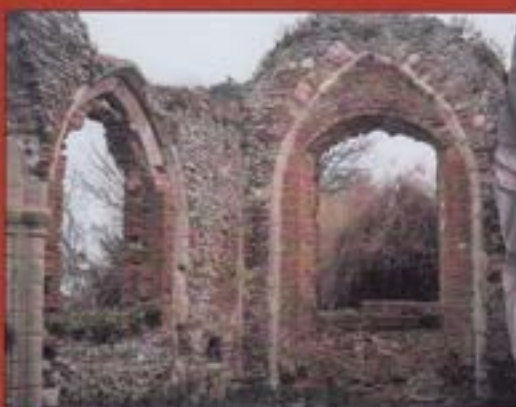
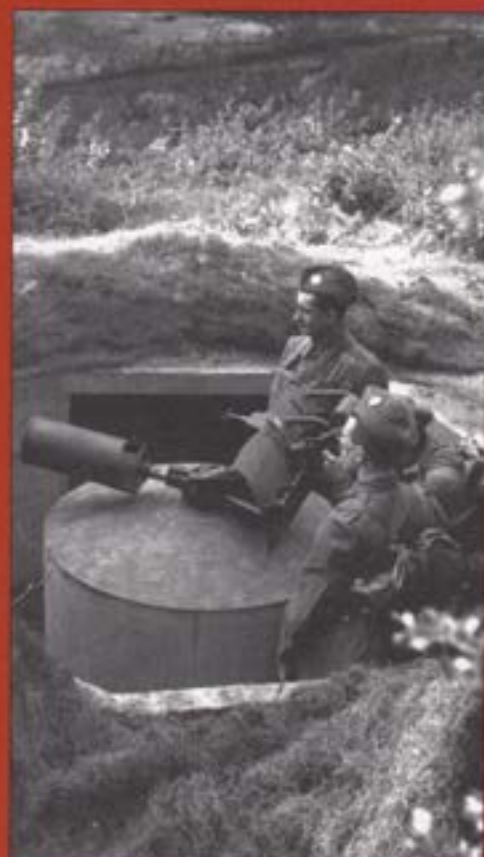


ESSEX

ARCHAEOLOGY AND HISTORY



TRANSACTIONS OF THE ESSEX SOCIETY
FOR ARCHAEOLOGY AND HISTORY

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2002

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THE TRANSACTIONS OF
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THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

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The Society was founded in 1852 as the Essex Archaeological Society. Its objects are:

1. To promote and encourage the study of the archaeology and history of the historic county of Essex.
2. In furtherance of the above, to publish the results of such studies in its journal and to disseminate information on matters relating to archaeology and history in Essex through appropriate media.
3. To organise conferences, lectures and visits for the benefit of members and interested members of the public; to educate the wider community in the historical and archaeological heritage of Essex; to co-operate with other bodies on matters of common interest and concern.
4. To provide library facilities for Society members and approved members of the public.

Publications

The articles in its journal range over the whole field of local history. Back numbers are available; a list and prices can be obtained on application to the Librarian. Members receive a regular Newsletter covering all aspects of the Society's activities, news of current excavations and fieldwork, and items of topical interest.

The Library

The Library is housed in the Albert Sloman Library at Essex University, Colchester, and is extensive. It aims to include all books on Essex history, and has many runs of publications by kindred Societies. Members may use the Library on any week day during Library opening hours, on presentation of a signed membership card.

Membership

Application should be made to the Hon. Membership Secretary (address inside back cover where a list of other officers can also be found).

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Obituary

Frank Sainsbury B.E.M., A.L.A. (1915-2001)

Frank Sainsbury, formerly Borough Librarian of West Ham, and a long-standing member of our Society, died at Southport on 2 October 2001. He was born at Canning Town in West Ham on 21 June 1915, the son of Edwin Sainsbury, insurance agent, and his wife Sarah. In 1930, after attending Russell Road higher elementary school, he became a Probationary assistant at Custom House branch library. He served West Ham, and later Newham libraries, until his retirement in 1976. From 1940 to 1946 he was in the Pioneer Corps, becoming a warrant officer and winning the British Empire Medal. Frank was for many years a member of the County committee of the Victoria History of Essex, and eventually its chairman. He was also a churchwarden of St. John's, Seven Kings.

In West Ham libraries Frank's abilities were soon evident. In 1932, having achieved a First Class in London matriculation, he was appointed to the permanent staff at Custom House; and in 1936 he helped the Borough Librarian, Donald McDougall, in editing *Fifty Years a Borough*, which marked the jubilee of West Ham's borough charter. Fifty years later Frank himself would edit the centenary volume, *West Ham 1886-1986*.

Back in the library after the war, Frank was rapidly promoted, to Senior Assistant (1946), Reference Librarian (1947) and Deputy Borough Librarian (1948). In 1956 he became Borough Librarian on the retirement from ill-health of E.R. Gamester. But he suffered a set back in 1965, when West Ham and East Ham were amalgamated as the London Borough of Newham. It had been widely expected that Frank would become Borough Librarian of Newham, but the post went to the Borough Librarian of East Ham, James Green, with Frank as Deputy. The disappointment was all the keener because Frank had previously been working hard to smooth the merger of the two libraries by combining their union catalogues. He was also required to move to an office at East Ham. But he accepted the change calmly, and never ceased to give of his best.

When the Essex *V.C.H.* was revived in 1951 West Ham was one of its main supporters, and Frank was, from the first, involved in its work. He helped to compile the *Essex Bibliography* (1959), and assembled the first draft of its *Supplement* (1987), which had originally been planned as an independent publication, but was eventually included in the *V.C.H.* series. In 1989 he succeeded Sir William Addison as chairman of the Essex County committee, serving until 1996. During those years the committee was in financial difficulties, with fears of redundancy or even dissolution. But under his steady leadership it survived, and the situation was somewhat relieved by the launching of an Appeal Fund.

Frank sat for many years on the committee of the Library Association's South East Bureau, which provided a regional catalogue to promote inter-lending. For a time he was acting librarian of the Essex Field Club. He was a founder member of Newham Historical Society, and served as honorary secretary for 26 years. He published several books, including *West Ham: Eight Hundred Years* (1965), and *The Church and Parish of St. John, Seven Kings* (1964, 2nd Edn. 1979), in recognition of which he was elected an Associate of the Royal Historical Society.

Frank Sainsbury was a small man, somewhat shy and reserved, with a wry humour. He was always kind and thoughtful, completely reliable in every undertaking, and full of enthusiasm, even in old age, for local history. In 1940 he married Connie Mary Jones, who supported him quietly and capably in his public life. She died in 1978. There were no children. In later years Frank suffered much ill-health, and in 1997 he left his home at Newbury Park to be cared for at Southport by his sister, Grace Robb.

W.R. Powell.



Frank Sainsbury with the Mayor of Newham, Cllr. L.A. Wood, at his retirement celebration held at East Ham Junior Library on 31 March 1976 (courtesy of Newham Archives and Local Studies Library).

Jousting at windmills? The Essex Cropmark Enclosures Project

by N. Brown and M. Germany

with contributions by H. Major, H. Martingell, P. Murphy, M. Robinson, H. M. Tinsley and H. Walker.

The project investigated four circular cropmark enclosures, thought to be henge or hengiform monuments on the basis of their morphology. Each was trial-trenched to recover dating evidence, and areas around the cropmarks were fieldwalked to provide information about the enclosures in their wider setting. In the event two enclosures proved to be medieval, and two were prehistoric, of Neolithic or earlier Bronze Age date. For these latter two sites, the opportunity was taken to sample local alluvial/colluvial sequences, gaining environmental data and thus allowing something of the prehistoric landscape to be reconstructed. The results of the fieldwork are described and each of the sites discussed in its local context and with regard to the implications for cropmark identification, the nature of prehistoric circular enclosures in eastern England, and the distribution of early medieval windmills.

Project aims

The Cropmark Enclosures Project had a long gestation period. During the 1980s various attempts at classification of cropmarks on the basis of their morphology at a local (e.g. Priddy and Buckley 1987), regional (Lawson *et al.* 1981) and national level (e.g. Harding and Lee 1987), revealed a range of interesting distributions and emphasised uncertainty over the date of many types of cropmark site. The latter point was given particular force by a series of excavations that revealed sites hitherto regarded as large Late Neolithic henges (e.g. Mucking South Rings, Springfield Lyons, Farriers Farm: Buckley and Hedges 1987; Brown 1996) were in fact of Late Bronze Age date. A research design for the project was submitted to English Heritage in 1993, and agreement for commencement of work was received in January 1994. However, due to rapid increase in English Heritage funding commitments for 1994/95, particularly to support the major excavation at Elms Farm, Essex (Atkinson and Preston 1998), funding for the project was withdrawn in February 1994. A research design, submitted in July 1995, was agreed and fieldwork was carried out between autumn 1995 and spring 1998.

The project was designed to examine a class of cropmark identified by Priddy and Buckley (1987) and Harding and Lee (1987) comprising large, circular enclosures, some 20 to 40m in diameter. The assumption that many of these sites were Neolithic henge monuments (e.g. Harding 1995; Holgate 1996) was largely based on their cropmark morphology. However, dating and classification of archaeological cropmarks by morphology alone is notoriously difficult (Harding and Lee 1987; Whimster 1992).

Four sites were examined by the project: Colemans Farm, Rivenhall; Sturrick Farm, Great Bentley; Hall Farm, Little Bentley; and Clare Downs Farm, Belchamp St. Paul (Fig. 1). Of these, two were regarded as probable henges (Great Bentley and Little Bentley) and one as a possible hengiform monument (Rivenhall). The fourth site (Belchamp St. Paul), was seen as a probable barrow, but had also been interpreted as a possible henge or Springfield type monument (e.g. Buckley and Hedges 1987).

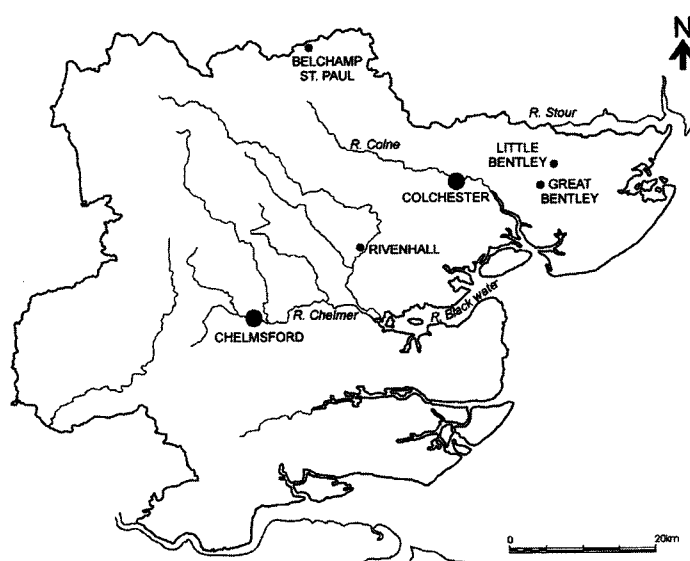


Fig. 1 Location plan showing sites investigated in relation to major rivers.

Methodology

The project used a combination of fieldwalking and trial-trenching to examine the four sites; the methodology is fully described in the archive. The selective trenching of cropmark complexes is a tried and tested method and a major focus of archaeological research. Essex has a well-established method of fieldwalking, which has been used before with much success to assess a large number of sites on a variety of soils (Medlycott and Germany 1994). The enclosures at Belchamp St. Paul, Great Bentley and Little Bentley were fieldwalked and trial-trenched, and the enclosure at Rivenhall, which was fieldwalked in 1986 (Buckley *et al.* 1988), trial-trenched. In addition at two sites (Rivenhall and Belchamp St. Paul), the opportunity was taken to sample alluvial/colluvial sequences close to the cropmarks.

Fieldwork

Sturrick Farm, Great Bentley

Cropmarks

The cropmark enclosure is situated in arable land to the east of the Bentley Brook, c.400m to the north-west of Sturrick Farm (Fig. 2). It has a diameter of c.32m, and an entranceway on its south side. A small faint circle can be seen on its opposite side, where the ditch is slightly thicker. Further cropmarks include three or more ring-ditches to either side of the brook. The largest of these, to the south-west, is c.20m across. Both sides of the brook are marked by the broad, irregular streaks of relict erosion gullies. The Great Bentley enclosure was considered likely to be a hengiform monument by Priddy and Buckley (1987, 72) and as either a henge monument or mill by Harding and Lee (1987, 144).

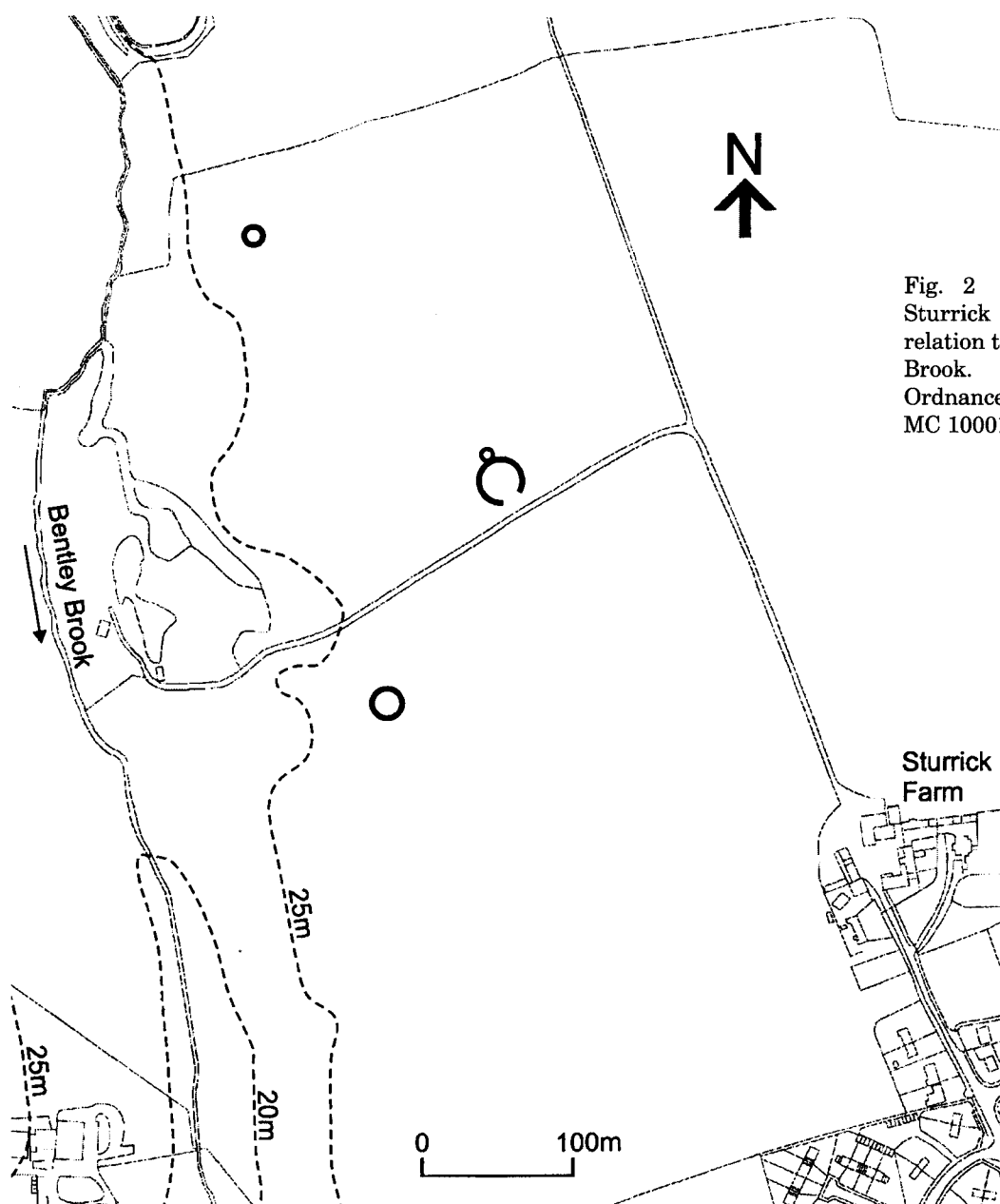


Fig. 2 Plan of cropmarks at Sturrick Farm, Great Bentley, in relation to the valley of the Bentley Brook. (© Crown copyright. Ordnance Survey. Licence no. MC 100014800).

Fieldwalking

Seventeen hectares of arable land were fieldwalked (Fig. 3). Worked and burnt flint was found in all areas and a minor concentration of undiagnostic flint cores was discovered to the immediate south-east of the ring-ditch. Other items included one or two pieces of possible Mesolithic date, and a laurel leaf or leaf-shaped arrowhead. A sherd of prehistoric pottery was found in the south-east corner of the survey area, near Sturrick Farm, and another was recovered to the north-west of the cropmark enclosure; neither was closely datable. Small amounts of Roman, medieval, and post-medieval pottery were distributed widely across the survey area. No significant concentrations of material, of any date, were seen in and around the cropmark enclosure.

Excavation

The cropmark enclosure and the ring-ditch to the south-west were investigated by one trench apiece (A & B in Fig. 4); the concentration of flint cores to the south-east was examined by fourteen small test-pits (C in Fig. 4). Trench A was 20m long and 8m wide, trench B 16.4m long and 5.6m wide, and the test-pits (C) each c.1.75m long and 1.5m wide; the

topsoil was removed by a mechanical excavator with a broad toothless bucket. No sampling of the topsoil was undertaken and no archaeological finds or features were revealed in the test pits. The underlying natural is a glacial patchwork of sand, silt, clay and gravel.

The south-east quarter of the cropmark enclosure ditch and the east side of its south entranceway (25) were exposed by trench A (Fig. 5). The enclosure ditch (14) ran in a slight curve across the trench from the north-east corner to the south west. It had a broad shallow profile and was c.6m wide and 1.25m deep (Fig. 6, S1). It contained a sequence of deposits of sandy silt, most of which were derived from the north-west side, the interior of the enclosure. Sherds of 13th to 14th-century pottery were recovered in its top and secondary fills. Pieces of medieval tile and a small amount of worked flint were also recovered.

The east half of the south entranceway was at 90 degrees to feature 14. It had even sides and a broad, slightly concave base, and was c.0.45m deep (Fig. 6, S2 to S3). It was filled by one deposit (5), and was cut by enclosure ditch 14, which was filled by deposit 26. No finds were found in 26, which was possibly the same fill as deposit 4 in S1, but one

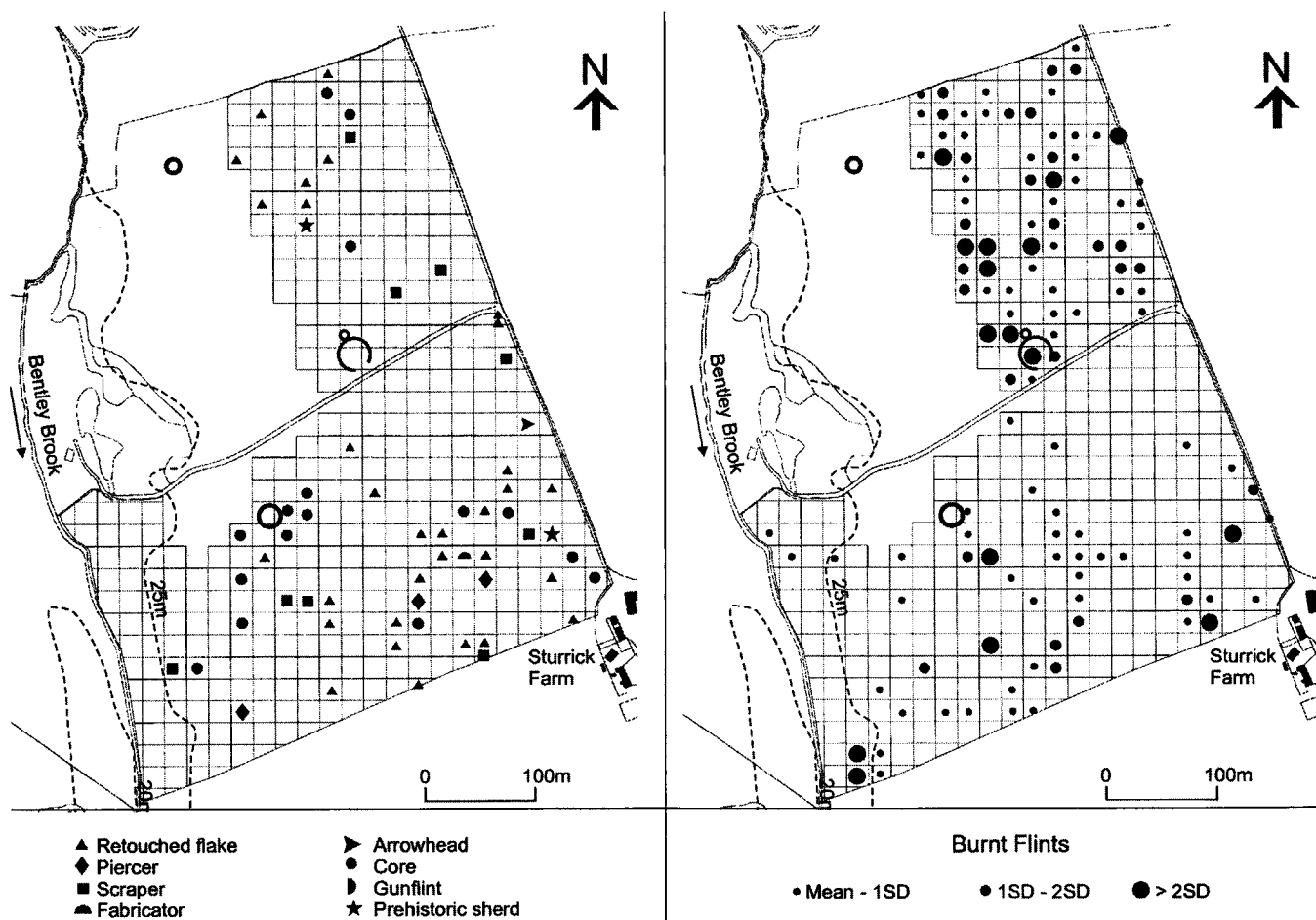


Fig. 3 Sturrick Farm, Great Bentley: fieldwalking plots showing distribution of struck and burnt flints.

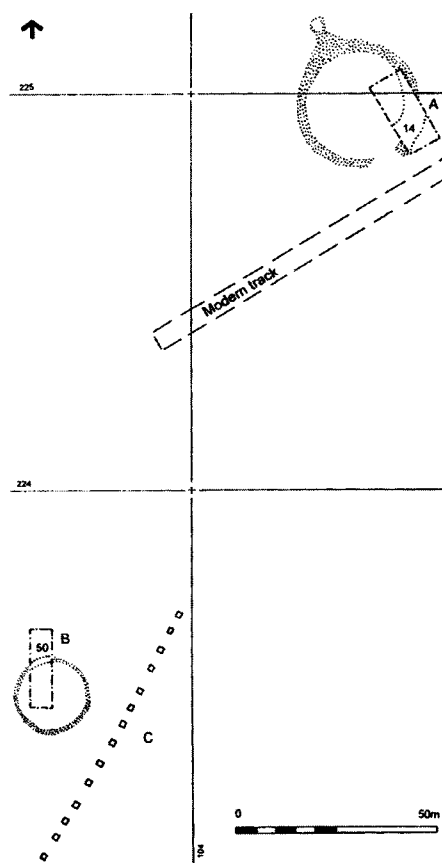


Fig. 4 Sturrick Farm, Great Bentley, showing crop marks in relation to the two excavated trenches and test pits.

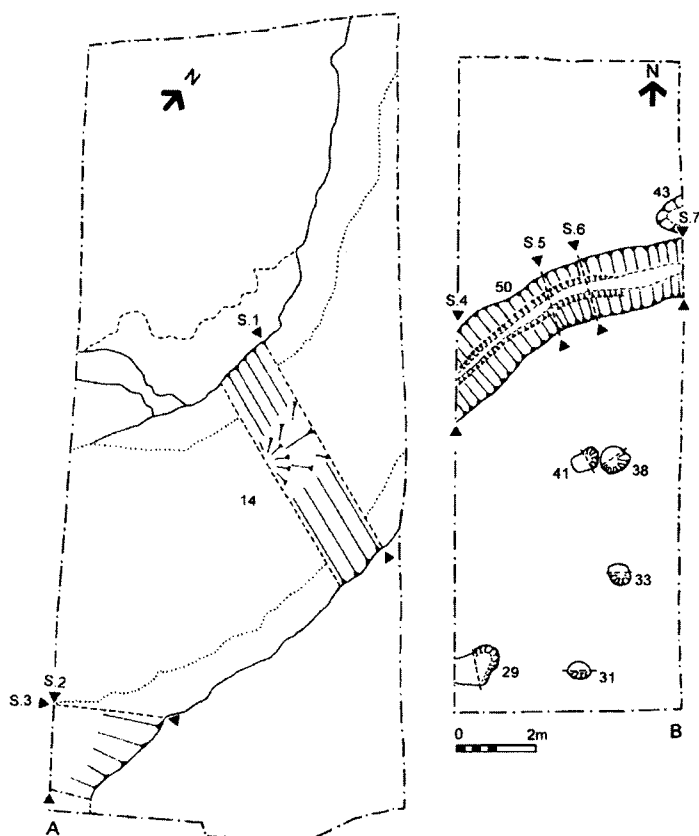


Fig. 5 Sturrick Farm, Great Bentley, plans of the two excavated trenches.

fragment of mill stone and a small assemblage of medieval pottery were discovered in 5.

Six undatable pits and post-holes (29, 31, 33, 38, 41 and 43) and the north-west part of the ring-ditch 50 were exposed by trench B (Fig. 5). One feature, 43, which was found outside the ring-ditch, appeared to be of natural origin. The ring-ditch itself was characterised by even sides and a narrow, slightly concave base, c.0.55m deep (Fig. 6, S4 to S7). The lower fills comprised nine deposits of silt-sand (53 - 55, 57, 61 to 63, 65 and 66), some of which appeared to derive from the exterior, north-west side, of the enclosure. The upper fills consisted of four deposits of sand-silt (58-60, and 64). Two pieces of possible Bronze Age pottery were retrieved from the lower fills, and one sherd of Late Iron Age pottery from the upper sand silt. Worked flint was found throughout the fills although concentrated in the western part of the excavated area. The cropmark enclosure is interpreted as the site of a medieval windmill and is discussed below.

Hall Farm, Little Bentley

Cropmarks

The cropmark enclosure is situated c.0.9km to the west of Hall Farm, and lies in a large arable field to the west of the Holland Brook, on the crest of the valley side which slopes down to the brook below (Fig. 7). The enclosure has opposed north-south entrances with rounded, outward projecting terminals, and a diameter of c.25m. The Little Bentley enclosure was identified as a possible henge by both Priddy and Buckley (1987) and Harding and Lee (1987) and has subsequently entered the literature as a henge monument (e.g. Harding, J. 1995, 131; Holgate 1996). The area to the north is covered by an extensive complex of cropmark enclosures and trackways. One of the enclosures, which is sub-rectangular in shape, is occupied by a small ring-ditch.

Fieldwalking

The fieldwalking survey covered 27.32 hectares. It revealed a large quantity of worked flint mainly in the eastern two thirds of the surveyed area (Fig. 8). Burnt flint was concentrated in the area of rectilinear cropmark enclosures, in the centre south of the surveyed area, and on the eastern side towards the Holland Brook (Fig. 9). A concentration of prehistoric pottery was recovered from the area of rectilinear cropmark enclosures (Fig. 10).

The worked flint (Fig. 8) comprised waste and retouched flakes but included several cores and a small number of scrapers, together with a barbed and tanged arrowhead, which was recovered to the south-east of the cropmark enclosure. Another arrowhead was found in the south-west corner, away from the main concentration, and a small

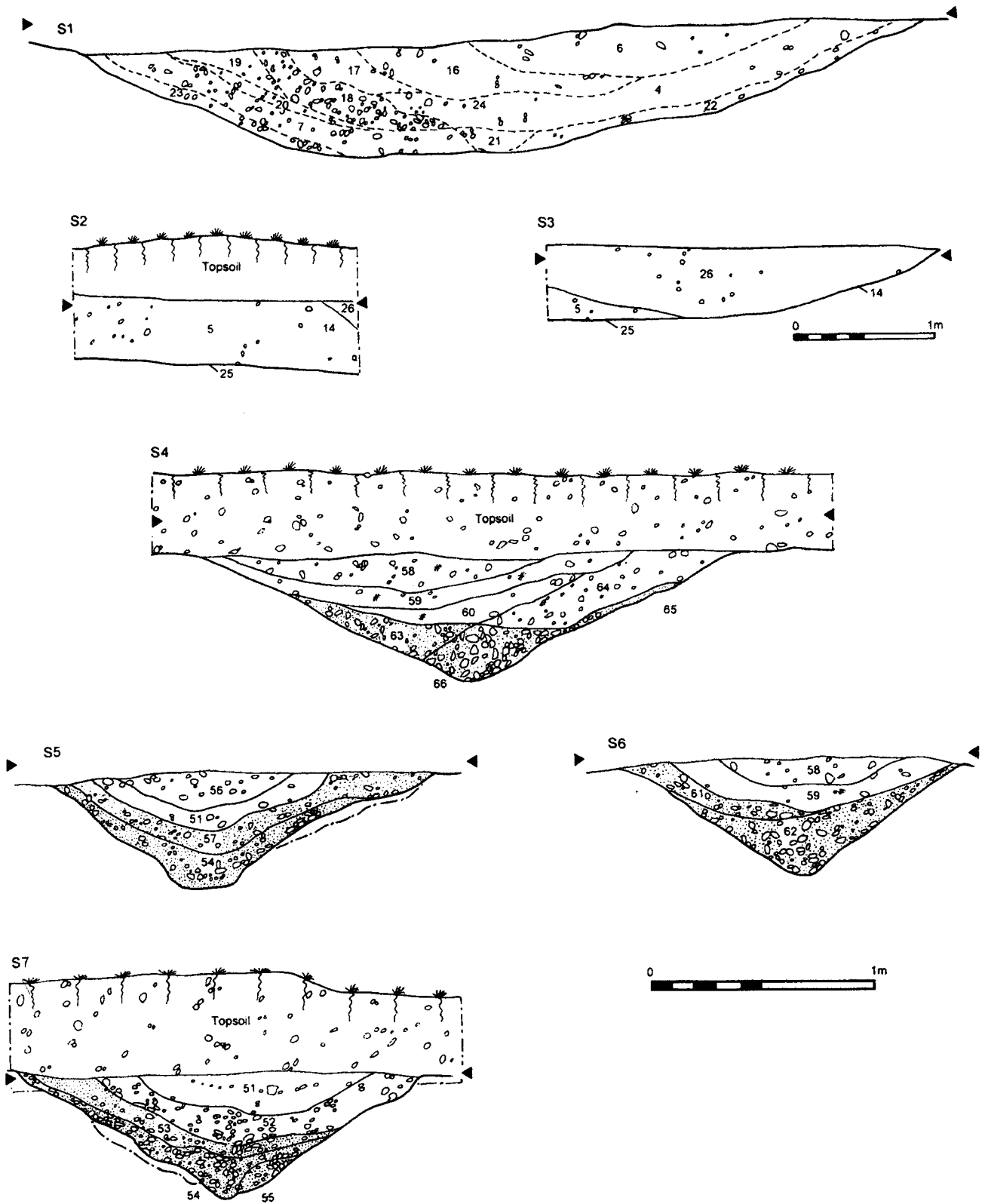


Fig. 6 Sturrick Farm, Great Bentley: sections through excavated features.

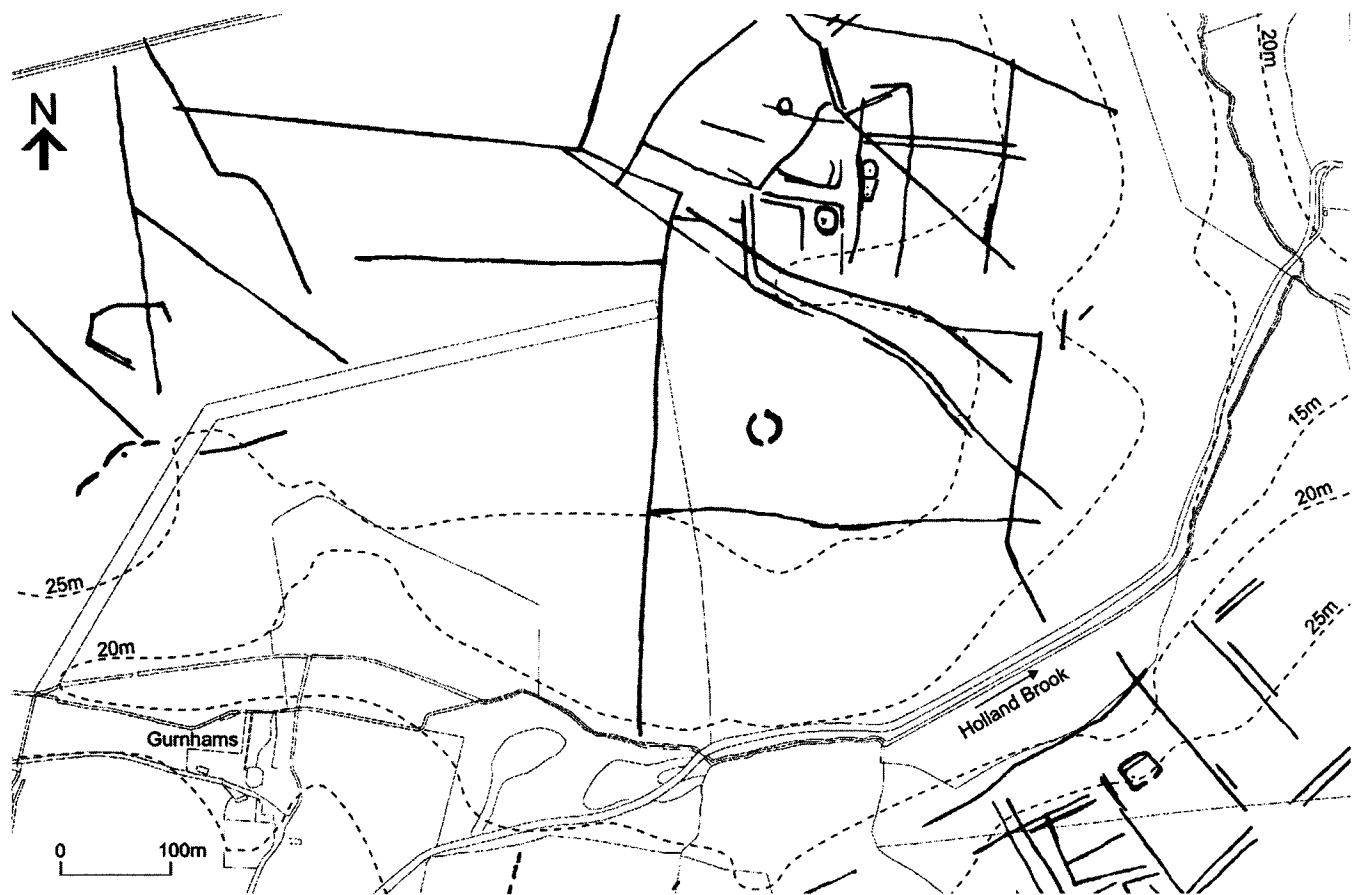


Fig. 7 Plan of cropmarks at Hall Farm, Little Bentley, in relation to the valley of the Holland Brook. (© Crown copyright. Ordnance Survey. Licence no. MC 10014800).

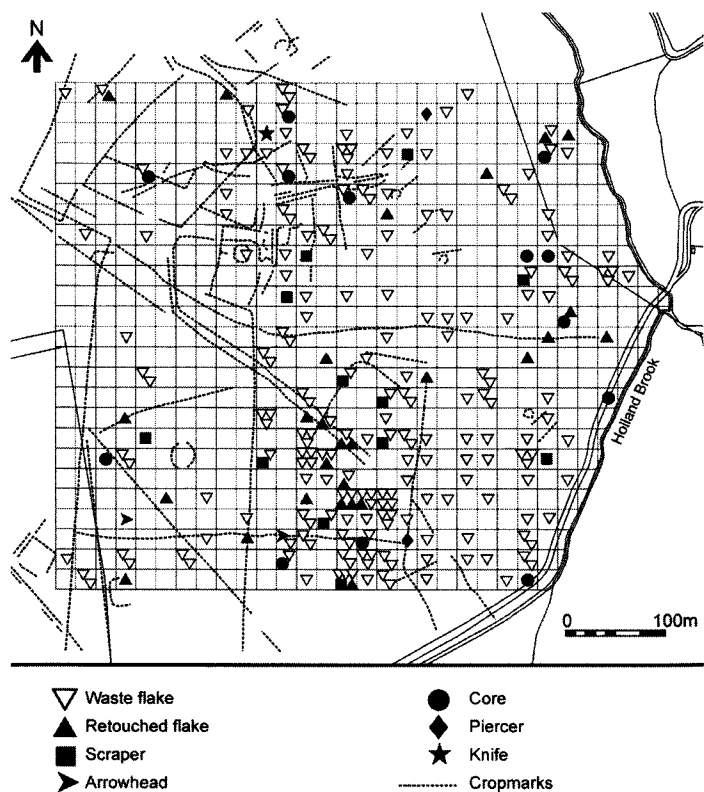


Fig. 8 Hall Farm, Little Bentley, fieldwalking plot.

number of cores and tools in the northern part of the survey area.

Thirteen sherds of prehistoric pottery were discovered in the central part of the survey area, in the same location as the densest part of the cropmarks (Fig. 10). Some of this material is of Middle Iron Age date, the remainder possibly of Bronze Age or earlier date. The pottery scatter was flanked to the north and south by two concentrations of burnt flint (Fig. 9). This would seem to indicate that the rectilinear enclosures formed a focus of prehistoric settlement.

A concentration of medieval pottery was recovered in the western part of the fieldwalked area, a concentration comparable to that associated with the medieval settlement at Boreham Interchange (Lavender 1999). Some pottery was recovered from the cropmark enclosure itself and other sherds were scattered across the fieldwalked area (Fig. 11).

The remainder of the fieldwalking finds comprised four sherds of Roman date, and a large quantity of post-medieval tile and pottery scattered throughout the survey area.

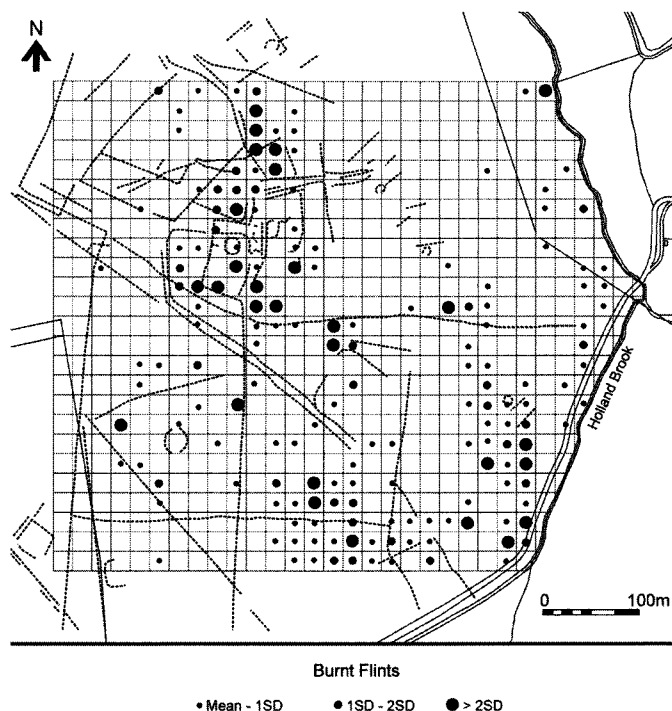


Fig. 9 Hall Farm, Little Bentley, fieldwalking plot. Showing burnt flints.

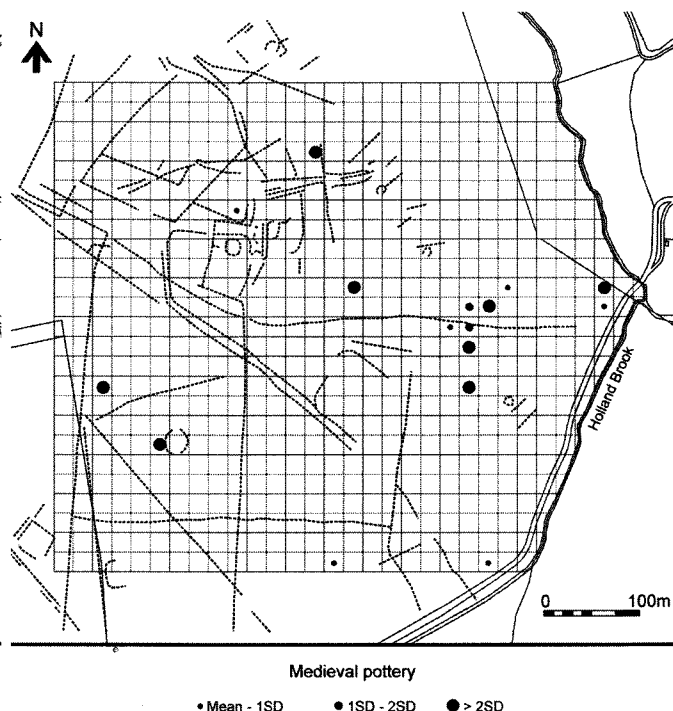


Fig. 11 Hall Farm, Little Bentley, fieldwalking plot. Showing medieval pottery.

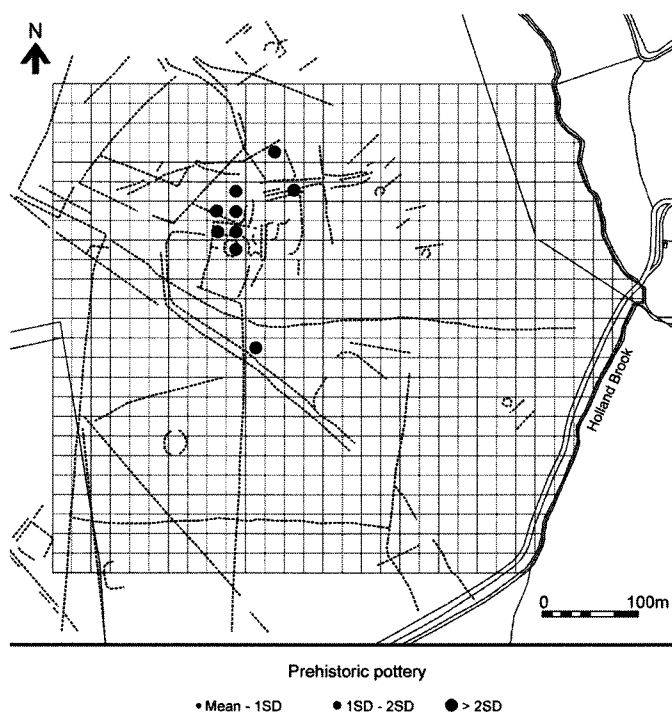


Fig. 10 Hall Farm, Little Bentley, fieldwalking plot. Showing prehistoric pottery.

Excavation

The north part of the cropmark enclosure was exposed by a single trench, c.36m by 5m (Fig. 12). A single section, 1.5m wide, was dug by hand across the north-west quarter (Fig. 13). The surface definition of the feature, which had been recut on three or more occasions (16, 9 and 12 in Fig. 13, S1), was very poor, possibly due to deep ploughing. The ditch was cut into a patchwork of natural sand, silt and gravel and was sealed by 0.35m of topsoil.

The initial cut (20) had steep sides, a sharp break of slope, at a broad flat base. It was 4.6m wide and 1.6m deep, and was filled by five deposits (14, 17-19, and 23). A small pit or post-hole (10) was found on the inside edge of initial cut 20, it contained no finds and was filled by one deposit. The second cut (16), on the inside edge of the first, was 1.75m deep. It had even, but irregular sides, which fanned out from a narrow concave base towards a probable terminal just beyond the face of the south-east section. It was filled by one deposit (15) and its inside edge was cut by recut 9, which was 1.33m deep and characterised by a broad, slightly concave base and steep sides. The ditch was filled by three deposits (7, 8 and 13), and came to an abrupt, steep-sided end in front of the south-east section.

A further possible recut, not recorded at the time of excavation but recognised during post-excavation, may have existed between 16 and 9,

defined by a small upward rise on the north-east side of its base, and the interface between fills 13 and 7. The final recut (12) was found on the outside edge of recut 9. It was seen in both sections, and was characterised by three deposits (2, 4 and 5) and a broad, shallow profile, c.4.25m wide and 0.63m deep.

Sherds of mid 12th to early 13th, century pottery were found in the initial cut (20) and the primary recut (16). Sherds of medieval pottery from the first half of the 13th century were recovered from the fills of cuts 9 and 12.

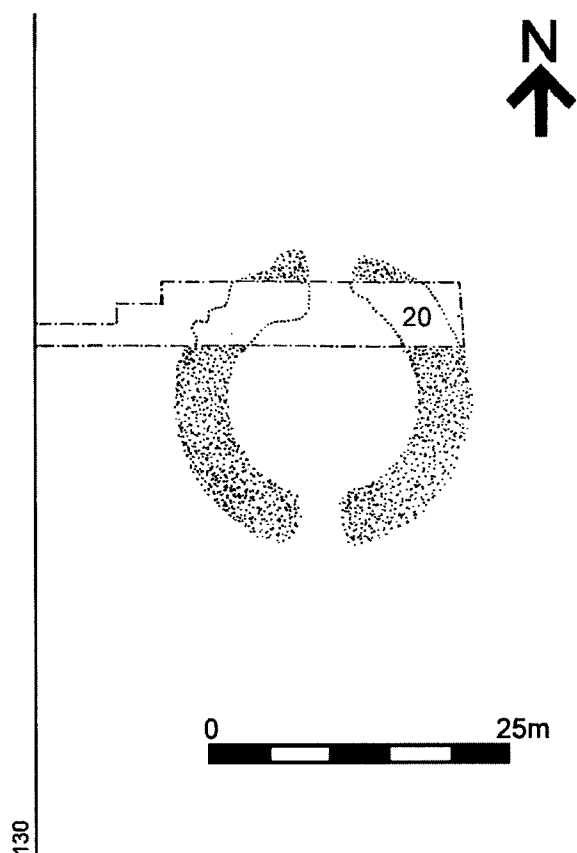


Fig. 12 Hall Farm, Little Bentley, excavated trench in relation to approach enclosure.

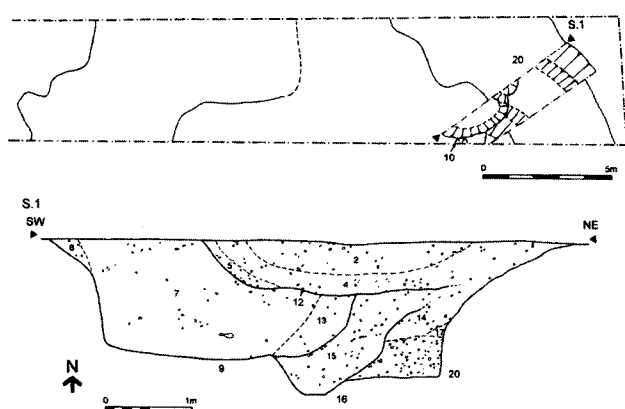


Fig. 13 Hall Farm, Little Bentley, excavation plan and cross section.

