and 75 respectively.

The samples both had relatively few glume bases in them, despite having reasonable numbers of cereal grains, in particular hulled wheat grains from pit 75. Glume bases frequently outnumber grains on many of the Middle–Late Bronze Age sites in the area, for example Princes

Road, Dartford (Pelling 2003) and North of Saltwood Tunnel, Folkestone (Stevens 2006) and these assemblages are interpreted as coming from the charring of waste from the processing of crops taken from granaries, where the grain has been stored in the spikelet.

Table 9 Charred plant remains

Feature		Beaker pit 234	BA pit 47	BA pit 75	SFB 318
Context		233	48	76	120
Sample		9	1	6	2
Vol (L)		30	30	20	20
Flot size		40	225	150	50
Roots %		75	5	10	5
Species	Common Name				
<i>Hordeum vulgare</i> sl.	barley	cf.3+1	11	9	–
<i>Secale cereale</i> (grain)	rye	–	–	1	–
<i>Secale cereale</i> (rachis fragment)	rye	–	–	–	1
<i>Triticum dicoccum</i> (glume bases)	emmer wheat	–	5	2	–
<i>Triticum dicoccum</i> (spikelet forks)	emmer wheat	–	2	4	–
<i>Triticum dicoccum/spelta</i> (grains)	emmer/spelt wheat	–	5	33	–
<i>T. dicoccum/spelta</i> (glume bases)	emmer/spelt wheat	–	1	1	–
<i>T. dicoccum/spelta</i> (spikelet fork)	emmer/spelt wheat	–	–	1	–
<i>Triticum spelta</i> (glume bases)	spelt wheat	–	–	1	–
Cereal indet.		1f.	29	42	4
<i>Corylus avellana</i>	hazelnut	1f.	–	–	–
<i>Chenopodium album</i>	Fat-hen	–	3	5	–
<i>Montia fontana</i> subsp. <i>chondrosperma</i>	blinks	–	3	2	–
<i>Stellaria media</i>	chickweed	–	–	1	–
Polygonaceae indet.	knotweeds	–	1	–	–
<i>Polygonum aviculare</i>	knotgrass	–	–	1	–
<i>Fallopia convolvulus</i>	black bindweed	–	–	2	–
<i>Rumex</i> sp.	dock	–	4	3	–
<i>Brassica</i> cf. <i>nigra</i>	black mustard	–	1	–	–
<i>Crataegus monogyna</i> (fruit stones)	hawthorn berries	–	–	3	–
<i>Crataegus monogyna</i> (thorns)	hawthorn thorns	–	–	1	–
<i>Vicia/Lathyrus</i> sp.	vetch/pea	–	3	5	–
<i>Trifolium</i> sp.	clover	–	6	1	–
<i>Linum usitatissimum</i>	flax seeds	–	–	2	–
<i>Prunella vulgaris</i>	self-heal	–	1	–	–
<i>Galium aparine</i>	cleavers	–	1	3	–
Cyperaceae indet.	sedges	–	1	–	–
<i>Carex</i> sp. (lenticular)	sedge	–	1	–	–
<i>Lolium perenne</i>	rye grass	–	cf.1	–	–
<i>Avena/Bromus</i> sp.	oat/brome	1	–	–	–
Indet small		–	2	1	–
Buds		–	3	–	–

The higher number of grains in pit 75 might be indicative of poor preservation in pit 47, although smaller weed seeds were well preserved and quite abundant in both pits. While the

absence of glumes in pit 47 may be due to the higher presence of barley, within pit 75 it may be that some processed grain is present or unpounded spikelets.

The presence of rye in one of the Bronze Age samples probably represents an intrusive grain from Saxon occupation, and this cereal was well represented at the Wainscott Northern Bypass site (Pelling 2009).

Saxon

A single sample was examined, mainly with the aim of obtaining suitable dating material for SFB 318. The sample proved to be largely devoid of charred cereals with only a single fragment of rye (*Secale cereale*) and some unidentified cereal grain fragments recovered. Occasional grains of free-threshing wheat and barley were also recorded from other Saxon features and confirm the presence of these cereals alongside rye as consistent with the Northern Bypass site (Pelling 2009).

Radiocarbon dating

by Chris J. Stevens and Alistair J. Barclay

Six samples were selected for radiocarbon dating. These included a sample of unidentified vitrified wood charcoal selected and submitted at an earlier phase in the project, from the upper fill of pit 355 (context 358), an undated, but potentially Saxon pit. Two samples comprised single grains of barley from pit 234 (context 233), and were associated with Beaker pottery. Both grains were quite degraded and, as there was little grain in the deposit, along with high numbers of roots, it was possible that it might be intrusive. Radiocarbon dates were therefore obtained to prove the presence of cereal agriculture during the deposition of the Beaker pottery, especially given their association with a saddle quern fragment.