Colemans Farm, Rivenhall

Cropmarks

The cropmark enclosure (Fig. 14) is located in a large arable field, to the west of the River Blackwater, a small stream, a tributary of the river, is situated to the south. The enclosure is defined by a narrow ditch and has a diameter of c.46m. It has no visible breaks and is flanked by a V-shaped arrangement of trackway ditches. In the field to the south is a c.80m long section of curved ditch, which parallels the south side of the cropmark enclosure. Buckley *et al.* (1988, fig. 2) regarded this enclosure as likely to be a henge. To the north-east of the cropmark enclosure is a Neolithic long barrow or mortuary enclosure, and to the east and north-east of that two small ring-ditches.

Previous work

The long barrow/mortuary enclosure was trial trenched and fieldwalked by Essex County Council Archaeology Section in 1986 (Buckley *et al.* 1988). It was defined by a single, steep-sided ditch, c.1.7m deep, and was found to contain a small amount of worked flint and Neolithic pottery. Two clusters of worked flint were discovered by the fieldwalking; no finds were found near the cropmark circular enclosure, probably due to masking colluvium/alluvium in this area. The published distribution plans make it clear that all finds were recovered from the gravel terrace: the stream/river floodplains were devoid of surface finds (Buckley *et al.* 1988, figs. 5 and 6)

In June 1996, the long barrow/mortuary enclosure was picked up by a geophysical (gradiometer) survey carried out by Oxford Archaeotechnics on behalf of the land-owner, Mr Simon Brice (Oxford Archaeotechnics 1996). This survey revealed a possible double ring-ditch, c.23m in diameter, south of the long barrow/mortuary enclosure (Fig. 14).

Excavation

Five trenches were opened by machine (Figs. 14 and 15). The two cropmark ring-ditches were investigated by trenches 1 and 2, the double ring-ditch identified by the geophysical survey by trench 3, and the cropmark hengiform enclosure and southern-most trackway by trenches 4 and 5. Trench 6, was opened as a second attempt to locate the northern-most ring-ditch, which trench 2 had failed to locate.

The south and east parts of the field, by the stream and the river, are covered by alluvium and sandy gravel. The gravel in the north-west part of the field is covered by brickearth. Both types of deposit are sealed by 0.3m of topsoil.

Trench 1 contained one feature, a broad, slightly curving ditch (1) on a north-east south-west

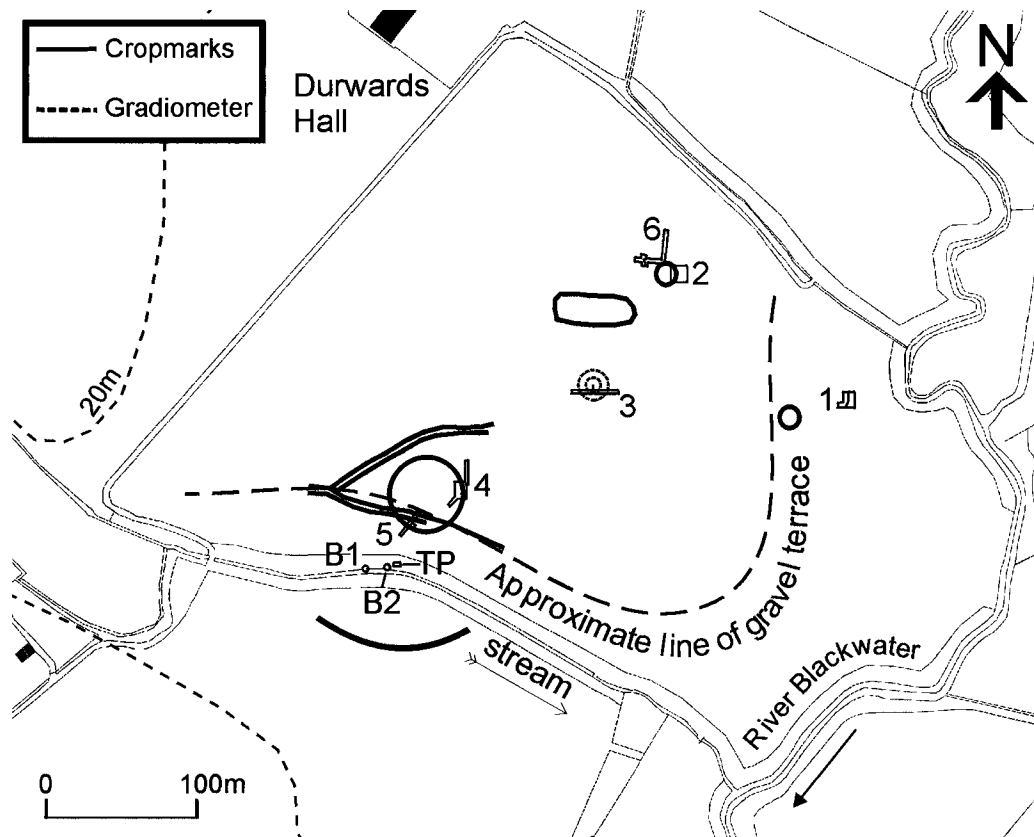


Fig. 14 Coleman's Farm, Rivenhall, excavated trenches in relation to cropmarks and apparent dual concentric ring-ditch revealed by gradiometer survey. (© Crown copyright. Ordnance Survey. Licence no. MC 10014800).

alignment (Fig. 15). It had gentle sides and a deep, narrow channel, 0.5m deep, which ran across its base at an oblique angle. It was filled by three deposits (2, 3 and 4 in Fig. 16, S1), which contained a small amount of worked flint and Roman pottery.

No archaeological features were found in trenches 2 and 3, although 58 pieces of worked flint and nine sherds of prehistoric pottery were discovered in the former in the top 0.1m of brickearth, mostly in the western half of the trench.

Trench 6 (Fig. 15) contained a small, curvilinear gully (56) and two pits or post-holes (47 and 49). The gully had shallow sides and a flat base and a terminal at its north-east end, which was slightly wider (1.3m) and deeper (0.4m) than the rest of the feature (Fig. 16, S6). It contained one deposit (57) and a small assemblage of prehistoric pottery, which included a sherd of Middle Bronze Age date. Pit 47 was found inside the gully's terminal, but its identification as a separate feature was highly questionable and its relationship with the surrounding gully was never properly determined. It contained one fill (48), which was indistinguishable from the surrounding fill of the gully, and a small amount of prehistoric pottery, which was found on its surface. Pit 49 had steep sides and a slightly concave base, c.0.45m deep. It

contained three deposits (50, 54 and 55), two waste flakes and a small amount of burnt/fire-cracked flint, the bulk of which was extracted from its secondary fill (54).

Trench 4 (Fig. 15) contained one ditch (22) and four rounded pits (8, 14, 44 and 45). The ditch was sealed by 0.15m layer of coarse gravel (19), which contained an assemblage of worked and burnt/fire-cracked flint. It had a north-south alignment and an irregular U-shaped profile, 1.7m wide and 0.65m deep (Fig. 16, S4). It contained seven deposits (21, 34-38, and 64), with at least one broad shallow recut filled by deposits 21 and 64 (Fig. 16, S4 and 5). The ditch yielded a large amount of burnt/fire-cracked flint, the bulk of which was found in a large rounded patch on its west side (16, Fig. 15). Pieces of worked flint were discovered in the primary (35), secondary (34) and penultimate (21) fills respectively. Pits 8, 14, 44 and 45 were all situated to the immediate west of the ditch. All four pits were between c.0.6m wide and 0.15 to 0.56m deep, with one fill apiece containing small amounts of burnt/fire-cracked flint. Other finds from trench 4 comprised a single piece of worked flint in pit 45, and 38 pieces of worked flint in pit 14.

Trench 5 (Fig. 15) revealed three parallel ditches on a north-west south-east alignment (5, 11 and 59).

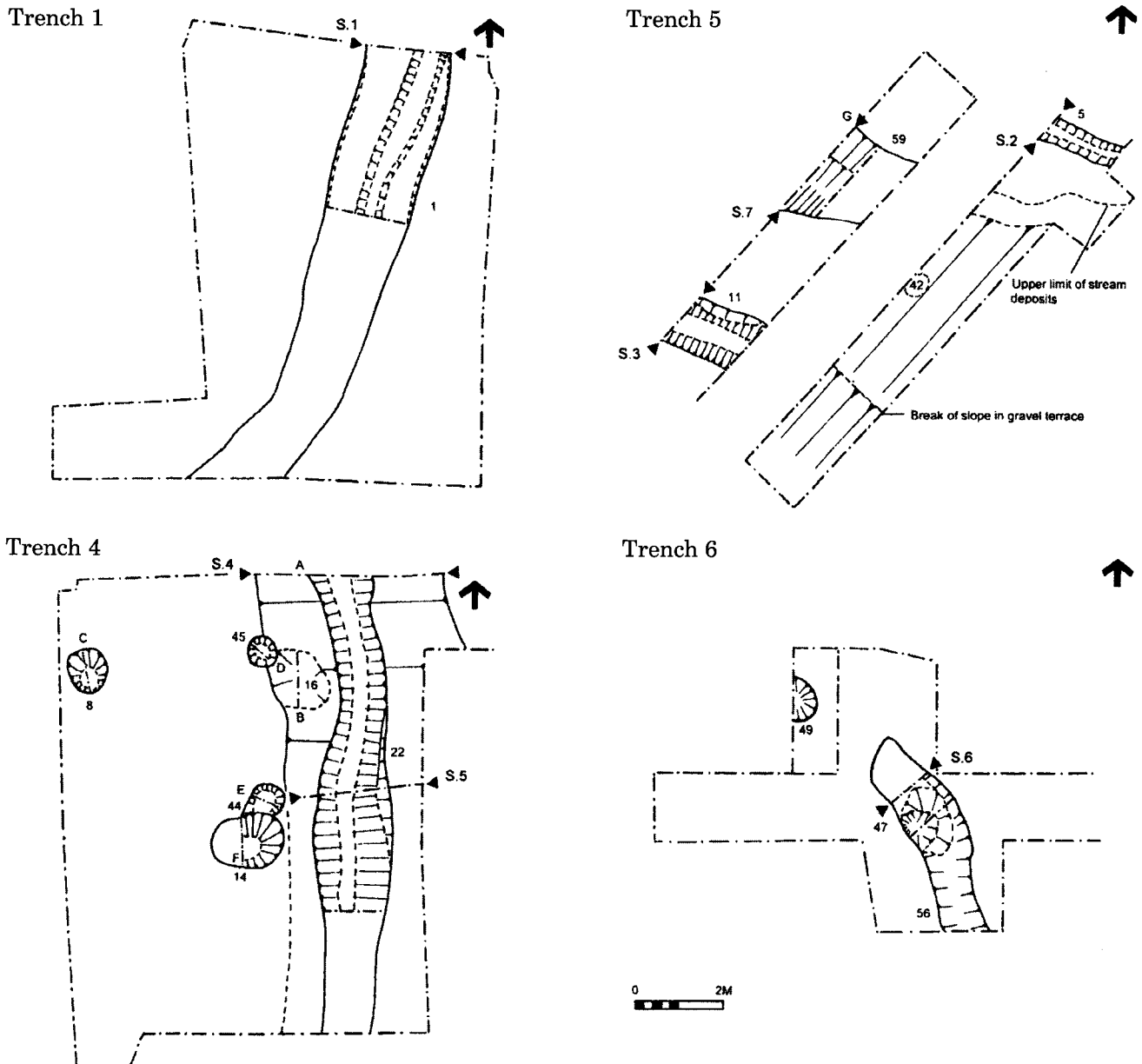


Fig. 15 Coleman's Farm, Rivenhall, plans of excavated trenches.

Gravel outcropped at the northern end of the trench, whilst a broad swathe of alluvium/colluvium occupied the south-west end. Ditch 59 was separated from ditches 11 and 5 by 3m and 6m wide gaps respectively. It was considerably larger (2.4m wide and 0.75m deep) than the other two ditches with even sides and a slightly concave base, and was filled by four deposits (51, 52, 58 and 53), one of which (52) contained six pieces of worked flint (Fig. 16, S7). Ditches 5 and 11 were 0.5m wide and 0.27m deep and 0.9m wide and 0.4m deep respectively. They both had even sides and slightly concave bases and were filled by two (6 and 10) and three (12, 23 and 24) deposits (Fig. 16, S2 and S3). No finds were discovered in ditch 5, but two pieces of worked flint were found in 11. No features were found beneath the alluvium.

Environmental sequence

Boreholes and a test pit examined the colluvial/alluvial sequence in the valley of the small stream (Fig. 14) and revealed a range of environmental data described below.

Clare Downs Farm, Belchamp St. Paul

Cropmarks

A sub-circular enclosure with a diameter of c.60m was considered likely to be '...a religious or ritual site...' by Priddy and Buckley (1987). The possibility of a Late Bronze Age date has also been tentatively suggested (Buckley and Hedges 1987). The east and north-west sides of the enclosure are interrupted by possible entranceways; an inner-ring ditch, which is

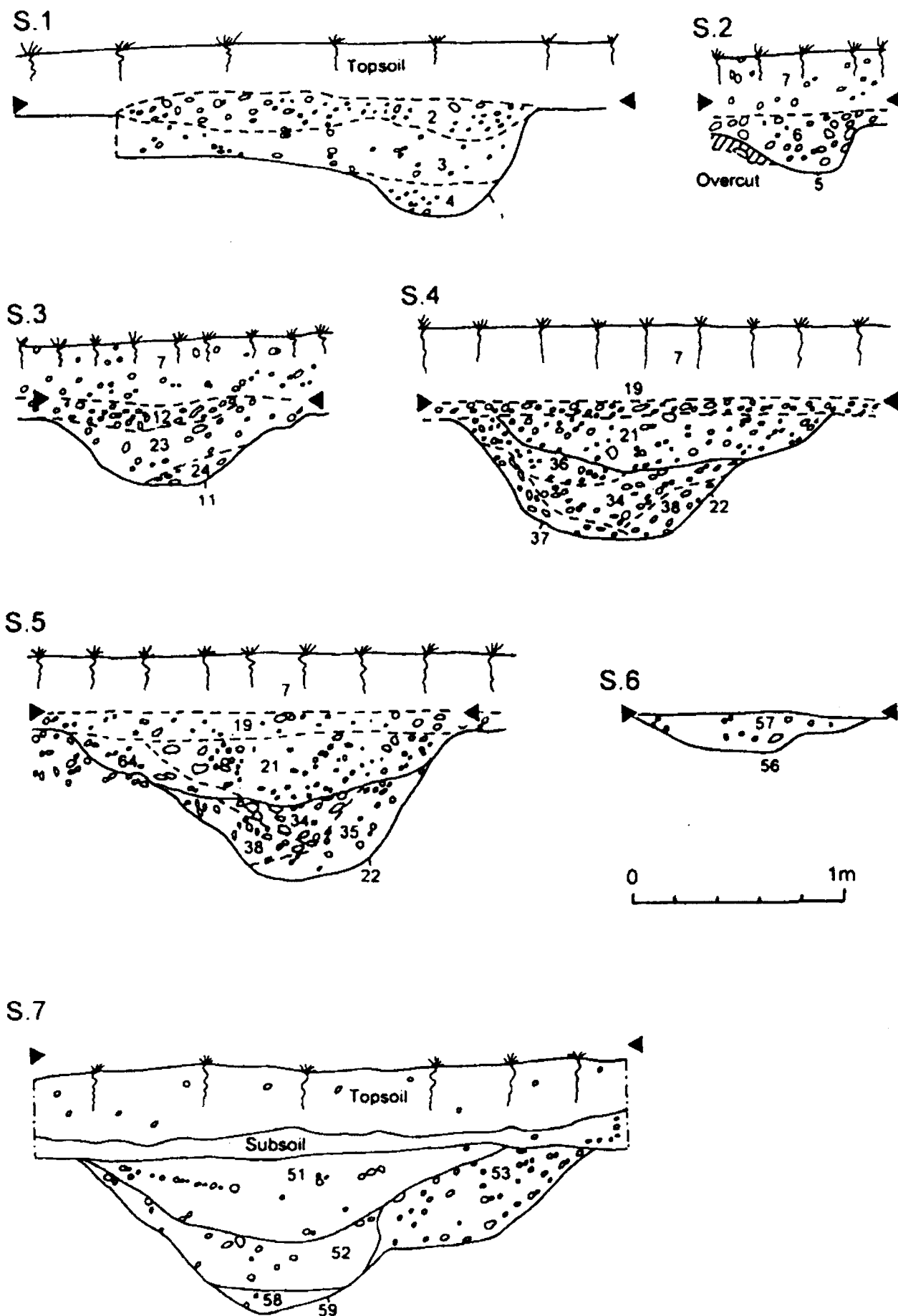


Fig. 16 Coleman's Farm, Rivenhall, sections through excavated features.

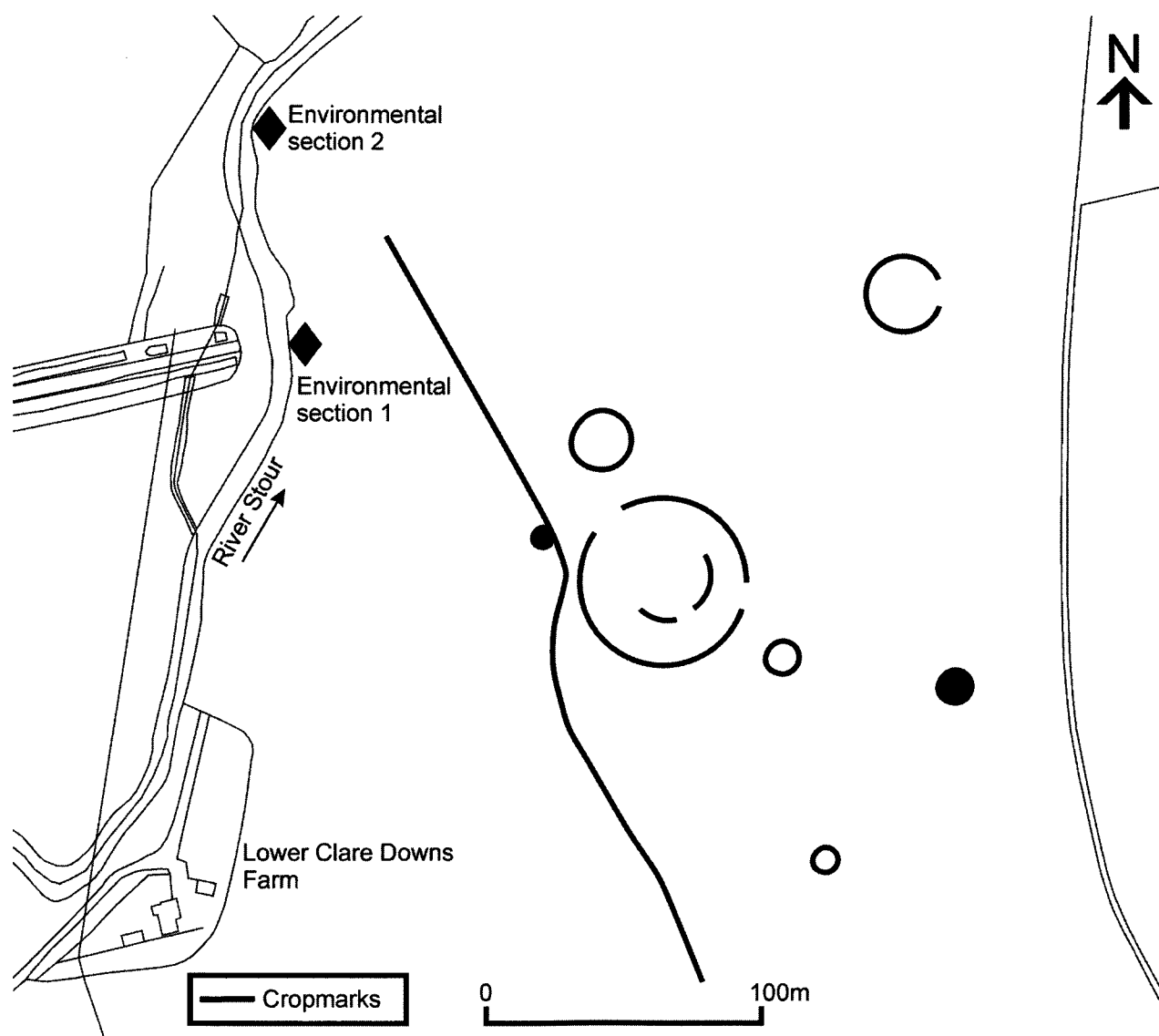


Fig. 17 Clare Downs Farm, Belchamp St. Paul, cropmarks in relation to river Stour and location of the two environmental sections. (© Crown copyright. Ordnance Survey. Licence no. MC 100014800).

not so well defined, is situated in a slightly off-centre position (Fig. 17). A further four ring-ditches can be seen to the north and south-east. Two large dark patches are probably infilled ponds. A cropmark ditch to the east is distinguished by a kink in its line, which possibly indicates that it was cut when the large sub-circular enclosure was still visible as an upstanding feature.

Fieldwalking

The fieldwalking survey covered 14.72 hectares; a scatter of worked and burnt/fire-cracked flint was found throughout (Fig. 18). The worked flint was concentrated in the area of the cropmarks, and in two broad linear zones running north-south through the centre of the fieldwalked area, these linear zones are even more marked in the distribution of burnt flint (Fig. 18). Other finds included a scatter of Roman pottery in the south-west, and a scatter of Roman brick and tile in the

north-east. Small amounts of medieval and post-medieval pottery were also found. The distribution and range of finds was similar to that recovered by a fieldwalking survey carried out by the Haverhill Archaeological Group in the early 1980s (Acquier 1986).

Excavation

Three trenches were stripped of topsoil by machine (Fig. 19). The natural in all three trenches – a reddish brown clay (25) – was sealed by layers of colluvium, overlain by 0.28-0.3m of topsoil. The majority of features were very difficult to see, as the top of the exposed hill wash in all three trenches had been disturbed by deep ploughing and sub-soilers.

Ditch 12, at the west end of trench A, was seen in section only, in box-section 11 (Fig. 20). It was aligned north-south and was c.0.43m deep. It contained two deposits (17 and 18) and had steep to even sides and a broad, undulating base (Fig. 20, S1).

In trench B the inner circle, ditch 4, was identified in section, in box-section 2, cutting colluvial deposit 8 at the west end of the trench (Figs. 19 and 20). Its single fill (10) was largely indistinguishable from hill wash deposit 8, which was a thick layer of yellowish brown sand silt. The base, which was the only part of the feature to be clearly detectable, was c.1m deep and at least 1.9m wide. It cut the reddish brown clay natural, and was characterised by a gradual fall to the west (Fig. 21, S3).

Cropmark enclosure ditch 31 was 4.2m wide and 1.02m deep. It had even sides and a concave base and was filled by three deposits (28-30) (Fig. 21, S4). It cut colluvial deposit 8 and was separated from the inner circle by a 15m wide berm. Both inner and outer ditches were sealed by layer 7, which appeared to be a further deposit of colluvium.

Ring-ditch 14 in trench C was characterised by even sides and a central, U-shaped slot (Figs. 20 and 21, S2). This ditch cut hill-wash deposit 35 and was 1.7m wide and 1m deep. Pit 16, also in trench C, was characterised by one deposit (15) and a shallow dish-shaped profile. It cut ring-ditch 14, but contained no finds.

Small amounts of Neolithic or Bronze Age pottery and worked flint of similar date were discovered in ditches 4 and 31. No other stratified finds were discovered.

Environmental sequence

Cleaning of the river bank and a test pit (Fig. 17) revealed a sequence of colluvial and alluvial deposits which were sampled for environmental data described below.

The Finds

Flint (Fig. 22)

H. Martingell

Introduction

The flint artefacts recovered from all four sites examined by the project are post-glacial in date, all appear to be no earlier than 10,000 BC. Descriptive lists of the artefacts for all four sites are deposited in the archive. Material recovered by earlier fieldwork at Colemans Farm and Clare Downs Farm is also briefly considered (Tables 1 and 2).

A single possible exception is a backed blade fragment from the 1995 field walking at Belchamp St. Paul, possibly of Upper Palaeolithic date. The absence of Early Palaeolithic artefacts is perhaps surprising as a complete *bout coupé*, Middle Palaeolithic hand-axe was recovered from the Colemans Farm site during the 1970s (Martingell 1982). Also at Colemans Farm, the recovery of four microliths during the 1970s and 1980s indicates a Mesolithic presence here and some of the blades may also belong to this period. However, one can see at a glance (Table 2), that only a few pieces may pre-

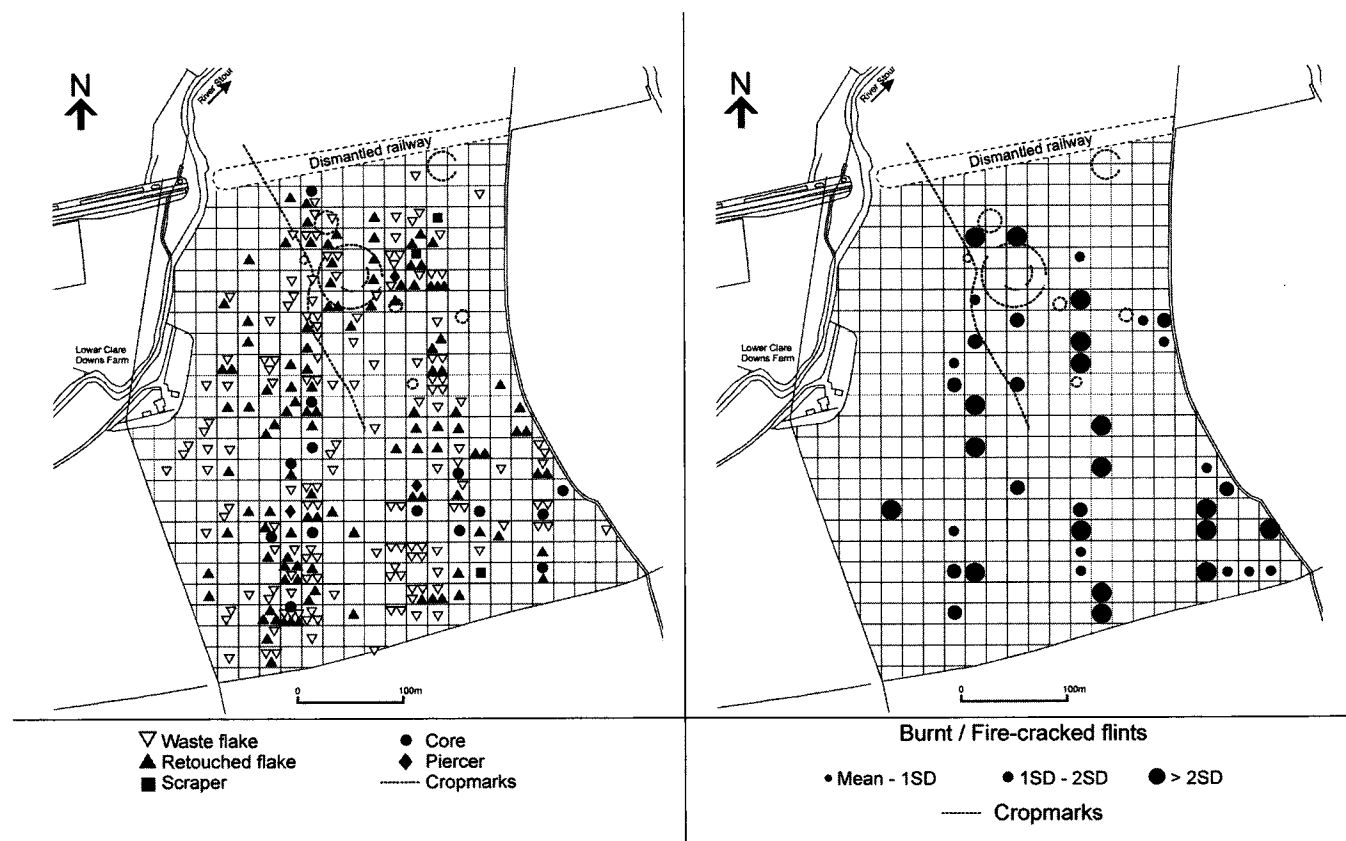


Fig. 18 Belchamp St. Paul, fieldwalking.

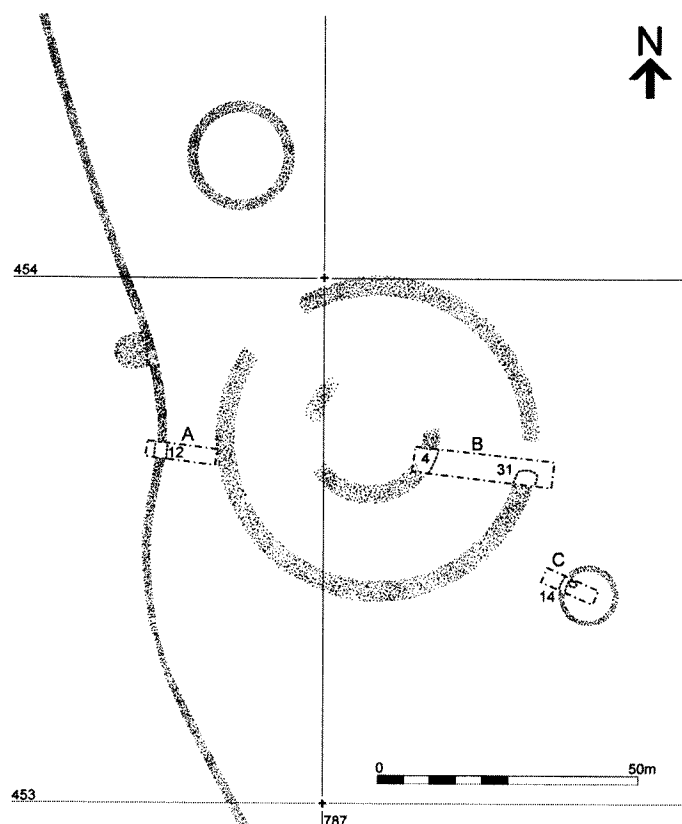


Fig. 19 Location of excavation trenches in relation to cropmarks at Belchamp St. Paul.

date 4,000 BC. Although many of the artefacts are patinated, none of these are diagnostic tool types and since patination can occur on Neolithic implements, it is safer to assume that they are of this later date.

Sturrick Farm

A total of 210 worked flints were recovered (Table 1). Of these, 11% were cores and 76% were flakes and waste chippings. 5% were retouched artefacts, including 4 scrapers. The remaining 8% had minimal retouch or damaged edges. None of the 14 blades or 3 blade cores were patinated, suggesting an early Neolithic rather than a Mesolithic date, for these pieces. Two pieces could be described as of Neolithic Levallois technique and would be of Middle Neolithic date, as would the leaf arrowhead roughout. The remaining secondary flaked artefacts belong to the Middle Neolithic, Late Neolithic and Bronze Ages. A 19th century gunflint was also recovered. Most of these artefacts come from the southern part of the site, where a series of episodes of flint knapping dating from the Neolithic to the Late Bronze Age is the most likely interpretation of the evidence.

Hall Farm

A total of 279 worked flints were recovered (Table 1). Of these 72% were flakes and waste chippings and 5% were cores. 10% were retouched artefacts (this latter percentage being about twice the number one would expect): 17 of these were scrapers, 1 a hollow-based Neolithic arrowhead, another a barbed and tanged Bronze Age arrowhead and, unexpectedly, a large Neolithic borer.

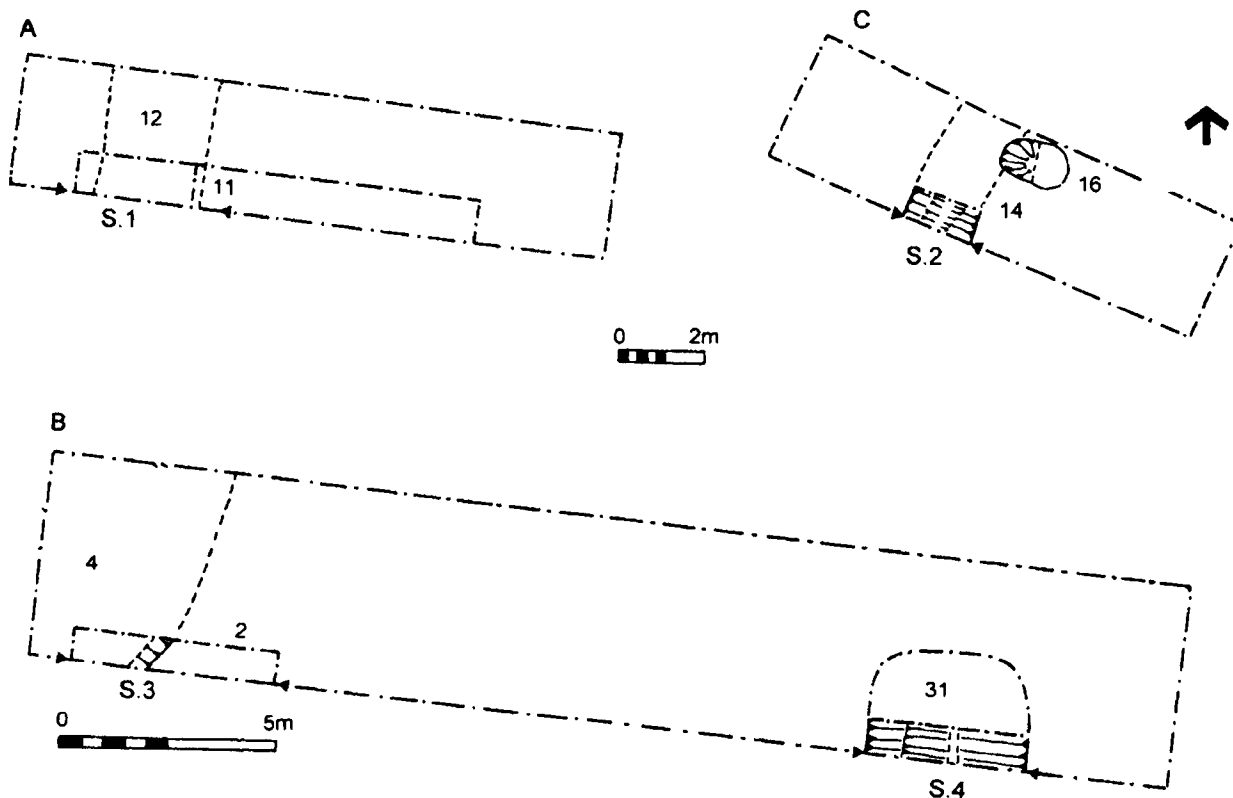


Fig. 20 Plans of excavated trenches at Belchamp St. Paul.

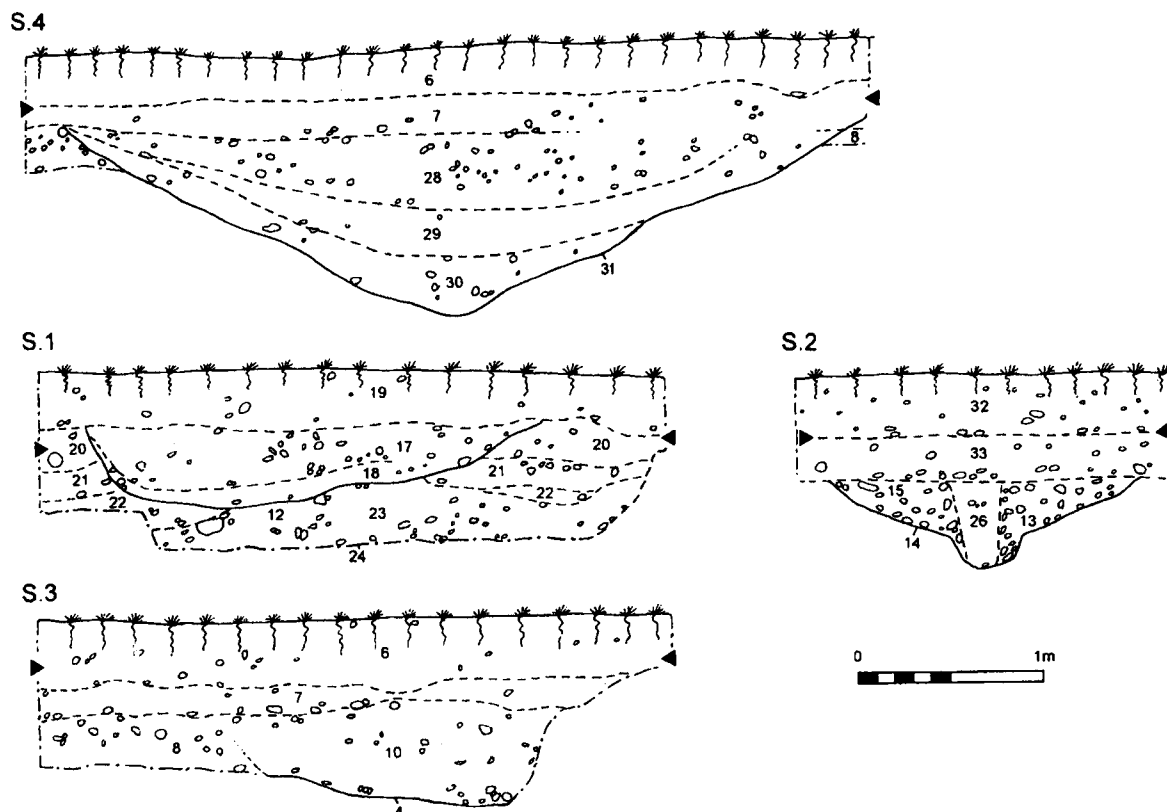


Fig. 21 Belchamp St. Paul, sections.

The remaining 13% were either irregularly retouched or too fragmentary to be sure of their original form. An interesting aspect of this collection was the small number of 'squat' flakes. Six can be positively identified and four of these have been retouched to form scrapers, there are also 4 'squat' flake cores; these could be of Iron Age date, and possibly some of the other casually knapped flakes may also belong to the Iron Age. If this is accepted then the cropmarks in the northern part of the site could include those of an Iron Age farmstead. The southern part of the site had the main concentration of the flints, including the arrowheads.

Clare Downs Farm

About 350 worked flints were recovered (Table 1). Of these, 56% were flakes and waste chippings; 15% were blades, 8 of these patinated; 10% were cores and blocks; 7% were retouched pieces including the backed blade fragment scrapers, piercers, denticulates, microdenticulates, notched pieces and a possible fabricator/strike-a-light roughout; 22% were irregularly retouched or edge-damaged pieces, or too fragmentary to classify. This high number of unclassifiable pieces due to damage, relates to the surface collection; but interestingly, the 1990s material was less damaged than the 1980s material, suggesting that the more recent collection had been exposed on the surface for a shorter period of time than the earlier collection. The material collected in the 1980s by the Haverhill and District Archaeological Society comprised 402 worked flints (Acquier 1986). The artefacts included 10 scrapers, 1 Neolithic pick, 4 piercers and about 40 pieces with edge

retouch/damage. The remaining pieces consisted of flakes, blades, cores and other waste.

The banks of the River Stour are notable for the great quantity of worked flint recovered from them over the years. Most of the artefacts are made of river gravel flint with a few on black flint from the chalk. Without doubt, there was Neolithic and Bronze Age flint knapping carried out on this site, especially in the southern area. The pick from the earlier collection, and the range of the retouched artefacts generally, suggests that they were made for local use. The lack of any prestigious artefacts, or any fragments of them, is notable. Indeed in the main, the artefacts appear rather slipshod in manufacture, unlike the more prestigious items found downstream at the mouth of the Stour estuary.

Colemans Farm

A total of 159 worked flints were recovered from the 1996 excavations (Table 1). 69% were flakes and waste chippings, 6% were cores, and 6% retouched artefacts including 3 scrapers and a probable roughout for a fabricator. The remaining 19% included 20 blades and other minimally retouched pieces.

From previous excavations and field walking in the 1980s and earlier, 1280 worked flint artefacts were collected and analysed (Table 1). Those recovered during the 1986 excavation of the possible Neolithic long barrow/mortuary enclosure in the Fen and Loews Field emphasised the dominant Neolithic aspect of the worked flint collection. In particular, a Middle Neolithic disc core using Levallois technique was found and a fragment of a flaked and ground flint axe. The scatter of worked flint to

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Table 1. Worked flint recovered by site.

Sites	Site area in hectares	Flint from 1990s		Flint from 1980s		S Brice coll.	Totals
		Excav	Fw	Excav	Fw		
RHCF	c10.00	159	-	1055	173	52	1439
GBESF	17.00	42	168	-	-	-	210
LBHF	27.22	16	263	-	-	-	279
BPCF	14.72	69	282	-	402	-	753

the east of the enclosure suggested a Late Neolithic domestic site (Holgate, 1988 77-91). The overall range of artefacts was similar to those in the recent collection, with the addition of the 4 microliths.

In contrast to Clare Downs Farm, Colemans Farm has produced a wide range of artefacts including prestigious bifacial pieces such as arrowheads and a large single piece sickle fragment, a fine Bronze Age plano-convex knife and Bronze Age axe hammers (Martingell and Brice 1992).

Prehistoric Pottery

N. Brown

Introduction

All the pottery has been examined and recorded using a system devised for prehistoric pottery in Essex (Brown 1988 details in archive). No prehistoric sherds were discovered during the trial trenching at Little Bentley or the fieldwalking at Belchamp St. Paul.

Clare Downs Farm, Belchamp St Paul

A total of 19 sherds weighing 51g were recovered from the excavations. The majority (11 sherds weighing 42g) derived from trench B, the area of the large double ring ditch. The material was recovered from cleaning of cover-loam, the fill of the inner ditch and the fill of the outer ditch. A single tiny sherd (Fig. 23.1) tempered with fine sand, with smoothed surfaces and a burnished interior, has incised lines on the interior and may derive from an internally decorated Grooved Ware bowl. Locally more complete examples of such vessels were recovered from the Lawford Enclosure (Smith 1985, fig. 11, 87-03) and sherds similar to that from Belchamp St. Paul were recovered from Culver Street, Colchester (Brown 1992) and Slough House Farm (Brown 1998). With the exception of this decorated sherd, the pottery mainly comprised thin walled sherds with well smoothed surfaces tempered with finely crushed, burnt flint. Unfortunately, rims, bases or decorated pieces were not present and this pottery might be of Neolithic or Bronze Age date. A sherd of flint and grog -tempered fabric recovered from the inner ditch may indicate a Bronze Age date, as this fabric commonly occurs in local Early/Middle Bronze Age pottery (Brown 1995b). Two sherds from the inner ditch had been burnt.

Sturrick Farm, Great Bentley

Two sherds weighing 14g were recovered during fieldwalking. Although these sherds lack diagnostic features, the flint-gritted fabrics are likely to be of Bronze Age or earlier date. Both sherds are relatively well-

preserved and unabraded for sherds recovered from fieldwalking, and this may indicate that they had only recently been incorporated into the ploughsoil.

Two sherds (35g) were recovered from excavation of the ring-ditch in trench B. A sherd of Beaker pottery was found on the spoil heap (Fig. 23.2). It had complex decoration comprising finger-nail 'crow's foot' impressions above a row of vertical stabbed impressions, bounded by horizontal lines of comb impressions at top and bottom. A blank zone separates this from a single line of square-toothed comb impressions above a row of 'crows foot' impressions. These decorative techniques are characteristic of Case's (1993) Group E, typically found in East Anglia and south-east England. Context 47 (covering finds from the bottom five deposits (62 to 66) in the western half a ring-ditch 50) produced a body sherd, likely on grounds of fabric and surface finish to derive from an Early/Middle Bronze Age urn. The absence of diagnostic features or decoration precludes a closer attribution. The fabric is very soft and its fresh and unabraded condition indicate that it was deposited quite soon after breakage.

Hall Farm, Little Bentley

A total of 13 sherds weighing 50g was recovered. This is a relatively large amount of prehistoric pottery for fieldwalking sites in Essex (Medlycott and Germany 1994). It is probable that more than one period is represented. The sandy fabric of two sherds may indicate a Middle Iron Age date, the fabrics of the other sherds are likely to be Bronze Age or earlier, although an Early Iron Age date cannot be ruled out (Brown 1995c; Drury 1978).

Colemans Farm, Rivenhall

A total of 20 sherds weighing 440g was recovered. The material is broadly of Deverel-Rimbury character, of Middle Bronze Age date. The assemblage includes substantial body sherds of large, thick-walled, straight-sided pots, a sherd decorated with random round toothed comb impressions (Fig. 23.3), a rim sherd of a bucket urn, decorated with finger impressions (Fig. 23.5), a plain rim of a small, thin-walled, straight-sided vessel (not illustrated) and a flat base, perhaps from a similar pot. These are all characteristic of local Deverel-Rimbury pottery (Brown 1995b and c). A large sherd, of a thin-walled round-shouldered cup or small bowl, with slightly flared upper body and decorated with an irregular double row of oval toothed comb impressions at the shoulder (Fig. 23.4), is most unusual, though presumably contemporary with the other pottery. This sherd was recovered from context 48, and a small joining sherd came from context 32, possibly indicating that these contexts were deposited at about the same time.

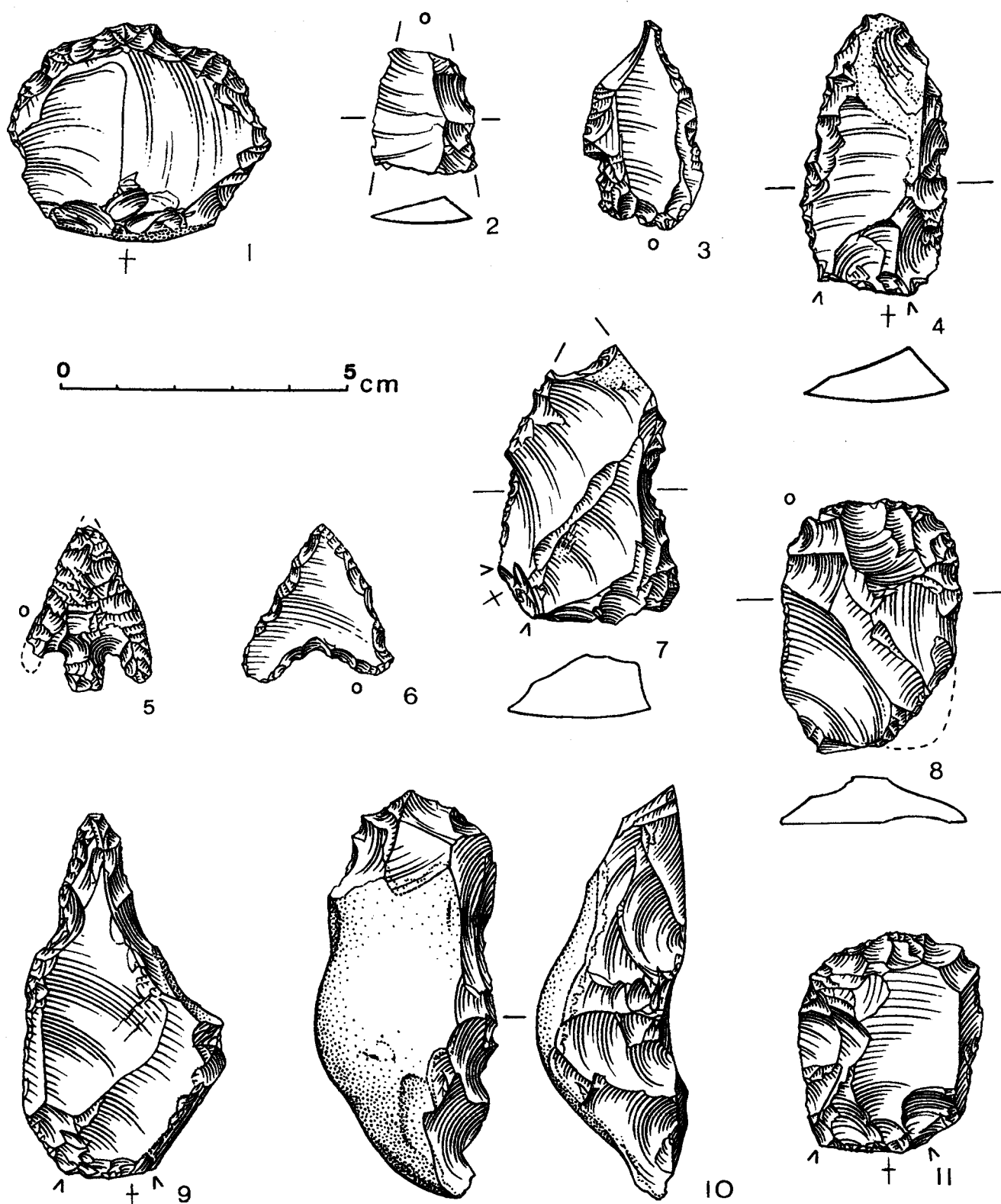


Fig. 22 Flints. 1 scraper, 2 backed blade, 3 piercer, 4 and 7 backed knives, from Clare Downs Farm, Belchamp St. Paul; 5 barbed and tanged arrowhead, 9 borer, from Hall Farm, Little Bentley; 8 scraper with glossy polish spots from Sturrick Farm, Great Bentley; 10 and 11 scrapers from Colemans Farm, Rivenhall.

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Table 2. Quantification of flint by type and site.

	Colemans Farm		Sturrick Farm		Hall Farm		Clare Downs Farm	
	Ex	Fw	Ex	Fw	Ex	Fw	Ex	Fw
Flakes	104		37	109	12	167	30	144
Blades & bladelets (some M)	18		1	12	2	14	7	39
Blade flakes	2			2		1		1
Flake blades	1					4	2	4
Cores	8		3	8		10	17	6
Blade cores	2			3		2		4
Retouched blades				2		1		7
Retouched flakes	3			2		4	3	22
End scrapers (M)	1							
Scrapers, all other	2		1	3	2	15	1	7
Piercers/borers	3			1	1	4	2	2
Microdenticulates						1	1	3
Denticulates	1							1
Notched pieces						4	2	6
Microburin ? irregular (M)						1		
Burin? (M)						1		
Arrowhead, Neo. Hollow based						1		
Arrowhead, B and T						1		
Arrowhead rough-out ?				1				
Fabricator rough-out ?	1						1	
Gun flint				1				
Bifacial fragment				1		1	1	4
Fragments and chippings	6			9		16	1	22
Waste blocks	1			11		2		7
Core rejuvenation pieces	4			2			1	3
Axe thinning/sharpening flakes				1		1		
TOTAL	159		42	168	16	263	69	282

(M) = possible Mesolithic pieces

Catalogue of illustrated sherds (Fig. 23)

- 23.1

Fabric tempered with very fine sand, exterior grey brown interior black. Exterior smoothed, interior burnished with fine incised lines and trace of a black deposit. Belchamp St Paul. Context 5.
- 23.2

Fabric tempered with sparse crushed burnt flint, orange/buff throughout. Surfaces smoothed, finger nail ‘crows foot’ impressions, above a row of vertical stabbed impressions bounded by horizontal lines of comb impressions; a blank zone separates this from a single line of square-toothed comb impressions, above a further row of ‘crows foot’ impressions. Little Bentley. Context 44.
- 23.3

Fabric tempered with dense medium crushed burnt flint, exterior grey brown, interior pale brown. Short row of round-tooth comb impressions on exterior. Rivenhall. Context 32.
- 23.4

Fabric tempered with dense crushed burnt flint grey to grey-brown throughout. Surfaces

smoothed; trace of burnish surviving on exterior. Double row of oval-tooth comb impressions at shoulder. Rivenhall contexts 48 and 32.

- 23.5

Fabric tempered with crushed burnt flint, pale brown surfaces black core. Surfaces wiped and possibly slipped, horizontal band of abrasion below rim on interior. Row of finger impressions on top of rim. Rivenhall context 20.

Medieval and post-medieval pottery

H. Walker

Sturrick farm, Great Bentley

Introduction

Very little pottery was excavated, a total of forty-five sherds weighing 392g (average sherd size 9g). Pottery was recovered from the second and top fills of ring ditch 14 (fills 6 and 7), and from Feature 25 which was cut by the ring-ditch. The pottery has been recorded according to Cunningham’s typology for post-Roman pottery in Essex

(Cunningham 1985, 1-16) and some of her fabric numbers and rim codes are quoted in this report.

The fabrics

Medieval coarse ware (Fabric 20) A general category of grey-firing sand-tempered coarse wares dating from the 12th to 14th centuries (described by Drury 1993, 81-6).

Scarborough ware phase I (Fabric 24A) Described by Farmer (1979), this is a high quality fine ware manufactured at Scarborough on the Yorkshire coast. Scarborough ware phase I is a fine, pink sandy ware in which glazed and often highly decorated jugs and other vessels were made. This ware was extensively traded from c.1200, and the phase I fabric was produced until around 1225 (although the end of phase I production has been disputed, Farmer and Farmer 1982, 66).

Sandy orange ware (Fabric 21) Described by Cunningham (1982, 359), sandy orange ware includes any locally made quartz sand-tempered, oxidised ware with a date range of 13th to 16th centuries. Glazed jugs were often made in this ware.

Colchester-type ware (Fabric 21A) This is a variant of sandy orange ware produced in the Colchester area between the 13th and 16th centuries, and is described by Cunningham (1982, 365-7), Drury (1993, 89-90) and Cotter (2000, 107-180). It is distinguishable from other sandy orange ware by its tempering of white quartz sands.

Pottery from Feature 25 (single fill 5)

Two bowl rims (described below) were excavated from this feature, with the addition of sherds of sandy orange ware including a small fragment of thickened rim (vessel form not identified), and a body sherd showing the remains of an internal glaze. There are also several joining sherds of a medieval coarse ware sagging base fragment.

Not illust. Bowl rim: medieval coarse ware; horizontal flanged rim similar in shape and appearance to bowl No. 6 from the Little Bentley site but thicker-walled; grey surfaces, thin buff margins, thick red core; iron-staining on outer surface; too fragmented to measure diameter accurately but could be in excess of 400mm; in addition to rim are 20 body and sagging base sherds which may also belong to this vessel.

Not illust. Bowl rim: sandy orange ware; horizontal flanged rim again similar in size and shape to bowl No. 6; orange surfaces, pale orange margins and thick pale grey core; diameter 340mm; abraded.

Pottery from ring ditch 14 (fills 6 and 7)

The earlier of the two fills contained the following vessel fragments; most of this material is slightly abraded.

24.1 Fragment from jug: Scarborough ware phase I; orange-pink fabric with paler internal surface; olive-green glaze with areas of brighter copper-green and brown streaks in glaze; faceted external surface; fragment is curved and tapering but appears too wide to be from a tubular spout, a form that does occur on Scarborough ware jugs (cf. Farmer

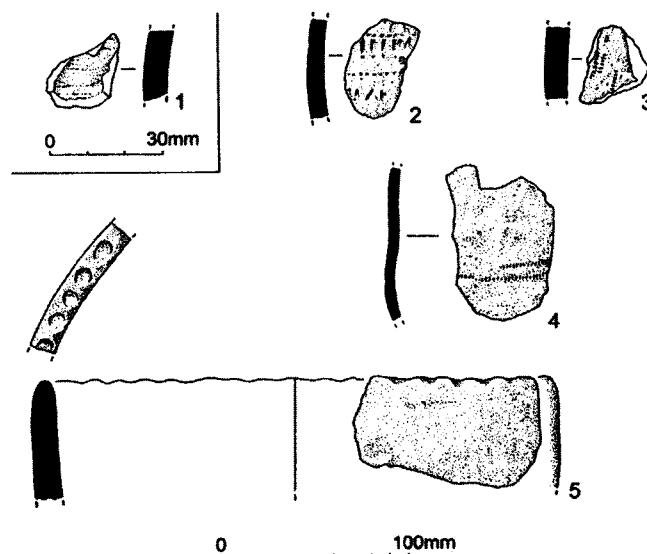


Fig. 23 Prehistoric pottery. 1 Grooved Ware, Belchamp St. Paul; 2 beaker, Great Bentley; 3 to 5 Middle Bronze Age Pottery, Rivenhall.

1979, fig. 8); perhaps from a large pulled spout or bridge spout (cf. McCarthy and Brooks 1988, fig.128.660-1); internal surface is smooth with no throwing lines but creasing of the clay as the ?spout narrows.

Not illust. Flared base: Colchester-type ware; perhaps from a baluster jug; orange fabric with reduced purplish 'skin' on outer surface; splashes of glaze on under side of base and single splash of glaze on the outer surface; chipped around basal angle.

Not illust. Sagging base sherd of sandy orange ware with darker external surfaces, and body sherd showing traces of cream slip-coating.

24.2 Bowl rim: medieval coarse ware; grey surfaces; red-brown core; some striations on surfaces perhaps made by burnt out blades of grass.

Not illust. Bowl rim: medieval coarse ware; grey surfaces, thick reddish core; outer edge of rim chipped away; wide rim of about the same diameter as that of No. 2; remains of small hole 6mm in diameter drilled just below rim.

The upper fill of ring ditch 14 (fill 6) produced ?tubular spout No. 3 and an abraded sandy orange ware base sherd.

24.3 Fragment of ?tubular spout from jug: sandy orange ware; orange with grey core; abraded but showing remains of cream slip-coating and patches of green-glaze; curved in section, similar to No. 1 but with smaller bore; also in common with No. 1, there are no throwing lines but creasing of clay at one end, and the outer surface is faceted.

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Discussion

The earlier fill of the ring ditch (fill 7) produced flanged bowl rims and slip-decorated sandy orange ware, generally datable to the 13th to 14th centuries. Baluster jugs with flared bases, similar to the Colchester-type ware base in this fill, occur in Mill Green ware dating from the mid-13th to mid-14th centuries (e.g. Pearce *et al.* 1982, fig.5.10). They are also common in London-type ware from the early/to mid-13th century to 14th centuries (e.g. Pearce *et al.* 1985, figs. 25-31). The fragment of Scarborough ware (Fig. 24.1) provides the closest date of c.1200 to c.1225 or later. The ?tubular spout (Fig. 24.3) and the other sherd of sandy orange ware in the top fill of the ring ditch (fill 6) are both abraded and may be residual in this context. Given the marked similarity between the ?spout fragments (Fig. 24.1 and Fig. 24.3), it is likely they are contemporary. The assemblage from Feature 25 with its flanged bowl rims in sandy orange ware and medieval coarse ware is similar to that from the ring ditch and is probably contemporary in spite of the fact that it is stratigraphically earlier. An earlier 13th century date may be tentatively suggested for this small assemblage.

Scarborough ware was traded down the North Sea coast and is a relatively common find at ports (e.g. Colchester, Harwich and Maldon) and coastal sites (Beaumont-cum-Moze and Dovercourt), but has also been found inland at Feering, near Kelvedon, and Rivenhall. These sites are listed by Cunningham (1983, 65-6). The presence of Colchester-type ware is not unexpected here as it is most commonly found in the Colchester and Tendring areas (Cotter 2000, 177-8).

Although Scarborough ware ?spout Fig. 24.1 has a wider bore than sandy orange ware ?tubular spout Fig. 24.3, the faceting of the surface and the shape of the profile show them to be very similar. Jugs with tubular spouts are not common in this region and do not appear to have been part of the output of the London or Mill Green industries. However, they were produced in Hedingham ware (Drury 1993, fig. 43.123-4), an industry well known for imitating Scarborough ware products (Cunningham and Farmer 1983; Walker 1990, 86). It is therefore most likely that this is a copy of a Scarborough vessel made at a local sandy orange ware production centre.

There are a number of other unusual features within this assemblage: for example, no cooking pots were identified. These were not only used for cooking but were general purpose vessels and usually account for the largest component of any medieval pottery assemblage.

The absence of cooking pots and the preponderance of bowls may therefore suggest some kind of specialised purpose. Some of the bowls are quite wide, in excess of 400mm, and in addition, one has a small hole drilled just below the rim. This may have been for suspension, but bowls with holes were also used for drainage and were used in the dairy to separate the cream. Other possible uses for large bowls were for making dough and mixing ingredients, both solid and liquid (McCarthy and Brooks 1988, 109-110).

Hall Farm, Little Bentley

Introduction

A small assemblage of a similar date to that from Sturrick Farm, Great Bentley, was recovered from this site, with a total of 134 sherds weighing nearly 1kg (average sherd size 7g). All the pottery was recovered from ring ditch 20 and its recuts. The method of recording is the same as that used for Great Bentley.

The fabrics

Early medieval ware (Fabric 13) This is a coarse sand-tempered ware typically with red-brown surfaces and a grey core, dating from the 10th to earlier 13th centuries (described by Drury 1993, 80).

Medieval coarse ware See Great Bentley report for fabric description. Some of the medieval coarse ware found at Little Bentley is not the typical grey firing fabric but is oxidised to a reddish-brown colour.

Hedingham ware (Fabric 22) This is described by Drury (1993, 86-89) and Cotter (2000, 75-91). It has a fine, micaceous fabric, usually creamy orange or buff in colour, and glazed and decorated jugs were the main product. Hedingham ware was manufactured at several production centres in the area of Sible Hedingham in north Essex, and has the extreme date range of mid 12th to mid 14th century, although later 12th and 13th century examples are commonest.

Sandy orange ware See Great Bentley report for fabric description.

Colchester-type ware See Great Bentley report for fabric description.

The pottery

There are many vertical cross-fits between the fills of the ditch and its recuts, indicating either that the fills have become mixed or that the pottery was deposited during

Table 3. Pottery from Sturrick Farm, Great Bentley, by feature, fabric and sherd count.

Feature	Fill	Relationships	Mcw	Scar	Sao	Col	Wt (g)
Ring ditch 14	6	top fill			3		35
	7	2nd fill	2	3	2	1	163
Feature 25	5	cut by ditch 14	25		9		194
Totals			27	3	14	1	392

Key
 Mcw = medieval coarse ware Scar= Scarborough ware
 Sao = sandy orange ware Col = Colchester-type ware

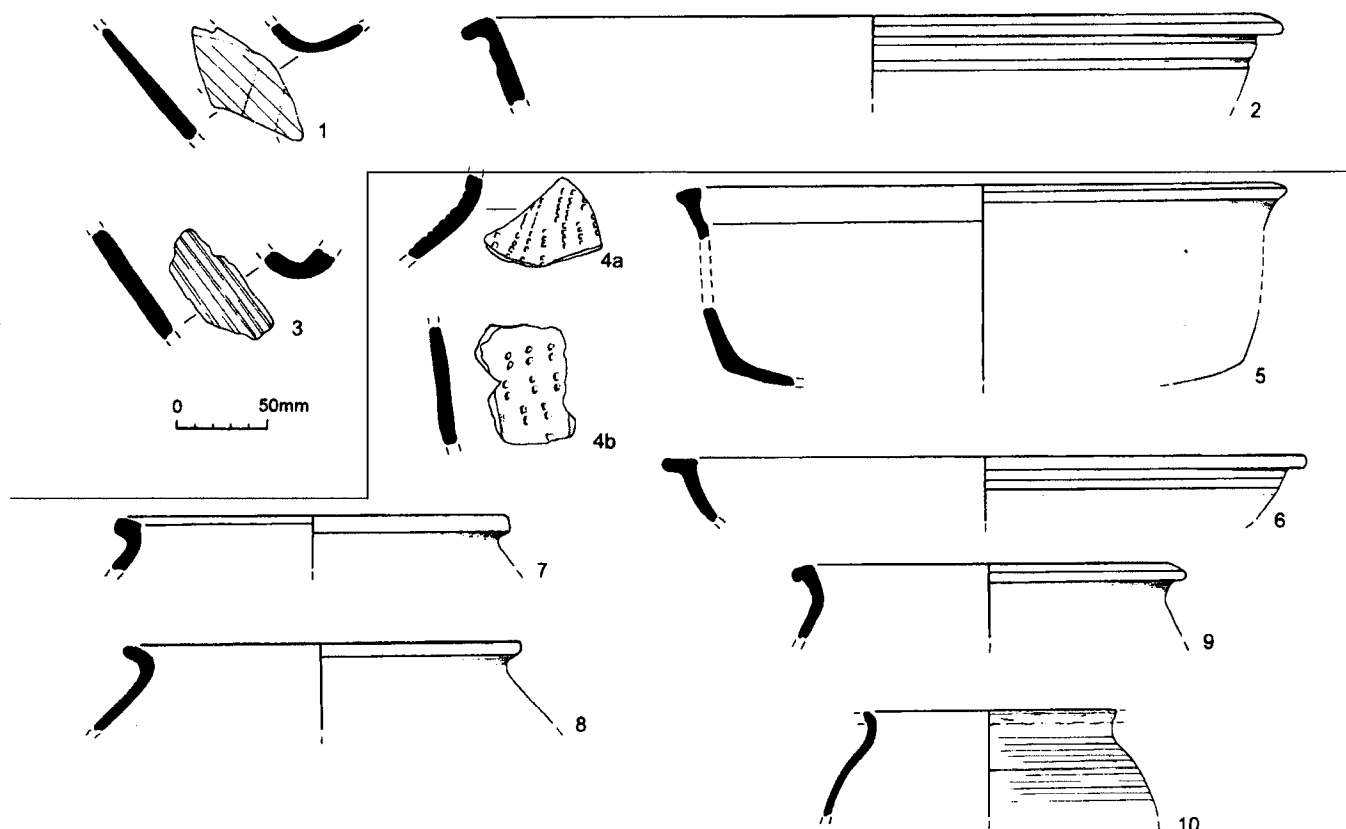


Fig. 24 Medieval pottery from Great and Little Bentley.

the same episode. Cross-fits were noted between all fills apart from fills 2 and 5 of final recut 12, and surface cleaning 1. In view this, all the pottery from the ring ditch and its recuts has been considered as one group and is described/illustrated below. Most of the pottery shows some degree of abrasion. Some of the pottery, for example cooking pot No. 10, and body sherds of medieval coarse ware in ditch fill 14, are reddened and may have been burnt.

The fine wares account for only a small proportion of the assemblage; none merit illustration. Stratified fine wares comprise three sherds of Hedingham ware and one sherd of sandy orange ware showing traces of glaze. All are very abraded. The finds of Hedingham ware include a large sagging jug base with a creamy-orange fabric from fill 3. It shows a group of oblique thumb marks around the basal angle and patches of clear and green glaze on the under side; there is also a surviving patch of green glaze above the basal angle. The internal surface is very abraded and has laminated. This is not a closely datable piece as sagging bases occur both on early rounded jugs dating to the mid 12th to early 13th century and stamped style jugs dating from the early 13th to early 14th century (Cotter 2000, fig. 52). However, the orange fabric indicates a date of not before the 13th century. There is also a green-glazed sherd of Hedingham ware and a plain sherd with a reduced or fire-blackened outer surface, but which has the fine ware fabric. Both these sherds occur in fill 14. Surface cleaning context 1 produced a plain sandy orange ware sherd and part of the neck of a Colchester-type ware jug, showing vertical lines of slip-painting under a plain lead glaze.

Medieval coarse ware was by far the most common find (see Table 4). The only other coarse ware comprises a single sherd of early medieval ware, although much of the medieval coarse ware is borderline with early medieval ware.

Medieval coarse ware storage jar/jug

24.4a Sherd from shoulder of vessel, from ?jug or ?storage jar: thick-walled coarse fabric; thick pale grey core with darker surfaces, borderline early medieval ware; vertical lines of stabbed decoration made with a comb-shaped tool. Fill 13 (second ditch recut 9).

24.4b Fragment from same vessel as 4a but showing two-pronged stab marks; rather flat for a jug, perhaps from area of jug near lower handle attachment, where the action of attaching the handle has deformed the jug; alternatively may be from a large storage jar. A sherd of Hedingham coarse ware with similar decoration and profile was excavated from the Boreham windmill site (Walker 2002, no.11). Fills 7, 13 (second ditch recut 9) (Sherds from No.4 also occur in fills 4, 6 and 15).

Medieval coarse ware jugs

Not illust. Small fragment of jug rim: dark-grey surfaces, thick reddish cores; rilled neck; remains of slightly everted rim; abraded. Fill 2 (final recut 12).

Not illust. Jug rim: everted flanged rim; carination below rim; grey core, buff surfaces, very abraded. Fill 2 (final recut 12).

Medieval coarse ware bowls

24.5 Bowl: reddish-brown fabric transitional with early medieval ware; fire-blackening on external surface; base probably belongs to this vessel but is much thicker walled. Fill 7 (second ditch recut 9) fill 4 (final ditch recut 12).

24.6 Bowl rim: grey surfaces, red-brown margins; brown-grey core; slightly abraded. Fill 7 (second ditch recut 9).

Not illust. Bowl rim: thickened everted rim; too fragmented to measure diameter; similar fabric to No. 6. Fill 5 (final recut 12).

Medieval coarse ware cooking pots

24.7 Cooking pot rim: rim-form B2; grey with darker grey external surfaces; abraded. Fill 2 (final ditch recut 12).

24.8 Cooking pot rim: rim-form D2; grey surfaces, brown margins, paler grey core; patches of fire-blackening on internal and external surfaces; patch of abrasion on internal surface. Fill 7 (second ditch recut 9).

Not illust. Cooking pot rim: rim-form D2; pale grey fabric; fire-blackening on rim edge. Fill 4 (final recut 12).

24.9 Cooking pot rim: down-turned rim probably the equivalent of rim-form H2; pale grey core, red external margin and darker grey surfaces; little abrasion. Fill 13 (second ditch recut 9).

24.10 Cooking pot rim: rim broken away from body; red-buff surfaces with patches of grey; red core; burnt appearance; abraded. Fill 6 (first ditch recut 16).

Decorated medieval coarse ware

As well as vessel 24.4, decorated sherds comprise three very abraded sherds from fill 15, showing a thumbled applied strip, and a fragment from the shoulder of a vessel from fill 7, showing incised horizontal lines with superimposed wavy line combing.

Discussion

The cooking pot rims can be approximately dated according to Drury's typology (Drury 1993, 81-4). The B2 cooking pot is thought to date to c.1200, the D2 rims to the first half of the 13th century and the ?H2 rim to the early to mid 13th century. The Hedingham ware sagging base would also fit in with this date, so the ring-ditch would appear to have been infilled in the earlier 13th century. The finds of Hedingham ware are not unexpected as this ware is common throughout the northern half of the county and along the Essex coast. The Colchester-type ware jug from surface cleaning may of this date or later. However, the small quantities of pottery, the amount of abrasion, and the presence of Roman pottery in one of the

recuts are all indicators of residuality and it is possible that this pottery has been redeposited.

The assemblage would seem fairly typical of any medieval site with a few fine ware jugs, several cooking pots with lesser amounts of coarse ware jugs, bowls and other forms. However the ratio of coarse ware bowls and jugs to cooking pots is quite high, comprising three coarse ware jug fragments, and three bowl rims to five cooking pots. This could imply some kind of specialist purpose. The two bowl fragments that were complete enough to measure were quite large (like those from the Great Bentley site), with diameters of 340mm and 360mm. None of the cooking pots however, are particularly large, measuring between 140 and 240mm. The average is usually around 260mm.

Discussion of medieval pottery from Great and Little Bentley

As noted above, the Colchester-type ware, Hedingham ware and Scarborough ware are all within their normal ranges of distribution. Scarborough ware with its coastal trading pattern may have arrived via the ports of Wivenhoe or Colchester on the River Colne, as Great Bentley would have been in the hinterland of both these ports. Alternatively, the pottery may have arrived here directly as Great Bentley is close to Brightlingsea Creek, which drains into the River Colne near the estuary, and the actual site is close to Bentley Brook which drains into Brightlingsea Creek and may have formed a natural route-way.

Both the Little Bentley and Great Bentley sites are alike in that they are of a similar date, with assemblages belonging to the earlier 13th century, and both are untypical with their preponderance of large bowls.

Only a few inland excavations in the Tendring area have so far produced medieval pottery. The only site to produce a substantial assemblage was a settlement site at Gutteridge Hall, near Weeley (Walker forthcoming), which produced a total of 15kg of pottery from its earliest phases (1b-c), dating to the early to mid 13th century. The assemblage differs from those from Great and Little Bentley, in that early medieval ware is more common than medieval coarse ware and cooking pots are by far the most common vessel type, as is typical of medieval sites, although wide bowls are also present. Like the Bentleys, small amounts of Hedingham ware and Colchester-type ware are present, but no Scarborough ware. A second site at St. Osyth (Walker forthcoming) produced a smaller medieval assemblage (4kg) of similar date. Examples of Colchester-type ware with smaller amounts of Hedingham ware are again present, although there are no traded wares.

Both the Great and Little Bentley ring ditches have been interpreted as possibly belonging to windmills. The only pottery assemblage from a

Table 4. Pottery from Hall Farm, Little Bentley, by feature, fabric and sherd count.

Feature	Fill	Relationships	Emw	Mcw	Hed	Sao	Col	Wt (g)	
Cleaning	1	above 2		19		1	7	80	R, P
Final recut 12	2	above 3 & 4		7				60	
	3	same as 4		7	1			69	
	4	above 5		12				80	R
	5	above 5		2				21	
	7	above 13		20				181	
2nd recut 9	13	above 6		5		1		50	
	6	same as 15		20				123	
1st recut 16	15	above 14	1	13				92	
	14	above 23		13	2			118	
Ring ditch 20	23	4th fill		3				52	
Totals			1	121	3	2	7	926	

Key

Emw = early medieval ware

Mcw = medieval coarse ware

R = Roman pottery also present

Sao = sandy orange ware

Hed = Hedingham ware

P = Prehistoric pottery also present

Col = Colchester-type ware

windmill site in Essex known to the author is from Boreham Airfield, near Chelmsford (Walker 2002). As well as the remains of a windmill, there was evidence here of a granary, domestic buildings and enclosure ditches. The excavated pottery was dated to the ?mid 12th to 13th century or later, with pottery from the actual windmill feature dating to the earlier 13th century (i.e. the same date as the Bentleys). Perhaps surprisingly the assemblage from Boreham windmill turned out to be very similar to any domestic site in central Essex, with no evidence of vessels with a specialised use associated with milling. There were very few coarse ware vessels other than cooking pots and no large wide bowls (in contrast to the situation at the Bentleys). This result was not entirely unexpected as very few specialised vessels were made in the medieval period and because Boreham appears to have been an occupation site as well as a windmill site. There is therefore no evidence from the Boreham Airfield assemblage that a preponderance of large bowls is an indicator that a windmill was present.

There are two minor points of similarity between the Boreham and Little Bentley ?windmill sites. The first is the similarity in decoration and sherd profile between jug/storage jar Fig. 24.4b from Little Bentley and sherd Fig. 24.11 from Boreham Airfield. It is possible that both are from storage jars perhaps used for storing grain. However storage jars are occasional finds at other sites (e.g. St. Osyth, Walker forthcoming) and do not prove there is a windmill present. The second point of similarity is that sherds that appear to have been burnt occurred both at the granary at Boreham and at Little Bentley. This is most likely to be co-incidental but it is worth noting that in more recent times windmills

were considered as 'doubly hazardous' for insurance purposes and instances of windmills destroyed by fire and struck by lightning are well documented (Farries 1981, 27-8).

Miscellaneous finds

H. Major

Hall Farm, Little Bentley

The miscellaneous finds are unexceptional. None of them is intrinsically datable, but none are incompatible with the dates given by the pottery. Besides a copper-alloy buckle plate, there were four iron nails, a small fragment of baked clay, a small chip of lava from a quernstone, and a small fragment of tufa, possibly non-local, but unworked.

Sturrick Farm, Gt. Bentley

Three small fragments of Rhenish lava were found, none with a complete thickness. As this may be a windmill site, it is likely that they are from millstones rather than querns, but it can be difficult distinguishing the two types of grinding stone unless substantial fragments are present. One of the pieces (context 24 fill of F24) has an unusual type of dressing on the grinding surface, consisting of ridges rather than grooves, 1mm high, 6mm wide, and 20-25mm apart (Fig. 25). It was probably redressed from a more standard pattern of grooves, traces of which survive between the ridges.

Colemans Farm Rivenhall

Ten fragments (396g) of tile came from post-medieval ditch 1. They are possibly all Roman; the ditch also produced Roman pottery.

Environmental evidence

P. Murphy (stratigraphy, plant macrofossils, molluscs),
M. Robinson (insects) and H. Tinsley (pollen)

Introduction

At two of the four sites examined by this project, Belchamp St. Paul and Rivenhall, investigation of adjacent alluvial stratigraphy was thought to be integral to an understanding of the sites within their local environments. Stratigraphic, palynological and macrofossil studies of alluvial sequences adjacent to earlier prehistoric sites have been characterised as a priority for study in the Eastern Counties' Archaeological Research Framework (Glazebrook 1997, Brown and Glazebrook 2000). Stratigraphic recording and sediment sampling was undertaken by hand-augering, inspection of river-bank sections and machine trenching. Examination of valley sediments adjacent to other cropmark enclosures examined during the project had been considered, but was not followed up after excavation showed them to be of medieval date. Full details of the environmental sampling are included in the archive. The main points are summarised here.

Methods

On-site sampling methods are detailed below, for each site separately. Samples were removed for pollen assessment at 2cm intervals from monolith tins. The monoliths were then sub-divided at approximately 5cm vertical intervals, as appropriate, for macrofossil assessment. Standard wet-sieving processing methods were used (Kenward *et al.* 1980). Sub-samples of retents were scanned under a binocular microscope at low power for assessment purposes, and samples which included informative assemblages were subsequently fully sorted and all macrofossils identified, so far as possible, by comparison with modern reference material. Nomenclature follows Kerney (1975), Kerney and Cameron (1979), Kloet and Hincks (1977) and Stace (1991).

Clare Downs Farm, Belchamp St. Paul

The crop marks at this site lie on a gravel terrace within a large meander of the River Stour. The location and boundary of the site is delineated by the Stour valley at this point. The river appears very deeply incised: the river level is some 2.5m below the top of its banks, which are steep and near-vertical in places, so that over-bank flooding must nowadays occur infrequently. The slopes from the interfluvies are steep, and arable cultivation extends almost to the river bank, with no necessity for drainage ditches. When examined, flow was sluggish and there was a well-developed flora of aquatic macrophytes including *Sagittaria*.

Stratigraphy

Section 1 (Fig. 17) A river-bank section close to the old railway bridge and some 100m from the supposed henge

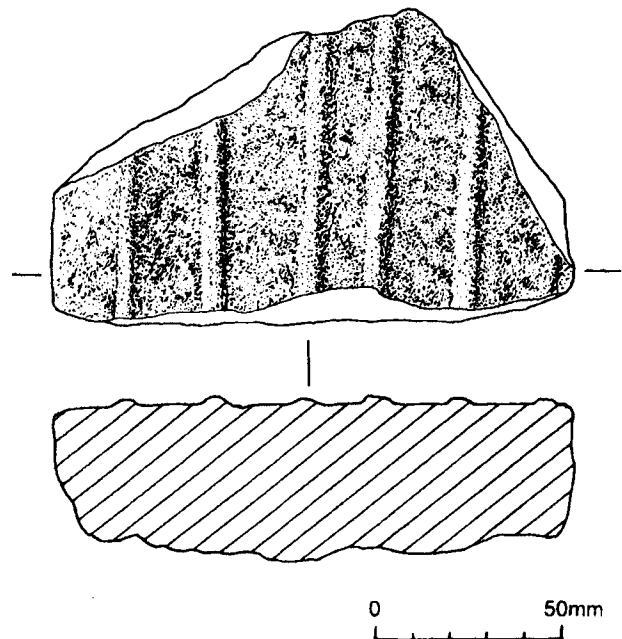


Fig. 25 Fragment of millstone from Great Bentley.

was examined on 22nd August 1997, by cutting back with a spade. The following deposits were seen:

- | | |
|-----------|---|
| 0-12cm | Greyish-brown silty clay topsoil; very stony with angular to sub-rounded flints and brick. |
| 12-22cm | Light greyish-brown silt loam; very stony with angular to rounded flints, chalk pebbles and brick. Probably re-deposited material from railway construction. |
| 22-100cm | Yellowish-brown silt loam; stony with sub-angular to sub-rounded flints and erratic sandstones; black (manganese?) flecks. Colluvium. |
| 100-115cm | Yellowish-brown silt loam with 5mm laminations of off-white tufaceous sediment; laminations more closely spaced in lower part, with 6 laminations in basal 5cm; vertical root channels with brown infilling; very slightly stony. |
| 115-125cm | (at right side of section). Pocket of yellowish-brown, mottled grey, silt loam. |
| 112-130cm | (at left side of section). Sub-angular to sub-rounded flint gravel in yellowish-brown sandy silt loam matrix. Some large sub-rounded sandstone blocks up to 25cm. |

Section 2 (Fig. 17) This was a machine-cut section on the floodplain of the Stour, north-north-west of the cropmarks, made on 29th August 1997. Stratigraphy as follows:

- | | |
|-----------|---|
| 0-135cm | Brown A ₁ over greyish-brown alluvial clay; firm; almost stoneless; mollusc shells common towards base; merging boundary. |
| 135-175cm | Greyish-brown alluvial clay; firm; almost stoneless; prominent reddish-brown mottles; mollusc shells common; very gradually merging boundary. |

- 175-205cm Greyish-brown alluvial clay; slightly firm; almost stoneless but with occasional flints up to 2cm; fine vertical root channels with reddish-brown zones of oxidation following them; mollusc shells common; narrow boundary.
- 205-216cm Dark grey alluvial clay; slightly firm; stoneless; fine vertical rootlets; merging boundary.
- 216-224cm Light grey alluvial clay; slightly firm; stoneless; narrow boundary.
- 224-266cm Black twiggy organic detritus mud; narrow boundary.
- 266-270cm Black twiggy organic detritus mud; slightly sandy; abundant mollusc shells.

Sampling

Two 50cm monoliths were taken from the basal sediments in section 2. Monolith 1 had its top at 220cm from the ground surface, Monolith 2 at 174cm, giving a 4cm overlap.

Radiocarbon dating

Two samples of *Alnus* (alder) wood from the basal organic sediments in section 2 were submitted for radiocarbon dating.

Plant macrofossils (Table 6; Fig. 26)

Assessment showed that samples from sediments above 224cm contained virtually no plant macrofossils, apart from occasional charophyte (stonewort) oogonia (185 - 200cm) and rare small charcoal fragments (174 - 220cm). Only samples from the basal twiggy organic detritus mud below 235cm were analysed quantitatively.

Wood samples identified from this sediment were all of *Alnus* sp (alder). Female catkins, catkin bracts and fruits of alder occurred in samples below 235cm. Macrofossils of other trees and shrubs included *Carpinus betulus* (hornbeam), *Corylus avellana* (hazel), *Crataegus monogyna* (hawthorn), *Prunus spinosa* (sloe), *Rubus* section *Glandulosus* (bramble), *Sambucus nigra* (elder) and *Solanum dulcamara* (woody nightshade). In addition, a seed of the woodland herb *Moehringia trinervia* (three-veined sandwort) was noted.

Dry land herbs - weeds and grassland species - occurred in this sediment, but only *Urtica dioica* (nettle) was common. Aquatic macrophytes were abundant, including *Alisma plantago-aquatica* (water plantain), *Lemna* sp (duckweed), *Nuphar lutea* (yellow water lily), *Oenanthe aquatica* (fine-leaved water dropwort), *Potamogeton* sp (pondweed) and *Ranunculus* subg. *Batrachium* (water crowfoot). Although the palaeochannel does not seem to have been active during deposition of this unit, there plainly was standing water. Wetland plants were not well-represented, but included *Carex* spp (sedges), *Eupatorium cannabinum* (hemp agrimony), *Filipendula ulmaria* (meadowsweet) and *Lycopus europaeus* (gipsywort).

Molluscs (Table 7; Fig. 27)

Shells were rare in most sediments from this sequence, though a few - mostly freshwater species - occurred in the basal twiggy detritus mud (266-270cm). Molluscs were abundant in alluvial clay at 175 - 205cm.

The predominant ecological groups in these samples were freshwater species and terrestrial molluscs characteristic of open habitats. Woodland molluscs were uncommon, as were snails found in marshes and shallow impersistent freshwater (Fig. 27). Plainly, in alluvial sediments there are problems of interpretation relating to taphonomy. However, the freshwater species are interpretable as *rejectionamenta* left after overbank flooding. The terrestrial open-country molluscs could have been resident in dry floodplain grassland at the site, but there could also have been an allochthonous component of shells derived from erosion of calcareous soils adjacent to the floodplain.

Insects

Beetle evidence was very limited. However, the occurrence of *Donacia crassipes* suggests that *Nymphaea alba* (white water lily) or *Nuphar lutea* (yellow water lily) grew in the river: the latter was identified from macrofossils. The terrestrial Coleoptera included *Athous* sp, a grassland beetle, the dung beetle *Geotrupes* sp and the ground beetle *Abax parallelipipedus*, which most usually occurs in woodland. There is thus mixed evidence from the beetles for the late Neolithic landscape.

Conclusions

The Holocene sediment sequence seen in section 2 was markedly deeper than that in section 1 (270cm+ compared to 115cm), and it included a basal organic sediment, which formed between 3080 and 2490 cal BC (95% confidence). It seems very probable that the sequence in section 1 is more typical of the floodplain as a whole, composed of alluvium with some tufaceous sediment, whilst section 2 was cut through the fills of a palaeochannel. Section 1 also showed a stony silt loam at 22-100cm, thought to be a colluvial deposit, perhaps formed as a result of downslope mass movement following clearance of the adjacent valley slopes.

The basal fill of the supposed palaeochannel in section 2 formed in the late Neolithic adjacent to floodplain woodland composed of alder, hornbeam, hazel, hawthorn, sloe, bramble, elder and woody nightshade. Herbaceous wetland vegetation, weeds, grassland plants and aquatics were also represented. A mosaic of plant communities growing on a complex and changing pattern of active and infilling channels and associated sedimentary structures in the vicinity is represented. The few beetle remains included aquatic, grassland and woodland species, as well as a dung beetle, reflecting local habitat diversity. Charcoal fragments were not observed at this level.

The light and dark grey alluvial clay units above this (205-224 cm) were virtually devoid of macrofossils, though charcoal was present. This might indicate intermittent desiccation, with consequent microbial degradation of organic material. The beginning of mineral alluviation and presence of charcoal imply an increasing human impact on vegetation and soils locally from about 2500 BC. Mollusc shells and charophyte (stonewort) oogonia from calcareous alluvium at 175-205 cm indicate overbank flooding and predominance of open grassland habitats, at least locally. The calcareous nature of the alluvium at this level contrasts markedly with the decalcified alluvium above, suggesting a different sediment source. Above this, 175cm of alluvial clay

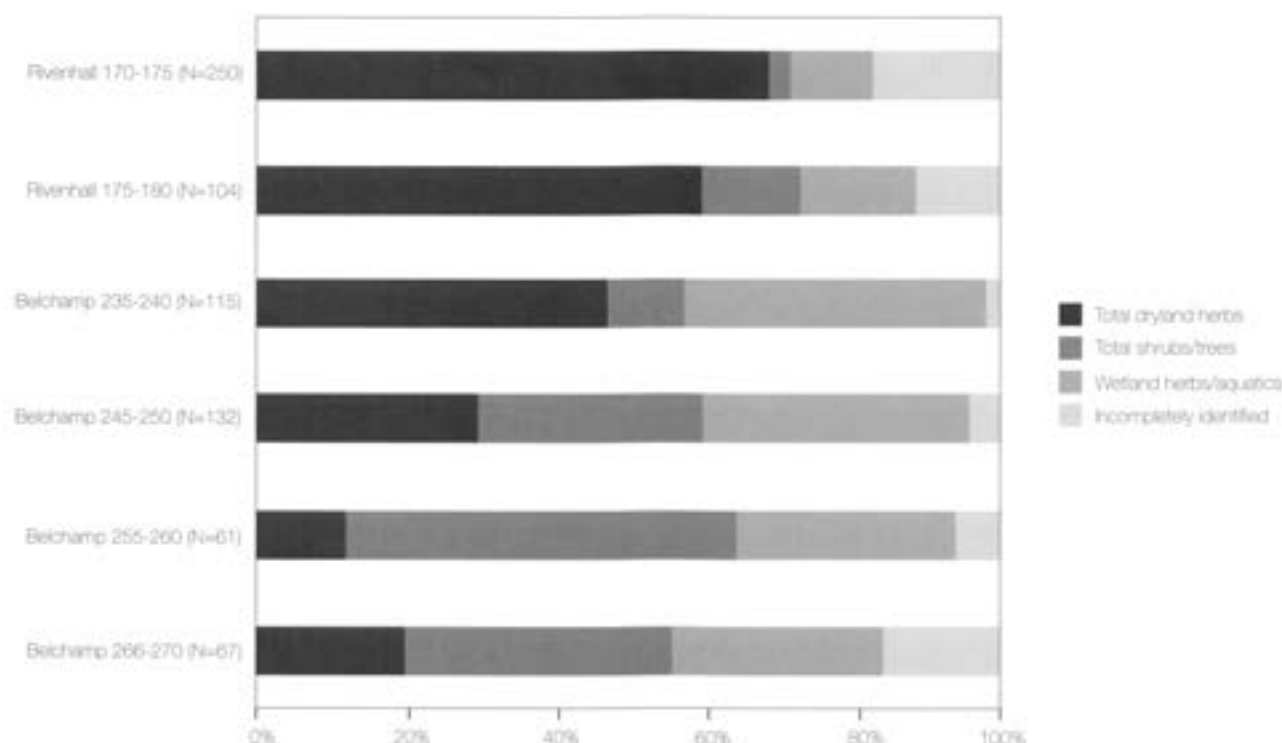


Fig. 26 Summary of plant macrofossil assemblages from Clare Downs Farm, Belchamp St. Paul and Colemans Farm, Rivenhall.

accumulated, relating to tillage and soil erosion in the wider catchment. Unfortunately, no organic materials suitable for radiocarbon dating were present in any of these silt/clay alluvial units.

Colemans Farm, Rivenhall

Stratigraphic investigation of sediments between the 'hengiform' cropmark on the edge of the gravel terrace and a small rivulet, a tributary of the Blackwater, now acting as a field ditch, was undertaken, in order to determine whether sediments suitable for palaeoecological investigation were present.

Stratigraphy

Limited preliminary prospecting was undertaken. Two auger holes (Holes 1 and 2, Fig. 17) were sunk, using a hand-driven gouge auger. Following this a machine trench was dug into the sediments adjacent to the stream channel.

Hole B1 Fig.14

0-35cm Brown stony silt loam A₁ with tile fragments. Sharp boundary.

35-70cm Yellowish-brown, very stiff oxidised clay loam alluvium. Merging boundary.
 70-115cm Greyish-brown, mottled reddish-brown, clay/silt loam alluvium, water content increasing with depth. Merging boundary.
 115-125cm Very light greyish-brown wet soft tufaceous chalk marl.
 125cm+ Impenetrable: probably basal gravel surface.

Hole B2 Fig. 14

0-35cm Brown stony silt loam A₁. Sharp boundary.
 35-70cm Yellowish-brown, very stiff oxidised clay loam alluvium. Merging boundary.
 70-80cm Greyish-brown, mottled reddish-brown, clay/silt loam alluvium. Merging boundary.
 80-118cm Greyish-brown slightly organic clay/silt loam alluvium, water content increasing with depth. Sharp boundary.
 118-121cm Very light greyish-brown soft wet tufaceous chalk marl. Sharp boundary.

Table 5. Radiocarbon dates, Clare Downs Farm, Belchamp St. Paul.

Depth (cm)	Laboratory Number	Sample Number	Radiocarbon age (BP)	Delta 13C (ppt)	Calibrated date range (95% confidence)
266 - 270	OxA-8492	BPCF 97 266-270	4315 ± 45	-24.4	3080 - 2870 cal BC
224 - 230	OxA-8493	BPCF 97 224-230	4100 ± 45	-26.8	2880 - 2490 cal BC

ESSEX ARCHAEOLOGY AND HISTORY

Table 6. Plant macrofossils Clare Downs Farm, Belchamp St. Paul.

Section no.	1	1	2	2	2	2	2	2	2	2	2	2
Depth (cm)	100-110	110-115	174-180	185-190	195-200	205-210	215-220	224-230	235-240	245-250	255-260	266-270
Dryland herbs (weeds/grassland)												
<i>Lapsana communis</i>										1		
<i>Plantago major</i>										1		1
<i>Potentilla sp</i>										1		
<i>Ranunculus acris/repens/bulbosus</i>									2	1		1
<i>Rumex sp</i>										1	1	4
<i>Stellaria media</i>									2			
<i>Urtica dioica</i>								x	50	34	6	7
Shrubs/trees												
<i>Alnus glutinosa</i> (female catkins /bracts)									2	6	26	7
<i>Alnus glutinosa</i> (fruits)									2	25	1	9
<i>Carpinus betulus</i>											1	
<i>Corylus avellana</i> (nutshell frags)										x	x	
<i>Crataegus monogyna</i>												3
<i>Prunus spinosa</i>												2
<i>Rubus section Glandulosus</i>												1
<i>Sambucus nigra</i>									7	6	3	2
<i>Solanum dulcamara</i>									1	1		
Woodland herb												
<i>Moehringia trinervia</i>										1		
Wetland herbs/aquatics												
<i>Alisma plantago-aquatica</i>									21	33	1	2
<i>Alismataceae indet</i>									14	4		
<i>Carex spp</i>									8			2
<i>Charophyta</i> (oogonia)					x	x						
<i>Eupatorium cannabinum</i>									1	7		
<i>Filipendula ulmaria</i>									x			
<i>Lemna sp</i>												1
<i>Lycopus europaeus</i>												4
<i>Nuphar lutea</i>											5	2
<i>Oenanthe aquatica</i>									1	3	10	8
<i>Potamogeton sp</i>									1			
<i>Ranunculus subg. Batrachium</i>											2	
Incompletely identified												
<i>Apiaceae indet</i>									1	1		
<i>Hypericum sp</i>									1			
<i>Mentha sp</i>											1	2
<i>Persicaria sp</i>											1	
<i>Polygonaceae indet</i>											2	
Other plant macrofossils												
<i>Buds/bud scales</i>										x		
<i>Mosses</i>									x	x	x	
<i>Rootlets</i>								x	x			
<i>Wood/twigs</i>								x	x	x	x	x
<i>Leaf fragments</i>										x	x	x
<i>Charcoal</i>				x	x	x	x	x				
<i>Unidentified seeds etc.</i>										5		9
Other components												
<i>Tufa concretions</i>	x	x										
Sample wt. assessed/analysed (kg)	1000	1000	100	100	100	100	100	50	0.45	0.55	0.325	0.15

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Table 7. Molluscs Clare Down Farm, Belchamp St. Paul.