Two further samples came from Middle Bronze Age pits which contained bucket urns, thought to be associated with the later part of the Deverel-Rimbury tradition. The selected material for dating comprised hulled wheat grains (*Triticum spelta/dicoccum*) from reasonably large deposits of charred cereals in pits 47 and 75.

The final sample came from a relatively sparse deposit in terms of charred plant remains, but reasonably rich in charcoal, from SFB 318 (context 120). A piece of short-lived roundwood was selected for dating that was ring-porous and probably of oak (*Quercus* sp.).

The samples were sent to the dating facility at Scottish Universities Environmental Research Centre (SUERC) AMS facility where the samples were treated and prepared for dating.

Results

The returned dates were calibrated in OxCal 4.1.7 (Bronk Ramsey 2001) using the IntCal09 atmospheric curve (Reimer *et al.* 2009) and are quoted in the form recommended by Mook (1986),

with the end points rounded outward to 10 years. The results of the radiocarbon are shown in Table 10 and Figures 16 and 17.

The earliest date, from pit 355, indicated that the charcoal was Mesolithic. However, given the low amounts of charcoal within this feature and that the material was vitrified, it is quite probable that it was reworked into a potentially much later feature.

The returned dates indicate two consistent Beaker dates for the barley grains from pit 234 that are statistically contemporaneous.

Table 10 Radiocarbon determinations

<i>Feature</i>	<i>Context</i>	<i>Charred charcoal</i>	<i>grain/</i>	<i>Lab. Ref.</i>	$\delta^{13}C$	<i>Date BP</i>	<i>Calibration (cal. BC) 2 sig. 95.4%</i>
Pit 355	358	Charcoal indet.		NZA-29409	-26.5	8008±45	7070–6710
Pit 234	233	cf. <i>Hordeum</i> sp.		SUERC-32989	-24.8‰	3850±30	2460–2200
Pit 234	233	cf. <i>Hordeum</i> sp.		SUERC-33331	-25.5‰	3810±30	2400–2140
Pit 47	48	2 x <i>Triticum dicoccum/spelta</i>		SUERC-33332	-23.8‰	3205±30	1530–1410
Pit 75	76	2x <i>Triticum dicoccum/spelta</i>		SUERC-33333	-24.2‰	3220±30	1610–1420
SFB 318	120	cf. <i>Quercus</i> charcoal roundwood 10 mm diameter		SUERC-33334	-25.3‰	1460±30	cal. AD 550–650

The returned Middle Bronze Age dates from pits 47 and 75 are extremely similar (statistically the same) and as such it is probable that both pits can be related to a single phase of settlement activity at the beginning of the Middle Bronze Age, sometime in the 16th–15th centuries cal. BC. As such, the dates place the pottery within the pit towards the beginning of the Deverel-Rimbury tradition.

The Anglo-Saxon radiocarbon date confirms that SFB 318 dates to the mid-6th to mid-7th centuries, falling within the Early/Mid-Saxon period.

Documentary Research

by Christopher Phillpotts†

A documentary study was undertaken to place the results of the excavations within an historic context.

Saxon

The vicinity of the site was identified by Alan Everitt (1986) in his analysis of the formation of Kentish settlements as lying in the Foothills *pays* of Kent, in the low-lying coastal plain along the northern edge of the county between the Downs and the marshes. This was formerly called the

OxCal v4.1.7 Bronk Ramsey (2010); r.5 Atmospheric data from Reimer et al (2009);

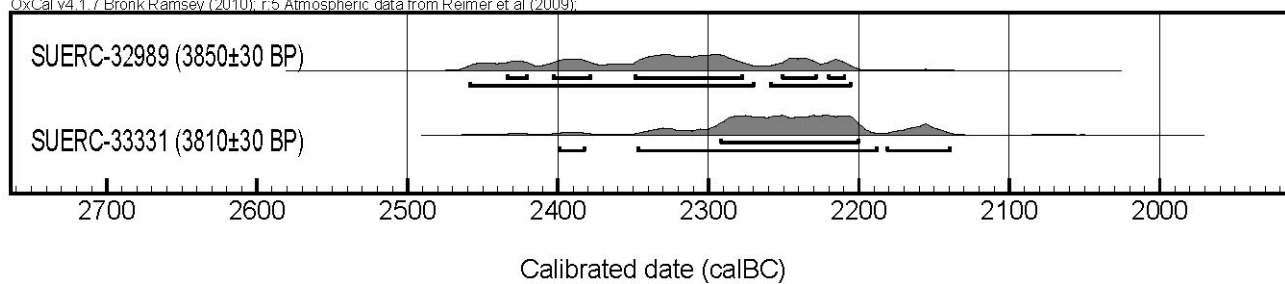


Figure 16: Probability distribution curves for the two dates on charred barley grains from Pit 234 (SUERC-32989 and SUERC-33331)