Depth (cm)	174-180	185-190	195-200	266-270
Freshwater molluscs				
<i>Armiger crista</i>	3	6	9	
<i>Bathyomphalus contortus</i>		1		4
<i>Bithynia</i> sp (operculum)	29	36	42	
<i>Bithynia tentaculata</i>	2		1	1
<i>Bithynia</i> sp	32	64	47	7
<i>Gyraulus albus</i>	3	8	14	
<i>Lymnaea</i> spp		1		
<i>Pisidium</i> sp	5	7	4	7
Planorbidae indet	7	8	2	1
<i>Theodoxus fluviatilis</i>	1	1		
<i>Valvata cristata</i>	7	30	14	
<i>Valvata piscinalis</i>	5	20	6	2
<i>Valvata</i> spp	18	31	26	
Freshwater slum/marsh molluscs				
<i>Carychium minimum</i>		7	1	
<i>Lymnaea truncatula</i>	6	6	2	1
Succineidae indet	5	3		
Land molluscs (shade)				
<i>Aegopinella pura</i>		2		
<i>Carychium tridentatum</i>		11	9	
Clausiliidae indet		1		
<i>Discus rotundatus</i>	4	2		
<i>Nesovitrea hammonis</i>	3	4		
<i>Punctum pygmaeum</i>		1		
<i>Vitrea</i> spp		1		1
Zonitidae indet			1	
Land molluscs (open country)				
<i>Helicella itala</i>		1		
<i>Pupilla muscorum</i>	31	16	32	
<i>Vallonia costata</i>	23	39	30	
<i>Vallonia excentrica</i>	13	10	8	
<i>Vallonia</i> spp	124	174	82	1
<i>Vertigo pygmaea</i>	13	9	6	
Land molluscs (catholic/indeterminate)				
Arionid' granules	x			
<i>Carychium</i> spp	15	6		
<i>Cochlicopa</i> sp	22	17	21	1
Limacidae indet	x	x	x	
<i>Trichia</i> spp	7	11	3	
<i>Vertigo</i> spp	3	7	10	
Unidentified		16		
Sample weight (kg)	?	500	600	50
% sorted	100	100	100	100

121-125cm As 80-118cm. Sharp boundary.
125-132cm As 118-121cm. Sharp boundary.
132-145cm As 80-118cm. Sharp boundary.
145-190cm Very light greyish-brown soft wet tufaceous chalk marl; chalk fragments up to 2cm towards base.
190cm+ Impenetrable: probably gravel surface.

Machine trench

0-35cm Brown, slightly stony loam A_s; merging boundary.

35-58cm Yellowish-brown alluvium; mottled reddish-brown; almost stoneless; some woody roots; merging, undulating boundary.
58-80cm Light yellowish-brown, mottled reddish-brown calcareous sand; slightly stony with coarse sand lenses; abundant calcareous concretions; mollusc shells common; charcoal patches; some woody roots; merging, undulating boundary.

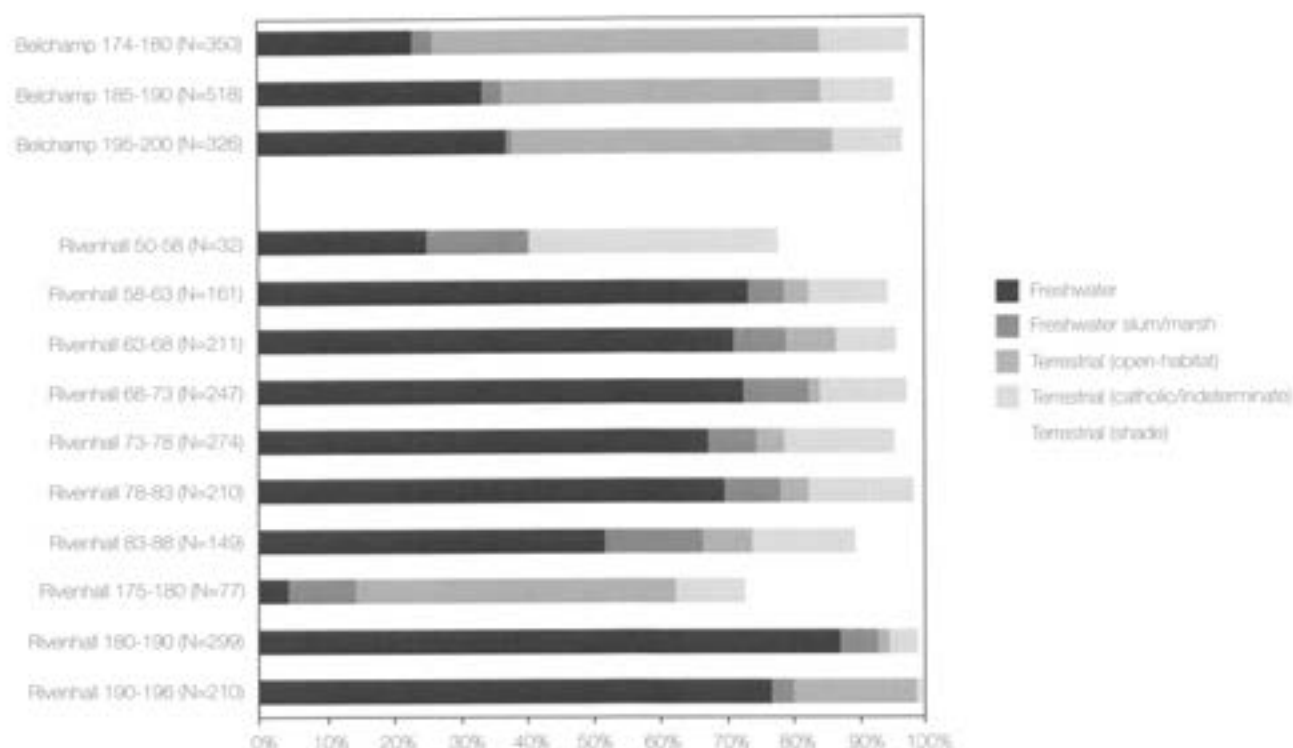


Fig. 27 Summary of mollusc assemblages from Clare Downs Farm, Belchamp St. Paul and Colemans Farm, Rivenhall.

80-85cm	Light greyish-brown, mottled reddish-brown, slightly organic alluvium; mollusc shells; some woody roots; merging, undulating boundary.
85-190cm	Dark greyish-brown organic alluvium with sand lenses; some mollusc shells and wood fragments; woody roots; very sharp but irregular and undulating boundary.
190-196cm	White tufa; thickness of layer very variable across section, from about 6cm to less than 1cm; woody roots; sharp irregular boundary.
196-206cm	Very dark greyish-brown, very sandy peat; thickness again variable, up to 10cm; wood fragments; sharp, irregular boundary.
206-218cm	Slightly organic greyish-brown sand; wood fragments; slightly stony with rounded pebbles.
218cm+	Flint gravel in greyish-brown sand matrix.

Sampling

Due to the suspected instability of the trench, sampling was undertaken very rapidly, and a full sequence of samples through the sequence was not collected. 50cm monoliths were collected for pollen and macrofossil analysis with their tops at 50 and 170cm, so as to include the two tufa and one peat unit within the sequence. Additional mollusc samples (1kg) were taken at 50-58, 58-63, 63-68, 68-73, 73-78, 78-83, 83-88 and 88-95cm.

Radiocarbon dating

Two samples of *Alnus* (alder) twigs were submitted from 175-180cm and 201-206cm, with a single sample of charcoal from 74cm.

Plant macrofossils (Table 10, Fig. 26)

Most samples from the section exposed in the machine trench produced very few plant macrofossils, except for two samples from organic alluvium at 170-180cm. The assemblages were dominated by dryland herbs. These included weed taxa (*Aphanes* spp, *Atriplex* sp, *Chenopodium album*, *Cirsium/Carduus* sp, *Plantago major*, *Polygonum aviculare*, *Rumex* spp, *Rumex acetosella*, *Stellaria media*-type and *Urtica dioica*). Grassland species were also represented: *Linum catharticum*, *Poaceae*, *Prunella vulgaris* and *Ranunculus acris/repens/bulbosus*. *L. catharticum* (purging flax) - the most abundant grassland plant - is particularly characteristic of short, grazed calcareous grassland (Stace 1997). Twigs of *Alnus* sp. (alder) occurred in organic sediments at 196-218 and 185-190cm. No other macrofossils of trees were noted, but a few fruitstones of *Rubus* section *Glandulosus* (bramble) and *Sambucus nigra* (elder) were recorded. Wetland and aquatic plants occurred sparsely. Charcoal was present in samples above 180cm, and there were dense charcoal patches at 74cm.

Molluscs (Table 11, Fig. 27)

Shells were very rare in the predominantly organic units below 196cm, but in the tufa at 190-196cm, and the base of the main organic alluvium at 180-190cm, were

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Table 8. Insects, Clare Down Farm, Belchamp St. Paul.

Section no.	2	2
Depth (cm)	235-240	245-250
Sample wt (g)	450	550
<i>Abax paralleipedus</i>	x	
<i>Megasternum obscurum</i>		x
<i>Limnebius papposus</i>		x
<i>Omalium</i> sp.		x
<i>Geotrupes</i> sp.		x
<i>Athous</i> sp.		x
<i>Donacia crassipes</i>		x
<i>Ceuthorhynchinae</i> indet.		x

abundant. The assemblages were overwhelmingly composed of freshwater and 'freshwater slum'/marsh species, pointing to tufa formation in shallow freshwater conditions. The assemblage from 175-180cm, however, included a higher proportion of terrestrial open-habitat species, notably *Vallonia costata*, with some snails typical of woodland, particularly *Carychium tridentatum*.

In the alluvial sediments between 88-58cm, above this, freshwater molluscs consistently predominated, and these are thought to represent mainly *rejectamenta* from overbank flooding. 'Freshwater slum'/marsh snails and land molluscs characteristic of both shaded and open habitats occurred at lower frequencies. These latter three groups are likely to represent the resident fauna of the floodplain.

Insects (Table 12)

The occurrence of *Oulimnius* sp shows that the sediments were deposited by clean flowing water. *Georissus crenulatus* and *Chaetarthria seminulum* would have lived in mud at the edge of the stream, while *Plateumaris sericea* feeds on marginal Cyperaceae (sedges). However, the majority of the Coleoptera were terrestrial species. *Phyllopertha horticola* and *Agrypnus murinus* have larvae which feed on the roots of grassland plants. *Geotrupes* sp and *Aphodius erraticus* are scarabaeoid dung beetles that suggest the presence of domestic animals. Woodland Coleoptera were absent. The limited results from the beetles therefore suggest that the area around the monument was pasture during the middle Bronze Age.

Conclusions

Above flint gravel in a sand matrix, of presumed late Devensian/early Flandrian date, the basal slightly stony organic sand (206-218cm) is thought to have been emplaced by active current flow, presumably in a palaeochannel. Peat formed over this sand from 1890-

1630 cal BC (3450 ± 45 BP: OxA-8496), but humification had occurred and macrofossil preservation was very poor. The peat was overlain by tufa (196-206cm) formed under shallow freshwater. The tufa in turn was covered by a thick unit of organic alluvium with sand lenses (85-190cm), and alder wood from 175-180cm was dated to 1690-1440 cal BC (3290 ± 45 BP: OxA-8495). The beginning of clay/silt alluvation is bracketed by these two radiocarbon dates. Local vegetation at about 1690-1440 cal BC, in the Middle Bronze Age, included short-turfed calcareous grassland maintained by grazing, together with weed, scrub and wetland/aquatic plant communities.

Pollen

H. M. Tinsley

Samples of sediment for pollen analysis were removed from monoliths collected in the field and placed in labelled polythene bags. Some of these samples were prepared for the original pollen assessment. However, these slides had insufficient pollen for full analysis and, as the original gels were not available, all samples referred to in this report were re-prepared from sediment. A list of samples is given in the site archive.

Laboratory methods

All samples were prepared for analysis using standard techniques (Moore, Webb and Collinson, 1991). Initial digestion in dilute potassium hydroxide was followed by treatment with cold hydrofluoric acid for a week. Samples were washed with hot 10% hydrochloric acid and acetolysed, then stained with safranin and mounted in glycerol. Two tablets of *Lycopodium* spores were added to each sample at the start of preparation to allow pollen concentration to be assessed. Samples were counted at a magnification of x400 with x1000 magnification used for critical determinations. Counting aimed to achieve 500 land pollen grains per sample with obligate aquatics, and all fern and moss spores counted outside this total. Fungal spores of *Diporotheca* Type 143 of Van Geel (van Hove and Hendrikse 1998) were noted in some samples, as were fungal hyphae. For each sample charcoal particles >40µm in diameter were counted on two traverses of a slide in order to estimate relative charcoal abundance. The presence of charcoal particles <40µm in diameter was recorded on an abundance scale. The presence of pyrite particles was also noted in some samples and recorded on an abundance scale.

Table 9. Coleman's Farm, Rivenhall. Radiocarbon dates.

Depth (cm)	Lab. Number	Sample Number	Radiocarbon age (BP)	Delta 13C (ppt)	Calibrated date range (95% confidence)
74	OxA-8494	RHCF 96 74	325 ± 40	-26.9	Cal AD 1450 - 1660
175 - 180	OxA-8495	RHCF 96 175-180	3290 ± 45	-27.5	1690 - 1440 cal BC
201 - 206	OxA-8496	RHCF 96 201-206	3450 ± 45	-27.6	1890 - 1630 cal BC

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Table 10. Plant Macrofossils, Colemans Farm, Rivenhall.

Depth (cm)	50-58	58-63	63-68	68-73	73-78	78-83	83-88	88-95	170-175	175-180	180-190	190-196	196-201
Dryland herbs (weeds/grassland)													
<i>Aphanes arvensis/microcarpa</i>									2	1			
<i>Atriplex</i> sp									3				
<i>Chenopodium album</i>									13	1			
<i>Chenopodiaceae</i> indet									2	2			
<i>Cirsium/Carduus</i> sp									12	7			
<i>Fumaria officinalis</i>								x					
<i>Linum catharticum</i>									38	12			
<i>Plantago major</i>									1				
Poaceae indet									12	1			
<i>Polygonum aviculare</i>									34	6			
<i>Prunella vulgaris</i>									5	2			
<i>Ranunculus acris/repens/bulbosus</i>								x	14	2			
<i>Raphanus raphanistrum</i>													
<i>Rumex</i> sp (p)									14	10			
<i>Rumex</i> sp(p) perianth fragments									x	x			
<i>Rumex acetosella</i>									1	3			
<i>Stellaria media</i> -type									8				
<i>Urtica dioica</i>									12	15			
Shrubs/trees													
<i>Rubus</i> sect. <i>Glandulosus</i>					x			x		3			
<i>Rubus</i> sp (fragment)									1				
<i>Sambucus nigra</i>									7	11			
Wetland herbs/aquatics													
<i>Carex</i> spp								x	7	7			x
<i>Epilobium</i> cf <i>hirsutum</i>									3				
<i>Juncus</i> spp									x				
<i>Mentha</i> sp									4	2			
<i>Montia fontana</i> subsp <i>chondrosperma</i>									3	x			
<i>Ranunculus sceleratus</i>									1	1			
<i>Ranunculus</i> subg. <i>Batrachium</i>								x	1	2			
<i>Rorippa nasturtium-aquaticum</i>									8	4			
<i>Zannichellia palustris</i>									1				
Incompletely identified													
<i>Apium</i> sp								x					
<i>Asteraceae</i> indet									1				
<i>Caryophyllaceae</i> indet									21	4			
<i>Cerastium</i> sp									8				
<i>Myosotis</i> sp									1				
<i>Persicaria</i> sp										1			
Other plant macrofossils													
Mosses									x	x			
Rootlets													x
Wood/twigs									x	x	x	x	x
Charcoal	x	x	X		xx (a)	x	x			x	x		
Unidentified seeds etc.										12	7		
Sample wt. assessed/analysed (kg)	1	1	1	1	1	0.9	1	1	0.1	0.1	0.1	0.1	0.1
% sorted/scanned	b	b	B	B	B	b	b	b	100	100	25	25	10
(a) Charcoal abundant at 74cm													
(b) 5 petri dishes scanned at 50-95cm													

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Table 11. Molluscs, Colemans Farm, Rivenhall.

Depth (cm)	50-58	58-63	63-68	68-73	73-78	78-83	83-88	88-95	175-180	180-190	190-196
Freshwater molluscs											
<i>Ancylus fluviatilis</i>		1				2	1				
<i>Armiger crista</i>				2	1					50	114
<i>Bathyomphalus contortus</i>		1	1	2	7	3	1				
<i>Bithynia</i> sp (operculum)	1	6	3	9	2	1	3				1
<i>Bithynia tentaculata</i>		5	7	2	1	3	1				
<i>Bithynia</i> sp					6	9	8				3
<i>Lymnaea peregra</i>					5	8					
<i>Lymnaea stagnalis</i>			1								
<i>Lymnaea</i> spp		2	4		9	11	3		1	4	
<i>Pisidium amnicum</i>	2	3	4	3	3	4					
<i>Pisidium</i> sp		28	68	153	114	48	36		4	79	15
Planorbidae indet										106	174
<i>Valvata cristata</i>		1		3	4	2	2			60	8
<i>Valvata piscinalis</i>	7	67	58	65	68	59	22				
<i>Valvata</i> spp		25	43	26	24	23	21				
Freshwater slum/marsh molluscs											
<i>Anisus leucostoma</i>			1	1	2	2					
<i>Carychium minimum</i>				4			3		4		
<i>Lymnaea truncatula</i>		4	13	11	7	10	4		3	7	12
Succineidae indet		5	3	9	11	6	14		1	8	1
<i>Vertigo antvertigo</i>							1			2	1
Land molluscs (shade)											
<i>Acanthinula aculeata</i>		1							1		
<i>Aegopinella pura</i>									1		
<i>Aegopinella</i> sp	1			1	1	1					
<i>Carychium tridentatum</i>			1	2			9		12		
<i>Clausilia bidentata</i>		1	1								
Clausiliidae indet			1		3		1				
<i>Discus rotundatus</i>	6	2	2	1	3		2		2		
<i>Ena obscura</i>						1					
<i>Nesovitrea hammonis</i>		2			1				4		
<i>Punctum pygmaeum</i>									1		
<i>Vitrea crystallina</i>				1		2	1				
<i>Vitrea</i> spp		3	1	2	2		3				1
Zonitidae indet			3		3					3	
Land molluscs (open country)											
<i>Pupilla muscorum</i>					1	1					
<i>Vallonia pulchella</i>	4		1	2							
<i>Vallonia costata</i>			1		1	4	2		27	1	
<i>Vallonia excentrica</i>			2		2	1					
<i>Vallonia</i> spp	1	4	10	2	8	2	8		10	3	
<i>Vertigo pygmaea</i>		2	2			1	1			1	
Land molluscs (catholic/indeterminate)											
<i>Carychium</i> spp	3	8	7	8	12	9	7		4	7	
<i>Ceciloides acicula</i>	x				x						
<i>Cepaea/Arianta</i>				1		2					
<i>Cochlicopa</i> sp		1	1	6	3		4		3		2
Limacidae indet	1	1		1			1				
<i>Trichia</i> spp	7	9	8	10	22	22	6				
<i>Vertigo</i> spp	1		3		2		2		1	2	3
Unidentified*				6	6		3			5	
Sample weight (g)	1000	1000	1000	1000	1000	900	1000	1000	100	600	475
% sorted	100	100	100	80	60	100	100	100	100	100	100

* Encrusted with tufaceous material, or very small apical fragments

Table 12. Insects, Colemans Farm, Rivenhall.

Depth (cm)	170-175	175-180
Sample wt. (g)	100	100
<i>Bembidion guttula</i>	x	
<i>Pterostichus madidus</i>		x
<i>Calathus fuscipes</i>	x	
<i>Georissus crenulatus</i>	x	
<i>Helophorus</i> sp. (<i>brevipalpus</i> size)	x	x
<i>Cercyon</i> sp.	x	
<i>Chaetarthria seminulum</i>	x	
<i>Ochthebius</i> cf. <i>minimus</i>	x	
<i>Stenus</i> sp.	x	
<i>Staphylinus</i> sp.	x	x
<i>Quedius</i> sp.		x
<i>Geotrupes</i> sp.	x	
<i>Colobterus erraticus</i>		x
<i>Phyllopertha horticola</i>	x	x
<i>Byrrhus</i> sp.		x
<i>Dryops</i> sp.	x	
<i>Oulimnius</i> sp.	xx	
<i>Agrypnus murinus</i>		x
<i>Plateumaris sericea</i>	x	

Plant nomenclature follows Stace (1991) and pollen taxa generally follow Bennett (1994). The taxonomic level to which pollen grains can be identified varies, some can be identified to species level, others to family and others to group. This report mainly follows the conventions used by Bennett (1994). Further details are given in the site archive. Stace (1991) was also used as a source for general ecological information.

Pollen preservation and concentration

Belchamp St. Paul Pollen preservation and concentration in these sediments was variable. Initial scanning of the slides established that the samples from 214cm and 220cm were virtually barren so the 10 samples between 226cm and 268cm were chosen for full analysis. Pollen preservation was only moderate in the uppermost sample, 226cm, but was good in all samples below this. Pollen concentrations were relatively low throughout, except for sample 244cm.

Rivenhall These samples also showed variable pollen concentration and preservation. The sample from 215cm was barren of pollen and was excluded from analysis. Pollen concentration was very low, and preservation poor, in the two samples from the tufa band (185cm and 190cm). Pollen concentration was also low in the samples from 205cm and 210cm, but in both these cases preservation was good and full counts were achieved. Preservation was only moderate in the sample from 80cm but concentration of pollen was reasonably good.

Overall, for both sets of samples, the relatively low pollen concentrations meant that many slide traverses had to be made to achieve full counts (between 20 and 92 for individual samples). In samples where preservation was only moderately good (226cm from Belchamp St Paul, 80cm from Rivenhall), some pollen grain exines were thin and other grains were crumpled and collapsed. In both

cases there may have been some differential decay of less resistant pollen types which could bias the resultant spectra towards the more robust taxa. Pollen preservation in the tufa band at Rivenhall was so poor that the pollen spectra are certainly biased and therefore the graphs for individual taxa are not plotted in the pollen diagram, but details are shown in a separate table. However, in the majority of samples there is no suggestion that differential decay of susceptible pollen types has biased the results.

Results of the pollen analysis

The results are presented in the form of two pollen diagrams produced by the use of the Tilia.graph package (Grimm 1990). Pollen counts are expressed as percentages of total land pollen, minus the obligate aquatics (TLP). The total land pollen counted at each level was +500 grains, except for the two samples from the tufa band at Rivenhall.

Each pollen diagram starts with a series of graphs summarising the data, followed by graphs for the individual taxa. Pollen types have been grouped into the woody components of the vegetation (trees, shrubs and climbers) and the herb taxa. The herb taxa have been subdivided into those typical of a wide range of dryland habitats and those which are indicative of wetland, or true aquatic communities. It should be noted that these groupings must be treated with some caution as some taxa have members which may belong to both groups. For instance, *Ranunculus acris*-type is a large taxon which includes many wetland species such as *R. flammula* and *R. lingua* (greater and lesser spearwort) but also species typical of grassland (e.g. *R. acris*, meadow buttercup, *R. bulbosus*, bulbous buttercup); similarly, *Potentilla* (cinquefoils) and the Rubiaceae (bedstraw family) are taxa which contain species typical of both wetland and drier habitats. The Brassicaceae (cabbage family) include many herbs of disturbed grassland but also *Rorippa* - the watercresses. Pollen of Coryloid-type includes *Corylus avellana* (hazel) and *Myrica gale* (bog myrtle); it has been placed in the 'Trees, shrubs and climbers' group. The distinction between pollen of *Corylus* and *Myrica* is not easy to make but Andrew (1984) noted that *Myrica* pollen can be identified on the basis of the sloping 'shoulders' leading to each pore. On this basis, in the Rivenhall and Belchamp St Paul samples, the bulk of the Coryloid-type grains are believed to be hazel. Pollen of Cereal-type was separated from that of the wild grasses on the basis of size. All grass pollen grains >40µm in diameter were assigned to this group, which does, however, contain some wild grasses. The pollen diagrams display all the taxa included in the pollen sum as solid bars. The obligate aquatic taxa are expressed as percentages of total land pollen plus aquatics (TPA), and the ferns are expressed as percentages of total land pollen plus ferns (TPF). Both groups are displayed as open histograms in the diagrams.

Description of the pollen diagrams

Clare Downs Farm, Belchamp St. Paul (Fig. 28)

The sediments analysed span 226-268cm and consist of twiggy organic detritus from the basal 50cm of the section. The base of the diagram is dated to 4315 +/- 45 BP (OxA-8492) 3080-2880 cal BC, and the top of the

diagram to 4100 \pm 45 BP (OxA-8493) 2880-2490 cal BC. The pollen spectra from the 10 samples making up this diagram are all similar and are therefore described below as one assemblage.

The assemblage is dominated by tree pollen which forms around 90% TLP. The dominant taxon is *Alnus glutinosa* (alder) which forms 40%-55% TLP. This is associated with Coryloid-type (hazel), 14%-35% TLP, *Quercus* (oak), 11%-19% TLP and *Tilia* (lime), 4%-23% TLP. A range of other tree pollen taxa is consistently present at <2% TLP, including *Pinus sylvestris* (pine), *Betula* (birch), *Ulmus* (elm) and *Fraxinus excelsior* (ash). There are occasional grains of *Salix* (willow), *Carpinus betulus* (hornbeam), *Sambucus nigra* (elder) and *Hedera helix* (ivy). Herbaceous pollen forms <10% TLP, with Poaceae (grasses) 1%-5% TLP and Cyperaceae (sedges) 1%-2% TLP. A diverse range of other herbs is represented at individual values of <1% TLP. Some of these are types associated with anthropogenically disturbed ground such as *Plantago lanceolata* (ribwort plantain), *Rumex acetosella* (sheep's sorrel), *Polygonum* (knotweed), *Solidago virgaurea*-type (coltsfoot, daisy and related Asteraceae), Chenopodiaceae (goosefoot family), *Artemisia* (mugwort), *Urtica* (nettle) and Brassicaceae (cabbage family). The presence of occasional grains of *Succisa* (devil's bit scabious) and *Centaureium* (century) suggests short-turf grassland. Four of the 10 samples contain single grains of Cereal-type pollen. There is a single grain of the calcicole taxon *Helianthemum* (rock rose) and also two grains of Ericaceae (heath) pollen, almost certainly *Calluna vulgaris*, which is a strong calcifuge. Other herb taxa represented by occasional grains include shade-loving types such as *Mercurialis perennis* (dog's mercury), *Euphorbia* (spurges), *Stellaria holostea* (greater stitchwort), and *Silene dioica* (red campion). Herbs of wetland sites present at <1% TLP include *Caltha palustris*-type (e.g. marsh marigold), *Sium latifolium*-type (greater and lesser water parsnip), *Lysimachia vulgaris*-type (e.g. yellow loosestrife), *Oenanthe* (water dropworts), *Filipendula* (meadow sweet), *Thalictrum* (common meadow rue) and *Mentha*-type (mints). Occasional grains of obligate aquatics occur, including *Nuphar* (yellow water lily) and Hydrocharitaceae (frogbit family). Of the non-pollen palynomorphs, Pteropsida (ferns) (principally undifferentiated) are present at <5% TPF throughout the assemblage and there are occasional spores of *Sphagnum* (bog moss). Fungal spores of *Diporotheca* were found at low frequency in a number of samples. Charcoal fragments >40 μ m in length are present throughout but at very low frequency. The relatively low pollen concentrations (except for sample 224cm) are indicative of fairly rapid sediment accumulation and this is demonstrated by the radiocarbon dates.

Colemans Farm, Rivenhall (Figs. 29 and 30)

The stratigraphic sequence from the Rivenhall site is complex, indicating phases of deposition of sand, gravel and alluvium, separated by peat and tufa accumulation. The trench cut for environmental sampling was unstable and therefore a full sequence of samples through the sediments could not be collected, hence the gap in the pollen diagram. Assessment showed that there was little pollen preserved in the sediments above 80cm and below

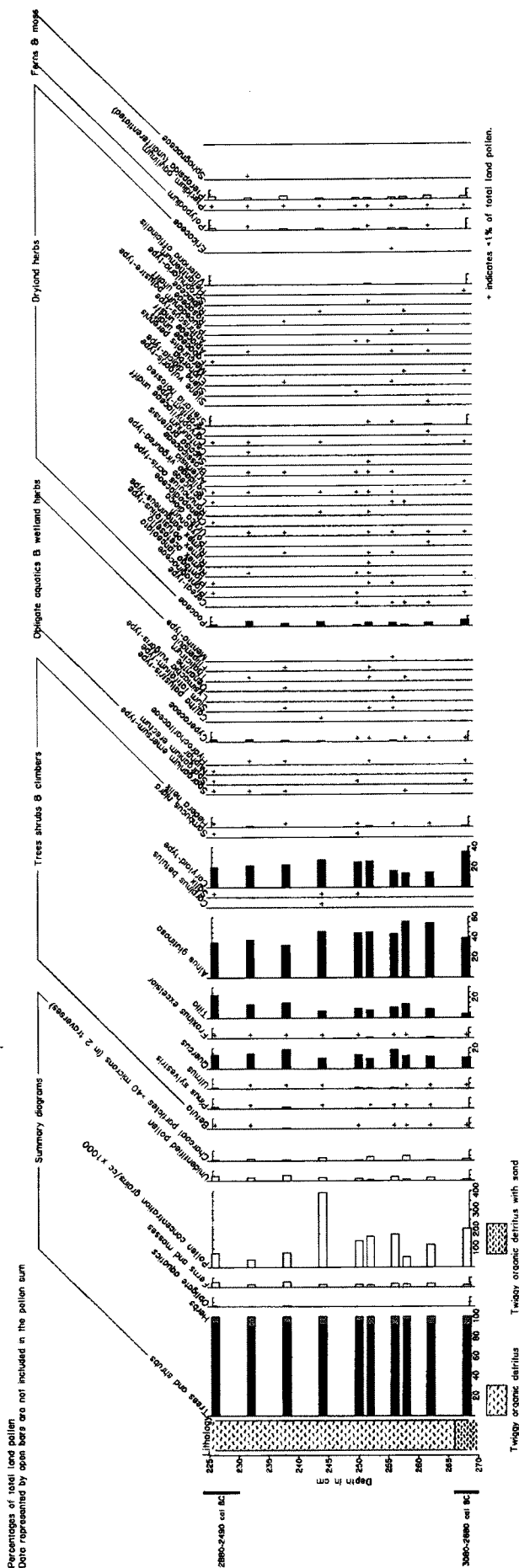
210cm (assessed for this report). The base of the pollen diagram predates 3450 \pm 45 BP (OxA-8496) 1890-1630 cal BC; the radiocarbon sample of *Alnus* wood came from 201cm-206cm, with the lowest pollen sample analysed being from 210cm. *Alnus* wood from 175cm-180cm was dated to 3290 \pm 45 BP (OxA-8495) 1690-1440 cal BC. The top of the diagram at 80cm predates 3250 \pm 40 BP (OxA-8494) cal AD 1450-1660. This date was derived from charcoal found at 74cm.

The pollen record from this site shows a high degree of variation, some of which appears to be linked to the overall stratigraphic changes in the sediment sequence, but there is also some marked between-sample variation. With such variability, it was not possible to divide the diagram into pollen assemblage zones *sensu stricto*. However, for the purposes of diagram description, and to aid interpretation, four local zones, Rivenhall (RH) 1 to 4 have been recognised. The position of the upper boundary of RH2 and the lower boundary of RH3 cannot be determined accurately because of the lack of sediment recovery between 170 and 101cm. The characteristic features of each of the zones are described below.

Zone RH1 This spans 210cm-195cm, basal sands with wood fragments and overlying sandy peat. The middle of the peat bed has a date of 1890-1630 cal BC. Tree pollen varies from 12% - 35% TLP, rising towards the top of the zone. The principal tree pollen taxa are *Pinus*, which is constant at 7%-8% TLP, and *Betula* which increases steadily to 27% TLP at 195cm. *Salix* is present at 1% - 2% TLP. Other tree pollen taxa represented by occasional grains include *Quercus*, *Alnus*, Coryloid-type and *Carpinus betulus*. The herbaceous pollen is dominated by Cyperaceae, 39% - 57% TLP, and Poaceae, around 18% TLP. The high percentage of Cyperaceae, the presence of *Sparganium erectum* (branched bur reed) at <5% TPA and *Filipendula* (meadowsweet) at <6% TLP, plus occasional grains of *Typha latifolia* (bulrush), *Sparganium emersum*-type (unbranched bur reed, lesser bulrush), *Sium latifolium*-type, *Thalictrum* and *Caltha palustris*-type, suggest that a substantial part of the pollen catchment must have had a damp, open environment. However, there is also a diverse range of dry land herbs all present at values of <1% TLP. These include ruderals such as *Plantago lanceolata*, *Ranunculus acris*-type (buttercup), Chenopodiaceae, *Cirsium* (thistle), *Rumex acetosella*, *Polygonum*, *Urtica*, *Solidago virgaurea*-type, *Artemisia* and *Achillea*-type (includes yarrow and chamomiles). Occasional grains of Cannabaceae (hop family) occur. Cereal-type pollen reaches 2% TLP in the sample from 200cm. Pteropsida (undifferentiated) are present at very low frequencies with some occasional spores of *Pteridium* (bracken). Charcoal fragments >40 μ m increase during the zone becoming frequent towards the top.

The Tufa Layer Zone RH1 ends at 195cm where tufa has been deposited over the sandy peat in a layer at least 6cm thick. Pollen concentration in the tufa layer is low and preservation is poor, with some grains so degraded they could not be identified (see summary curves at the start of the pollen diagram). For this reason no detailed pollen taxon curves are plotted for the two samples. Undoubtedly the results have been affected by differential

Fig. 28 Pollen diagram, Clare Downs Farm, Belchamp St. Paul.



decay with the more susceptible taxa being entirely lost. This is borne out by the large numbers of Pteropsida (undifferentiated) recorded for these two samples (80% - 96% TPF). Fern spores are resistant to degradation and high frequencies are often found in sediments when other pollen has decayed away. Tufas can preserve pollen reasonably well if the deposit remains waterlogged and anaerobic (see examples quoted in Moore, Webb and Collinson, 1991) but if the tufa dries out, then degradation of pollen will result, as commonly occurs in dry sediments of high pH (Moore, Webb and Collinson, 1991). In the Rivenhall tufa even the ferns show extensive pitting of the spore surface. 59 identifiable pollen grains were recorded from 185cm and only 14 from 190cm. The pollen which could be identified consisted mainly of *Pinus* and *Betula*, with a few Poaceae and occasional grains of grassland herbs, and *Typha latifolia*. This appears to be a rather similar assemblage to RH1. There were hardly any charcoal particles in the tufa band. Occasional pyrite particles were found in the pollen preparations, both within and outside the pollen grains.

Zone RH2 This extends from the top of the tufa at 185cm, through the organic alluvium to the point where sample recovery ended at 170cm. *Alnus* wood from 175-180cm was dated to 1690-1440 cal BC. The pollen assemblage is markedly different from RH1. Tree pollen values are high at the start of the zone (80% TLP) but decline towards the top to around 20% TLP. The principal tree pollen taxon is *Alnus* which is at 40% TLP at the start of the zone and declines to 7% TLP at 170cm, *Quercus* and *Tilia* follow the same pattern of decline from around 14% at the start of the zone to 3% at 170cm. Coryloid-type is around 12% TLP at the start of the zone reducing to 6%. *Betula* and *Pinus* percentages are reduced compared with RH1. There are occasional grains of *Ulmus*, *Fraxinus*, *Salix*, *Sambucus* and *Hedera*. The herbaceous pollen is dominated by Cyperaceae and Poaceae which together form between 10% and 36% TLP increasing towards the top of the zone. A wide range of dry land herbs are present: taxa typical of disturbed or grazed ground are well represented including *Ranunculus acris*-type (1%-2% TLP) and *Plantago lanceolata* (2-4% TLP). Lactuceae (a large taxon including dandelions, hawkbits and related Asteraceae) rise dramatically during the zone to 28% TLP at 170cm. Other taxa represented at values of <1.5% TLP include *Rumex acetosella*, *Polygonum*, *Chenopodiaceae*, *Cirsium*, *Centaurea nigra* (common knapweed), *Solidago virgaurea*-type, *Achillea*-type, Brassicaceae and *Calluna*. A few grains of Cereal-type pollen were noted and there are occasional pollen grains of weeds typical of arable fields including *Spergula*-type (spurreys). Herbs characteristic of shady conditions are also represented: these include *Silene dioica*, *Anthriscus*-type (cow parsley), Rubiaceae (bedstraws) and Lamiaceae (dead nettle family). Occasional grains of taxa more typical of wetland sites occur including *Sparganium erectum* and *S. emersum*-type, Hydrocharitaceae, *Sium latifolium*-type, *Mentha*-type, and *Veronica* (speedwells). However, overall this group is reduced compared to zone RH1. Pteropsida (undifferentiated) are dramatically reduced compared with the tufa band but *Pteridium* (bracken) increases to 18% TPF at 170cm. Charcoal particles >40µm are frequent in this zone.

There was no recovery of sediment between 101 and 170 cm.

Zone RH3 This spans 4 samples from 100cm to 85cm in the organic alluvium. It is characterised by low values for tree pollen (<5% TLP). Tree taxa present include *Quercus*, *Alnus* and Coryloid-type, with occasional grains of *Pinus*, *Ulmus*, *Fraxinus*, *Salix* and *Tilia* and one grain of *Juglans* (walnut). The herbaceous pollen is dominated by Cyperaceae (37-47% TLP) and Poaceae (19-25% TLP). The range of dryland herbs is very similar to that in RH2, with many ruderal types, including *P. lanceolata* (2-3% TLP), *Solidago virgaurea*-type (1-4% TLP) *Rumex* spp., and *Polygonum*. Lactuceae range from 9-32% TLP. Some herbs typical of more shady conditions are again present as occasional grains. Cereal-type pollen forms <1% TLP, and there are also a few grains of *Centaurea cyanus* (cornflower) and one grain of *Alchemilla*-type (includes *Aphanes*, parsley pierts), both typical of cultivated fields (Stace, 1991). In addition to the Cyperaceae, wetland herbs are represented by low frequencies of *Sparganium emersum*-type and a few grains of *Lysimachia vulgaris*-type, *Filipendula*, *Mentha*-type, *Symphytum* (comfrey) and *Veronica*. The presence of two grains of *Potamogeton natans*-type (pondweed) and one of *Typha latifolia* suggest that some open water was present in the pollen catchment. There are few spores of Pteropsida (undifferentiated) but *Pteridium* forms around 6% TPF. Charcoal particles >40µm are frequent in this zone.

Zone RH4 This is recognised in the uppermost sample analysed from the organic alluvium. The zone pre-dates cal AD 1450-1660, a date obtained from charcoal extracted from the section at 74cm. The zone was distinguished from RH3 on the basis of a rise in tree pollen to 21% TLP, principally due to increases in *Quercus* and *Alnus*, and a fall in Cyperaceae to 10% TLP. Otherwise the features of the pollen assemblage are similar to those of RH3.

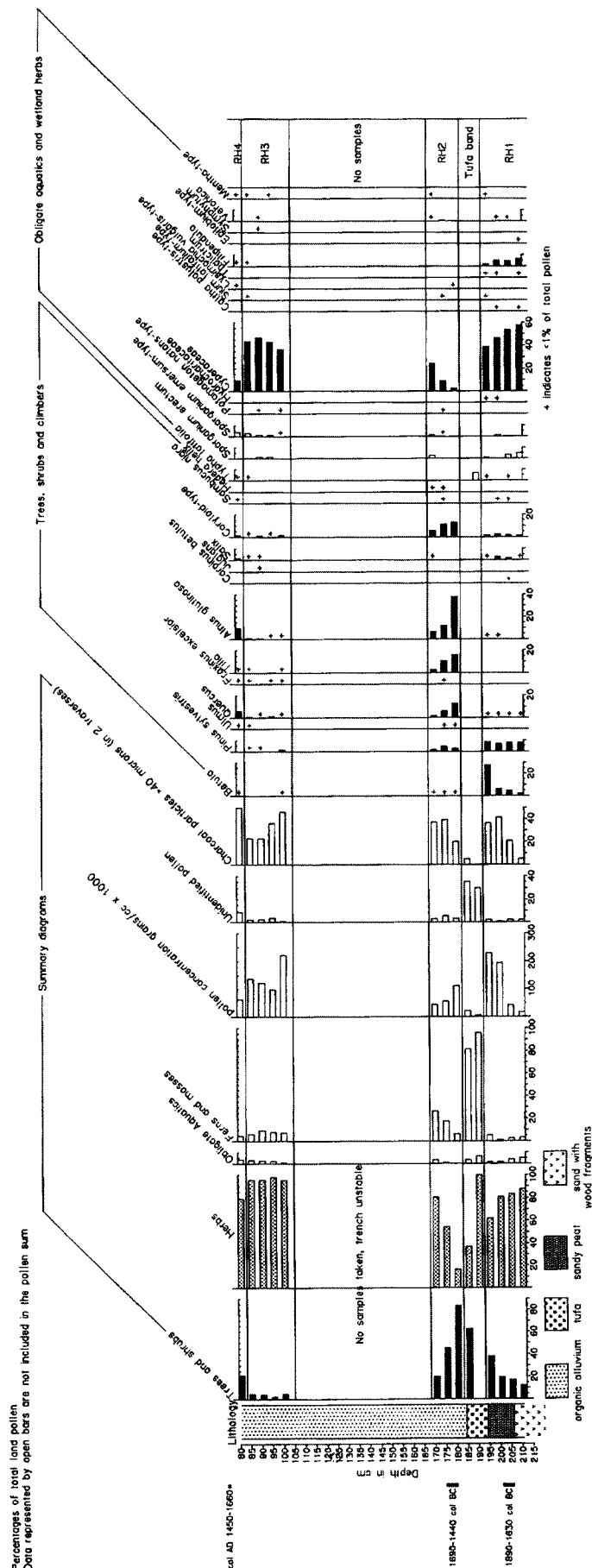
Interpretation

Clare Downs Farm, Belchamp St. Paul

The environmental sampling site at Belchamp St Paul is on the flood plain of the River Stour. Sediments accumulating in such a position will have received pollen from the surrounding vegetation dispersed by wind, but could also have received pollen transported by water and deposited at times of flooding. Hence the pollen source area is potentially complex. However, this pollen diagram only spans the basal organic detritus mud and this has a relatively low clay content (determined during processing of the pollen samples). Therefore it seems likely that flooding did not greatly affect the site at this stage. After 2880-2490 cal BC (224-230cm), alluvial clays were deposited, clearly indicating that flooding was taking place, but pollen preservation in these clays was poor.

The pollen assemblage in the basal organic sediments suggests a well wooded environment in the later part of the Neolithic (3080-2880 cal BC - 2880-2490 cal BC). It is likely that wet alder woods with some willow, dominated the immediate river valley. Willow is insect pollinated and is not so widely dispersed as alder which is wind pollinated. Willow therefore tends to be under-

Fig. 29 Pollen diagram, Colemans Farm, Rivenhall.

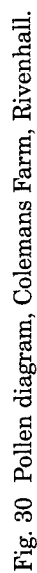


represented in pollen assemblages, compared with its representation in vegetation (Faegri and Iversen, 1989). The presence of occasional pollen grains of yellow water lily and frogbit family (which includes a range of aquatic plants typical of ponds and ditches) suggest open water, they may have grown in the pool in which the organic detritus accumulated. The pool edge would have provided a habitat with sufficient light for wetland herbs to flower, including marsh marigold, water parsnip, yellow loosestrife, meadowsweet, mint and water dropwort.

Away from the wettest soils on the flood plain, the tree pollen assemblage indicates a mixed deciduous woodland dominated by oak and lime with hazel and some ash, elm, hornbeam and elder. Lime may well have been the major contributor to this woodland; it is another insect pollinated tree which tends to be under-represented in pollen assemblages. The pollen of pine, which is present at frequencies of <1% TLP, is likely to have blown into the site from further afield. Pine pollen grains have air bladders attached to them and can travel great distances on air currents. The woodland ground flora included red campion, dog's mercury and spurge. Members of the Solanaceae family (includes climbers such as *Solanum dulcamara* (bittersweet) may have grown in these woods; no pollen was found but their presence is suggested by the *Diporothea* spores which occurred in the assemblage. These fungi are root parasites which appear to be associated with the Solanaceae (Van Geel, personal communication).

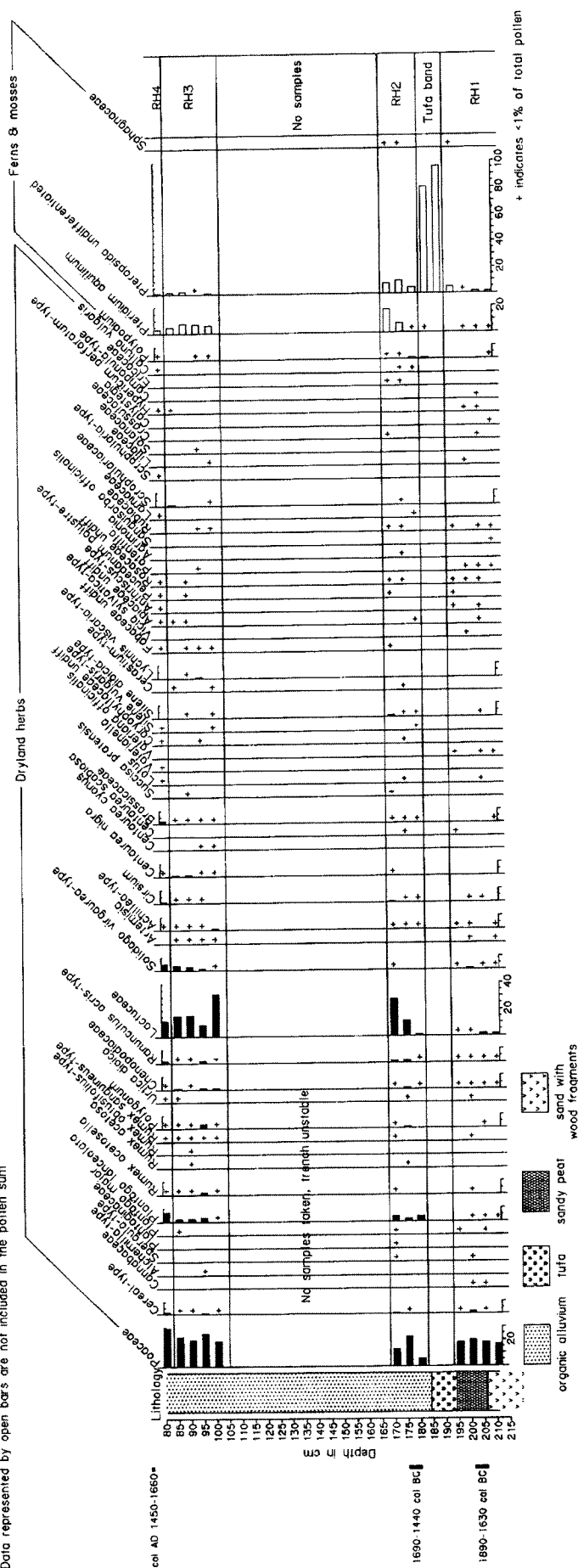
Although the landscape around the site was dominated by woodland, the presence of pollen of grassland herbs indicates that there were some open areas, though the low frequency of grass pollen suggests that these were limited in extent, at least in the immediate vicinity. The variety of herbs is quite diverse: ribwort plantain, knotgrass, goosefoot family, and mugwort, all suggest disturbance by trampling of animals, whereas devil's bit scabious, century and common valerian suggest grazed or open land. Herb pollen is released close to the ground and does not usually disperse far compared to the pollen of trees, so it is quite possible that some of the drier areas of the flood plain were grazed. The presence of a grain of rock rose pollen and two grains of pollen of heather suggest the presence of both calcareous and acid soils within the pollen catchment. The occasional Cereal-type grains could be indicative of cultivation in the area; however, this taxon includes *Glyceria* (sweet grass), a marsh grass which might have grown in ponds on the Stour flood plain, or at the edge of the river.

Overall, the pollen evidence from Belchamp St Paul supports the interpretation based on plant macrofossils, molluscs and insects which suggests that in the late Neolithic flood plain woodland occupied this part of the valley of the Stour, with a mosaic of wetland and dryland herbaceous plant communities. However, in addition, the pollen evidence points to extensive dryland woodland of oak, lime and hazel. The frequency of microscopic charcoal particles (both $<40\mu\text{m}$ and $>40\mu\text{m}$) is low, suggesting that settlement in the immediate area was limited. A somewhat similar environment is recorded, at a much later date, in the Waveney valley, at Scole, on the Norfolk-Suffolk border. The pollen diagram from organic silts in a palaeochannel at this site revealed dense



Percentages of total land pollen

Percentages of total land and pollen
Data represented by open bars are not included in the pollen sum



woodland with lime, oak, hazel and alder around 1980-1740 cal BC (Wiltshire and Murphy, 1999).

Colemans Farm, Rivenhall

The environmental sampling site at Rivenhall is adjacent to a small rivulet which currently acts as a field ditch which drains to the River Blackwater. The pollen diagram exhibits markedly different assemblages in its lower section reflecting variations in the stratigraphy. As at Belchamp St Paul, the site is on a flood plain. The basal sediments accumulated around 1890-1630 cal BC in a palaeochannel which became cut off from active flow as peat developed. Though the size of this hollow is unknown it is likely to have been fairly small and so the pollen catchment will have been local. Work by Sugita (1994) on pollen source areas established that small forest hollows around 4 metres across have a relevant source area for pollen of around 50-100 metres. The vegetation around the site at this stage was dominated by grasses and sedges; amongst the wetland herbs, meadowsweet was particularly prominent along with branched bur reed, both typical of damp marshy places. Marsh marigold, *Veronica*, water parsnip and willow herb were also present. The Cannabaceae pollen found in RH1 probably represents *Humulus lupulus* (hop) which grows in wet fen-carr sites, as well as in scrub woodland (Stace 1991). It is clear from the wide range of dryland herbs recorded that parts of the flood plain must have been fairly well drained supporting grassland with herbs such as *Campanula* (e.g. harebell) and St John's wort. Ruderals such as ribwort plantain, greater plantain, goosefoot family, thistles and mugwort suggest disturbance by grazing animals. Cereal-type pollen reaches 2% TLP in one sample from these lower organic sediments, possibly indicating local cultivation, though the flood plain situation means that, as at Belchamp St Paul, this could be pollen of sweet grass.

Birch and willow probably grew in copses on the flood plain, willow in the wetter and birch in the drier areas. The increase in birch pollen towards the end of RH1 may indicate a partial drying out near the sampling site, perhaps due to river channel migration. The pine pollen present in this zone is likely to be the result of long distance transport from pine growing on drier soils well away from the river valley.

The episode of tufa deposition, which brought peat accumulation at this site to an end, occurred at some time between the two radiocarbon dated horizons of 1890-1630 cal BC and 1690-1440 cal BC. From the very limited and poorly preserved pollen assemblage in the tufa, it appears that the surrounding vegetation remained fairly similar to that of RH1 while the deposits accumulated. Possibly the wet conditions encouraged the growth of ferns around the spring, which would account for the large numbers of fern spores in the tufa.

The pollen assemblage in the alluvium which overlies the tufa (RH2) is entirely different from that of RH1. From the pollen diagram marked discontinuities are clear in the graphs for *Betula*, *Quercus*, *Tilia*, *Alnus*, Coryloid-type and Cyperaceae across the tufa band. At the start of RH2, alder woodland was well established on the flood plain close to the sampling site. The alder pollen on the slides from RH2 often occurred in clumps, suggesting that

whole catkins had been deposited in the accumulating sediments. Mixed deciduous woodland dominated by oak, lime, elm and hazel was growing on the drier sites. The discontinuity in the pollen assemblages could be explained if there had been some truncation of the peat bed or the tufa layer (or both) resulting in loss of part of the sedimentary record. Another possible reason for the discontinuities is that the pollen source area was rather different in RH2 compared with RH1. Once alluviation commenced, pollen from a wider catchment may have been deposited in the floodwaters.

The immediate vicinity of the site appears to have been drier in RH2 than during RH1, as wetland herbs are not so well represented; in particular there are reductions in sedges, meadow sweet and branched bur-reed. However, the spread of birch at the end of RH1, which possibly indicated the start of this drier phase, is not continued into this zone, clearly supporting the view that some truncation has occurred.

During RH2 both the dry and wet woodland, which were well established at the start of the zone, declined and in response herbaceous communities dominated by grasses, and herbs expanded. The marked increase in Lactuceae (dandelions and related Asteraceae) to 28% TLP, which characterises this zone, and continues in RH3, is somewhat problematic to explain. Lactuceae pollen grains are highly resistant to degradation; as a result high percentages of Lactuceae are often characteristic of sediments where there has been differential decay of less robust pollen taxa. However, in this case, pollen in RH2 is well preserved; the exines of most grains are entire and uncorroded and morphological features are distinct. Thus the Lactuceae peak appears to represent a real feature of the vegetation, and not an artefact of preservation. The Lactuceae are a large family with members which grow in a wide range of habitats, some are associated with anthropogenic disturbance, others not. The opening up of the flood plain woods must have offered ideal conditions for this taxon to expand. Overall the herb flora was quite diverse; the range of ruderals found in RH1 was present, the slightly higher frequencies suggesting increased disturbance of the flood plain. Herbs common in grazed pasture included buttercups, common knapweed and yarrows/chamomiles. Bracken expanded in this zone and this could also be a result of increasing grazing pressure. As in RH1, some Cereal-type grains possibly indicate cultivation and the presence of spurrey supports this view. Hedgerows around fields would have been a suitable habitat for shade loving herbs such as red campion, dead nettle and cow parsley. By 1690-1440 cal BC, at the end of RH2 in the Middle Bronze Age, the environment of this part of the Blackwater flood plain was one in which both wet and dry woodland were in decline as grazing land and cultivated fields extended. The alluviation which characterises the sedimentary sequence above the tufa band may well have been linked with increasing soil instability associated with agriculture in the wider Blackwater catchment from this period onwards.

There are 70cm of unsampled alluvium between zones RH2 and RH3, so the relationship between the two pollen zones cannot be established. There is no radiocarbon date for RH3, but a Roman, or post-Roman, date is suggested by a single grain of *Juglans* pollen at 90cm. *Juglans regia*

(walnut) was introduced to Britain by the Romans (Rackham, 1990). The presence of a few grains of *Centaurea cyanus* (cornflower) pollen may also suggest a post-Roman date. According to Greig (1991), cornflower only becomes common around AD 1200, although there are some Roman records. This fits with the radiocarbon date of cal AD 1450-1660 for 74cm in the sedimentary sequence, 6cm above the top of the pollen diagram. By this stage woodland had virtually disappeared from around the site. There seems to have been a return to rather wetter conditions in the immediate area with sedges, wetland and aquatic herbs more widespread than in RH2. Herbs of disturbed ground, grazed grassland and hedgerows are all present in similar frequencies to RH2 along with Cereal-type pollen. This suggests that farming near the site at this later period was probably about as intensive as it had been in the Middle Bronze Age. Right at the top of the pollen diagram, in zone RH4, there is a suggestion of some woodland regeneration with alder and oak increasing at the expense of sedges. This may once again be a result of hydrological change on the flood plain resulting in the drying out of some areas which then became colonised by woodland. Frequencies of grass and ribwort plantain pollen increase slightly at this point suggesting that the agricultural part of the landscape was not affected by this woodland expansion.

Microscopic charcoal is frequent throughout these sediments, its origin is likely to have been domestic fires from settlement in the local area.

Conclusions

The pollen diagram from Clare Downs Farm, Belchamp St. Paul has demonstrated that the landscape of this part of the Stour valley in the later part of the Neolithic, prior to the construction of the Late Neolithic/Early Bronze Age barrow, was heavily wooded. Wet alder woods dominated the flood plain with some areas of open water surrounded by marshy vegetation. Mixed deciduous woods of oak, lime and hazel occupied sites away from the river. There were some limited areas of open, drier grassland which were probably grazed.

The pollen and stratigraphic evidence from Coleman's Farm, Rivenhall post-date the construction of the Neolithic monument. The evidence suggests that, in the Middle Bronze Age, the environment of this part of the Blackwater valley was subject to dynamic change linked to fluctuating hydrological conditions associated with the river and with spring activity. The landscape of the flood plain included marshy wetlands, alder woods, mixed deciduous woodland, drier grassland used for grazing and possibly some cultivated fields. These communities fluctuated in area and/or position in relation to the sampling site, probably as a result of the changing hydrology. The alluviation which was initiated in the Middle Bronze Age may have been linked to the expansion of agriculture within the wider catchment. By the Roman (or post-Roman) period, woodland had declined markedly but the flood plain continued to support both

marshy communities and dry grassland. Pre-cal AD 1450-1660 there is some evidence for reduction of marsh on the flood plain and the extension of woodland.

Discussion

Introduction

The problems of dating and classifying cropmark enclosures on the basis of morphology alone are well known. The Cropmark Enclosures Project was designed to examine sites belonging to a class of circular enclosures generally regarded as small henge monuments (Priddy and Buckley 1987; Harding and Lee 1987). Of the four sites investigated two, Great and Little Bentley, both on the Tendring Plateau, were shown to be of early Medieval date. The remaining two sites, at Rivenhall close in the Blackwater valley, and Belchamp St. Paul in the Stour valley, proved to be of prehistoric date.

The Belchamp St. Paul and Rivenhall cropmarks lay adjacent to a substantial river valley and small stream valley respectively. Hand augering and trial trenching revealed deep alluvial/colluvial sequences, which were sampled for environmental evidence. This is of some significance: it demonstrates the existence of such deposits not only in major river valleys like the Stour, but also in the valleys of apparently insignificant streams such as the tributary of the Blackwater at Rivenhall. In the east of England, where such valley deposits have been examined in the past, they have generally been revealed as a result of road/bridge construction etc. and so have not necessarily been closely related to archaeological sites. By contrast, the two sequences examined as part of this project, were targeted precisely because of their close proximity to archaeological cropmarks. In the long term, there is thus the potential to redress the imbalance of environmental data which currently exists in eastern England, where there is considerable evidence from the fens/fen edge and some coastal areas but little from elsewhere (Brown and Murphy 2000; Brown *et al.* 2000).

The prehistoric sites

At Belchamp St. Paul, the distribution of worked flint from the fieldwalking shows no clear concentrations, but there are two broad bands of flintwork running north/south across the area investigated, one to the east, the other to the west of the large cropmark concentric ring-ditch (Fig. 18). The burnt flint shows a somewhat similar distribution (Fig. 18). Interestingly, the results of fieldwalking seem to be broadly comparable with those obtained ten years earlier when the site was fieldwalked by the Haverhill and District Archaeological Group between 1983 and 1985

(Acquier 1986). The range of items recovered at that time was similar, although a number of scrapers and a fragment of polished axe were amongst the material recorded by the Haverhill Group. The distribution of the material recovered in the 1980s and 1990s may also have been somewhat similar. Although no detailed plots of the fieldwalking carried out in the 1980s are available, the Haverhill Group's report states that 'Any concentration in the immediate vicinity of the ring ditches has now become scattered over the whole area due to continual ploughing' (Acquier 1986, 78).

The majority of the datable flintwork from both groups of fieldwalking material could be broadly assigned to the Neolithic or earlier Bronze Age and both contained Mesolithic pieces. The occurrence of a possible Upper Palaeolithic flint from the 1995 fieldwalking is of some interest. It may be that some part of the fairly complex sequence of colluvial and alluvial deposits of the Stour valley contain evidence for late glacial occupation. Flintwork of this date is very rare in Essex, but it is notable that of the few finds that have been made, there is a marked cluster around the outer Stour estuary (Jacobi 1996, 10). The Stour valley and estuary might prove a rewarding area for further research into this locally rather poorly understood period (Austin 2000, 6-7).

The excavation trench across the ditches of the large concentric ring-ditch at Belchamp St. Paul revealed little to indicate the former presence of mounds or banks. However, interpretation as an elaborate barrow with a mound within the inner ditch, a broad berm between the inner and outer ditch, the latter perhaps with an internal bank seems reasonable. Such an interpretation is similar to that offered for the comparable cropmark at Raunds, Northamptonshire (Humble 1993), or Harford Farm, Norfolk (Ashwin and Bates 2000). The dating evidence derived from Neolithic/Bronze Age flintwork, together with pottery of similar date, which included a very small sherd of Grooved Ware, and another sherd, probably from an earlier Bronze Age Urn, confirms the suspected Late Neolithic/Early Bronze Age date of this monument. The evidence would seem to support Harding and Lee's (1987) judgement that this site was unlikely to belong to the henge class. Nonetheless, the Belchamp St. Paul site may have been rather more than a simple large barrow, and the dating evidence such as it is, would suggest a long-lived monument probably with more than a single phase of construction and use. The Stour Valley Project (Strachan and Brown 2000; Strachan, Brown and Knopp 2001; Brown, Knopp and Strachan forthcoming) has shown that of 21 dual concentric ring-ditches in the valley, only one at Langham, is comparable in size and form to the Belchamp St. Paul site. Another example at Higham, Suffolk is of similar diameter, but here the two ditches are much

closer together and narrower than in the Belchamp example (Strachan, Brown and Knopp 2000, fig. 12).

The large concentric ring-ditch at Belchamp St. Paul may have provided a focus for ring-ditch construction; two lie close by, whilst four others are further off (Fig. 19). The excavated example had a centrally placed slot at the bottom of the ditch with at least one clear postpipe in the ditch fill (Figs. 20 and 21). This would indicate that the ditch had originally formed a bedding trench for upright posts: given the small area excavated it is uncertain whether there was originally a continuous palisade, a circle of separate posts or more isolated individual uprights. These smaller ring-ditches may be suggested to be of Early/Middle Bronze Age date and are similar in size to many Early/Middle Bronze Age ring-ditches excavated in the Ardleigh area (Brown 1999). It certainly appears likely that they post-date the dual concentric ring-ditch, and were built with regard to it. In Garwood's (1991, 16) terminology, ring-ditches 1 and 2 may be regarded as built in direct association with the dual concentric ring-ditch and the remainder in indirect association. All these monuments are set within a broad meander of the river Stour on relatively low lying, fairly level ground, and are overlooked by two further ring-ditches, which lie on the valley slopes 400m to the south west. The Stour Valley Project has prepared a synthesis of the cropmark landscape in a GIS environment, which has demonstrated an intimate connection between the monument complexes, the river, and valley topography. The situation of the cluster of ring-ditches at Belchamp St Paul within a meander of the river is typical of many groups of monuments in the valley; it is also typical in being placed towards the valley bottom on, or just above, the floodplain. Viewed two-dimensionally on a map there appears to be a fairly simple linear distribution of monument complexes along the valley. However, viewshed studies of the cropmarks have shown that the monument complexes are frequently not intervisible. Furthermore, experienced on the ground, the location of the Belchamp St Paul double concentric ring-ditch and associated ring-ditches do not give much impression of a linear valley location. Rather, the broad curve of the river and the form of the valley slopes to the north and south tend to give a sense of enclosure with the monuments occupying the floor of a basin.

The environmental evidence recovered from the test pit and riverbank section is complex. The radiocarbon dates of 4315 ± 45 BP 3080-2880 cal BC (OxA-8492) and 4100 ± 45 BP 2880-2490 cal BC (OxA-8493) from the basal organic sediment indicate damp woodland in the valley bottom throughout the first half of the third millennium BC, the earlier part of the Late Neolithic. This woodland probably occupied a floodplain, crossed by

a river channel rather more braided and much less deeply incised than it is today, there are also indications of areas of probably grazed grassland. This was a diverse habitat which would have offered considerable opportunities for human populations operating a mixed farming/hunter gathering economy which currently seems to characterise local Neolithic groups (e.g. Whittle 1996, 1997; Brown 1997). The organic sediment was succeeded by a phase of mineral alluviation containing charcoal fragments which suggest a phase of considerable human interference and woodland clearance, perhaps from around 2500 BC — linking this sequence to the cropmark ring-ditches further up slope and around 200m from the recorded environmental sequence is problematic. Layers of colluvium were recorded in the excavation trenches; these layers do not correlate particularly well with the appearance of deposits recorded in the environmental sequence. However, some correlation may be attempted. The dual concentric ring-ditch cut the earlier of the two colluvial deposits and it seems reasonable to suppose that construction took place during the first phase of mineral alluviation recorded in environmental section 2. This would accord with the late Neolithic/Early Bronze Age date suggested for the large dual concentric ring-ditch. The smaller ring-ditches, perhaps of Early/Middle Bronze Age date, may relate to a later stage in this phase of mineral accretion or to the succeeding phase of calcareous deposition with evidence for a local environment of open grassland. Although somewhat speculative, the suggestion that these ring-ditches may have been built during a pastoral phase seems plausible. There is increasing evidence for the importance of pastoralism in eastern England (e.g. Pryor 1998). In central Essex, environmental data suggests a pastoral landscape in at least one part of the Blackwater valley in the Middle Bronze Age (below). There is also evidence of a predominately pastoral later Bronze Age landscape adjacent to the Blackwater estuary (Brown 1988; Wallis and Waughman 1998). The upper phase of mineral accretion seen in the two Belchamp St Paul environmental sequences may in part be linked to the second layer of colluvium recorded in the excavation trenches. There may also be a link with the appearance of extensive areas of cropmark linear boundaries/fieldsystems in the Stour valley. Many of these features clearly postdate the cropmark ring-ditches. However, a number of the linear features appear to respect the cropmark monuments. This seems to indicate that certain of the cropmark ring ditches and other monuments they were still visible as upstanding elements in the landscape, when the linear features were laid out.

At Rivenhall, the field, called Fen and Loews, in which the cropmark complex lies, was fieldwalked in

1986 as part of a programme of fieldwork designed to examine the cropmark long mortuary enclosure. The distribution shows a concentration of finds between the east end of the mortuary enclosure and the edge of the gravel terrace (Buckley *et al.* 1988, figs. 5-6). There is a marked absence of any flintwork beyond the edge of the gravel terrace, including the vicinity of the cropmark hengiform monument; it seems likely this reflects masking by the colluvium/alluvium of the Blackwater and its tributary. No burnt flint was recorded, and it seems likely that this material was not collected, rather than being totally absent.

The date of the material recovered from the fieldwalking (and indeed from the excavated trenches across the long mortuary enclosure ditches) was predominately late Neolithic, but with a clear Mesolithic component (Holgate 1988). In addition the landowner, Simon Brice, has a large collection of flintwork from the farm which includes both Palaeolithic pieces and Early Bronze Age items, some of the latter from Fen and Loews field (Holgate 1988; Martingell 1982). There is also a remarkable collection of shafthole implements from the farm (Martingell and Brice 1992). Flintwork from the excavated trenches appears to be broadly of Neolithic date with a smaller earlier component, perhaps like the material from the ploughsoil, also of Mesolithic date.

The cropmark of the possible hengiform monument comprised a roughly circular ring-ditch about 50m in diameter, with to the south, across a small stream, an 80m length of curved cropmark ditch which may be part of an outer concentric ring. The central cropmark ring-ditch was examined in two excavation trenches (4 and 5 above). The longest length of ditch was exposed in trench 4; the ditch was broadly U-shaped, up to 1.7m wide and 0.65m deep, very sinuous and variable in width particularly at the base, perhaps an indication of having been originally dug in separate segments (Fig. 15). The fill sequence was quite complex, perhaps indicative of a fairly extended period of use; the ditch had been recut at least once, the upper fills incorporated a considerable quantity of burnt flint, with a marked concentration at one point on the inner edge of the ditch (16 in Fig. 15), this deposit being cut by post hole 45 (Fig. 16 and below) which itself contained Neolithic flintwork. A layer of coarse gravel sealed the whole ditch sequence. The ditch as revealed in trench 5, down slope and closer to the stream, was much narrower and shallower, presumably this change in ditch form reflects a desire to maintain a fairly level base to the ditch.

A group of four post holes was revealed in trench 4 in the interior of the monument, presumably the remains of wooden structures associated with the enclosure. However, the post holes were clearly of more than one phase. Post hole 14 cut and possibly

replaced post hole 44. The precise relationship of the structure or structures represented with the ring-ditch is uncertain. At least one post hole (45) represents a late phase since it cuts the upper ditch fill. No pottery was recovered from these features but the flintwork derived from them is suggestive of a Neolithic date.

This monument may be broadly contemporary with the long mortuary enclosure approximately 100m to the north-east and the two sites are highly likely to have been constructed with regard to one another. Despite their proximity, the difference in location of these two monuments is very marked. The mortuary enclosure lies in the centre of a curving arc of high ground affording views across the Blackwater valley to the west, and the smaller valley to the south-east in which the hengiform enclosure was constructed. The close proximity of this monument to a small stream may be paralleled, on a far grander scale, by the Etton Causewayed, and Etton Woodgate, enclosures (Pryor 1998). If the southern arc of the cropmark at Rivenhall is indeed part of an outer concentric ring-ditch, then the monument was actually built across the stream in the same manner as a number of the hengiform monuments at Maxey (Pryor 1998, 373). Whereas the long mortuary enclosure was placed at the centre of a natural topographic feature (Brown 1997), the hengiform monument was constructed in a physically liminal zone. Whilst the hengiform enclosure may have been physically liminal, the long mortuary enclosure may have been spiritually so, assuming that the interpretation of such structures as key elements in the disposal of the dead is correct (Buckley *et al.* 1988; Kinnes 1992). The two sites may have been used in conjunction, through rituals performed at them symbolically binding the elements of the landscape together, and, perhaps, facilitating the passage of the dead from the world of the living to a spirit realm. It is possible that the close association of the hengiform monument with a stream, perhaps even to the point of incorporating it into the actual monument, may have been particularly significant in these processes (Parker-Pearson 1993, 206).

The difficulties in reconciling the cropmark plot with the excavation trenches together with the particularly dry ground conditions meant that, of the two smaller ring-ditches, only that closest to the long mortuary enclosure may *actually* have been examined. No dating evidence was recovered. However, as with the similar features at Belchamp St Paul an Early/Middle Bronze Age may be suggested. Sherds of Deverel-Rimbury pottery recovered from the coverloam in trenches designed to investigate these ring-ditches might support such a date. The trackway ditches encountered in trench 5 post-date the ring-ditch but might be of some

antiquity; they certainly do not appear on the first edition Ordnance Survey map.

The environmental sequence at Rivenhall revealed a lower peaty deposit of Early Bronze Age date (1890-1630 cal BC OxA-8496) which was succeeded by alluviation perhaps due to the onset of forest clearance. A zone of organic alluvium yielded a radiocarbon date of 1690-1440 cal BC (OxA-8496). Plant macrofossils and insects remains from this level indicate a local environment of short grazed calcareous grassland. This might suggest that the long mortuary and hengiform enclosures were constructed prior to large-scale woodland clearance. By contrast the two ring-ditches were probably constructed in a largely pastoral landscape following extensive clearance. The upper levels of the environmental sequence show further mineral alluviation, whether continuous or episodic is uncertain. In part at least this is presumably the result of increased arable cultivation. The process of deposition was clearly protracted, continuing into the later Medieval/early post-Medieval period as indicated by a radiocarbon date of cal AD 1450-1690 (OxA-8494) from charcoal from the upper levels indicates.

Although both the supposed cropmark henge monuments at Great and Little Bentley proved to be medieval in date, both sites produced considerable evidence of prehistoric activity. The fieldwalking at Great Bentley revealed a fairly even distribution of struck flint across the area investigated, together with two sherds of prehistoric pottery. To the north of the supposed henge cropmark, there was a marked concentration of burnt flint (Fig. 3.). A small concentration of cores occurred in the vicinity of a small cropmark ring-ditch. This ring-ditch was examined by trench B: in the excavated section of the ditch there was some indication that the lower fills were derived from the exterior of the ring-ditch, suggesting the presence of an external bank. Locally such banks seem to have been features of a number of the ring-ditches at Ardleigh (Brown 1999a). The ring-ditch produced an unabraded sherd with a fabric which can be closely matched amongst the very large number of Early/Middle Bronze Age urns recovered from north-east Essex (Brown 1995; Brown 1999b). A sherd of late style Beaker was recovered from the spoilheap. As with the ring-ditches at Belchamp St Paul and Rivenhall, an Early/Middle Bronze Age date seems likely for the Great Bentley ring-ditch. This is certainly the date of many of the numerous ring-ditches excavated at Ardleigh about 8km to the north east (Brown 1999a). The Great Bentley ring-ditch had some Late Iron Age sherds from the upper fills indicating that the ditch remained open for a considerable time; again, this is a pattern represented in many of the Ardleigh ring-ditches (Brown 1999a).

At Hall Farm, Little Bentley the fieldwalking results indicate extensive prehistoric occupation from at least the Neolithic, with an area of rectilinear cropmark enclosures indicating a focus of probable Iron Age settlement, perhaps with earlier origins. About 1km to the east across the Holland Brook, excavation in advance of construction of an agricultural reservoir has revealed a ring-ditch with a Beaker burial together with a range of linear boundaries of Bronze Age and Late Iron Age date (Barber 1995). Also about 1km away, to the south-east at Hill Farm, excavations, again in advance of reservoir construction, have revealed a complex sequence of field boundary ditches. These features are mainly of Middle and Late Iron Age and Roman date but with at least one example dating from the Late Neolithic/Early Bronze Age (Heppell 1998, 1999 and forthcoming). It seems that the area around the Holland Brook would provide a suitable one in which to study the development and nature of prehistoric barrows, trackways, enclosures and settlements in relation to the distinctive topography of the Tendring Plateau (Brown 1999a, 184).

The medieval sites

Both the Great and Little Bentley enclosures produced pottery indicating an early medieval date and may be windmill sites. Documentary sources indicate a widespread and early adoption of windmills in Essex during the medieval period (Farries 1981, 88). The results of the Cropmark Enclosures project indicate that archaeological evidence can supply this information. Both the Great and Little Bentley windmills are close to, but separate from, manorial sites; neither fieldwalking nor cropmark evidence indicate that they were part of a larger building complexes. By contrast the recently examined early medieval windmill at Boreham is embedded in a complex of other buildings and enclosures (Clark 2002).

The classic means of distinguishing cropmark windmills from cropmark hengiform monuments is the appearance of 'cross trees' (e.g. Harding and Lee 1987, 15-23). Neither the Little and Great Bentley sites have shown cross-trees despite being photographed on a number of occasions over many years. The limited trial-trenching at these two sites has not revealed any indication of their presence, nor has the more extensive excavation of a similar site at Boreham. By contrast the late medieval/early post-medieval windmill excavated at Mucking did have clear cross trees. It seems possible that, in Essex, early medieval windmills were not always constructed in such a way that cross trees were sunk into the subsoil, whereas in late medieval/post-medieval mills they were. Whilst the identification of these sites as windmills is here preferred, the evidence is inconclusive and a range of other functions are possible. Amongst these the circular

form might suggest dovecotes. It is possible that the circular enclosures may have played a role in stock management, perhaps related to dairying, and there is some slight evidence from the pottery to support this (Walker above).

Fieldwalking at Little Bentley yielded medieval pottery associated with the supposed hengiform cropmark and other finds of medieval pottery occurred within the survey area (Fig. 11), including a concentration comparable with that associated with the site of a substantial early medieval farmstead at Boreham Interchange near Chelmsford (Lavender 1999). The Tendring plateau in general, and the Little Bentley area in particular, may be a promising location in which to study the nature of early medieval occupation in an area characterised by dispersed settlement (MSRG 1997, 7). This area of north-east Essex would be a suitable location in which to attempt to address the kinds of questions outlined by Roberts and Wrathmell (2000, 42).

Both the Little and Great Bentley sites were included in a map accompanying a recent discussion of the later Neolithic (Harding 1995). Indeed the Little Bentley cropmark has long been considered amongst the most likely cropmark henges in eastern England, and frequently discussed as such (e.g. Harding 1995, 131 and fig. 8; Holgate 1996, 19 and fig. 2). This clearly indicates the necessity for careful characterisation of cropmark evidence; developing explanations of the Neolithic is difficult enough without inadvertently attempting to accommodate medieval sites.

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A Bronze Age and Saxon occupation site at Frog Hall Farm, Fingringhoe

by Howard Brooks

with contributions by Nigel Brown, Peter Murphy, and Susan Tyler

*Excavations in 1975-76 revealed the site of a structure defined by an oval setting of posts, lying slightly off-centre within an irregular ring ditch which is part of wider network of undated but probably associated cropmarks. Pottery from the post-holes, ditch and associated pits is of a flint-gritted, Late Bronze Age type. A sample of *Vicia faba* (Horsebean) gave a radiocarbon estimation of 1130-790 cal BC, which is broadly in line with the ceramic evidence. Other contemporary finds included spindle whorls and struck flints. There was a residual Neolithic sherd among the Bronze Age material, and Roman, Saxon and medieval pottery and a Saxon bead in the ploughsoil.*

Introduction

An aerial photograph taken for the Potato Marketing Board in 1974 revealed a cropmark complex south of the village of Fingringhoe, 6 km south-south-east of Colchester. As the area was scheduled for gravel extraction, the Essex County Archaeological Officer (then John Hedges) asked the Colchester Excavation Committee (now the Archaeological Trust) to excavate the focus of the cropmark complex, a ring ditch at TM 0347 1966. This lay in the field immediately north of 'Jaggers', on land formerly owned by Frog Hall Farm. The site was excavated from September 1975 to February 1976 under the supervision of the writer. This is a summary of an archive report lodged with the finds and archive at Colchester Museum (accession 1998.270).

The aerial photograph revealed cropmarks in Ordnance Survey field numbers TM 0219 8000, and TM 0319 0005, 2500 and 6500 (Fig. 1). Cropmark features of particular interest are the oval enclosure in field 8000 (cropmark A), the double ditched trackways in fields 0005 (B) and 2500 (C), and the large (tripartite?) rectangular enclosure D, E, F, in field 6500. The latter includes a smaller enclosure on its western side which contains a broken circle (G) – the site of the 1975-76 excavation. A ring ditch I lies to the north of E. Those cropmarks which corresponded convincingly with field boundaries shown on the 1881 Ordnance Survey 6 inch series (sheet XXXVII), and on the 1842 Tithe Map (Essex

Record Office D/Ct 140) have been omitted from Fig 1. Some of the short cropmark lines around the north and east sides of enclosure E may also be of recent origin.

A description of the excavation

The excavation was targeted on the comprehensive examination of cropmark G (Figs. 1-2), the logical focus of the enclosure D/E/F. There was no brief to investigate any other of the cropmark areas.

Ploughsoil and subsoil

A variable depth (250-450mm) of modern ploughsoil was removed using a JCB digger with a flat-edged bucket (Layer 1: sections 19, 20, Fig. 3). The many post-medieval and modern finds from L1 are listed in the archive report. The removal of layer 1 exposed layer 2, in which were visible cultivation marks running parallel with the modern crop rows. Layer 2 was therefore a plough-disturbed horizon. Although no features were visible in it, most of the prehistoric sherds from the excavation were found in L2. These were recorded in 1 metre squares, and by 'spits' as L2 was worked down by hand to the level of the undisturbed natural subsoil. After the removal of L2, a number of archaeological and geological features were exposed, cutting into the natural subsoil (glacial till and gravel).

The great concentration of prehistoric potsherds and other material found in L2 indicates that the original site ground level must have been somewhere in the thickness of L2, and that subsequent ploughing has destroyed it and truncated the tops of the features.

The geological feature (Fig. 2)

A ditch running west-north-west to east-south-east south of cropmark G was sectioned in three places. Its sides were of gravel, and its fill consisted of clean layers of sand and till quite different in nature to the fill of cropmark G (excavated feature 1). The profile of the feature was that of a smooth funnel, and the sides were still dropping down steeply at a depth of 2m below cleared site level. It appeared to be a natural periglacial ice wedge crack.

A BRONZE AGE AND SAXON OCCUPATION SITE AT FROG HALL FARM, FINGRINGHOE

The ring ditch - Feature 1 (Figs. 2, 3)

This was the principal excavated feature - an irregular pennanular ditch with a narrow causeway on its eastern side. Approximately 65% of the fill was excavated, in separate lengths labelled A-K (e.g. F1/K). Its average internal diameter was 11.2m.

The fills of F1 can be split into a number of distinct types: rapid silts; primary silts; wash-down layers; other fill layers. After the original digging of the ditch, rapid silts L23 and L28 (Fig. 3, sx 25, 24) accumulated on both the south and north sides of the open ditch. These were followed in some instances by primary silting, L22, and perhaps L14 (Fig. 3, sx25, sx20). There is no reason to suppose that a long time elapsed between the opening of the ditch and the accumulation of this primary silt, which contained no finds. Subsequently, the next fill layer in some of the ditch sections (primarily the larger ditch sections on the north and south sides, sx 19, 20, 22, 25, 26) had stripes of cleanish sand mixed in with the otherwise dark yellowish or dark

brown loam fills. The most obvious explanation of these stripes is that they derive from material washing down off a bank, with the sand fraction settling separately from the other material. The division between water-borne and non water-borne fills was not clear cut. Apart from the fills above, the rest of the ditch was filled in with a fairly uniform deposit of dark brown sandy loam (L3, L13). A number of Late Bronze Age sherds and prehistoric flints were excavated from F1.

Internal features (Figs. 2, 3)

Within the area enclosed by the ditch F1 were a number of shallow (i.e. truncated) features, F2-8 and F13-18. Stratified Late Bronze Age pottery was recovered from F2, F3, and F4 (Fig. 4.5). Features 2-4 also contained comminuted and unidentifiable charcoal fragments. Features 4, 6, 7, 14-16 and 18 fall on an ellipse whose diameter is 6.4 m north-west to south-east, and 4.8m north-east to south-west. This arrangement is best interpreted as the post

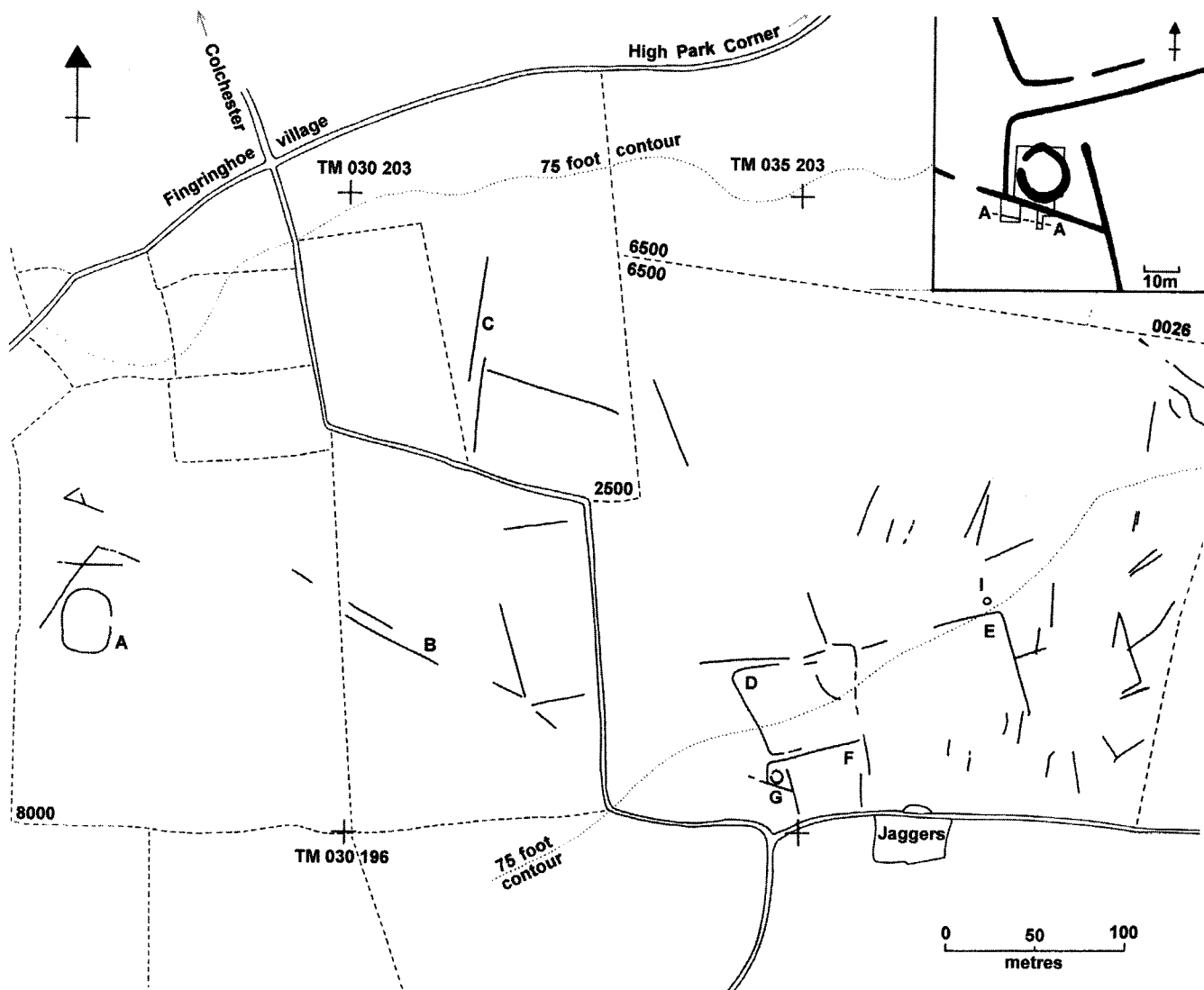


Fig. 1 Fingringhoe site location map with local cropmarks and, inset, the excavated area (G).

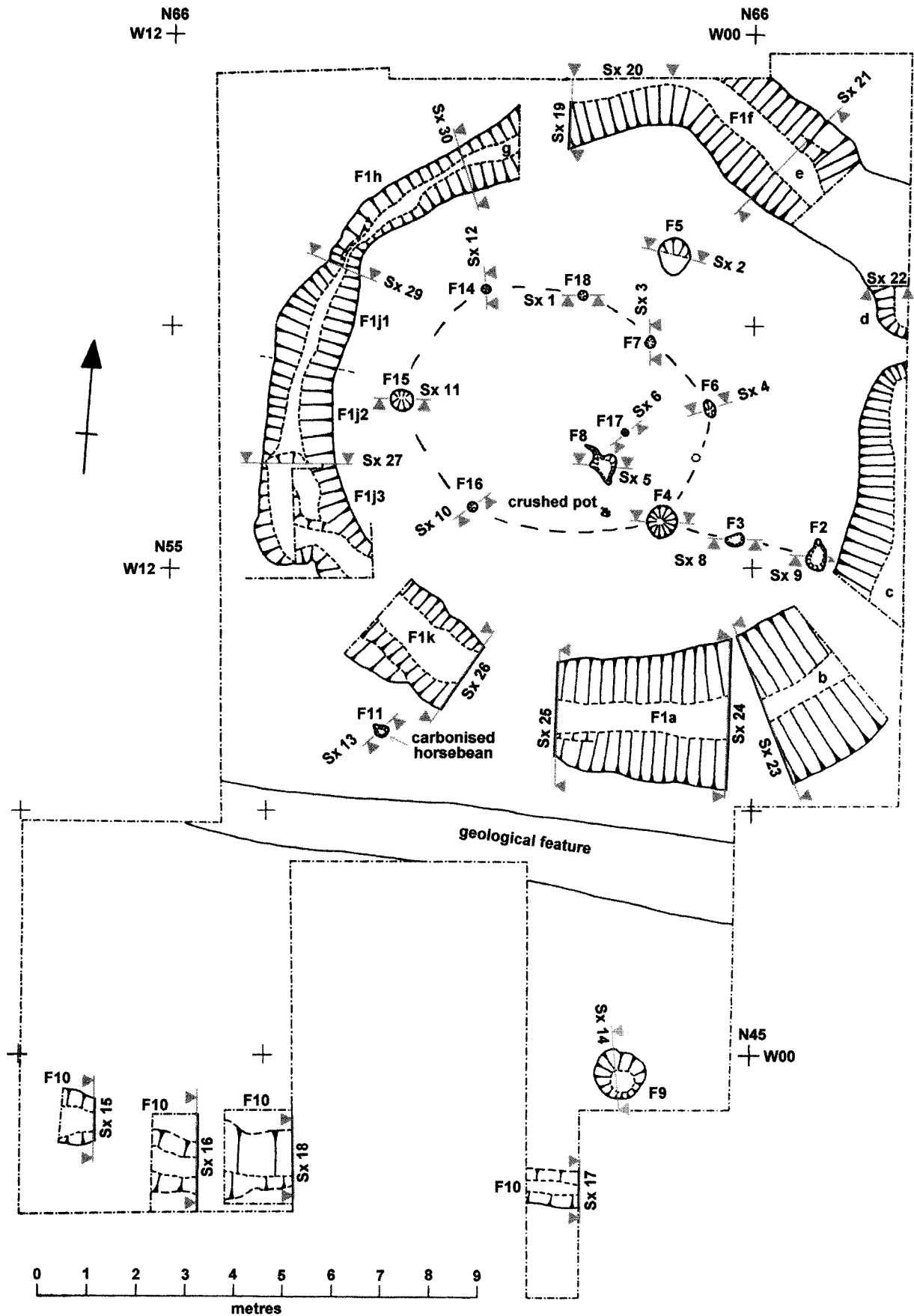


Fig. 2 Fingringhoe: plan of excavated ring ditch F1 and other features.

A BRONZE AGE AND SAXON OCCUPATION SITE AT FROG HALL FARM, FINGRINGHOE

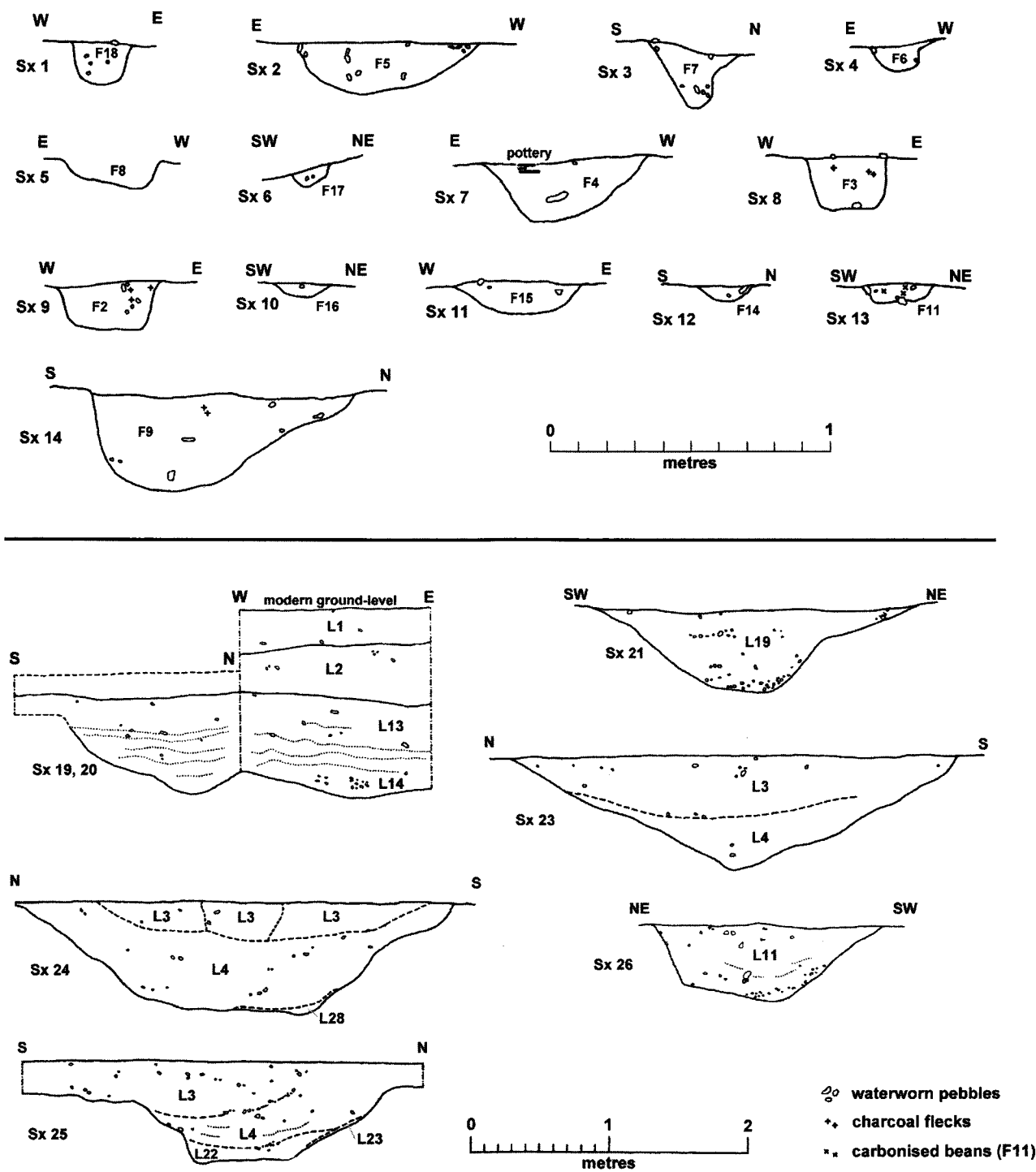


Fig. 3 Sections through ring ditch F1 (below), and other features (above).

ring of a timber structure. The larger size of F4 and F15 may be due to later disturbance. A crushed pot F13 (pot 1232; Fig. 4.4) was found close to the wall line defined by the elliptical post setting. To survive the later plough damage, this pot must have been set below floor level (no cut was visible). It contained no finds or cremated bone. The position of features 2 and 3 suggests that they may be unconnected with the ellipse of posts.

External features (Fig. 2)

In the area outside F1 were a shallow feature F11, a pit F9 and a gully F10. Feature 11 produced several sherds of Late Bronze Age pottery and a deposit of horsebean (*Vicia faba* L. var. minor), a report on which is given below. A radiocarbon date of 1130-790 cal BC (Harwell reference 2502) was obtained from half of the carbonised beans. Pit F9 contained several sherds of pottery and one abraded fragment of baked clay – possibly a weight fragment similar to those from L2. Gully F10 was nebulous and difficult to excavate, and there was no clear division between it and the overlying L2. This cannot be the ditch which produced the cropmark – it is much too far south. In fact, the cropmark must be the geological feature (Fig. 2). The line of the F10 ditch is shown as A - A on Fig. 1 (inset).

The pit F9, F11 containing the carbonised horsebeans and the crushed pot F13 are the only features on the site for which a non-structural function might be suggested. Current thinking on prehistoric features would suggest that material which used to be considered simply as ‘rubbish’ may be deliberately placed deposits. Thus the crushed pot F13 was set into the ground within the oval post setting either for storage or ritual purposes. As for the other two features, there seems no strong evidence either way – F11 contained beans and two potsherds, F9 contained two sherds and a weight fragment, and rubbish disposal may be an equally valid interpretation as placed deposits in these cases.

The small finds (Fig. 4)

The small finds consisted of a number of fired clay objects, a Saxon bead, and a Roman pottery counter. The bead is reported on separately below.

1. *Fig. 4.7* Simple biconical spindle whorl in very gritty dark brown fabric identical to some of the Late Bronze Age pottery. Rounded edges and straight-sided 6mm diameter perforation with very slightly splayed ends. Slightly abraded on one surface, otherwise intact. Miscellaneous find 38. Layer 2 (N61.09/W10.05) Weight 25g.
2. *Fig. 4.8* Biconical spindle whorl in gritty dark grey fabric identical to some of the Late Bronze Age pottery. Larger than no. 1, and with more angled edges. Depression in one

surface. Perforation 6mm diameter. Small chip, otherwise intact. Miscellaneous find 39. Layer 2 (N53.20/W08.46) Weight 35g.