OxCal v4.1.7 Bronk Ramsey (2010); r.5 Atmospheric data from Reimer et al (2009);

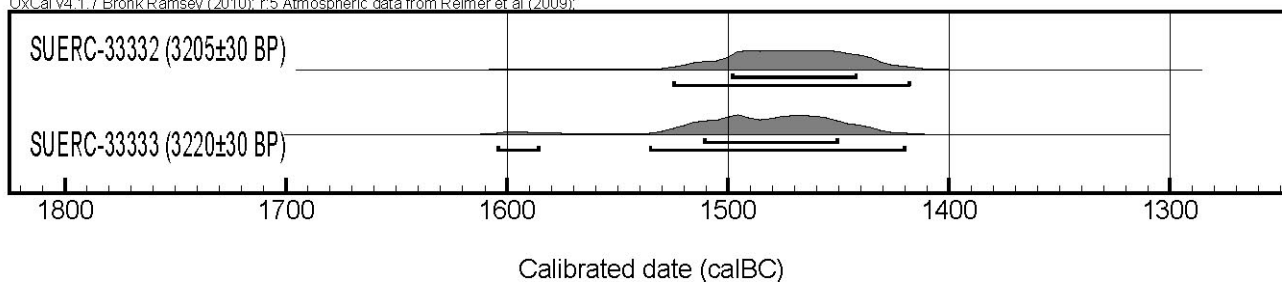


Figure 17: Probability distribution curves for the two dates on charred hulled wheat grains from Pit 47 (SUERC-33332) and Pit 75 (SUERC-33333)

‘Upland’ to distinguish it as dry land from the sodden marshes. The soils consist of fertile and easily-worked Thanet Sands and brickearth and this was, therefore, the main area of the county for cereal production from the late prehistoric period onwards. Its proximity to the coast, the navigable Medway valley and, later, the presence of Watling Street which crossed the Medway at Rochester, led to the development of market centres. This area attracted the earliest Jutish and Saxon settlements in the county, spreading up the Medway valley as far as Yalding, evident in the distribution of place-names in the relatively abundant early Anglo-Saxon charters of Kent (Everitt 1986, 45–6, 70–1, 120–1, 338–9).

The Rochester area was probably a focus of continuing occupation from the Late Iron Age and the Romano-British periods, its agricultural advantages too valuable to abandon (*ibid.*, 116–17, 339). Indeed the whole Jutish kingdom of Kent can be viewed as a continuation of an Iron Age principality and a Romano-British *civitas* without even a change of name (Brooks 1989, 57). There may have been continuous occupation within the walls of town of Rochester. However, it seems unlikely that the previous administrative structure survived the demographic collapse of the early 6th century intact (Everitt 1986, 342–3).

The presence of pagan settlers in the area is suggested by burial evidence of the 5th–7th centuries, with cemeteries found around Rochester and in the Strood area (Meaney 1964, 134–5, 138). These cemeteries have more affinities with those of Surrey and Essex than with the richer graves of east Kent, which have definite Jutish and Frankish connections (Brooks 1989, 68).

In the Early Saxon period Kent may have been divided into two separate kingdoms, the eastern represented by the medieval diocese of Canterbury, the western centred on Rochester and probably called *Cæsterware* (the people of the chester). West Kent was probably brought under the rule of the East Kentish dynasty by King Æthelberht in the late 6th or early 7th century. This separate polity is suggested by the establishment of a bishopric for west Kent at Rochester by Æthelberht in 604, and the foundation of the cathedral there by Bishop Justus. It is not clear if the kings of east Kent and Essex had competed for the area, or it had been part of a larger East Saxon kingdom. There were often two kings of Kent later in the 7th and 8th centuries, and some of the west Kentish rulers were related to the dynasty of Essex, including Sigereð in the 760s (Garmonsway 1972, 20, 23; Brooks 1989, 68–9, 73). These connections between west Kent and Essex may account for the outlying parts of the estates of Woolwich and Gravesend on the north shore of the Thames at North Woolwich and Tilbury respectively, as recorded in *Domesday Book* (Williams and Martin 2002, 35, 989).

The form of the estates established within west Kent consisted of a core of arable land, with outlying appurtenant areas of marshland and wood pasture. They were of the multiple estate type, designed to include a variety of landscapes within their boundaries for comprehensive agricultural exploitation. They may have derived from Romano-British predecessors, although this seems less likely than in east Kent. Much of the animal husbandry of these Kentish multiple estates was based

on the practice of transhumance. The estate centres of the northern coastal fringe had detached swine and cattle pastures in the Weald to the south, called *denes* or *denns*, often at a considerable distance from their parent settlements. They provided pigs with pannage (seasonal beech mast in the autumn), and cattle with summer grazing, accessed by droveways running from north to south. The structure of these estates can be traced in the manorial connections of the medieval period and the jurisdictions of the early minster churches (Everitt 1986, 72, 74–5, 342–3). Some of the estates had established their own churches before the Norman conquest, and these included Strood and Islingham in the vicinity of the site (Campbell 1962, 495, 499). To the east there was an estate centre with a minster church at Hoo.

A series of settlements lay within these estates in a dispersed pattern, each consisting of only a few households. The settlements are likely to have drifted within the same locality in the Early Saxon period, and shifted to different sites in the Mid-Saxon period. It appears that all Early Saxon settlements were regarded as temporary, and that they were necessarily deserted by their communities in favour of fresh sites. This implies that a shifting form of agriculture was practised, which periodically required new ground to be broken in, as old fields became exhausted or choked with weeds. The more permanent Mid-Saxon settlements probably operated a more stable and intensive form of agriculture, based on heavier ploughs able to cope with a wider variety of soil types. The movements of settlements are likely to have taken place within the boundaries of the existing land-units. The mechanism by which these shifts of settlement occurred is unknown, but in the context of the division of the landscape into a series of estates, they are likely to have been seigneurially directed (Muir 2000, 192; Williamson 2004, 13, 29–33, 113, 118–19, 122).

By the mid-8th century the kings of Kent were granting estates in the area by charters to the bishops of Rochester and their cathedral. In 738 King Eadberht gave 10 ploughlands at *Andscohesham* (Stoke) in the territory (*regio*) of Hoo to Bishop Ealdwulf (Hearne 1720, 64–6, 220; Sawyer 1968, 78, no. 27). In 764 King Sigered of west Kent gave 20 ploughlands of arable land at *Æslingaham* on the west side of the Medway to Bishop Eardwulf, with seven named *denes* in the Weald, and this grant was confirmed by King Offa of Mercia (Hearne 1720 72–6; Sawyer 1968, 79–80, no. 33, 98, no. 105). This charter was later regarded as including Frindsbury and Wich (Hearne 1720, 152, 220), and it seems likely that it included the Wainscott area. In 778 King Ecgberht gave half a ploughland at *Bromgeheg* to Bishop Deora with a marsh called *Scaga*, almost surrounded by water, and four detached areas of meadow with specified boundaries in *Hreodham* (perhaps Redham in Cliffe) (Hearne 1720, 82–3; Birch 1885, i 317–18, no. 227; Sawyer 1968, 80, no. 35). The estate centre is represented by the modern name Broom Hill. In 779 Ecgberht added another adjacent half ploughland at *Bromgeheg*, bordered by the *Wuodafleot* (the River Medway) to the east, with the marsh of *Scaga* extending as far as the water of *Jaenlade* (Yantlet Creek) measuring almost 50 yokes (2250 or 2500 acres = approx. 809 or 1012 ha) (Hearne 1720, 84; Birch 1885, i 319; Sawyer 1968, 80, no. 36). These grants were also confirmed to Bishop Wærmund in

789 by King Offa, who in later centuries was regarded as the benefactor who had given Frindsbury to the bishopric, under the name of Eslingham *cum appendiciis* (Hearne 1720, 88–9, 221; Sawyer 1968, 104, no. 130; Lambard 1970, 331).

In 889 Bishop Swithulf and the cathedral community at Rochester granted to a certain Beorhtwulf half of a ploughland with specified boundaries at Haddun (Haven Street in Frindsbury) with detached meadows at Beckley and Strood. The boundaries include *ealden strete*, perhaps to be identified as Hoo Road, *wen weg*, perhaps an early form of Wainscott, and *Cioldmundesland* (Birch 1885, ii 201–2, no. 562; Sawyer 1968, 370, no. 1276). The last may relate to Cioldmund the archdeacon, who witnessed the charter, or to Ceoldmund the ealdorman of Kent, who died in the same year as Swithulf in 897 (Garmonsway 1972, 90).