3. *Fig. 4.9* Fragment of a biconical spindle whorl in gritty dark brown fabric. Perforation missing. Found in two pieces in Layer 2 – pot no. 403 (N44.98/W06.38), pot no. 405 (N45.12/W06.59). Combined weight 15g.
4. *Fig. 4.10* Fragment of a vertically perforated baked clay object. Chaff or grass impressions on surface. Fabric is orange-brown. One surface and the perforation are reduced grey. The perforation implies that it is a weight. Vertically perforated weights (rounded and slack in profile) are known in MBA or LBA contexts at Itford Hill (Burstow & Holleyman 1957, 200-201) and Shearplace Hill (Rahtz and ApSimon 1962, 321-2). Found in two pieces in Layer 2 – pot no. 777 (N47.62/W03.96), pot no. 1060 (N52.49/W04.52). Weight 40g. Perforation 5.5mm across.
7. (Unillustrated). Pottery counter cut from Roman grey ware sherd. Layer 2. Weight 2g, maximum diameter 21mm.

Prehistoric pottery

Nigel Brown

The excavations produced a total of 1183 sherds weighing 6.25kg. The material has been recorded using a system devised for prehistoric pottery in Essex (Brown 1988; details in archive). The great majority of the pottery (930 sherds weighing 4.671kg) was recovered from layer 2, which clearly incorporated material which had once been on the prehistoric ground surface. The pottery is of a Late Bronze Age date, with the exception of one small rim sherd (P364) which might be part of a rolled rim of an early Neolithic bowl.

Catalogue of illustrated sherds

At an early stage in the post-excavation programme, all the rim sherds and most of the base sherds were drawn. These drawings are held in the site archive.

Fig. no.	Context no.	Description	Fabric
4.1	L2 (P545)	Upright flat-topped rim of round shouldered jar; smoothed surfaces.	B
4.2	L2 (P455)	Slightly everted rounded rim of ?round-shouldered jar. Burnt.	C
4.3	L2 (P340)	Rounded rim with slight internal bevel. Smoothed surfaces. Fine bowl.	A
4.4	F13 (P1232)	Upright flat-topped rim of slack	C

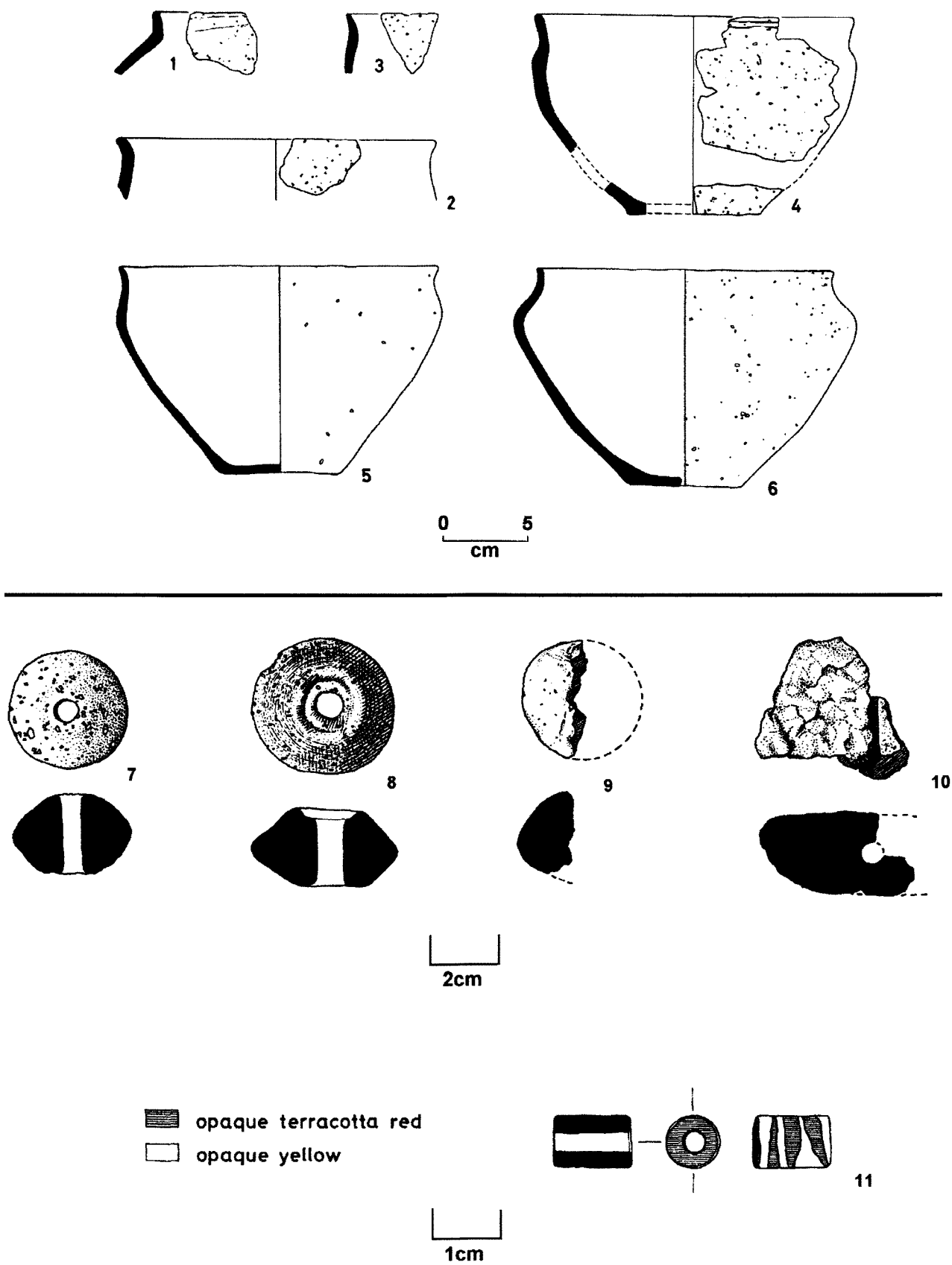


Fig. 4 Prehistoric pottery (nos.1-6): small finds (nos. 7-11).

		shouldered jar, roughly wiped exterior.	
4.5	F4 (P1178)	Upright flat-topped rim of plain bowl with slight rounded shoulder. Smoothed surfaces.	B
4.6	L2 (P1181)	Slightly everted rounded rim of round-shouldered bowl, smoothed and burnished surfaces.	B

The pottery is typical of Late Bronze Age (LBA) assemblages. However, the full range of vessel types is not present. The Frog Hall Farm pottery is characterised by small jars, both coarse and fine, together with coarse and fine bowls and cups, some with burnished surfaces. Very large storage jars, which are a characteristic part of most large LBA assemblages, are not represented. The very coarse flint tempered sherds derived from such jars which usually form a high proportion of LBA pottery assemblages are virtually absent. It seems likely that the restricted nature of the excavation has resulted in ceramic refuse relating particularly to cooking and eating being recovered. Variable distribution of ceramic refuse on LBA sites is a well-known phenomenon (e.g. Bradley *et al.* 1980; Brown 1988). It seems reasonable to suggest that the restricted nature of the ceramic assemblage is an indication of the activities carried out in and around the circular structure at Frog Hall Farm.

The characteristic features of the assemblage, such as a predominance of flint tempered fabrics, finger wiping/smearing on coarse pots, traces of finger impressions where bases are joined to bodies, dense flint temper on the bottom of bases, smoothed and burnished surfaces of fine pots, are all typical of LBA assemblages (e.g. Adkins and Needham 1985; Brown 1988). The fabrics and forms present, together with a general lack of decoration (only one jar rim sherd has traces of finger impressions giving a cabled effect), indicate a fairly early date within the LBA. A date within the first half of the 9th century BC may be suggested, and this accords with the radiocarbon date.

A particularly striking feature of the assemblage is the quantity of burnt sherds, many of which have been reduced to a pumice-like consistency. Occasional burnt sherds occur in any large assemblage, but at Frog Hall Farm over 10% of the sherds have been burnt, indicating intense and/or frequent burning activity in the vicinity.

The flints

Dr. J.J. Wymer has very kindly examined the flints, and the main points of his report are given here. The Fingringhoe flints are not distinctive. They could range in date from Neolithic to Bronze Age, or even Iron Age. There are no signs of the methodical micro-blade production which characterises all Mesolithic industries.

Table 1. Worked flint.

Contexts	No.	Weight
Layer 1 (ploughsoil)	3	5g
Burnt flints (all L1)	3	160g
Layer 2 (lower ploughsoil)	19	99g
Ditch F1	4	13g

The Roman pottery

I am obliged to Stephen Benfield of Colchester Archaeological Trust for his comments. 23 sherds of Roman or probable Roman pottery weighing 422g were recovered from the plough-disturbed horizon L2. Most of the sherds were general greyware body sherds, but there were also sherds of samian, probable Dressel 20 amphora, and storage jar rim.

The Saxon pottery

Susan Tyler

A total of 16 sherds weighing 68g (representing between 10 and 15 vessels) were recovered from layer 2. Only one fabric type is present, characterised by an organic temper with varying amounts of small to medium quartz sand and occasional inclusions of other minerals such as iron oxide. The mineral inclusions and varying amounts of quartz-sand are most likely the result of natural variations in the raw clay as collected from local sources rather than a deliberate act to vary the temper. The precise dating of this small assemblage is difficult given the lack of diagnostic forms. The only feature of the assemblage that gives any indication of date is the fabric which, being exclusively organic tempered, suggests a 6th- to 7th-century date (see Hamerow 1993, 28-31).

The Saxon bead (Fig. 4.11)

I am grateful to Jenny Price, Tania Dickinson, and Margaret Guido for their comments on the bead (from ploughsoil, layer 1). The bead (Fig. 4.11) is cylindrical and made in light blue glass, with a trail of white glass marvered into its surface. Beads of this type are matched on the continent by 6th- and 7th-century examples (Koch 1977). Although there are no Saxon deposits or features on site, one must assume that there was Saxon occupation here, since Saxon pottery was present among the material from Layer 2.

The medieval and post-medieval pottery

32 sherds of unstratified medieval and later pottery weighing a total of 311g were recovered from the ploughsoil (L1) and the lower ploughsoil (L2). Principal wares (after Cunningham 1985 and Cotter 2000) were fabrics 48d (ironstone), and 40 (post-medieval red earthenware). There were smaller quantities of fabrics 51a and b, 21, 20, 13, and 12. The pottery shows a broad date range, from 11th century through to modern. Sherds of the 13th-16th century are less common than other dates. Since there are no contemporary features, we must assume that the pot sherds have been carted out from local farms, and dumped on the fields with farmyard manure. Taking the pottery dates at face value, this would indicate strong arable activity in the early medieval period, a drop off of arable in late medieval and early modern periods, and a strong 19th to 20th-century arable revival.

Charred beans from feature 11

Peter Murphy

A sample of approximately 90ml of charred plant material, with traces of a matrix of yellowish-brown silty clay and a few small pebbles, was received for examination. The sample arrived in two portions, one of which was ultimately intended for radiocarbon dating. To

avoid the risk of contamination, this portion was only quickly looked through, but it appeared to be very similar in nature to the second portion. This included 191 seeds of the horsebean, *Vicia faba* L. var. minor, together with 110 isolated cotyledons and large fragments. Something over 500 beans were represented in the deposit. No charred weed seeds or pod fragments were observed.

The beans were oblong in their lateral view and almost circular in cross-section. Only one seed retained its hilum intact. More often there was a furrow between the two cotyledons in the former position of the hilum. The dimensions of 30 seeds are given in Table 2.

Table 2. Dimension of 30 seeds of *Vicia faba* var. minor.

	Length (mm)	Breadth of cotyledon (mm)	Thickness across cotyledons (mm)
minimum	4.4	3.40	3.00
mean	6.23	4.22	4.60
maximum	8.10	5.60	6.60

Although sometimes known as 'Celtic' beans, seeds of *Vicia faba* var. minor are not common in prehistoric contexts in this country, and at sites where they have been reported the crop is usually represented only sporadically by small numbers of seeds. This does not necessarily reflect the true importance of beans and other legumes in prehistoric agricultural systems. Although beans are nowadays often dried to improve storage qualities (MAFF 1970), drying, which involves a risk of charring, is not an essential stage in processing, as it is with some cereals. Consequently, pulse crops are less likely to have been preserved by charring.

It is now clear that the crop had been introduced to Eastern England by the Later Bronze Age: there are records, for example, from Lofts Farm, Heybridge and Springfield Lyons, Chelmsford, both in Essex (Murphy 1988, 1990). The seeds from Fingringhoe are dated to 1130-790 cal BC (two sigma: 2760 + 80 BP, HAR-2502: Bronk Ramsey 2000).

Apart from their use as a protein rich foodstuff for human consumption, beans and straw make a high quality livestock feed, and the crop also improves soil nitrogen levels by the action of symbiotic nitrogen-fixing bacteria in root nodules. It is, of course, impossible to determine the precise use of beans in prehistoric farming systems, but cultivation of the crop would at least have allowed the possibility of legume-cereal rotations.

Other finds

Other finds (peg tile, brick, slate, iron objects, oyster, charcoal, slag) are listed in the archive.

Discussion and conclusions

The configuration of the cropmark ditches around the excavated site (G) implies that it may be part of the same system as the enclosures D and F (and perhaps E), with G being a centre of occupation, and

D-F the associated fields. Cropmark B (heading directly for G) could be a contemporary trackway. Though it is on the same alignment as the geological feature, the fact that it has two parallel ditches would indicate that it is of an archaeological rather than a geological origin.

The oval setting of posts is best interpreted as the main post-ring of a building measuring approximately 6.4 x 4.8m internally, with a floor space of approximately 31m² within the post ring. Oval shaped buildings are not uncommon on British Bronze Age sites: a similar structure was excavated by Paul Drury at Rawreth near Chelmsford in 1968 (Drury 1977, 23), and another by Richard Bradley at Belle Tout (structure I, Bradley 1970, 322-3). Two features (F5, F3) outside the post ring may represent an outer ring. The question of whether the structure was roofed cannot be answered - if these posts were part of the same structure, then this would increase the likelihood that it was roofed.

Though there were finds in the upper fills of the ring ditch (pottery and flints), there were none in the lower fills or primary silts. Was the structure erected inside a natural circular feature? The answer is no, because the ditch profiles were obviously man-made, and contrast strongly with the form of the adjacent natural ice crack. The lack of finds may imply that the ring ditch was cut before the structure was built (or before there was any rubbish-producing activity on the site), and that natural weathering had caused some filling of the ditch before any noticeable activity took place. The digging of the ditch must have produced spoil, which was presumably banked up somewhere on site. The position of the structure and associated features argues against an internal bank, but an external bank is a possibility.

The presence of spindle whorls and weight fragments indicates that spinning and perhaps weaving took place on the site. The wool for spinning was presumably locally produced. Horsebeans were clearly cultivated somewhere in the vicinity. As Peter Murphy points out, the horsebean is not only a human food source, but also a livestock feed, and its cultivation improves soil nitrogen levels. The radiocarbon date for the horsebeans (1130-790 cal BC) is in keeping with the pottery evidence, suggesting an occupation date in the 9th century BC. At a simple level, therefore, this is a Late Bronze Age domestic structure associated with a field system where both arable and pastoral farming took place.

The ceramic evidence puts an interesting angle on this picture. Over 10% of the pot sherds were burnt, and the range of vessels present relates particularly to cooking and eating activities. The intensely burnt pottery suggests a kitchen area. Perhaps the excavated site was close to (or part of)

two specific zones of activity – the area where spinning and weaving took place, and the area where cooking and eating took place. It is difficult to go much beyond this, except to point out that the bulk of the Late Bronze Age pottery was found outside (south and east of) the post-ring structure, both within and outside the line of the ditch.

The presence of a Saxon bead and pottery suggests Saxon activity, presumably domestic, in the 6th to 7th centuries. This material was all residual – there were no contemporary site features. The medieval and later material can all be explained as the result of manuring activity from local farms, and need not necessarily imply occupation during those periods.

Acknowledgements

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The north-western town defences of Kelvedon. Excavation of an Iron Age and Roman Site on land to the rear of Lawson Villas, Kelvedon

by Trevor Ennis and Stuart Foreman

with contributions by J. Compton, T.S. Martin, H. Martingell, H. Major
and H. Walker

Excavation in 1996 and 1998 recorded features related to the Late Iron Age settlement and the Romano-British 'small town', including a length of the north-western side of the Roman town defensive ditch. The southern end of the ditch had been destroyed by Roman quarry pits. Features included ditches and gullies, most of which conform to a north-east/south-west alignment, a timber fence-line and a few pits and postholes.

Introduction

A programme of archaeological evaluation, excavation and monitoring was undertaken by the Essex County Council Field Archaeology Unit from 1996 to 1999 in advance of a residential development to the rear of Lawson Villas, High Street, Kelvedon (TL 8630 1891) (Fig. 1). The proposed development lay within an area thought to contain the north-western side of the Roman town defensive ditch. In January 1996 an archaeological evaluation (Foreman 1996, Trenches A-H) was carried out with the specific aim of locating the ditch and assessing whether any other features relating to the Iron Age and Roman settlements were present within the development area. Two further trenches (Trenches 1 and 2) were excavated across the ditch in September 1998 and a subsequent watching brief was held on the excavation of the house foundation trenches in the spring of 1999. The site archive will be deposited at Braintree Museum under the Site Codes KL8 96, 98 and 99.

There is evidence for archaeological activity in the Kelvedon area throughout the prehistoric era. The earliest finds, a number of flint tools, date from the Palaeolithic, when there was a glacial lake nearby (Turner 1970, 377). Finds and occasional features dating to the Mesolithic and Neolithic, the Bronze Age and Early to Middle Iron Age have also been identified. These are summarised in a survey of the town by Medlycott (1999).

Most of the archaeological evidence from previous excavations in Kelvedon relates to the development of the Late Iron Age and Roman settlement. Late Iron Age features were mainly located in the area of the later Roman town, south-east of the present day

High Street, and included ditched and palisaded enclosures containing rectangular timber buildings and pits, and field boundary ditches (Rodwell 1988, 15-21; Eddy 1982, 8-10).

In the Roman period a small town developed on the site of the Late Iron Age settlement. This has been identified as *Canonium*, recorded in Route IX of the Antonine Itinerary as a staging post on the Roman road from London to Colchester (Rivet and Smith 1979, 168-9). The Roman road is believed to lie beneath the High Street, as groundworks beneath the modern road have exposed a considerable depth of well-compacted gravels thought to represent the original Roman road metallings (Medlycott 1999, 9).

Roman occupation appears to have begun in the mid to late 1st century AD and peaked in the 2nd century when the settlement was enclosed by a defensive ditch. The Roman town appears to have been focused on a gravelled trackway or minor road deviating from the main Roman road, dating from the mid-late 1st century AD (Rodwell 1988, 5, 54-5). Previous excavations have demonstrated the presence of a temple, a possible mansio, industrial activity and cemeteries in and around the Roman town enclosure (Rodwell 1988). A postulated Roman fort (Rodwell 1988, 135, fig. 40) to the south-west of the settlement has had doubt cast upon it by Eddy (1995).

The defensive enclosure appears to have been sub-rectangular and orientated south-west to north-east; excavation has shown that the ditch had a V-shaped profile and was 4m wide and 2m deep. Two sides of the enclosure have been located by excavation (Eddy 1982, 11-12, fig. 2) and a third was projected by Rodwell (1988, fig. 40) as following the line of a bank forming a field boundary recorded on the 1838 Tithe Map. This projected line of the defences ran through the site area.

By the 4th century, the area of the town appears to have largely reverted back to agricultural use (Eddy 1982, 17; Rodwell 1988, 135-6). The development area lay to the rear of the medieval and post-medieval ribbon development along the High Street to the north-west.

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Topography and geology

Kelvedon is located on a crossing of the river Blackwater at the margin of the Boulder Clay plateau that formed over north and central Essex during the Anglian glaciation. A post-glacial lake formed immediately to the south-east of Kelvedon, but the lake deposits were sealed by successive gravel terraces of the Blackwater as the river assumed its present-day course (Turner 1970, 377). The well-drained gravel terraces have attracted settlement in the Kelvedon area from prehistoric times. The modern village is situated on the main Roman London to Colchester road 15km (9 miles) south-west of Colchester, and the site is located 40m to the south-east of the High Street. Locally, the drift geology comprises grey-brown brickearth overlying river gravels. In parts of the excavation area the brickearth deposit was non-existent and here archaeological deposits directly overlay gravels.

The archaeological excavation (Fig. 3)

The aim of the 1996 evaluation was to assess any evidence of the Late Iron Age and Roman settlements and to determine whether the Roman town defences crossed the site. The evaluation consisted of eight machine-excavated trial trenches (A - H), 2m wide and varying in length from 9m to 20m. A number of features were excavated and a large linear feature believed to be the town defensive ditch was identified. Depth restrictions allowed for only limited excavation of this ditch and its depth was only determined by auguring.

The aim of the further trenching in 1998 was to investigate the defensive ditch in greater detail, by means of two additional trenches (1 and 2) across its projected line. The trenches were initially machine-excavated and the sections across the ditch were then excavated by hand. The sides of the trenches were stepped for safety reasons. Trench 1 was 15m

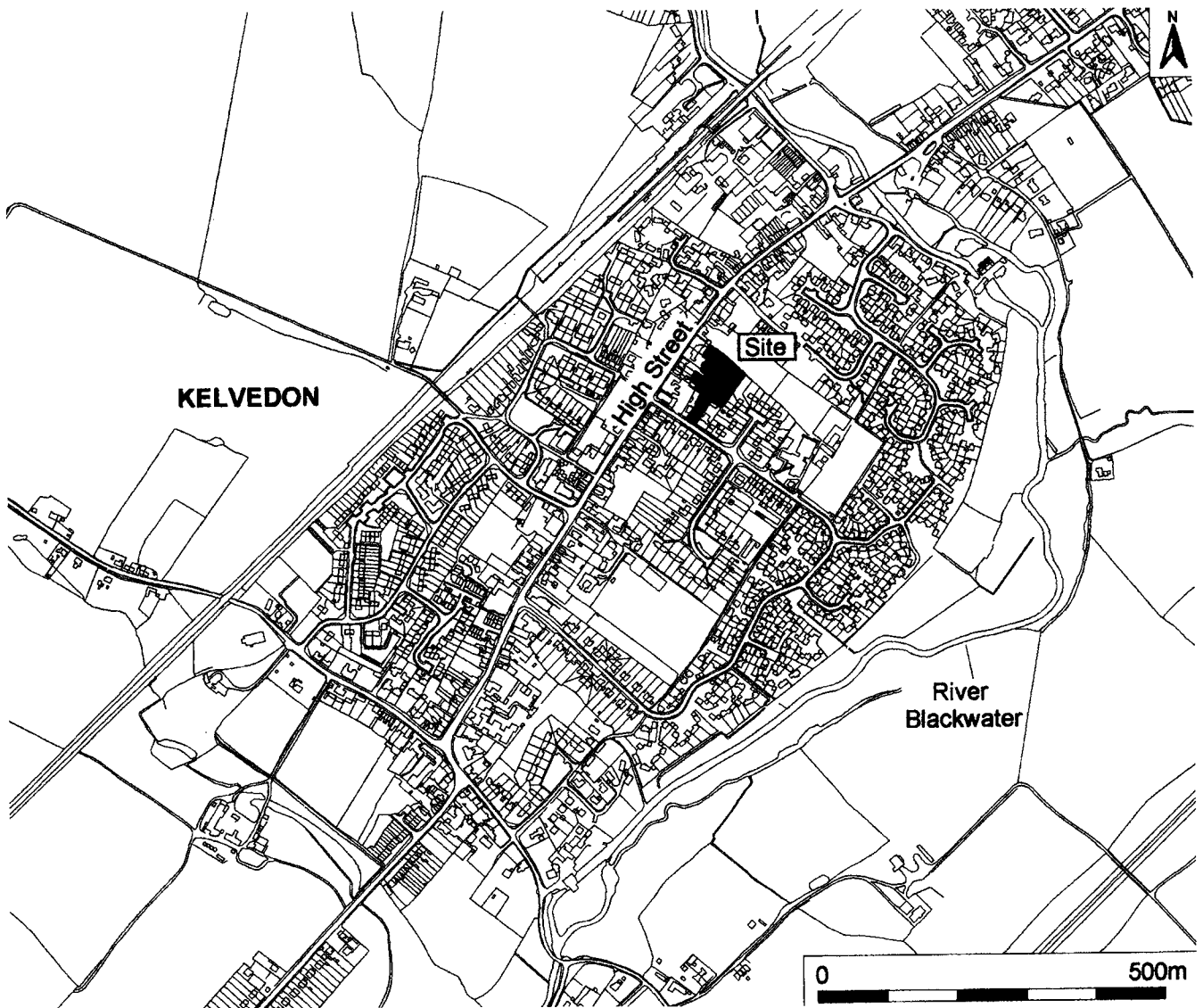


Fig. 1 Map of Kelvedon showing the area excavated. (© Crown copyright. Ordnance Survey. All rights reserved. Licence no. MC 100014800).

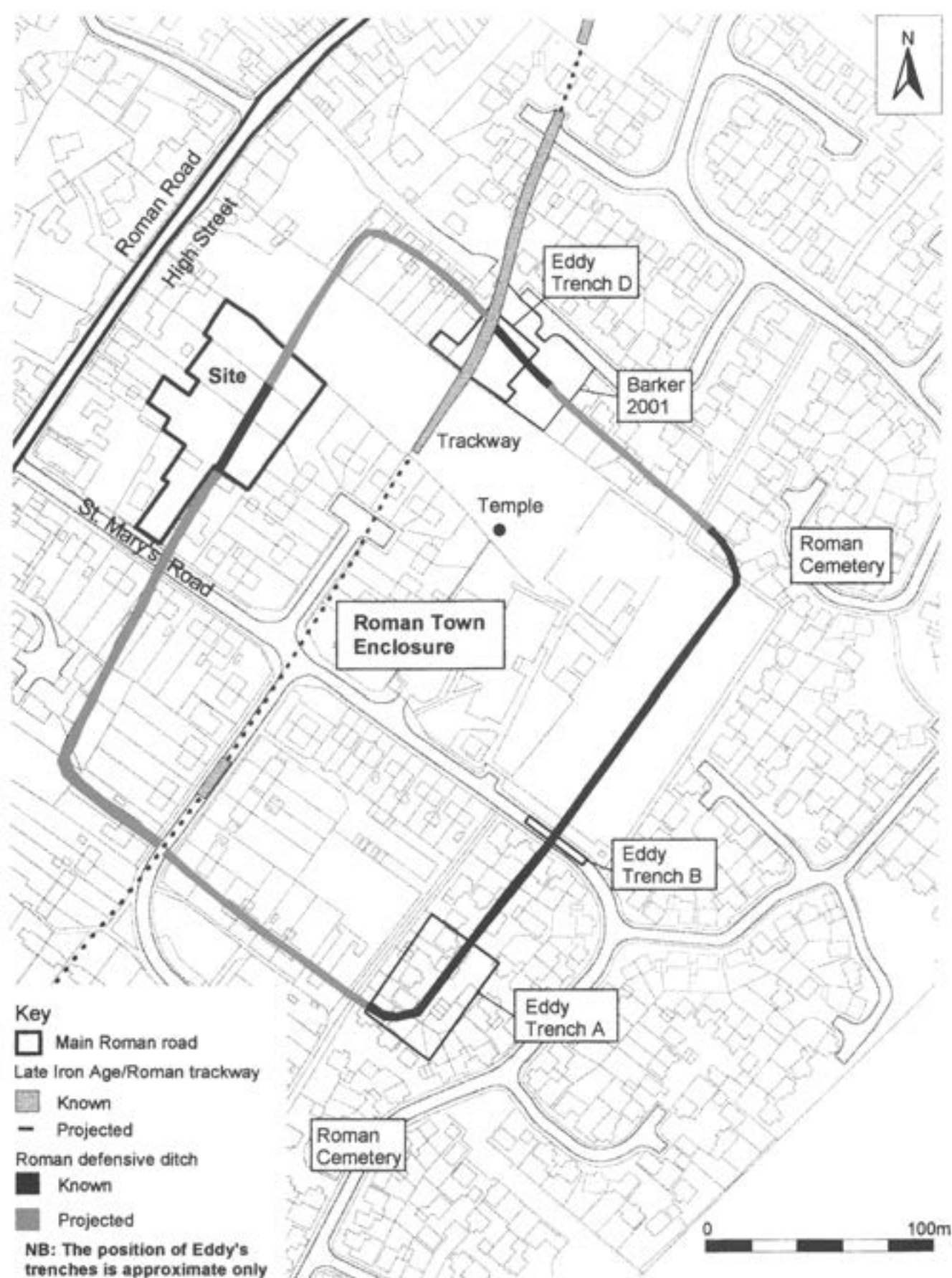


Fig. 2 Plan of the small Roman town at Kelvedon showing the excavated areas. (© Crown copyright, Ordnance Survey. All rights reserved. Licence no. MC 100014800).

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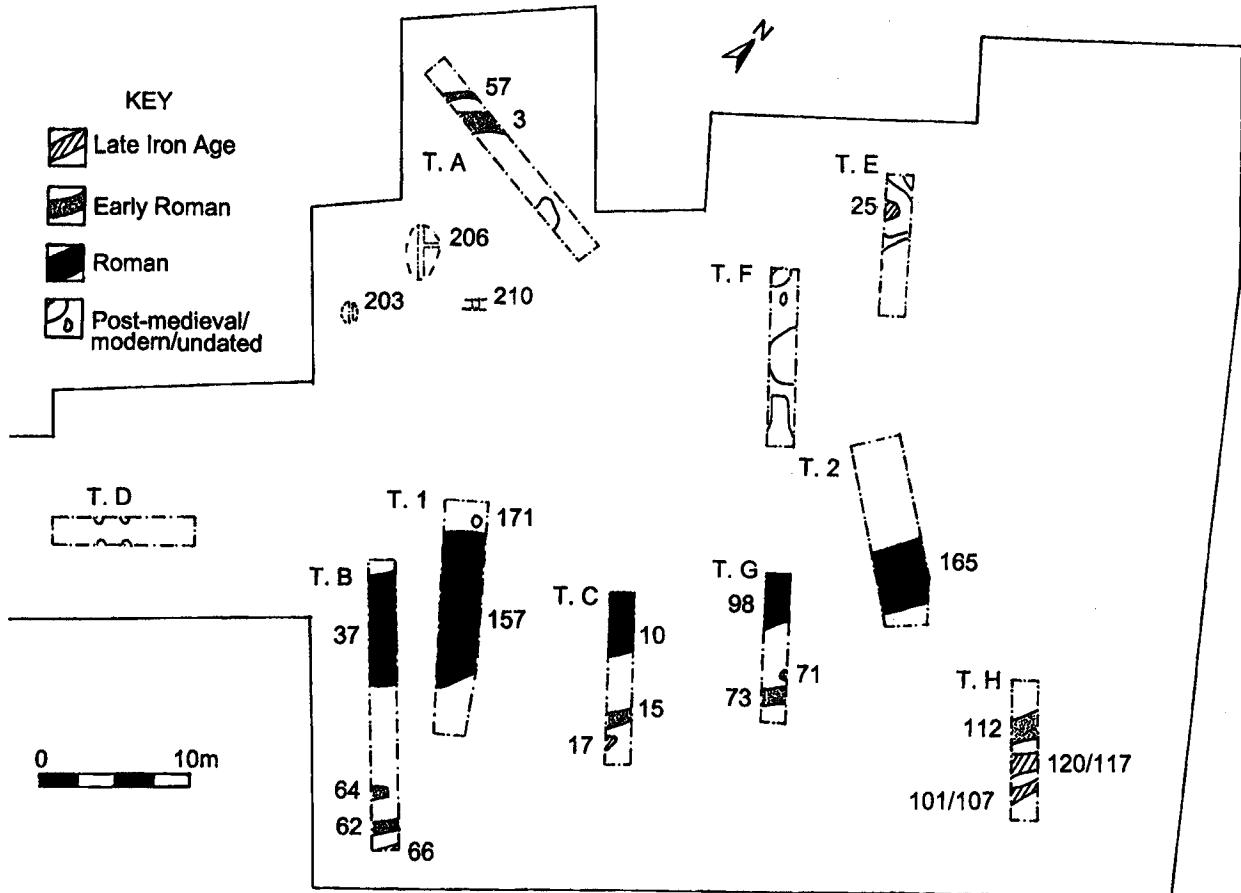


Fig. 3 Kelvedon, plan of the area investigated, showing the eight evaluation trenches (A-H) and the two additional trenches.

long by 3m wide and was located to the south of the site, just to the north of the position of evaluation Trench B. Trench 2 was 12m long by 3.2m wide and was located to the north of evaluation Trench G, immediately south of a garden boundary hedge separating off the furthest garden from the rest of the site. Subsequent to this, in the spring of 1999 a watching brief was held on the excavation of the foundation trenches of the new housing.

Prehistoric

Twenty-six flint artefacts, including a late Neolithic scraper (Fig. 9) and a number of blades, were recovered as residual finds in later contexts. Although no prehistoric features were identified, there is a noticeable cluster of flint artefacts from Trench A (which produced 43% of the assemblage, including the scraper) and Trench G (which produced all the blades and one blade core fragment).

Late Iron Age/early Roman - 1st century AD

(Figs. 3, 4, 5)

The distribution of the Late Iron Age and early Roman features fell into two distinct groups: one located to the north-west of the site (Trenches A and E) and the other to the south-east (Trenches B, C, G, H and 2). The majority of the features excavated were linear in plan.

Two parallel boundaries orientated south-west to north-east were excavated in the western half of Trench

A. These comprised a ditch (3), 1.35m wide by 0.71m deep with a V-shaped profile, and a post-trench (57), 0.48m wide, located 0.8m to the west of the ditch. A circular post-setting (21) and part of a second post-setting (60) were found at the base of 57, which was 0.49m at its maximum depth, but very shallow at only 0.08m deep between the post-settings. All features contained reddish brown sandy silty clay fills with only minor variations.

Only small amounts of pottery were recovered and the dating for these two boundary features is tentative. Ditch 3 may be Late Iron Age or early Roman in date, whereas, post-trench 57 and post-setting 21 are early Roman. The similarity in position and alignment of these two features suggests that they may represent the same boundary, although it is difficult to tell whether the fence-line replaced the ditch or whether they were contemporary.

Two parallel gullies (64 and 62) were excavated towards the south-east end of Trench B and a possible third (66) was part-excavated at the very end of the trench. All features contained single dark greyish or yellowish brown clayey silt fills. Gully 64 was a flat-bottomed linear feature, 0.95m wide by 0.25m deep, that appears to represent the square-ended terminal of a north-east/south-west orientated gully. Gully 62 was located 1.5m to the east on a similar orientation and was 0.8m wide by 0.17m deep. Finds from this context included a copper alloy ring. The third possible gully (66) was located 1m east of gully 62 at the eastern edge of the

trench and also appeared to be orientated north-east/south-west. Dating of these features is again extremely tentative, as the amounts of pottery recovered were too small for reliable evidence. However, the pottery suggests that gully 66 is Late Iron Age and gullies 62 and 64 are early Roman in date.

A further gully (15), orientated north-east/south-west, was excavated in the south-east half of Trench C. This was 1.2m wide, 0.35m deep and contained two greyish brown fills (16 and 121). Pottery recovered from the primary fill (16) of this feature was Late Iron Age/early Roman. To the south-east of this gully was the rounded terminal of another possible linear feature (17) that continued beyond the trench to the south. This feature was 0.52m wide and only 0.08m deep and its fill produced two sherds of Late Iron Age pottery and a fragment of salt briquetage.

A shallow sub-circular pit (25), 1.0m wide with fairly steep sides, was identified at the south-western end of Trench E. The pit contained a single fill, which produced two sherds of Late Iron Age pottery, and was notable for a concentration of charcoal and burnt flint towards the base of the feature on its south side.

Another gully (73), 0.99m wide by 0.31m deep, orientated north-east/south-west, was situated in the south-east half of Trench G. This appeared to be a continuation of gully 15 in Trench C and may represent a drainage or boundary feature. A good quantity of pottery was retrieved from the two fills of gully 73, which can be confidently dated as early Roman. A small pit or posthole (71) lay adjacent to gully 73 at the northern side of the trench, and produced three sherds of Late Iron Age pottery.

A series of north-east/south-west orientated gullies were exposed in Trench H. The largest of these (112) was 0.95m wide by 0.35m deep. It contained two fills (113 and 114), both of which produced Late Iron Age and early Roman pottery. To the east were two smaller inter-cutting gullies (117 and 120). Gully 120 was 0.67m wide by 0.25m deep and gully 117 was 0.63m wide by 0.27m deep. The stratigraphically earlier gully (120) contained two fills and was truncated on its eastern side by later gully 117. Gullies 117 and 120 are both dated by pottery to the Late Iron Age. Gullies 112 and 120 were sealed by a reddish brown silty loam (111). A fourth gully (101), 0.74m wide by 0.27m deep, was located a little to the east and appeared to have a later re-cut (107) on a similar alignment. Pottery from both phases of the gully was dated to the Late Iron Age.

The earliest feature in Trench 2 was a shallow, undated, curving linear feature (167), possibly a gully, situated at the far eastern end of the trench. This feature was filled and overlain by a root-disturbed layer (166), which in turn appeared to be cut (in the south facing section - not illustrated) by ditch 165.

Town defensive ditch – 2nd century AD

(Figs. 3, 5, and 6)

Evaluation Trenches C and G revealed the presence of a large linear feature interpreted as the Roman town defensive ditch. This feature was later fully investigated in excavation Trench 2.

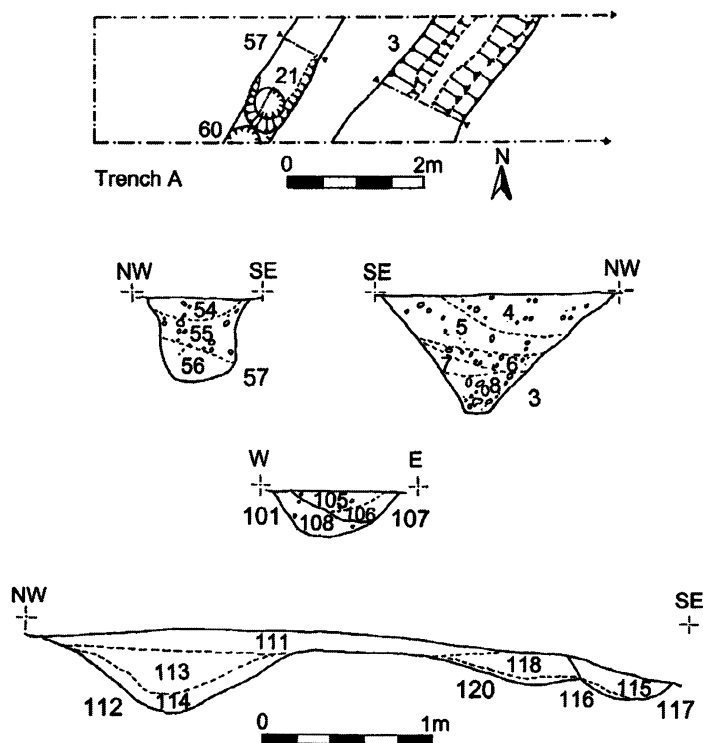


Fig. 4 Kelvedon, plan and sections of ditches 3 and 57 in trench A; and sections through gullies 101/107, 112, 120 and 117 in trench H.

During the evaluation phase a large, 4m wide, linear feature (10) was identified at the north-west end of Trench C. For safety reasons the ditch was only excavated to a depth of c.1.2m below the modern ground surface. Ditch 10 continued (as 98) through the north-western end of Trench G to the north of Trench C, although its width was not fully-exposed within this trench.

The feature was further investigated (as 165) in Trench 2, positioned to the north of Trench G on the projected north-east/south-west line of the enclosure ditch. The full width and depth of the ditch was exposed at this point, and was found to be 4.2m wide and 1.2m deep with a V-shaped profile. Three fills were identified, the uppermost two of which contained Roman pottery, animal bone and tile.

The similarity of orientation, shape and dimensions of the ditches identified in evaluation Trenches C and G and excavation Trench 2 suggests that they are all part of the same feature. The large size and V-shaped profile of the ditch indicates that it is part of the defensive ditch surrounding the Roman small town. Unfortunately dating evidence for the ditch is poor. The fully excavated part of the ditch (165) in Trench 2 produced only a small amount of undiagnostic early Roman pottery from its fills. Pottery from the partially excavated evaluation trenches was little better. Ditch 10 in Trench C produced early Roman pottery and ditch 98 in Trench G contained pottery broadly datable to the Roman period.

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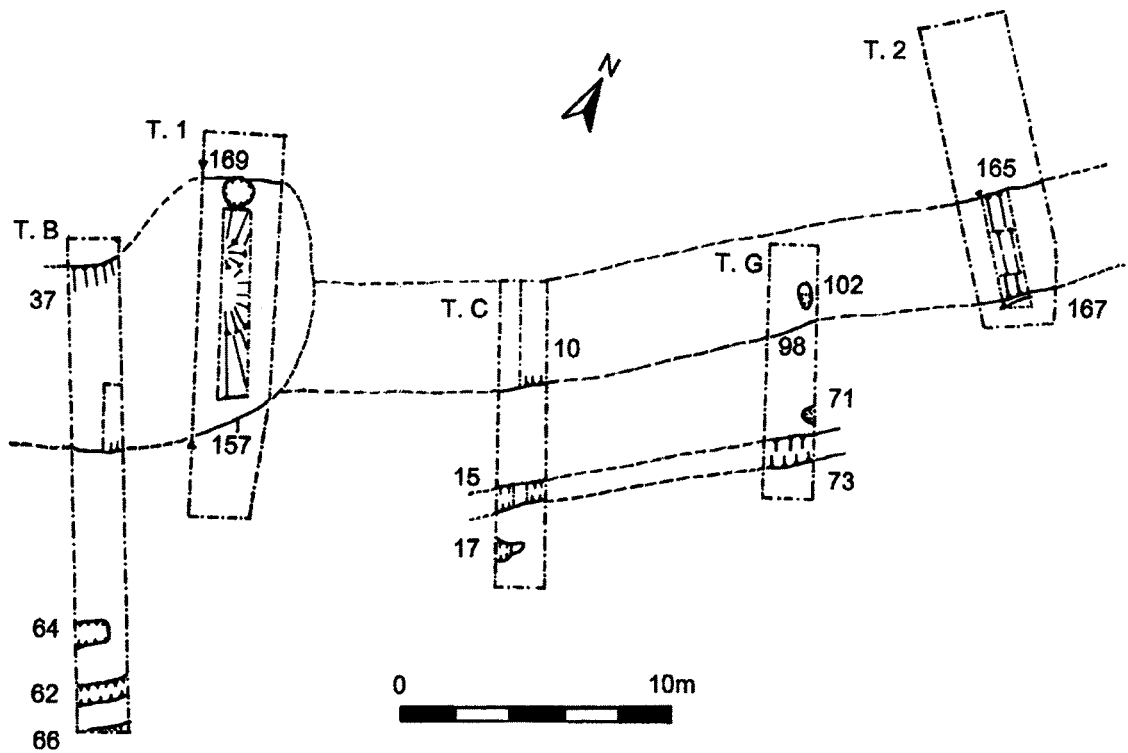


Fig. 5 Kelvedon, plan of the town defensive ditch as revealed in trenches C, G and 2, and of the later quarry 157.

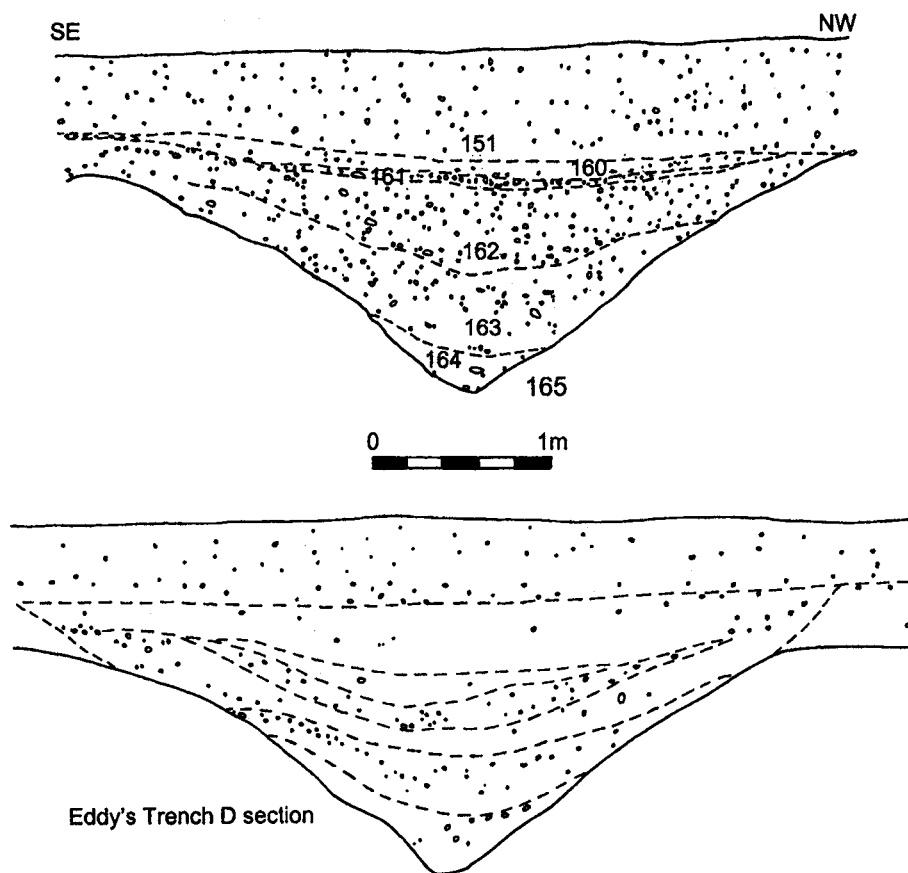


Fig. 6 Section through the defensive ditch in trench 2, compared with that found by Eddy in 1977.

Later Roman features – 2nd to 3rd centuries AD (Figs. 3, 5, 6 and 7)

Later Roman activity on the site was fairly sparse, comprising layers overlying the infilled defensive ditch in Trench 2, evidence of quarrying in Trenches B and 1, and a shallow pit in Trench G.

Defensive ditch 165 was sealed by a compact metallised surface (161) comprising frequent small-medium flints and pebbles into which occasional small pieces of tile had been set. This deposit was a deliberately laid surface that appeared to extend to the eastern end of the trench, where it had become less dense. A few pieces of animal bone and 2nd- to mid 3rd-century Roman pottery were also recovered from this deposit. The purpose of this surface was not clear from the limited extent of the excavation trench. However, it does indicate that by at least the middle of the 3rd century AD the ditch had been infilled and the area put to an alternative use.

Above the flint surface was a 0.10m-thick layer (160), which was only really discernible from the bulk of the overlying subsoil by the higher percentage of charcoal, both flecks and small pieces, within the deposit. A small quantity of undiagnostic Roman pottery and one sherd of possibly intrusive medieval pottery were retrieved from layer 160.

One of the earliest features in Trench 1 was a partially-exposed sub-circular feature (159), the top and north-west sides of which were truncated. No dating evidence was retrieved from this feature, which probably represents the base of a large pit or perhaps an early episode of quarrying. A large vertically-sided circular posthole (169), 1.1m in diameter by 0.9m deep, was located at the north-west end of the trench. No dating evidence was retrieved from this feature although it was backfilled with a distinctive mid orange brown silty clay (168) that was noticeably different from the other greyish-brown deposits encountered in the rest of the trench. Posthole 169 was located on the shallow gently sloping top edge of a large feature (157), but unfortunately the stratigraphic relationship between the two was unclear.