Other local landowners made grants to the monks of Rochester in the Late Saxon and early Norman periods, including Eadric of Hescenden and his family who gave the grain tithes of their lands in Frindsbury and Borstal; Goldwin the Greek who gave two *hagas* in Rochester which belonged to Frindsbury, and half another *haga* next to the monks' cemetery, which was attached to Borstal; Goldwin the priest who gave another half a *haga* in Rochester attached to Frindsbury; Ælfrin who gave another half a *haga* belonging to Borstal; and the wife of Rodbert Latimar who gave land called Thornidun in Frindsbury (Hearne 1720, 182–4, 197–200).

By the Late Saxon period the estates of Kent were divided up into lathes and hundreds. The Wainscott area lay in the Lathe of Aylesford and the Hundred of Shamwell. The boundary with the Hundred of Hoo ran about 1 km to the east between Four Elms and Broad Street. After the kings of Kent had given all their property in the city of Rochester to the bishops, the former kingdom of west Kent was probably divided into the whole lathe of Aylesford and the half-lathes of Sutton-at-Hone and Milton Regis, each based on a royal estate centre.

The Rochester area suffered from large-scale attacks by Danish raiders from the late 9th century onwards. In 885 the army of the Danes laid siege to Rochester, where they built a siege camp. The citizens defended the city walls until King Alfred came to their assistance with his forces. The Danes then abandoned their camp and went back to their ships; the same summer they sailed overseas. In 986 King Æthelred laid waste the diocese of Rochester, although the context of this action is not clear. In 999 a Viking fleet sailed up the Medway and attacked Rochester, defeating the local Kentish forces. The Vikings then seized horses and rode widely through west Kent, laying it waste again (Garmonsway 1972, 78, 125, 131–3). These episodes of destruction must have disrupted the continuity of agriculture and settlement in the area.

Medieval and post-medieval

Kent has been characterised as an area in which dispersed settlement persisted in the early medieval period, where the nucleation of villages and the development of common field systems did not take place, as in other parts of England (Everitt 1986, 334). The northern coastal strip remained a zone

of frequent scattered hamlets in the late 11th century, especially along the river valleys. Most of these settlements had some meadowland and a mill attached to them; some also had a fishery (Campbell 1962, 558–9). The arable exploitation of this zone required a large labour force, and attracted settlement by immigrants (Everitt 1986, 68). The hamlet of Wainscott may have been established by this time at the junction on the west side of the site, although there is no written evidence for it. Its name probably means ‘wagon shelter’, suggesting a subordinate role in the larger estate of Frindsbury (Glover 1976, 199).

At the time of the *Domesday* survey in 1086 the manor of *Frandesberie* (Frindsbury) was held by the bishop of Rochester. It had been assessed at 10 sulungs (971 ha) in 1066, but this had now been reduced to 7 sulungs (680 ha), probably an artificial reduction made as a favour to the bishop, but both much less than the 20 ploughlands of the charter of 764. It was a large manor with a total of 16 ploughs operating on the demesne and tenant land, nine slaves and a mill. There were 40 acres (c. 16 ha) of meadow and sufficient woodland to feed five pigs, probably in detached parcels. In the city of Rochester the bishop held 80 tenements which belonged to the manors of Frindsbury and Borstal, the legacy of the grants of *hagas* by Eadric of Hescenden, Goldwin the Greek and others (Campbell 1962, 505, 551; Williams and Martin 2002, 14). The manor also had its own stone church, which had been built since 1075 (Hasted 1797–1801, iii 540).

The marshlands attached to these coastal estates do not appear to have been reclaimed and settled with subsidiary hamlets and farms until after the Norman conquest (Everitt 1986, 72, 120–1). The presence of 28 bordars at Frindsbury in 1086, and a rise in the value of the manor from £8 to £25 in the previous 20 years suggest that some reclamation from the marshes was taking place, but neither of these is definitive indicators of the extension of the cultivated area (Williams and Martin 2002, 14).

There was a separate manor of Wainscott which had emerged from the parent manor of Frindsbury by the early 14th century. It was also called ‘Parlabien’s Yoke’ (or ‘Perleben’s Yoke’) after the family which held it at this time. It afterwards descended to the Colepeper family, which held it until the late 16th century (Hasted 1797–1801, iii 538–9). In the years 1494–1504 it was divided into two halves, and court records survive for one of these moieties. However, very little business was transacted beyond the collection of fines from tenants who failed to attend (TNA: PRO, SC 2/180/74). If the extent of the manor was really one yoke, it would not have been more than 50 acres (c. 20.2 ha). The fields underlying the north excavation area to the north of Hoo Road were in the manor, as were a series of smaller fields along the south side of the road as far as the stream. Beyond the stream to the north-east were the fields of Islingham manor; to the south of the road lay parts of the manors of Frindsbury and Chattenden (TNA: PRO, IR 29/17/145 nos 345, 426; IR 30/17/145; see Figure 3).

At the dissolution of the monasteries in the 1530s, the manor of Frindsbury with its appendages was confiscated from Rochester Priory by Henry VIII, but was subsequently passed on

to the Dean and Chapter of Rochester in 1542 (Hasted 1797–1801, iii 531). The manor of Wainscott was sold in the late 16th century, and passed by a series of descents and sales to John Boghurst, who held it in the late 18th century. He still held a court leet and a court baron for the manor at this time (Hasted 1797–1801, iii 539). Post-medieval and modern maps and documents indicate that the area of the site comprised a number of agricultural fields, both within Islingham (CKS U36/P21) and Wainscott manors ((TNA: PRO, IR 29/17/145 nos 345, 426; IR 30/17/145).

To the south-east of Wainscott lies Upnor Castle, built early in the reign of Elizabeth to defend the approach to Chatham Dockyard up the River Medway. Further artillery defences were added later to the system on the west bank of the Medway at Cockham Wood Fort and a fort on the marshes called the ‘Swamp’ or the ‘Birdsnest’. These defences became redundant after the Dutch assault on the Medway in 1667; the castle became a gunpowder magazine and military storehouse, and the smaller forts were allowed to decay. In the 18th century the castle was manned by a master gunner, 12 other gunners, a guard of soldiers, a store-keeper and a clerk of the cheque, all under the command of a governor. However, guns were no longer mounted on its ramparts (Hasted 1797–1801, iii 526–7; Colvin 1982, 483).

The castle had lands around it which were in military occupation. This Ordnance Office land was depicted on plans of 1779, 1806, 1825 and 1848, and listed in surveys of land and buildings from 1806 onwards (TNA: PRO, MFQ 1/830/39; MPH 1/358; MPH 1/872/1; MR 1/815/6; WO 55/2350). They included a large piece of pasture and heath called Tower Hill, and a small arable field on its west side. These lay at the south end of Broad Field (tithe field 345), which incorporated excavation Areas 3 and 5. On the map of 1825 Tower Hill is labelled ‘Practice ground for the field instruction’ (TNA: PRO, MPH 1/872/1).

Gunnery practice by the garrison of Upnor Castle seems the most likely context in which ammunition became deposited in the excavated area, as no battles are known to have taken place in the area. However, the ammunition was found in the northern excavation area, some distance from the Ordnance property boundary.

Discussion

The excavations in 2007 on the north-eastern edge of Wainscott revealed a palimpsest of evidence for human activity dating from the early prehistoric through to the post-medieval period, and provided important new evidence for Bronze Age, Romano-British and Saxon settlement. In both of the fields investigated, archaeological features and deposits lay towards the bottom of the slopes, where they were generally sealed both by ploughsoil and colluvial subsoils.

The earliest evidence for a human presence comprises a small assemblage of worked flint, largely found residual in later features. A few isolated pieces hint at activity in the Mesolithic and Neolithic periods, with a bladelet core, blades, a notched blade and an Early Neolithic leaf

arrowhead recovered. The absence of any contemporary features or deposits suggests that such activity is likely to have been sporadic. This is consistent with the results of the excavations on the adjacent Four Elms Roundabout site, from which a small lithic assemblage was also recovered, including a fragment from a Neolithic polished flint axe.

Beaker pits 121 and 234 provide important and fairly rare evidence for possible settlement in the area. The lithic assemblage from the Four Elms site was sufficiently diverse and diagnostic to suggest a focus of activity in the Late Neolithic/Early Bronze Age (Clark *et al.* 2009, 36). The worked flint recovered from pit 121 in Area 2 is consistent with a similar date. Pit 234 in Area 3, however, also provides significant evidence for domestic and agricultural activity in the vicinity. The presence of charred grains in this pit, taken in conjunction with the fragment of saddle quern, indicates cereal cultivation at an early date, whilst the pottery sherds from the pit derive from at least four different vessels. Two radiocarbon dates obtained from cereal grains confirm a Beaker date. The presence of further sherds of Beaker and Early Bronze Age pottery residual in later features hints at additional activity in the vicinity of the site. Evidence for cereal cultivation in the early and middle 3rd millennium BC from Southern Britain is rare and becomes more frequent later on during the Beaker period. Whether this is connected to an increase in cross-Channel activity and wider patterns of social and cultural transformation at this time is a moot point.