Feature 157 extended across most of the length of the trench, it measured 9.2m wide by 2.1m deep and was found to contain three fills. The earliest contained a few sherds of probably residual Late Iron Age pottery, whilst the upper fill produced a small quantity of mid- to late-2nd century Roman pottery and a few pieces of tile. The deepest part of this feature was located adjacent to the drawn section face (Fig. 7). To the north, 157 became shallower and appeared to curve around and rise up, suggesting that the back edge of the feature was not far beyond the excavated trench. This large feature probably represents a backfilled quarry pit.

This quarry pit had previously been identified as a large feature (37), c.7m wide, in evaluation trench B. This had been machine excavated to a depth of 1.2m and for a further 0.2m by hand in order to recover dating evidence. Only small quantities of Roman pottery were retrieved none of which is closely datable. It seems likely that the quarry had removed all traces of the town enclosure ditch in this area of the site. The northern side of the quarry was almost certainly located just north of the excavated section in Trench 1. The fact that the feature in Trench B has narrowed by 2m suggests that the opposite edge of

the quarry pit was probably located not far beyond the southern side of this trench. One shallow elongated pit (102), that cut the top of the backfilled town defensive ditch, was excavated in Trench G. This produced one sherd of early Roman pottery that may be residual.

Medieval and later features (Fig. 3)

Very little evidence of activity relating to the medieval and post-medieval periods was identified. Medieval and late medieval pottery was recovered from the subsoil and topsoil in Trench 2. Features comprised a post-medieval posthole structure in Trench D and a post-medieval or later pit in Trench 1.

A square post-built structure was excavated in Trench D. This was composed of four small, steep-sided, postholes (77, 79, 81 and 83) forming a square of some 1.8m in length. A sherd of mid 16th- to late 17th-century pottery was retrieved from the fill of posthole 77. Other finds included fragments of oyster shell, animal bone and tile. It is possible that this structure extended beyond the limits of the trench.

Most of the features found in Trench E and all those in Trench F appear to have resulted from garden activity. Some of the investigated features produced 20th-century pottery and others cut the topsoil. The latest archaeological feature in Trench 1 was a small circular pit (171) that contained a piece of coal, some tile and a small trapezoidal shaped piece of copper alloy sheet. Pit 171 was located in the highest part of the trench and appeared to be of a much later date (post-medieval/modern) than the other features in this trench.

All the features in Trenches 1 and 2 were sealed by a thick (0.8-1.0m) overburden of mid brownish grey clay silt subsoil and dark grey topsoil. The subsoil (151) in trench 2 contained sherds of medieval and late medieval pottery and the topsoil (150) produced a mixture of late medieval, post-medieval and modern pottery.

The watching brief (Fig. 3)

Three archaeological features, all located to the west of the site and to the south of Trench A, were identified during the watching brief stage of the project. Feature 203 was a possible pit that only showed in the north-east facing section of a house foundation trench, and feature 206, a large, possibly natural, depression showed in all faces of two joining foundation trenches. Feature 210 was a possible linear feature that appeared in both faces of a foundation trench, although it did not show in the adjacent foundation trenches 6m to the north-east and 3.3m to the south-west. No dating evidence was recovered from any of these features. In addition, observation of the house foundations in the south-west of the area confirmed the position of the south-eastern side of the town enclosure ditch mid-way between Trenches 1 and C. The position of the south-east side of the quarry hollow between Trenches 1 and B was also located (Fig. 5).

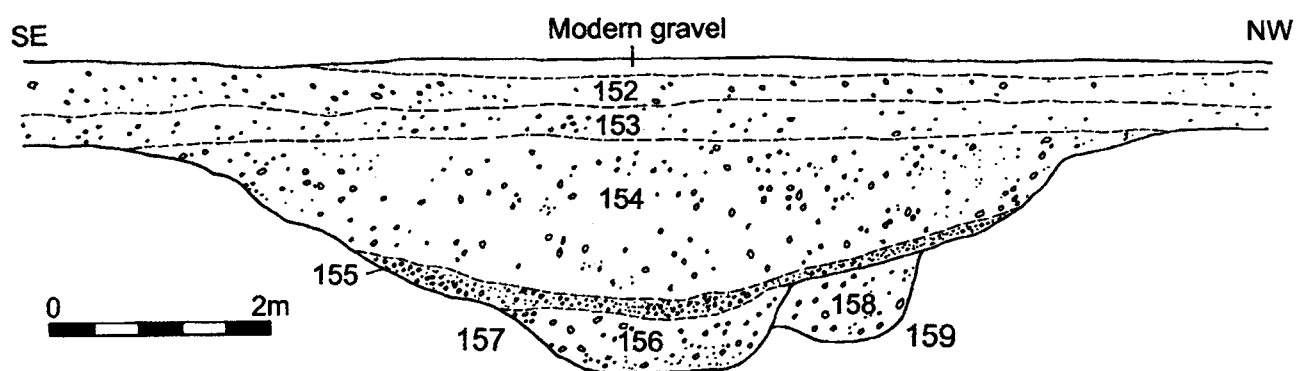


Fig. 7 Section through quarry 157 in trench 1.

The Late Iron Age and Roman pottery

T.S. Martin

Introduction

The eight 1996 evaluation trenches (A-H) produced a total of 667 sherds (9kg) of Late Iron Age and Roman pottery from 35 contexts. Pottery was recovered from a total of twenty-one discrete features. The 1998 trenches (1-2) produced a further 65 sherds (0.6kg) from nine contexts. Pottery was retrieved from just two features.

The pottery was classified using the Chelmsford typology published by Going (1987, 2-54) and the *Camulodunum* type series (Hawkes and Hull 1947, 215-273) where forms are present that are not included in the former. Reference to Thompson's corpus of Grog-tempered 'Belgic' pottery (Thompson 1982) has been kept to a minimum because it was felt that some of the jar categories in particular were too amorphous to provide meaningful information about the site's ceramics. This typology is therefore only referred to if a particular vessel form is not included in either Going's or Hawkes and Hull's corpora. Analysis was primarily concerned with identifying the variety of fabrics and forms, and providing dating evidence for features. Quantification was by sherd count and weight by fabric. The following fabrics were identified (numbers in bold after Going 1987):

Amph (a)	Unidentified early amphora fabric
Amph (b)	Dressel 2-4 amphora
BB2	Black-burnished ware category 2 (41)
BSW	Black-surfaced or Romanising grey wares (45)
BUF	Unspecified buff wares (31)
CGWS	?Central Gaulish micaceous white-slipped ware
COLB	Colchester buff ware (27)
COLC	Colchester colour-coat (1)

ESH	Early shell-tempered ware (50)
GRF	Fine grey wares (39)
GROG	Grog-tempered wares (53)
GRS	Sandy grey wares (47)
HAX	Hadham oxidised red ware (4)
NKG	North Kent grey wares (32)
RED	Misc. oxidised red wares (21)
STOR	Storage jar fabrics (44)
TN	Terra Nigra
TR	Terra Rubra
TSG	All samian ware (60)
UPOT	Unidentified Late Iron Age pottery
UWW	Unspecified white fabric
VRW	Verulamium region white wares (26)
WFS	North Gaulish white fine sandy ware

Site chronology

The establishment of a reliable chronology for the Lawson Villas site is hampered by the absence of closely datable pottery (i.e. samian), the scarcity of large well-preserved groups, and clear stratigraphical relationships. This is due as much to the size of the excavated sample as it is to the variable quality of the dating evidence and distribution of pottery over the site. Most contexts contained small quantities of pottery, usually less than 30 sherds. Five contexts contained more than 30 sherds but only one produced more than 100 sherds. Few groups are therefore securely dated.

Late Iron Age/early Roman

The earliest features contained pottery broadly of Late Iron Age and early Roman date (Table 1). A terminal date in the mid 1st century AD is indicated by the relative paucity of fully Romanised wares. Two distinct groupings of features belonging to this period are discernible. To the north-west of the site (Trenches A and E) are located two parallel boundary ditches (3 and 57), a posthole (21), and a pit (25). The second group comprises a group of gullies (15, 17, 62, 64, 66, 73, 101 and 107) and a posthole (71) to the south-east of the site (Trenches B, C, G, H and 2).

The dating of the north-western features in Trenches A and E is not well established. The primary fill of ditch 3 (context 8) produced the base of a Terra Nigra platter, which indicates a date within the 1st century AD, but it is not possible to say whether this is pre- or post-conquest. Pottery from the secondary fill (6) would indicate that this feature was probably being infilled in the post-conquest period, although the dating is fairly ambiguous. The fill of gully 24 may be pre-conquest in date, but the fills of its recut, gully 57 (contexts 56 and 55) contained several undiagnostic Roman sherds. Again, the dating of this feature is ambiguous, although in its final form it appears to be Roman in date. Posthole 21 contained two small, abraded sandy grey ware body sherds, which again point to a Roman date. The only other feature in the group that is likely to be pre-conquest is pit 25 in Trench E, which produced two grog-tempered storage jar sherds from two vessels, probably of Cam 271 type.

The dating of the south-eastern features is much better established. Most of these features contained no Romanised pottery, but grog-tempered wares were ubiquitous. These comprised gullies 17, 64, 66 (Trench B), 101, 107, 117 and 120 (Trench H). To this list may be added pit 71 in Trench G. The evidence suggests that activity in this area commenced earlier than in the north-western part of the site. Gully 117 in Trench H seems to have been completely infilled by the mid-1st century AD at the latest as does gully 107. The dating of these groups is reasonably well established.

Four features contained mainly Late Iron Age material in association with small amounts of Roman pottery. These comprised gullies 15, 62, 64 and 73. Mid 1st century AD and later dates are indicated by the presence of black-surfaced Romanising wares and storage jar sherds in gully 15, storage jar sherds in gully 64, and fine and sandy grey ware sherds in gullies 62 and 73. Gullies 62 and 73 are clearly early Roman in date. The dating of the others is more problematic. Although black-surfaced Romanising wares and storage jar sherds are most common in post-conquest horizons, it is likely that these fabrics were first produced late pre-conquest.

Town defensive ditch

The defences were sectioned in Trenches C, G and 2 (Table 2) but produced very little dating evidence. Most of the pottery is undiagnostic and not closely datable. The evidence suggests infilling in the early Roman period. Dating is based primarily on fabrics present rather than vessel form. It is notable that the top fill of segment 10 produced a total of 62 sherds but very few of these were diagnostic. None of the sherds need be much later than the early 2nd century.

Later Roman activity

The sequence post-dating the defensive ditch is represented by a large quarry pit recorded in Trenches B and 1 (37 and 157) and a gravel layer (161) in trench 2 (Table 3). These contexts are characterised by the presence of small amounts of largely undiagnostic pottery, which means that only very tentative dates can be provided. The dating of these features is therefore not well established. Layer 161 in Trench 2 appears to be a surface in the very top of the defences and could date from any time between the 2nd to mid 3rd century, while the

layer above this (160) is not closely datable. The quarry produced very little dating evidence. The presence of BB2 in the top fill of 157 in Trench 1 suggests a date from the mid 2nd century onwards, but the quarry fill in Trench B is not closely datable.

Pottery supply

Because of the absence of large well-dated groups only tentative comments can be made regarding pottery supply to the site. The range of pottery is fairly typical of Kelvedon sites with locally made pottery, particularly grog-tempered wares, predominating. Jars form the principal vessel class, but there are also a small number of platters and bowls. The large quantities of grog-tempered pottery recovered from the site generally points to the presence of a genuine Late Iron Age phase. This impression is strongest in the south-eastern features. The bulk of the pottery recovered from the site is datable to the Late Iron Age and early Roman periods. There is very little that clearly dates from the mid 2nd century onwards. Late and 'latest' Roman pottery is completely lacking.

A notable feature of the assemblage is the lack of samian. Rodwell notes that pre-Roman levels at Kelvedon had yielded only a single sherd of Arretine ware and that there was a marked absence of early Claudian wares in contrast to contemporary late pre-conquest and conquest period assemblages from Camulodunum (Rodwell 1988, 97-8). Indeed, very little samian reached Kelvedon prior to c. AD 55-60. This seems to confirm the general impression that the assemblage as a whole may belong to the conquest period.

The range of Gallo-Belgic imports includes Terra Nigra platters, Terra Rubra, white fine sandy ware butt beakers, and a possible Central Gaulish micaceous white-slipped ware flagon, as well as small quantities of amphorae. Although the sources of these vessels are presently unidentified, the range of forms includes Dressel 2-4 (Peacock and Williams 1986, Class 10). These were produced in several areas including Campania, Latium and Etruria in Italy, Catalonia and Baetica in Spain, and southern and central France (Peacock and Williams 1986, 105-6). It seems that small quantities of wine were reaching the site in the period immediately prior to the conquest.

The early Roman pottery reaching the site comprises a relatively narrow range of fully Romanised fabrics. It includes locally made fine and sandy grey wares (fabrics 39 and 47), black-surfaced Romanising wares, with very small quantities of Verulamium region white ware, North Kent grey ware and Colchester buff ware coming in from further afield. Vessel forms are, however, hard to identify from among the sherds. The Verulamium region white ware and Colchester buff ware probably indicate the presence of flagons, while

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Table 1. Pottery from contexts pre-dating the defensive ditch.

Trench	Feature	Context	Pottery	Date
A	Ditch 3	top fill 4	<i>Misc. pottery</i> : ?butt beaker (GROG).	LIA-early Roman
		secondary fill 6	<i>Misc. pottery</i> : Fabrics RED, STOR & GROG.	LIA-early Roman
		primary fill 8	<i>Misc. pottery</i> : Platter base (TN)	LIA-early Roman
	Posthole 21	primary fill 23	<i>Misc. pottery</i> : Fabric GRS.	Roman
	Gully 24	fill 58	<i>Misc. pottery</i> : Fabric GROG.	LIA
	Gully 57	primary fill 56	<i>Misc. pottery</i> : Fabrics RED & GRS.	Roman
		secondary fill 55	<i>Misc. pottery</i> : Fabrics STOR, GRS & GROG.	Roman
E	Pit 25	fill 26	<i>Misc. pottery</i> : Fabric GROG.	LIA
C	Gully 15	primary fill 121	<i>Misc. pottery</i> : Fabrics BSW & GROG.	LIA-early Roman
		secondary fill 16/110	<i>Misc. pottery</i> : platter CAM 21A (GROG); jars G16.2 (GROG) & G necked type (GROG). Fabrics WFS, BSW & STOR.	LIA-early Roman
B	Gully 17	fill 18	<i>Misc. pottery</i> : Fabric GROG.	LIA
	Gully 62	fill 63	<i>Misc. pottery</i> : platter base (TN); jar G [storage jar rim frag.] (GROG). Fabrics WFS, GRF, STOR & BSW.	Early Roman
	Gully 64	fill 65	<i>Misc. pottery</i> : platter base (GROG); jar G44 [with traces of secondary use] (STOR).	LIA-early Roman
	Gully 66	fill 67	<i>Misc. pottery</i> : Fabric GROG.	LIA
G	Gully 73	top fill 74	<i>Misc. pottery</i> : jars G40 - early type (GRF), G44 (STOR), G3.1 (GROG) & G19.2 (GROG); beakers CAM 96 (GRF) & CAM 98 (GRS). Fabric BSW.	Early Roman
		primary fill 75	<i>Misc. pottery</i> : jars G40 - early type (GRF), G19 (GROG) & G [unclass.] (GROG). Fabrics WFS, ESH & Amph (a).	Early Roman
H	Pit 71	fill 72	<i>Misc. pottery</i> : Fabric GROG.	LIA
	Gully 107 (re-cut of gully 101)	top fill 105	<i>Misc. pottery</i> : Fabric GROG.	LIA
		primary fill 106	<i>Misc. pottery</i> : jar G necked type (GROG).	LIA
	Gully 101	fill 108	<i>Misc. pottery</i> : Fabrics ESH & GROG.	LIA
	Gully 112	fill 113	<i>Misc. pottery</i> : jars G17.1 (GROG), G18.2 (GROG) & G necked type (GROG). Fabrics STOR & Amph (b).	LIA-early Roman
		fill 114	<i>Misc. pottery</i> : jars G17.2/CAM 231 (GROG) & G44 (STOR); beaker H7/CAM 116 (TR); Fabrics WFS & Amph (b).	LIA-early Roman
	Gully 117	primary fill 116	<i>Misc. pottery</i> : jar G3.2 (GROG).	LIA
		top fill 115	<i>Misc. pottery</i> : bowl CAM 252/Thompson 1982 D3-4 (GROG); jar G44 (GROG). Fabric WFS.	LIA
	Gully 120	fill 118	<i>Misc. pottery</i> : jar G44 (GROG).	LIA
		fill 119	<i>Misc. pottery</i> : Fabric GROG.	LIA

sherds from two unusual beaker forms are commented on in more detail below. Otherwise, the vessels identified were jars.

- Ditch 112, fill 114
3. GROG, G.
4. GROG, G/Cam 231B.
5. TR4, H7/Cam 116.

The illustrated pottery (Fig. 8)

Ditch 112, fill 113

1. GROG, H7.
2. GROG, G18.

Gully 73, top filling 74

6. GRF, H/Cam 98.
7. GRS, H/Cam 96.
8. GROG, G3.1.
9. GROG, G20.

Table 2. Pottery from the defensive ditch.

Trench	Feature	Context	Pottery	Date
C	Ditch 10	top fill 12/109	<i>Misc. pottery:</i> jars G necked types (BSW, GRS & GROG), G unclass. (GROG). Fabrics GRF, WFS, VRW, BUF & STOR	Early Roman
G	Ditch 98	fill 99	<i>Misc. pottery:</i> jar G unclass. (GROG). Fabrics STOR, BSW & GRS.	Roman
2	Ditch 165	top fill 162	<i>Misc. pottery:</i> jars G (STOR & GRS). Fabrics GROG & BSW.	Roman
		secondary fill 163	<i>Misc. pottery:</i> bowl ?C (GROG). Fabrics BSW & NKG.	Roman

Table 3. Pottery from contexts post-dating the defensive ditch.

Trench	Feature	Context	Pottery	Date
B	Quarry 37	fill 61	<i>Misc. pottery:</i> Fabrics STOR, BSW & GRS.	Roman
		fill 68	<i>Misc. pottery:</i> Fabric BSW.	Roman
1	Quarry 157	top fill 154	<i>Samian:</i> <i>Misc. pottery:</i> Fabrics BB2, STOR, UWW & GROG.	Mid-/late 2nd cent.
		primary fill 156	<i>Misc. pottery:</i> Fabric GROG.	LIA
2	Surface 161 above top fill of ditch 165		<i>Misc. pottery:</i> jars G5.5 (GRS), G (GRS). Fabric BUF	2nd to mid-3rd cent.
	Layer 160 above surface 161		<i>Samian</i> tiny abraded chip, ?intrusive. <i>Misc. pottery:</i> Fabrics STOR & GROG.	Roman
G	Posthole 102	fill 103	<i>Misc. pottery:</i> jar G19 (GROG). Fabric GRS.	Early Roman

10. GRF, G40.

11. GROG, G.

Ditch 107, recut of Ditch 101, fill 115

12. GROG, G/Cam 252.

13. GROG, C/Thompson 1982, type D3-4.

Pottery of intrinsic interest

Two vessels, identified from body sherds, are of special interest (Fig. 8, nos. 6 and 7). A Cam. 96 spike-studded globular beaker and a Cam. 98 globular beaker with jagged 'rusticated' decoration in fine grey ware and sandy grey ware respectively were recovered from gully 73. Both beaker types are far from common and are probably derived from continental prototypes. Vessels in a hard granular grey fabric not too dissimilar to Mayen ware or Derbyshire ware seem to have been produced at Cologne and around Mainz (Anderson 1981, fig. 6.3, nos. 20-21). In London these vessels were assigned to the period AD 43-80 on account of their absence from the German limes which was initially constructed c. AD 85 (Anderson 1981, 94). The Kelvedon vessels are not in a comparable fabric and are likely to have been made at Colchester rather than being imports.

In Britain vessels of this type are sparsely distributed and are mainly found in the south-east and south midlands of England. Leaving aside the Colchester examples, vessels with comparable

decorative motifs have been recorded at Baldock, Herts. (cf. Rigby 1986, fig. 133.379), Richborough (Bushe-Fox 1932, pl. XXXVIII.287), Elms Farm, Heybridge, Essex (C.R. Wallace pers. comm.) and Piddington, Northamptonshire (Friendship-Taylor and Friendship-Taylor 1989, fig. 6.48). At Colchester, these vessels were assigned to Periods III-VI, a date range comparable to that suggested by Anderson for the London vessels (Hawkes and Hull 1947, 235-6). The Piddington example came from a Claudian to early Neronian ditch group (Friendship-Taylor and Friendship-Taylor 1989, 12). It is likely that the Kelvedon vessels are also of this early period. The vessel from Richborough, however, was from a context dated AD 70-100 (Bushe-Fox 1932, 177) and is presumably residual.

Medieval pottery

H. Walker

Only a very small amount (12 sherds) of medieval and post-medieval pottery was excavated. These largely derived from layers that also contained Roman pottery (160 and 151), or from modern contexts, although a sherd of Frechen stoneware dating from the mid 16th to later 17th century was recovered from posthole 76. The assemblage is similar to that from previous excavations in the town, where some late medieval pottery has been recovered but there is a dearth of pottery dating to the later 12th to 13th centuries (Medlycott 1999).

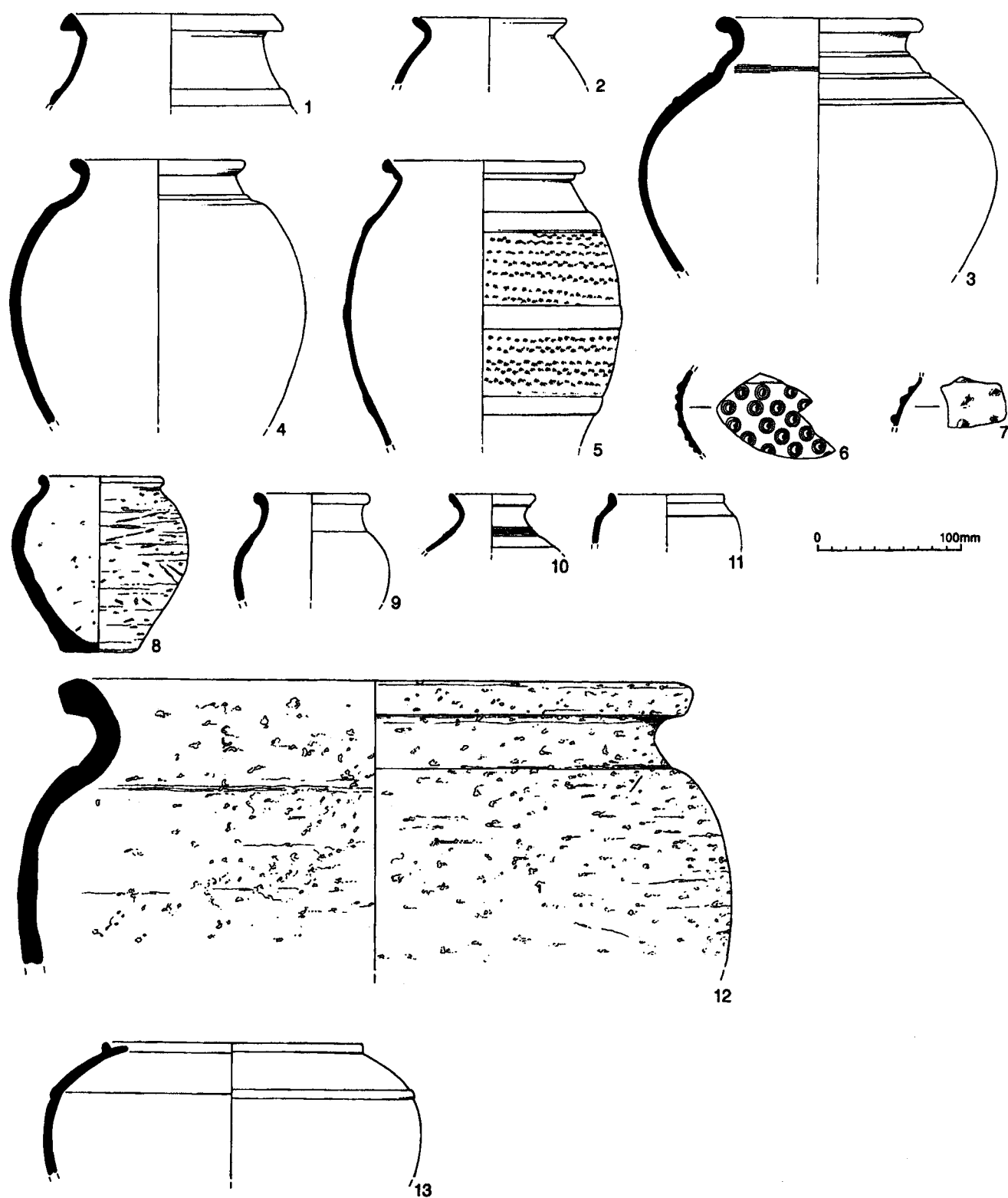


Fig. 8 Kelvedon, Roman pottery.

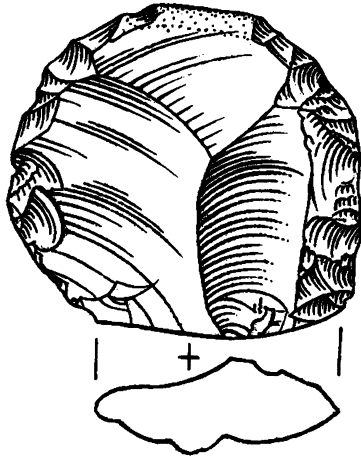


Fig. 9 Kelvedon, Neolithic scraper.

Roman glass

Joyce Compton

Two items of Roman glass were recovered, a vessel sherd from gully 57 and a complete bead from posthole 102. The sherd is in translucent dark blue glass, probably from a shallow, cast vessel. Both internal and external surfaces are dulled, worn and scratched, but there are few bubbles in the metal. The curvature of the sherd is slight, thickening slightly towards one edge, and the opposite edge has been grozed and partially ground smooth. Evidently the vessel sustained damage in antiquity and the upper edge was reworked to provide a serviceable, but shallower, vessel. A range of comparable bowls, cups and plates is illustrated in Price and Cottam (1998, 47-59), with a date range of mid 1st to mid 2nd century, although the strongly-coloured sherd from Kelvedon most likely comes from a vessel dating to the second half of the 1st century AD.

The bead is a long cylindrical type in weathered, opaque green glass, and appears to be ribbed longitudinally with an oval cross-section. The bead may have been flattened during manufacture, otherwise it conforms to the cylindrical beads illustrated in Guido (1978, fig. 37.4,5). This type of bead cannot be closely dated, as it is current throughout the Roman period and beyond, although beads with longitudinal striations are normally later Roman in date (Guido 1978, 95).

Flint artefacts

H. Martingell

A total of 30 worked pieces of flint was studied. Of these, 26 were artefacts and four were natural pot-lid fractured pieces without modification. A scraper (Trench A, context 4, feature 3, Fig. 9), which is complete, is a fine example of a 'horseshoe' shaped implement, with semi-invasive retouch around three sides except for a small area of cortex at the distal end. It is probably middle to late Neolithic in date. A crested/ first blade is 90mm long (Trench G, context 74, feature 73). It extends to the full

length of the core, with some cortex at the distal end. It was punch struck from the core having no platform and a diffuse bulb of percussion. This blade is early Neolithic or earlier in date. A converging block (Trench B, context 61, feature 37), with a notch on the right lateral edge, is probably a multi-purpose tool: the point used for boring and the notch for trimming. It is late prehistoric, possibly Iron Age in date. One flake from Trench A is of Iron Age type, short in length and with deep positive and negative bulbs. Many flakes like this and their cores have been recovered in earlier Kelvedon excavations (Martingell 1990). The irregularly retouched pieces in this collection are too few in number to make any precise comment, but their importance would become apparent when considered with similar pieces recovered from the many earlier excavations in Kelvedon. What is interesting though, is the clustering of even this small amount of material. For example:

- 1) Trench A. 43% of the artefacts, including the scraper, came from this trench.
- 2) Trench G. All the blades and one blade core fragment come from this trench.

Hundreds of lithic artefacts of all periods have been collected from excavations and from the surface over the years. The popularity of the area was due, in part, to the River Blackwater and its gravels.

Miscellaneous finds

Hilary Major

Three copper alloy objects were found. One was a probable finger-ring, in poor condition, from early Roman gully 62. Little of the surface survived, but it appears to be a simple hoop with a D-shaped section, possibly faceted. A probable brooch pin fragment came from late Iron Age or early Roman ditch 3. The third piece was a scrap of sheet from a post-medieval context. No intrinsically datable ironwork was recovered, and the only definitely identifiable objects were a small number of nails, from late Iron Age, Roman and medieval contexts. The only possible object, apart from the nails, is a bar with a circular section, which may be a medieval punch (context 160). However, the surface of the object has flaked off, making identification difficult.

A single sherd of salt briquetage, a rim from a straight-sided vessel, came from context 18 (gully 17). Although the sherd is not intrinsically closely datable, it derives from a context containing a small amount of late Iron Age pottery. There are details in the archive of the small quantities of Roman tile, baked clay, unworked stone, burnt flint, animal bone, and shell which were found.

Discussion (Fig. 2)

The archaeological work undertaken at this site has increased our knowledge of the layout of Iron Age and Roman Kelvedon. The location of the north-western side of the defensive enclosure, postulated by Rodwell (1988, fig. 40) to follow the line of a bank forming a field boundary recorded on the 1838 Tithe Map, was confirmed by the excavation. A number of Late Iron Age and other Roman features were also identified.

Features were located in all of the ten trenches as well as during the subsequent watching brief. A high proportion of the features are linear in plan, and many of these conform to a north-east/south-west alignment, similar to that of the main defensive ditch identified in Trenches C, G and 2. This alignment appears to have been utilised from at least the Late Iron Age until the early Roman period, and is also evident in the orientation of the Roman road and the defensive ditch.

Although no prehistoric features were identified, worked flints including a late Neolithic scraper and several blades were residual finds in later contexts. Gullies dating to the Late Iron Age were located in the south-east of the site. Similar features dating to the early Roman period, including a gully containing a number of post settings suggestive of a boundary, were also identified. The gully containing post-settings was adjacent to a Late Iron Age or early Roman boundary ditch and its position suggests the continuation of this boundary in the early Roman period. Similarly, an early Roman drainage or boundary gully was located in the same area of the site as several Late Iron Age gullies.

One of the main aims of the excavation phase was to investigate in more detail the Roman town enclosure ditch initially located by the evaluation. The line of the north-west side of the ditch is now properly established and where fully excavated in Trench 2 (Fig. 6), the ditch is virtually identical to the other sections of V-shaped enclosure ditch excavated by Eddy in 1977 (Eddy 1982, 12). Only the exact position of the south-western side of the town defences still remains to be firmly located.

Dating of the town enclosure ditch has not been greatly improved by the excavations. Very little pottery was recovered and most is undiagnostic and not closely datable. The limited evidence suggests a tentative early 2nd century date for the backfilling. This is by no means certain and is at odds with the evidence from Eddy's excavations elsewhere around the defensive circuit. Eddy suggested that the ditch was dug at the end of the 2nd century and was being used as a rubbish dump by the early to mid 3rd century (Eddy 1982, 11). The 2nd- to mid-3rd-century date for the surface sealing the ditch in Trench 2 fits in better with Eddy's provisional evidence. The mid 2nd-century or later date for the filling of the quarry pit 157, which had removed part of the ditch, is less consistent with Eddy's dating. The precise date of the town enclosure ditch remains open at present.

The northern section of ditch, located in Eddy's Trench D, was initially interpreted as an outwork because it was located off the projected line of the defensive ditch (Eddy 1982, 11 and fig. 2). However, more recent summaries (Rodwell 1988; Medlycott 1999) have re-interpreted the ditch as part of the

north-eastern line of the defensive enclosure rather than as an additional outwork. A watching brief by B. Barker (2001) relocated this part of the defensive ditch and traced it for a further 10m to the south on an alignment closer to the projected line of the enclosure than Eddy had at first thought. The length of ditch recorded by Barker had previously been excavated as it contained a modern backfill throughout its exposed extent. The north-western end of the ditch would have been excavated by Eddy, within his Trench D, and the remainder probably by Campen and Bennett (Rodwell 1988, 54-5). In Eddy's Trench D the ditch abutted the minor road that ran through the Roman town, and presumably respected an entrance.

Evidence of Roman quarrying datable probably to the mid to late 2nd century was found at the south-western end of the site area, where the defensive ditch appears to have been almost completely destroyed. Evidence for quarrying was recorded by Eddy in his Trench A where the sides of the redundant town enclosure ditch were used as working faces for gravel extraction (Eddy 1982, 11). Other quarry pit sites have been identified in Kelvedon by excavation (e.g. Fell and Humphrey 2001) and aerial photography (Rodwell, 1988, Plate 1).

There is very little evidence for activity dating to the post-Roman period, other than a post-built structure dating to the 16th-17th century. This is in keeping with the known history of Kelvedon, which indicates that this area of the modern town had reverted to agriculture in the post-Roman period. The area of the site would have been located in backlands to the rear of the medieval town development along the High Street to the north-west.

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Excavations at 97-99 High Street, Braintree

by Andrew Pearson

with contributions by Ian Baxter, Jane Cowgill, Nina Crummy, Andrew Fawcett and Berni Sudds. Edited by Jon Murray and Leonora O'Brien and illustrated by Kathren Henry

The majority of excavated evidence dated to the post-medieval and modern periods, but a small number of Roman features and a medieval feature were also revealed. The principal Roman features were the truncated remains of a metalled surface, a partially robbed-out wall foundation, and a large rubbish pit.

Introduction

A small archaeological excavation was undertaken in advance of the construction of a new office block on land to the rear of 97-99 High Street, Braintree (TL 757 229; Fig. 1). The site lies within the area of both the Roman and mediaeval town. There is evidence for the occupation of Braintree from the Late Iron Age (LIA) onwards (Medlycott 1998), where it appears to have been concentrated around the modern Pierrefitte Way. A small ditched enclosure of the early 1st century AD has been excavated at the College House and 2-4 London Road sites. Further to the east, on the south side of the Cressing and Coggeshall Roads, a large bank and ditch feature enclosing an area of approximately 50ha. is known. This has been suggested to be a possible *oppidum* (Drury 1976) though this remains unproven (cf. Bedwin 1983-4).

Braintree is situated on a clay and brickearth capped ridge between the rivers Blackwater and Brain. Soils in the vicinity mainly derive from the Ludford association (Soil Survey of England & Wales 1983). The small Roman town occupied a triangular area between the two major highways that met at Braintree, namely Stane Street (now Rayne Road) and the Sudbury-Chelmsford road (London Road/ High Street). Roman Braintree was considered in detail by Drury (1976) and since that time knowledge of the town has been supplemented by a number of excavations undertaken in advance of development. The Late Iron Age settlement appears to have provided the focus for early Roman occupation, but during the 2nd and 3rd centuries the settlement expanded north and eastwards into the George Yard and Rayne Road area. It is suspected that there was ribbon development along Stane Street during the early years of the town, with properties extending eastwards from the main settlement towards the road junction. The present

site offered the opportunity to investigate the theory of occupation to the rear of the Roman Sudbury-Chelmsford Road.

Roman buildings have been excavated at a number of sites around Pierrefitte Way, and more structures were discovered in the George Yard area (Havis 1993), whilst a little to the west of Pierrefitte Way a substantial aisled building was excavated at 7 Grenville Road (Garwood & Lavender 2000). Several minor roads or trackways are known within the built up area, and the alignment of one of these with a boundary ditch has led to the suggestion that the early town was deliberately planned (Garwood & Lavender 2000). There is evidence for industrial zoning within the built-up area of the Roman town, with a concentration of iron-working debris, including furnace slag at the College House site and a possible bloomery and smithy at the Letch's Builders Yard site in the south-west corner of the town. However, sites such as the Brands Site in the eastern part of the town have also revealed large quantities of slag (R. Havis pers. comm.).

Occupation of the town declined during the 4th century, and it seems to have been largely abandoned by the 5th century. There is evidence for scant occupation during the Saxon period, though it was never of an urban nature. A two-post sunken floored building excavated at The Flacks site is presumed to be Saxon in date, although the site remains unpublished. At 69 Rayne Road the Roman features were sealed by a thick black loamy deposit, possibly a 'dark-earth' created by agricultural activity during the post-Roman period. However, evidence suggests that the Saxon settlement lay to the south-west of the later St Michael's church, a church which may have had a Saxon predecessor (Medlycott 1998, 13).

The excavated site also lay within the built-up area of the medieval town, the main focus of which appears to have been the market place, 200m to the east (infilled from the 16th century), which dates from the granting of a weekly market and annual fair in 1199. The market grant was the spur to the creation of a 'new town' on the eastern side of the main road junction. The site of the excavation lies

EXCAVATIONS AT 97-99 HIGH STREET, BRAINTREE

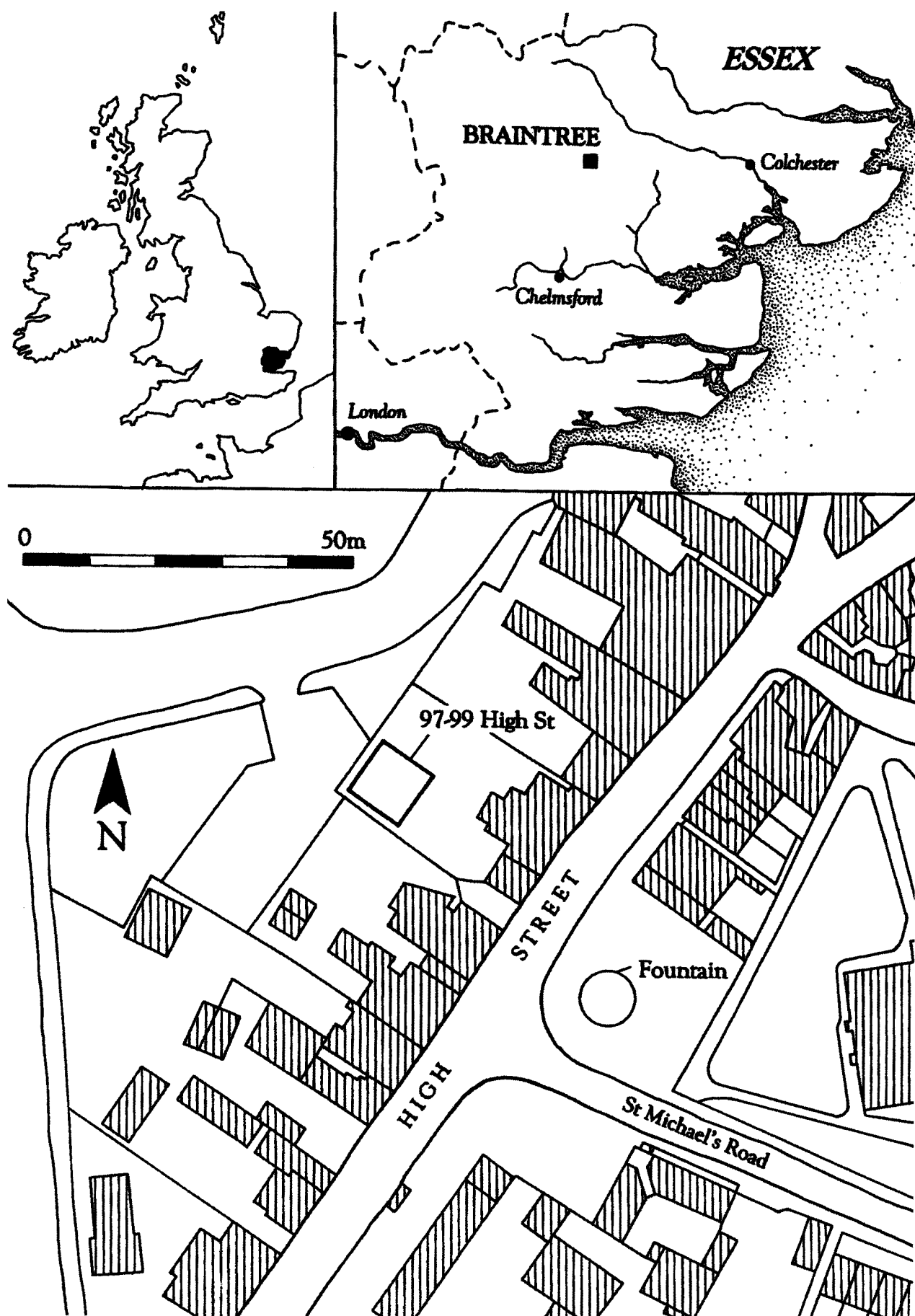


Fig. 1 97-99 High Street, Braintree. General site location.

some 60m to the north-west of St. Michael's church, and was occupied by properties fronting the High Street.

The excavations

An open area excavation was undertaken on the footprint of the proposed office building. A significant depth of archaeological deposits survived, though heavily truncated by later features (including a large cellar). Generally one metre of post mediaeval/modern overburden sealed the natural terrace gravel/brickearth, where the Roman and mediaeval layers did not survive, and this resulted in the mechanical excavation of the majority of the site down to the natural drift. This in effect led to surviving 'islands' of stratigraphy on the site having to be partially interpreted in section. The excavations uncovered several Roman features and a single medieval pit (Fig. 2). The survival of Roman elements was patchy, with isolated pockets of preservation extant amidst large areas of truncation. Where Roman archaeology survived it was often at some depth, the base of wall foundation trench F1041 being 1.6m below the modern tarmac (Fig. 3, section B). Gravel metalling of the contemporary Roman ground level was encountered at lesser depths of between 0.6m and 1m beneath the present surface.

Phasing

Roman

Roman features comprised the remnant of the terminal end of a wall foundation, a pit, and the patchy remains of a cobbled surface, over which there were sparsely-surviving Roman build-up layers.

The wall foundation (F1029) was revealed in the north-western part of the site, surviving as a 0.38m wide and 0.45m deep foundation (Figs. 2 & 3, section B). It was built of rounded and nodular flint cobbles in a chalky clay matrix, and set in a trench with vertical sides (F1041). The base and sides of the foundation trench had been filled with a compact sandy silt (L1071), which contained large flints, frequent oyster shell, tile fragments, animal bone and two undiagnostic Roman pottery sherds. The foundation was sealed by undated layer L1028 and cut through layer L1027, suggesting that the latter is also of Roman date (Fig. 3, section B). The wall was partially robbed out during the late Roman or probably post-Roman period, as evidenced by a deep robber trench (F1042). The overlying layer, L1028, was also truncated by this trench, suggesting that the wall had become redundant and had been buried long before its subsequent robbing (Fig. 3, section B).

The nature of the structure associated with the wall foundation is difficult to assess, given the small portion revealed. Comparable stone foundations have been encountered at 2-4 London Road and Letch's Yard. These are thought likely to be masonry bases of timber superstructures (M. Medlycott pers. comm.), and it is possible that F1029 may have related to a building of similar nature.

A single Roman pit (F1080) was identified in the northern corner of the site, truncated by medieval pit F1066 to the west (Fig. 2; Fig. 3, section B). The former was 1.6m x 0.4m+ wide and 0.6m+ deep, and contained a large assemblage of Roman sherds, typically dating between the mid 1st and 2nd centuries, in addition to tile, animal bone, a possible piece of iron smithing slag and iron fragments.

Three surviving areas of a cobbled surface were encountered in the southern part of the site (L1062, L1065 & L1072, Figs. 2 & 3). They consisted of small rounded flint cobbles in a fine gravel/sand and pea-grit matrix, with a reasonably uniform thickness of 0.10m in the western part of the site (L1072), but L1062 in the east varied between 0.08m and 0.27m, where it was associated with undulations in the natural ground surface.

A single sherd of Roman pottery was incorporated within L1062, and L1065 produced small quantities of animal bone, stone and an iron fragment, together with a copper alloy ring (SF4, Fig. 5 No. 4) and a tiny pink glass bead (SF3, Fig. 5 No. 5) at its upper surface (possibly intrusive). The ring was of indeterminate age (possibly Roman), but the bead is distinctive, being of a type introduced into Britain from Anglia around the mid 5th century, suggesting activity in the vicinity of the former Roman town. The remnant Roman layers overlying parts of the cobbled surface produced pottery sherds of a general 2nd century date with a few later sherds, suggesting that there was less intense use of the site in the later Roman period and that parts of the surface were becoming partially redundant and covered by soil accumulation by this early stage.

The cobbled surfaces were partially sealed by the remains of build-up deposits (Fig. 3, section C). Overlying surface L1065 were the truncated remains of L1063, a mid olive-brown, moderately compact sandy silt, with occasional pea grit and small flint pebbles. The deposit was up to 0.3m thick and contained a significant quantity of pottery of 2nd century date, tile, animal bone, oyster shell, and a copper alloy pin likely to be of Roman age (SF2, Fig. 5 No. 4). Cobbled surface L1072 was overlain by layer L1006, which was composed of a mid to light greenish-brown, very sandy silt with occasional flint pebbles, containing Roman pottery of the 2nd - 4th centuries, animal bone, oyster shell, slag, fragments of burnt stone and a piece of a lava hand-quern (SF1, Fig. 5 No. 1). All the layers were much truncated, and the build-up deposit was probably originally much more widespread across the site. L1019 in the north-west corner of the trench, for example, was of similar character and could have been part of the same deposit. Layers below the gravel surfaces were of natural origin.

The truncation of the cobbled surfaces makes their interpretation problematic. Whilst feasibly they relate to road surfaces or to house platforms, feature types which are known from other areas of Roman Braintree, they were most likely metalled yard surfaces.

Medieval

A single mediaeval rubbish pit was identified (F1066), truncating Roman pit F1080 (Fig. 2; Fig. 3, section B). It was large, deep and steep-sided, 2.7m x 0.65m+ wide, excavated to a depth of 0.5m. Finds from the deposit

EXCAVATIONS AT 97-99 HIGH STREET, BRAINTREE

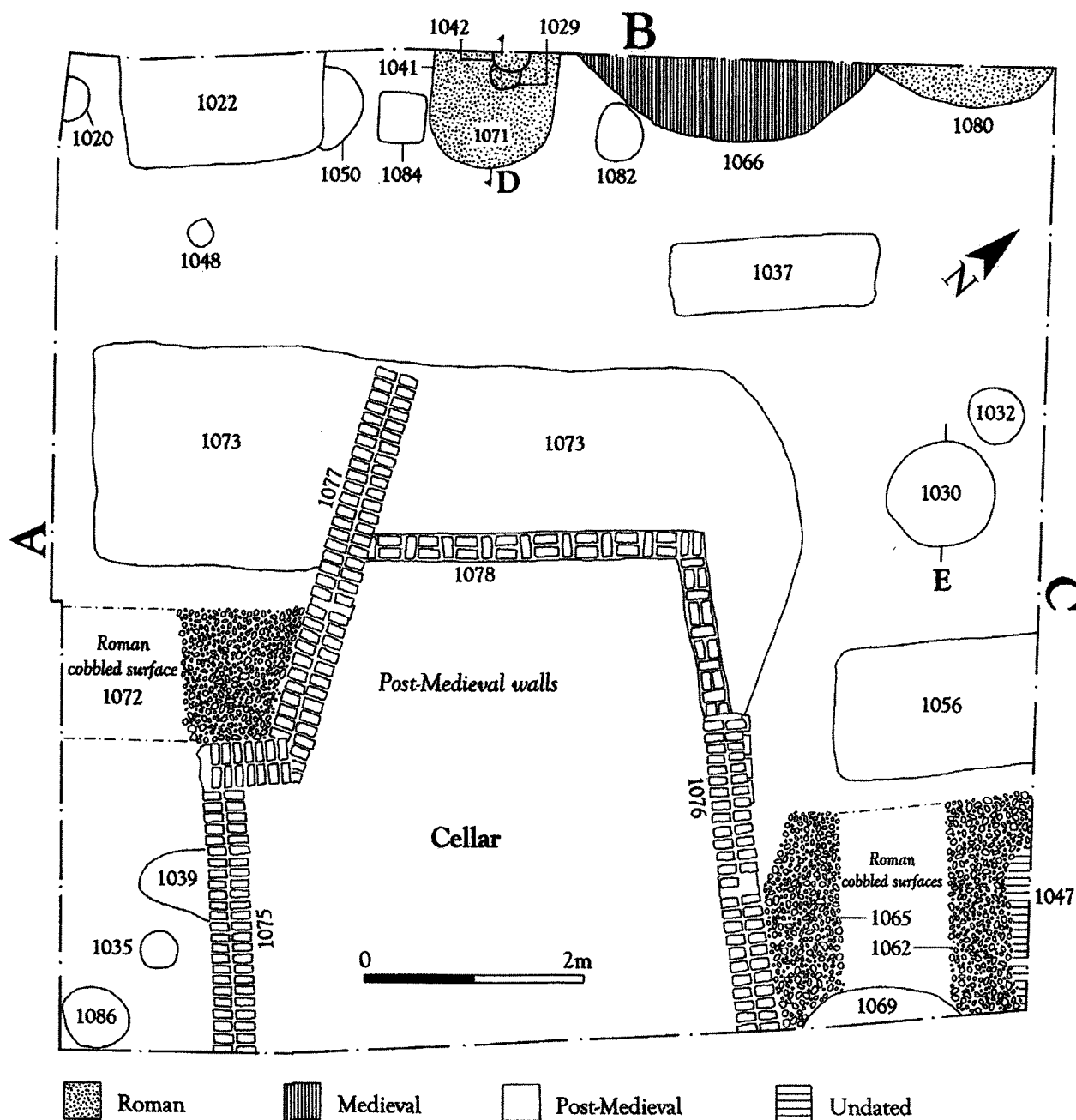


Fig. 2 97-99 High Street, Braintree. Plans of the excavations.

included 12th to 14th century and residual Roman pottery sherds, tile fragments, animal bone, struck flint and oyster shell.