A number of Middle Bronze Age features were excavated in Areas 1, 2, 3 and 5. The features in Areas 1 and 2 were largely concentrated towards the north-eastern edge of the site, and a single pit on the Four Elms site containing Middle Bronze Age pottery (Clark *et al.* 2009, 7) probably relates to the same activity. Sufficient pottery, animal bone and worked and burnt flint was recovered from these features to suggest the presence of a small settlement in the vicinity. Amongst these features was a single probable hearth (115) while the identification of two contemporary gullies (294 and 302) suggests some form of enclosure or division of the landscape. However, no evidence of any contemporary structures was identified, and the precise location of any associated settlement must remain conjectural.

Evidence for possible ritual activity was recorded, in the form of the unaccompanied pots placed in pits 338 and 346. Similar placed deposits are known from elsewhere in southern Britain, often found in liminal zones or in association with boundaries (see Cooke and Powell in prep.). These deposits often occur in small groups or linear clusters, usually some distance from settlements, and may themselves represent rituals associated with the definition of boundaries or land ownership.

Other Middle Bronze Age features were excavated in Areas 3 (pit 232) and 5 (pit 7103 and ditch 282), some considerable distance to the south. Whilst it is not possible to draw any firm conclusions on the basis of so small a number of features in these areas, it does point to further Middle Bronze Age activity in the wider landscape.

There is little evidence for human activity after this time until the creation of a ditched and metalled trackway across Area 2. The metalling itself was laid in the base of a hollow, although it is not clear whether this hollow was deliberately created or represents a hollow-way formed over time through constant use. For much of its length this track was flanked by ditches, presumably to aid drainage. Finds from the fills of these ditches and the layers of trampling and silting sealing the metalling included some Romano-British material (pottery, metalwork and ceramic building material) and small quantities of Late Iron Age pottery. This suggests that the trackway remained in use for some considerable period of time, perhaps with its origins in the Late Iron Age or Early Romano-British period. No traces of the trackway were recorded on the adjacent Four Elms roundabout site (Clark *et al.* 2009, fig. 3), although the eastern side of a Romano-British enclosure, dated to the late 2nd or 3rd century, appears to respect its alignment, suggesting that the trackway was probably still in use at this time.

Apart from this trackway, there are no other certainly Romano-British features, and much of the Romano-British material recovered from Areas 1, 2 and 3 is likely to derive from activity peripheral to the two enclosures excavated on the Four Elms site, one of which contained a stone-built heated structure, probably used for drying crops or malting, and possibly associated with a villa complex to the north or east (Clark *et al.* 2009, 73). Some elements of the Romano-British assemblage from the recent site, in particular the ceramic building material appear to show similar characteristics to that from the earlier excavations, although the coins point to a longer span of Roman activity than is suggested from the four Elms site, where they date exclusively to the late 3rd century.

There is no obvious continuity between the Late Roman activity and the Early/Mid-Saxon settlement excavated on the site, either chronological or spatial. The organic-tempered pottery recovered suggests that the earliest Saxon occupation on the site dates to the late 6th and 7th centuries, whilst the spread of Early/Mid-Saxon features indicates fairly widespread activity, comprising a partially enclosed landscape with at least two foci of settlement.

This is most evident in Areas 1 and 2, where a trackway flanked by enclosures was identified, associated with two sunken-feature buildings and a small rectangular building (308). These sunken-featured buildings are paralleled by the examples at Keston (Philp 1973, 156–63), St Mary Cray (Hart 1984), Springhead and in the vicinity of the Northfleet villa (Andrews *et al.* 2011). Some longevity of settlement is suggested, with the rectangular building sited within a small enclosure perpendicular to the trackway, and thus probably contemporary with its use, whilst both sunken-feature building 318 and probable SFB 156 cut the silted fills of the ditches flanking the trackway.

Further settlement was identified in Area 3, where another SFB (320) was excavated. It is possible, given its location, and the number of residual finds in the fills of ditch 319, that this building once lay within an Early/Mid-Saxon enclosure, later redug as ditch 319.

Associated with these buildings were a small number of discrete features likely to represent rubbish pits, waterholes and cess pits. The general paucity of cultural material, especially from the pits, has been noted elsewhere (e.g. Rady 1987, 132–4; Andrews 1997, 174; Clark *et al.* 2009, 77), although the small assemblages recovered from these features includes animal bone, pottery, ironworking slag, quern and millstone fragments, loomweights and occasional deposits of charred material. These point to a dispersed, essentially domestic, rural settlement. Charred plant remains indicate the cultivation of free-threshing wheat, barley and rye, as well as the exploitation of wild resources such as hazelnuts, whilst the animal bone assemblage includes a range of domesticated animals kept as stock – predominantly cattle and sheep/goats, but also pigs. Small-scale craft is also evident in the loomweights and ironworking slag. Both the pottery and the radiocarbon date obtained from material within sunken-feature building 318 confirm a late 6th or 7th century date for this dispersed settlement.

There appears to have been continuity of activity into the Mid-/Late Saxon period, although the focus of the settlement in Area 2 apparently shifted northwards, to the enclosed settlement excavated on the Four Elms site. The size of the bow-sided timber hall on the Four Elms site, with its associated pits and enclosure ditches, suggests a settlement of some status, although only a relatively modest assemblage of artefactual material was recovered. A small number of features of this date excavated on Area 1, many containing evidence for ironworking, probably represent activity peripheral to this settlement.

Ditch 319, in Area 3, however, may provide evidence of direct continuity of settlement, perhaps representing the recut of an earlier enclosure ditch. The pottery recovered dates this feature to the 8th or 9th century, a date broadly supported by the early 8th century sceattas and other items of metalwork, including the bracteate die. Although no contemporary internal features were identified, some of the artefacts from this enclosure ditch, such as the bracteate die, the sceattas, vessel glass, lava querns and millstones and the small quantities of possibly imported pottery hint at a settlement of some status, exploiting wider trade links.

The presence of two apparently separate but broadly contemporary enclosures, one closely associated with settlement, so close together within the Mid-/Late Saxon landscape is interesting and may be linked to the change from the shifting pattern of Early Saxon occupation to more permanent settlements in the Mid-/Late Saxon period. It seems likely that both the settlement on the Four Elms site and the possible settlement enclosure represented by ditch 319 were part of the same estate, and given the differences in the finds assemblages between the two sites, may have been of different status. Without further evidence for the nature of activity within enclosure ditch 319, it is perhaps unwise to speculate further on the relationship between the two sites.

It is not clear how long this phase of activity may have lasted – the shell tempered pottery found may have continued as late as the 10th or 11th century, although there is no associated metalwork or coin evidence to suggest any settlement on the site later than the 8th century.

The only later features of any significance comprise a group of shallow, discontinuous parallel ditches on the north-western edge of Area 2 continuing the alignment of features of Late Saxon or early medieval date on the adjacent Four Elms roundabout site (Clark *et al.* 2009, 29). These were interpreted as narrow strip fields or selions on the latter site (*ibid.*, 79), on the basis of their narrow width. However, it is clear from the more recent excavations that these ‘strip fields’ narrow appreciably, and are now considered much more likely to represent the ditches flanking a shifting trackway. Later medieval activity is represented only by a few sherds of 13th–15th century pottery and metalwork, the latter mainly occurring as stray metal detector finds from colluvial and ploughsoil contexts. Although not closely datable, the colluvium itself must post-date the Late Saxon/early medieval periods.

Three pits containing 17th–18th century pottery and medieval/post-medieval roof tile fragments were located on the southern edge of Area 2. The substantial quantity of post-medieval/modern metal detector finds (including coins, buttons, copper nails and lead seals) provides further evidence of extensive activity (if not settlement) at this time, while the ordnance recovered from the northern field may be linked to field exercises undertaken by the garrison of the nearby Upnor Castle.

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Abbreviations

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TNA The National Archives, Kew

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Plate 1: North-west facing section of Beaker pit 234 showing the saddle quern fragment (bottom right) (scale = 1m)



Plate 2: *In situ* vessel in Middle Bronze Age pit 346 (scale = 0.2m)



Plate 3: Late Iron Age/Romano-British trackway 296 and flanking ditches, looking south-west (scale = 2m)



Plate 4: Saxon sub-rectangular ditched enclosure 395 (scale = 2m)



Plate 5: Sunken feature building 320 under excavation



Plate 6: Saxon sceattas



Plate 7: Saxon tweezers ON 361 from ditch 319



Plate 8: Anglo-Saxon bractete die (ON 255)



0 50 100 mm

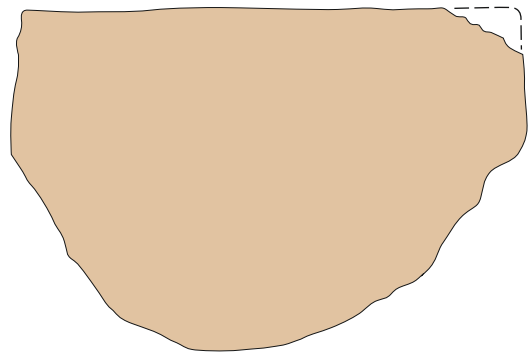


Plate 9: Stone saddle quern fragment from Beaker pit 234