Post-medieval/modern

The site contained a number of post-medieval and modern pits and other intrusive features (Fig. 2). Others were recorded in section, including pits F1007, F1009, F1015, F1022, F1044, F1054, F1056, F1058 and F1061 (Fig. 3, sections A, B & C).

A large rubble-filled brick cellar occupied much of the southern part of the site (Fig. 2). It was formed of brick walls and measured some 5m x 4.5m+, with an angled north-west to south-east wall present in its north-western

part (F1077), and a large disturbed area (F1073) probably representing a foundation cut or an alteration in its layout.

Several rubbish pits were found that contained material of 17th-18th century date, in addition to residual earlier material (F1030, F1069 and F1082). Other sizeable post-medieval pits were also identified (F1022, F1037 and F1056), as well as two post holes. The rest of the features that were partially revealed included a number of other pits and post holes, which were probably 19th century in date. A number of features which contained no datable finds also probably date to the post-medieval period (post holes F1020, F1048 and pits F1039, F1084 and F1086).

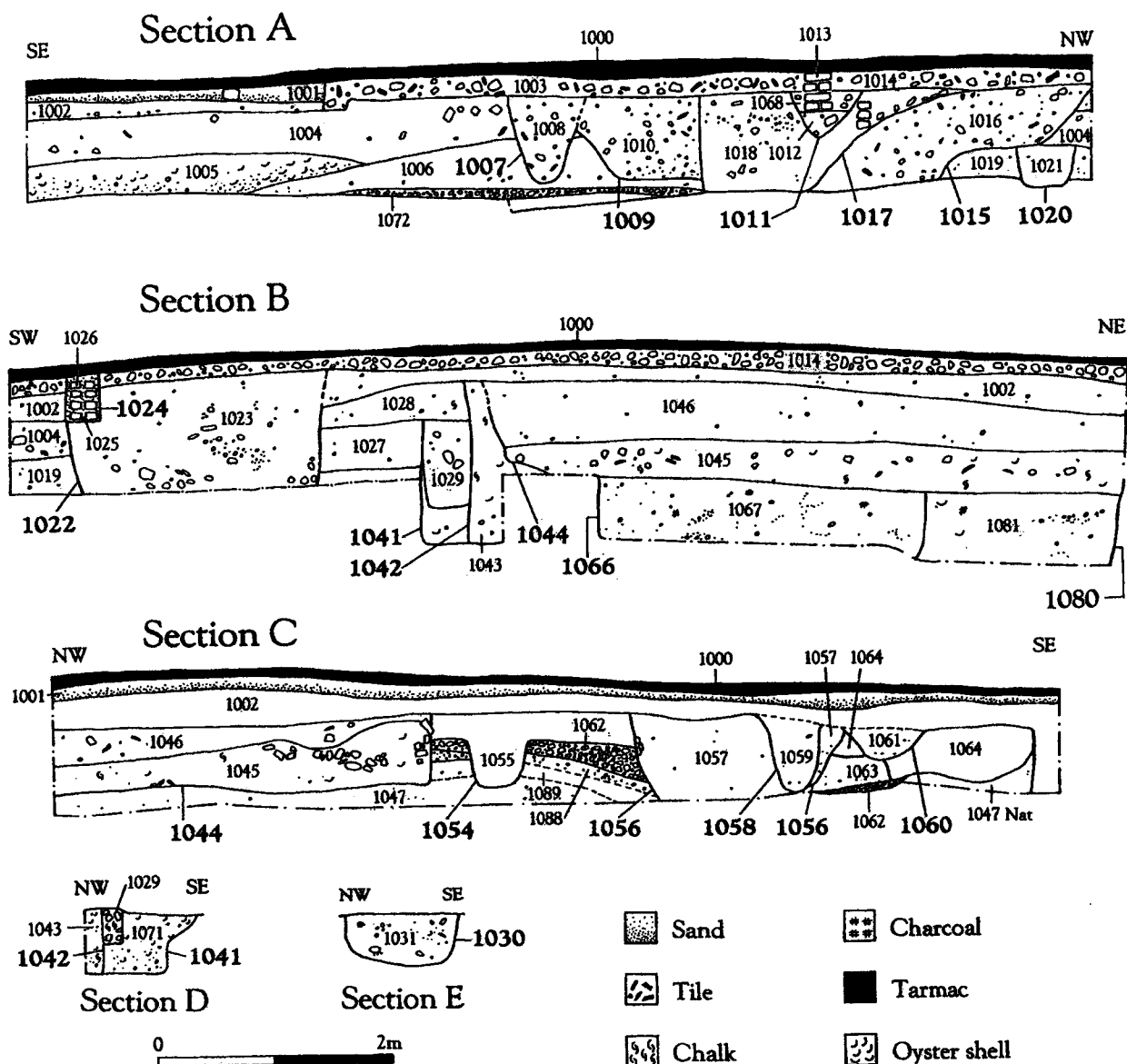


Fig. 3 97-99 High Street, Braintree. Sections.

The Roman pottery

Andrew Fawcett

Introduction

In total the site yielded 332 Roman sherds weighing 3451g with a total rim EVE of 3.07, the average sherd size being 10.92g. Although the sherds are often fragmentary they are generally not abraded; this is particularly true of the larger assemblages e.g. 1063. Sherds in the remaining contexts are only slightly abraded. This report focuses on the three contexts that can be dated with confidence from the late 1st to 2nd century, pit 1080, and layers 1006 and 1063.

The results of recording are set out below quantified by sherd count, weight and rim EVEs. The alphabetical codes employed for fabric types are those in current use as part of the national system (Tomber & Dore 1998). The

number codes which appear in bold alongside the national system are those used at Chelmsford, Essex (Going 1987). The latter is the most important study of ceramics in Essex and the site is located about 12 miles to the south of Braintree.

Fabric descriptions

LGF SA La Graufesenque samian ware **60**
Only two non-diagnostic sherds noted.

LMV SA Les Martres-de-Veyre samian ware **60**
One sherd has been identified as part of Drg33 cup dated to c.AD120.

LEZ SA 2 Lezoux samian ware category two **60**
Only one sherd of this 2nd century fabric is present.

COL WH Colchester white ware **27**
Two mortaria sherds represent this fabric. Both sherds display extremely worn trituration grits of quartz and

EXCAVATIONS AT 97-99 HIGH STREET, BRAINTREE

flint. A finger mark is present on the underside of one sherd within a design that appears at first glance to be keying.

BSW Unsourced black surfaced or Romanising grey ware 45
As at Chelmsford, current examples are varied in terms of frequency and sorting of inclusions, and colour. The fabric is described as the post-conquest continuation of the grog tempered fabrics. In Essex this is most common during the 1st century whereas during the early 2nd century it rapidly declines. However, even at Chelmsford the fabric is found throughout the Roman period and current research in Essex confirms its continued production (S. Martin pers. comm.). Early jar styles, a platter and dish are found in this fabric.

GRF Unsourced fine grey wares 39
This is a finer version of GRS (below) in terms of the surface finish and inclusions. The fabric occurs throughout the Roman period. The majority of diagnostic sherds belong to beakers.

GRS Unsourced sandy grey wares 47
This is a coarser version of GRF (above), dominated by quartz which can be both well- and ill-sorted and vary in size. The fabric is thought to replace BSW (above) around the mid 2nd century AD at Chelmsford (Going 1987, 9). Jars are dominant in this fabric, the only other form noted being three bowls.

NRK FR North Kent fine reduced ware 32
Although this distinctive Flavian to Antonine fabric was once thought to have been produced at Colchester, the lack of compelling evidence shifts the source to London or North Kent (Going 1987, 7). The sherds from Braintree belong to a beaker base. The fabric compares well with that identified from the Upchurch marshes of Kent (Davies *et al.* 1994, 152).

STOR Unsourced storage jar fabrics 44
The two fabrics noted at Braintree both approximately equate to the previous fabrics identified as BSW and GRS. The BSW fabric contains the most sherds.

Table 1. Vessel form.

EVE	Platter	Dish	Bowl	Bowl-Jar	Jar	Beaker	Cup
2.85	0.03	0.13	0.09	0.04	1.90	0.52	0.14
%	1%	5%	3%	1%	67%	18%	5%

Table 2. Quantification of pottery from Pit 1080 and Layers 1006 & 1063, all contemporary.

FABRIC	SHERD No	%	WEIGHT	%	R.EVE	%
LGF SA	2	1%	8g	Pres	-	-
LEZ SA 2	1	Pres	1g	Pres	-	-
COL WH*	2	-	209g	-	-	-
BSW	161	69%	1144g	68%	1.14	52%
GRF	11	5%	86g	5%	0.57	26%
GRS	54	23%	410g	24%	0.49	22%
NRK FR	3	1%	26g	2%	-	-
STOR*23	-	464g	-	0.05	-	-
SEX SH*	13	-	402g	-	0.30	-
SOB GT	1	Pres	15g	1%	-	-
TOTAL*	233		1690g		2.85	

(*denotes that material has been excluded)

Table 3. Quantification of medieval and post-medieval wares.

	Ware Code	Fabric (common name) / Date range	No	Wt
Early medieval	13 (?13T)	Early medieval ware (11th-early 13th C)	1	30g
Medieval	20	Medieval coarse ware (Late 12th-14th C)	7	135g
	21	Sandy orange ware - ?Colchester-type (13th-14th C)	1	6g
Post-medieval	40	Post-medieval red earthenware (16th-18th C)	9	83g
		<i>Including Black-glazed red earthenware (17th C)</i>		
	50	Staffordshire-type slipware (Mid 17th-18th C)	1	3g
Modern	48D	Transfer-printed ware (Mid 18th-19th C)	2	7g
TOTAL			21	264g

SOB GT Southern British grog tempered wares 53

Only three sherds occur in this fabric which is dominated by abundant orange grog. This fabric is thought to have declined shortly after the conquest (Going 1987, 10). Nevertheless, recent work in east Hertfordshire has indicated a longer span for this fabric, especially on rural sites (Fawcett, forthcoming 1). The trend has also been noted at Chells, Stevenage, where it continues into the early 2nd century AD (Waugh 1999, 95). No diagnostic sherds occur.

SEX SH South Essex shell tempered (early) ware 50

Kilns making this product are known to have been in operation on both the Essex and Kent side of the Thames. The fabric and form style both display affinities with many of the early shell tempered wares found in east Hertfordshire (Fawcett, forthcoming 2). Undoubtedly there are many undiscovered sources for these types of ware.

BAT AM 1 Baetican (early) amphorae 1 (Dressel 20) 55

The Spanish amphorae sherds identified at Braintree belong to the first half of the production period (mid 1st to c. mid 2nd AD).

Results and discussion

Only a small range of fabrics are present on the site. The only finewares are from Gaul and the only other continental imports are two sherds of a Dressel 20 olive oil carrier from Spain. There is a notable absence of Romano-British finewares, for example Colchester and Nene Valley colour-coats. Regional coarse ware imports are also absent; two examples are Hadham and Verulamium, both originating in Hertfordshire. The remaining sherds all originate in Essex, with the exception of NRK FR, with the majority probably being local.

The dominant form is the jar followed by beakers (Table 1). The small assemblage is perhaps not an accurate reflection of an early assemblage, lacking for instance flagon and mortaria rims. However, the jar, bowl and dish percentages are similar to other assemblages for this period (Fawcett, forthcoming 1), especially those of a rural nature.

None of the features are dated later than the 2nd century AD and of these only three features contain assemblages of sufficient size to be confidently dated. Table 2 demonstrates the range of quantified fabrics from the three best-dated features (1006, 1063, 1081).

All three of these features span from c.late 1st to the 2nd century AD. Consideration of the fabric combinations for the three contexts indicates the dominance of BSW against GRS, and the absence of SOB GT. These trends are consistent with the late 1st to the c.mid 2nd century AD.

A detailed comparison with previous investigations in Braintree is difficult for a number of reasons. A significant number of excavations remain unpublished. Although a number of sites have been published they do not contain detailed fabric descriptions or sufficient quantification of the pottery for comparative purposes. Many of the sites produced small assemblages of pottery, and the sites are fairly scattered.

Despite these problems the evidence from local sites indicates that this current assemblage is comparable. The

best examples are from the Grenville Road and College Road sites (Martin unpublished; Martin in Garwood & Lavender 2000), including College House, 2-4 London Road (late 1st-late 2nd) and the Boars Head (mostly 2nd century). Pottery from the High Street in the Kenworthy collection (in particular nos. 80-82 and a number of unprovenanced sites) are dated from the Flavian to 3rd century. There is much more 1st and 2nd century material from these High Street sites than of a later date (Drury & Pratt 1976, 96-119). A full comparison is available in the archive report.

Illustrated pottery (Fig. 4)

- Fig. 4.1 1006. GRS H2 style. Mid 1st - AD100. The fabric is fine and hard, medium grey in colour with a highly burnished darker surface.
- Fig. 4.2 1006. BSW G20. Pre-Flavian - early 2nd century AD. A hard slightly sandy fabric with a partially burnished black surface. The fabric has a grey core with orange/brown margins.
- Fig. 4.3 1006. BSW G24.1. c.2nd - 4th century AD. A hard high-fired sandy fabric which is medium grey. The core is grey with orange margins.
- Fig. 4.4 1006. NRK FR H. Flavian - Antonine. This is a hard fine fabric with a dark grey rouletted surface. The internal surface is buff and micaceous. The sherds display the distinctive sandwich effect.
- Fig. 4.5 1063. BSW B2.1 style. Mid 2nd - early/mid 3rd century AD. The fabric is hard and sandy with an oxidised surface (patchy) with a brownish grey core and dark grey margins.
- Fig. 4.6 1063. GRS E2 style. Pre-Flavian - early 2nd century AD. A hard sandy fabric with light grey surfaces, the remainder being medium grey.
- Fig. 4.7 1063. GRS G23.1-3 style. 1st - 2nd century AD. This is a sandy fabric coloured medium grey throughout.
- Fig. 4.8 1063. SEX SH G 1-2. Pre-Flavian - Flavian. The fabric is hard with a soapy/sandy feel. The surfaces are brown/orange in colour (patchy) with a light grey core and thin orange sub-surface margins. The shell is common to abundant and ill sorted on the surface.
- Fig. 4.9 1063. SEX SH Cam 254. Late 1st - Antonine. This sherd has a darker grey external surface whereas the internal surface is the same as No. 8. The shell on this example is less frequent on the surface but is abundant in the break.
- Fig. 4.10 1067. BSW E2. Late 2nd - 4th century. The fabric is hard and sandy with a dark grey surface. The core is brownish-grey.
- Fig. 4.11 1081. GRS H1. 1st century AD. This is a fine sandy fabric with a highly burnished medium grey surface. Traces of a barbotine decorative scheme can be seen below the surface. The fabric is medium grey throughout.

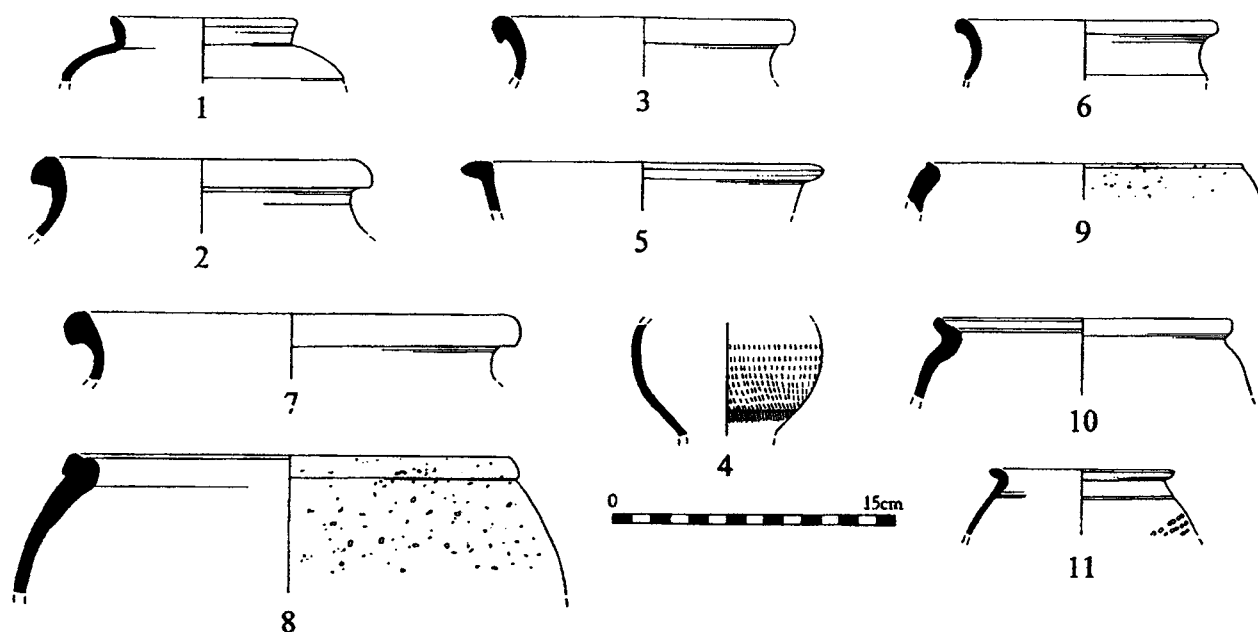


Fig. 4 Roman pottery from the excavations.

Medieval and post-medieval pottery

Berni Sudds

The medieval and later assemblage recovered from 97-99 High Street amounts to only 21 sherds. The group consists primarily of local and regional coarsewares, similar to the type and range encountered through previous excavation at Braintree (Toft's Garage, Huggins 1986, 87; Naylinghurst, Drury 1976, 267). The numerical codes given are based upon the post-Roman pottery codes for Essex (Cunningham 1985; Cotter 2000). Fabric descriptions and a full ceramic catalogue appear in the archive report held with the site archive.

Successive truncation of the site from the medieval period onwards and particularly during the post-medieval period has resulted in a high level of residuality within later features. Pit (1066), representing the only medieval feature identified on site, produced a significant quantity of residual Roman pottery in addition to a single early medieval ware sherd, a small group of hard, sandy medieval coarse wares and a possible Colchester ware jug. The coarse wares remain only broadly datable but the oxidised jug rim suggests a group date of the 13th to 14th century. The group is too small to warrant a detailed discussion, although it is an interesting group, as the presence of the early medieval ware sherd suggests that there may have been settlement here before the market charter date of 1199 (D. Andrews pers. comm.).

Small finds and iron nails

Nina Crummy

The majority of the items in this small assemblage are Roman. However, SF5 (Cat. No. 2), from a post-medieval pit, is a reshaped fragment of wall veneer which may have been adapted and reused at any time from the Roman period through to the date of the context. SF3 is an early Anglo-Saxon bead (Cat. No. 5).

Illustrated small finds (Fig. 5)

Fig. 5.1 Upper stone rim fragment from a hand-quern of Niedermendig lava. The grinding surface has worn smooth, but there are traces of bi-directional grooving on the upper surface and vertical grooving on the edge. Diameter 280mm, maximum thickness at rim 57mm. SF1 (1006).

Fig. 5.2 Rectangular fragment of a dense gastropodic limestone. One surface appears to be original and worn, the other surface and the edges are slightly rough. Length 45mm, width 37mm, section tapering from 13 - 8mm. Probably a reshaped and reused fragment of Roman wall veneer. SF5 (1070).

Fig. 5.3 Stout copper-alloy ring of circular section. External diameter 28mm, internal diameter 17mm, section diameter 5.5mm. The uses of similar rings must have been very diverse, ranging from harness to drape rings. SF4 (1065).

Fig. 5.4 Bent copper-alloy shaft from either a hairpin or toilet instrument, most likely the latter. The broken end is slightly flattened. Length 87mm. SF2 (1063).

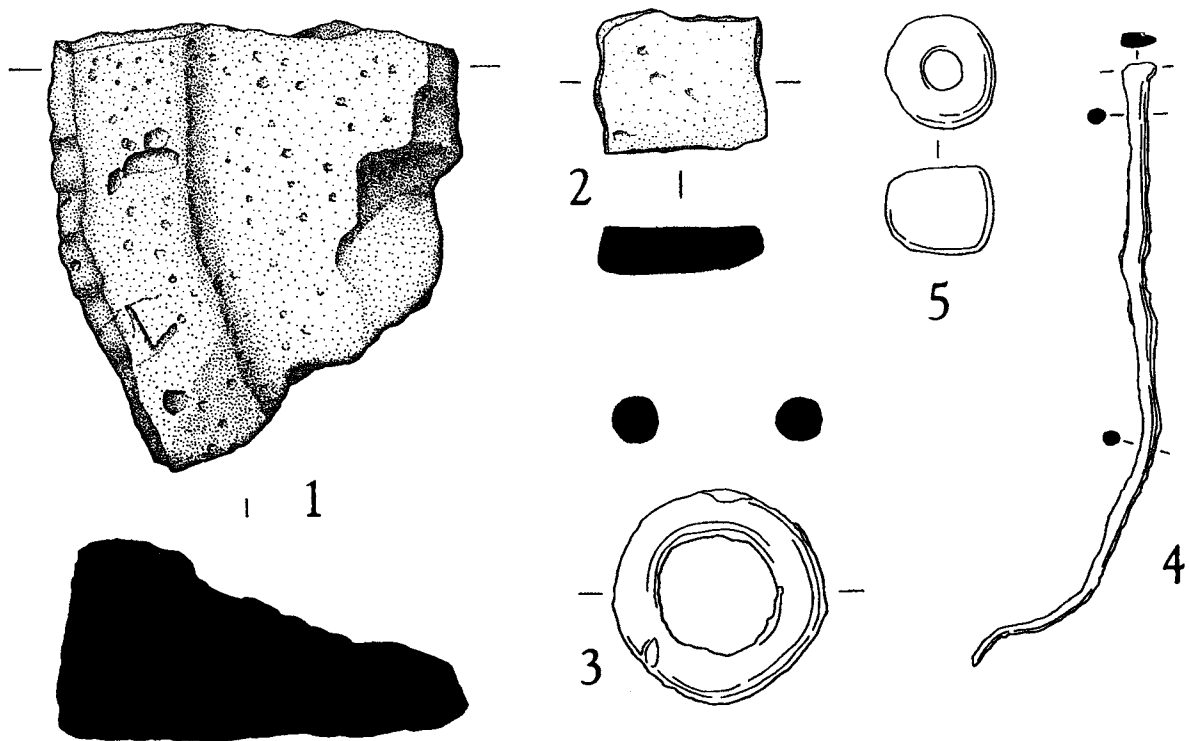


Fig. 5 Small finds. 1 Lava quern 1:2 SF1 1006. 2 Re-shaped and re-used fragment of Roman wall veneer 1:2 SF5 1065. 3 Cu alloy ring 1:1 SF4 1065. 4 Cu alloy hairpin or toilet instrument 1:1 SF2 1063. 5 Early Anglo-Saxon glass bead 5:1 SF3 1065.

Fig. 5.5 Tiny barrel-shaped bead of pinky-brown glass. Length 2mm, diameter 3mm. Beads of this form and colour, achieved by the addition of manganese which produced shades from crimson to pink to brown, were introduced into Britain by migrant settlers from continental Anglia round about the mid 5th century. They have a wide distribution in Britain, particularly in contexts dated to the 6th century. In Essex beads of this colour have been found at Feering, Great Chesterford, Mucking, and Springfield Lyons. All, apart from the single example from Feering, come from graves with a date range from the late 5th to 6th century (Guido 1999, 56, 277-82). SF3 (1065).

Slag

Jane Cowgill

Roman layer L1006 contained cinder slag (21g) and a vitrified hearth lining (28g). Roman pit F1080 contained either a very dense, iron rich, iron smithing slag or an iron object (173g), encrusted with corrosion products. The cinder and vitrified hearth lining could have been generated by any high temperature process, except iron smithing.

Animal bone

Ian Baxter

A total of 104 fragments of animal bone with a weight of approximately 2.3kg were recovered from the site. Of this total 21 fragments have been identified to species or broader taxonomic level. The bones are generally well preserved. The majority derive from Roman features comprising a pit (F1080), layers partially overlying a cobbled surface (L1063, L1006) and the fill of the construction trench of a wall (L1071). Cattle remains are the main faunal element. The humerus, furcula and femur of a raven (*Corvus corax*) were found in layer L1063. Although now restricted to the west and north of Britain, ravens were widespread throughout the country during the Roman period. The medieval pit F1066 contained, in addition to the 'countable' pig mandible, a sternum fragment from a domestic duck or mallard (*Anas platyrhynchos*) and an indeterminate fragment from the head of a largish fish. Remains from the late post-medieval (17th-18th century) pits include the mandible of an elderly bovine with extensive calculus deposits on its teeth, a butchered cattle distal humerus, a sub-adult distal pig femur, a sheep proximal radius and a domestic (?) goose humerus shaft fragment.

Discussion

The excavations at 97-99 High Street revealed sparse Roman features when compared to other, better preserved, sites within Braintree. There had been a considerable depth of stratigraphy surviving until the post-mediaeval period on the site, although this was heavily truncated by later features. Despite this, and the small size of the site, these excavations have been able to shed light on this area of the Roman town.

The southern edge of the excavation was some 20m to the north-west of the line of the Roman Chelmsford to Braintree road, and the site therefore lay in an area likely to be occupied by roadside plots. The cobbled surfaces attest to some form of development near to the road, and probably relate to the back yard of a street frontage property. The stone wall foundation in the extreme northern part of the excavated area suggests the existence of a building, possibly timber-framed.

The small quantity of slag that was recovered from the Roman contexts may not in itself be suggestive of metalworking, especially when compared with evidence from the known industrial area at Rayne Road.

The pottery from the excavations suggests a general 2nd century date for occupation, the three securely dated contexts spanning the Flavian period/late 1st century to the 2nd century. The site therefore seems to fit reasonably well into the model for the development of Roman Braintree, which indicates occupation round the road junction at a fairly early stage. This is in contrast with the majority of the Pierrefitte Way sites and the George Yard area where late 3rd and 4th-century occupation has been found (Havis 1993). In as much as the High Street remained an important artery throughout the lifetime of the town, it seems likely that at least some parts of its frontage continued to be occupied into the later Roman period.

Of the later finds, the 5th to 6th-century bead is of the greatest interest. It adds to the other evidence from this part of the town that attests to occupation during the early Saxon period, albeit on a limited scale. The medieval and post-medieval rubbish pits are typical back yard deposits. The single medieval pit dates from the 13th-14th century, whilst a number of the later pits are of 17th to 18th-century date and later.

Acknowledgements

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the Trust by Tom McDonald. The archive is deposited at Braintree Museum & Heritage Centre.

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A Roman site behind Flacks Hotel, 103-5 High Street, Braintree

by Steve Hickling

with contributions by Owen Bedwin, T. Scott Martin,
Ros Tyrrell and Helen Walker

Small-scale archaeological excavation produced evidence of Roman occupation dating to the 2nd-3rd centuries. A patchy gravel surface may have been a length of the minor Roman road recorded at the Fountain site 60m to the north-west, or part of a yard surface recorded in the adjacent excavation at 97-9 High Street. A cultivated soil containing Roman and medieval material overlay the Roman strata and was covered by post-medieval levelling layers and yard surfaces dating from the 18th century onwards.

Introduction

In March 2001 a small excavation was carried out to the rear of 103-5 High Street, Braintree (TL 7555 2292) by the Essex County Council Field Archaeology Unit in advance of the construction of an extension at the back of Flacks Hotel public house (Fig. 1). The excavation was limited to the foundation and service trenches of the extension, which meant that archaeological deposits were only exposed over a very limited area, although it was possible to record a detailed archaeological sequence in most of the trenches. A full report on the excavation has been lodged with the Essex County Council Heritage Conservation Record, and the excavation records and finds will be deposited at Braintree Museum.

Archaeological and historical background

Braintree is located on a plateau of glacial deposits of sand, clay and gravel, 65-70m above sea level, between the valleys of the rivers Brain and Pant or Blackwater. The town has grown up around a Roman cross-roads: a Roman road traceable from Gosfield, 6km north-east of Braintree, to Chelmsford (now the A131) crossed Stane Street, the Roman road from Colchester to Braughing (now the A120), 300m north-east of the site. Although the street plan in the town centre has changed over time, the Roman road lines have continued to be major thoroughfares. In the vicinity of the site these roads are broadly reflected in the line of the High Street/London Road and Rayne Road respectively.

The site lies on the north-west side of the High Street (Fig. 1), within the known area of the Roman town and 200m south-west of the medieval market place (Drury 1976; Havis 1993; Medlycott 1999). The excavation trenches were located to the rear of the site, 12-22m from the street frontage. Extensive archaeological investigations have taken place immediately to the north and west of the site, identifying Late Iron Age, Roman and Saxon settlement. Many of these remain unpublished, but are summarised in Havis 1993.

The area north-west of the High Street and London Road appears to have been a centre of Late Iron Age settlement. A Late Iron Age ditched enclosure was recorded beneath Pierrefitte Way, while roundhouse gullies were identified at the Fountain and Boars Head sites (Hope 1983; 1987). Further Late Iron Age material came from College House and 2-4 London Road (Havis 1993, 61 and fig. 27), and from recent excavations at Grenville Road (Garwood and Lavender 2000).

The Roman town was established in the area of Late Iron Age settlement around Pierrefitte Way and spread north-eastwards in the 2nd and 3rd centuries (Drury 1976; Havis 1993). It appears to have remained largely confined within the south-western angle of the Roman cross-roads, represented by London Road and Rayne Road. Access to this area was provided by a series of minor roads (Havis 1993, 66 and fig. 29), and Havis's plan suggests that one of these roads, recorded by Hope (1982, 1983) at the Fountain site, crossed the present site. This road was a thin gravel metalling 3m wide, with a ditch on its south-west side, running perpendicular to the Roman London Road. It was in use in the 1st-2nd centuries, but was encroached upon by a late Roman building and had become disused by that date. In the 4th century urban life in Braintree seems to have declined, with a contraction of the settlement area.

During the Saxon period there is limited evidence of settlement and agriculture within the former town, but nothing to suggest continuing urban activity. A sunken-featured building was recorded at the Fountain site (Hope 1982; 1983), while

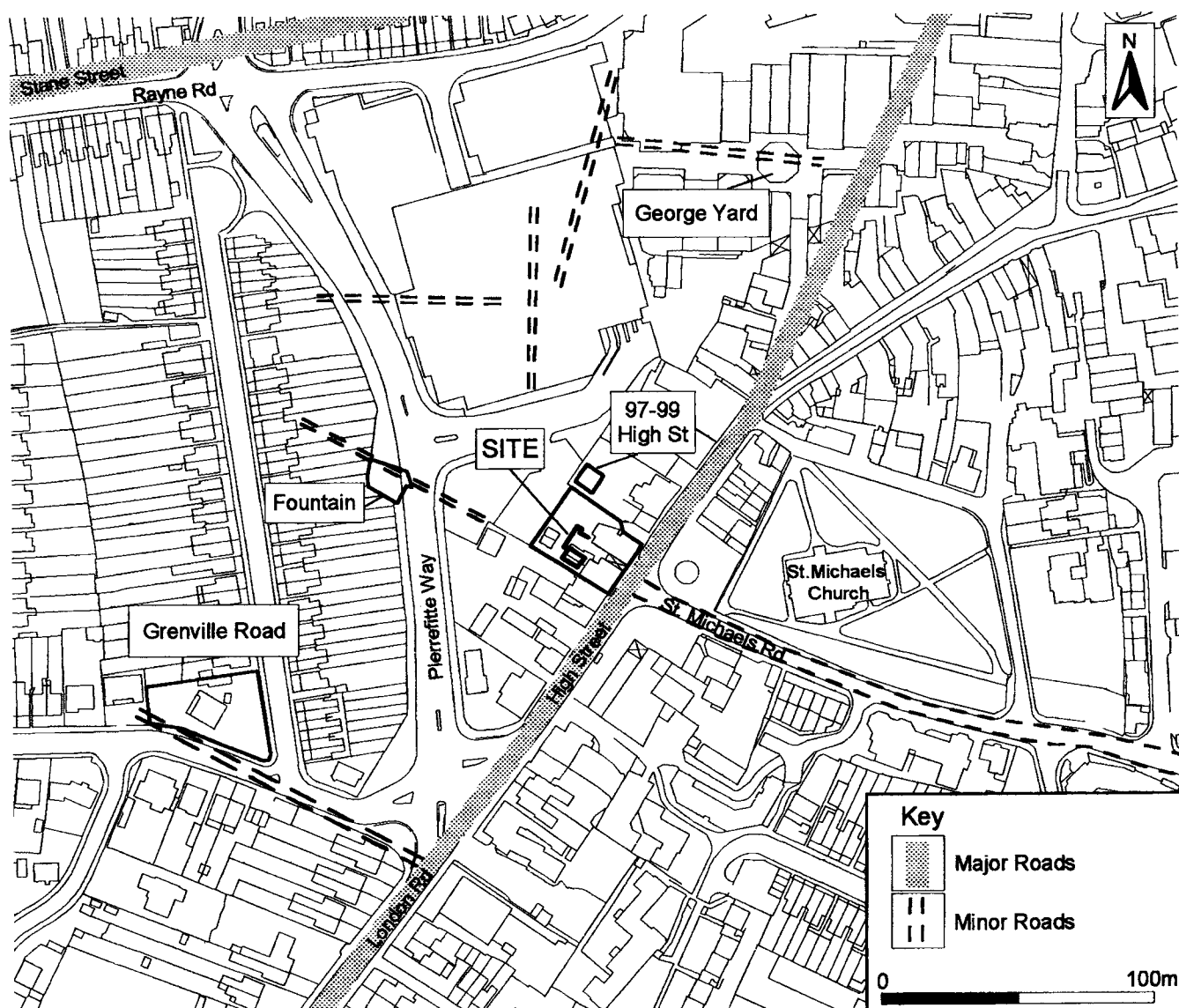


Fig. 1 Braintree, Flacks Hotel, site location and postulated Roman road pattern. (© Crown copyright. Ordnance Survey. Licence no. MC10001 4800).

elsewhere a post-Roman 'dark earth' deposit developed as a result of agriculture or horticulture.

The medieval period saw the development of a market place and tenements to the north-east of the site, at the junction of the High Street and Bank Street. Little medieval activity has been recorded at the lower end of the High Street, apart from St. Michael's church, the fabric of which contains a considerable quantity of Roman tile, probably taken from the ruins of Roman buildings on or near the site. Flacks Hotel itself contains elements of timber framing dating from the 15th century.

Excavations to the rear of 97-99 High Street, the property next door to Flacks Hotel, identified surviving deposits of Roman date (Pearson, this volume), including a yard surface and a flint wall running perpendicular to the High Street.

The excavation (Figs. 2, 3)

The uppermost 0.5m of deposits was removed by a mini-digger down to the top of the Roman stratigraphy, which was then excavated by hand, together with some areas of the overlying soil horizon, and post-Roman intrusive features. The uppermost natural deposit on site, investigated in detail in trench 1 (Fig. 3, section 1), was orange-brown sand and gravel (29a/b).

Late Iron Age/early Roman - 1st century AD (Fig. 2)

In the north of the site, ditch [45] in trench 6 appeared to be aligned east-north-east to west-south-west, and was cut through the natural topsoil and sealed by post-Roman deposits. This ditch was much larger than other ditches on the site, being around 2m wide and 0.8m deep, and could represent a major boundary. The silting-up of the ditch may have spanned the Late Iron Age and early Roman

periods, as a sherd of Late Iron Age pottery was recovered from the second fill of the ditch, a black, organic silt (49), while the gravelly fill above (46) produced an undiagnostic Roman sherd.

Roman - 2nd-3rd/4th centuries (Figs. 2, 3)

Several features of 2nd-3rd century date were identified: a large pit [25], a ditch [41], three postholes [27], [36] and [39], and a compacted surface (11) overlain by a disturbed midden layer (10). All these features were located in the west of the site, 15-20m from the High Street frontage.

Pit [25] was large, shallow and irregular, measuring 3m east-west and at least 4m north-south. It was filled with silty sand (26) and was probably a quarry pit for the extraction of the natural sand. Fill (26) produced a large amount of pottery dated to the early to mid-2nd century. The top of the fill had been disturbed by the post-Roman soil (30) and was contaminated by sherds of medieval pottery.

Overlying part of pit [25] was a brown sandy silt layer (10), which was probably a midden due to the extremely large proportion of oyster shell in its make-up. This layer extended patchily across trenches 1 and 3 into the south end of trench 5. It contained a relatively large amount of late 2nd-century pottery, but had also been disturbed by the post-Roman soil (8/9/30) and again was contaminated by sherds of medieval pottery. Beneath the midden layer (10) in trench 1 was a very thin compacted gravel surface (11), which directly overlay the natural subsoil, and extended for 4m up the line of the trench (Fig. 3, section 1). It was not visible in trench 3, presumably because of truncation by cut features (Fig. 3, section 2). The gravel surface contained no finds and is dated only by its relationship with the overlying midden (10).

Ditch [41] was only visible in trench 3 and not in trench 4 which was rather disturbed, so its precise alignment is difficult to determine. It appeared to be orientated east-south-east to west-north-west. It cut the western edge of pit [25] and was sealed by the overlying post-Roman soil (30). The pottery retrieved from this feature is broadly dated to the 3rd to first half of the 4th centuries.

Possible Roman features (Figs. 2, 3)

Posthole [39] cut through pit [25] and ditch [41] in trench 3, and was sealed by the post-Roman soil (30). Postholes [27] and [36] in trench 2 were also sealed by the post-Roman soil (30). All three of these postholes contained a small, abraded fragment of Roman pottery, which may be residual. Similarly, in trench 6, gully [68] cannot be closely dated because no finds were recovered, although it was sealed by the soil (30). This feature appeared to be aligned parallel with the High Street.

Saxon and medieval (Figs. 2, 3)

No features of Saxon or medieval date were identified, although a small amount of medieval pottery was recovered from a 0.3m thick soil horizon that overlay the Roman stratigraphy and covered the entire site. The soil (8, 9, 30) was a dark brown clayey sandy silt with charcoal flecks, containing medieval pottery dated to the 12th-16th centuries, peg tile, and residual Roman pottery and tile. The latest artefact in it was a Nuremburg token dated to 1586-1612. It was often difficult to see the interface between the soil and the underlying Roman features, suggesting some disturbance of the top of the Roman strata. The soil is a similar deposit to the 'dark earth' found over most Roman town sites, and is interpreted as a cultivated soil containing much residual rubbish and churned up earlier occupation deposits.

Post-medieval (Figs. 2, 3)

In most areas of the site the post-Roman cultivated soil (30) was overlain by a 0.3m thick layer of modern building rubble (1). This clearly cut down into the underlying soil and it is likely that any post-medieval surfaces would have been truncated. However, in trench 1 in the south-west of the site, a layer of clay with chalk and brick fragments (3, 4, 5, 7) represented an internal surface predating the modern overburden (Fig. 3, section 1). This surface sealed a small pit [15] and a soak-away [20] cutting the post-Roman cultivated soil, and was cut by a further small pit [17]. The surface and other features are undated but appear to represent a yard behind the public house, whose earliest elements date from the 15th century.

Levelling layer (77), recorded in trench 7 dug beneath the floor of the public house, contained 18th and 19th century pottery (including bowls, stoneware mugs, jugs and a possible bottle), glass wine bottles and clay tobacco pipes, a typical tavern group. Trench 7 was located in a rear part of the public house and the dating evidence gives a *tempus post quem* for an extension to the rear of the main building.

Pit [43] in trench 6 in the north-east of the site contained a little late 3rd- to early 4th-century pottery, but was cut through the post-Roman cultivated soil (30), so this material must be residual. Its stratigraphic relationships show that the pit must have dated from the 16th century at the earliest. The pit was sealed by a sequence of thinly laid surfaces of sand, gravel, and crushed brick and chalk, representing modern resurfacing of the back yard.

Well [52] in trench 5 appears to have cut the cultivated soil (30). The well was circular and was lined with flint and occasional 2-inch thick bricks bonded with a very sandy mortar; the lining

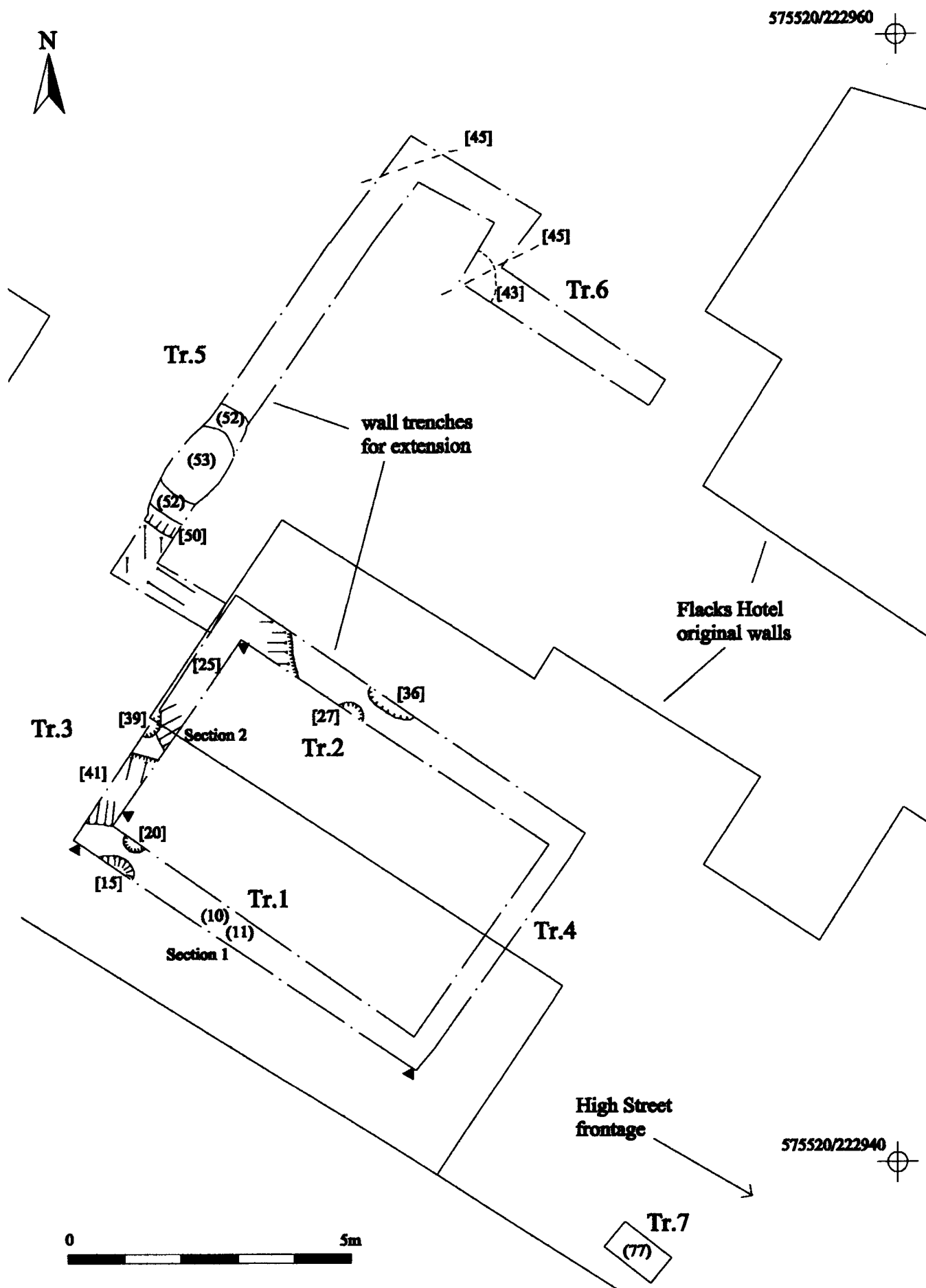
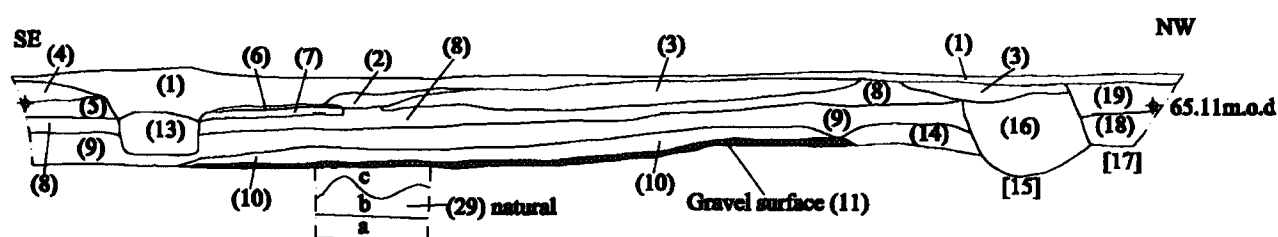
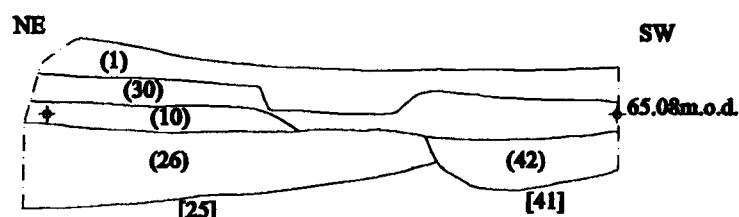


Fig. 2 Location of trenches and features.

Section 1



Section 2



0 1m

Fig. 3 Section drawings.

suggests it could have been constructed as early as the 15th century. It was deliberately plugged with clay (33), and although this backfill was investigated by augur to a depth of 3m, the primary fills were not encountered. The only finds recovered were a few fragments of roof tile. A dome was constructed over the top of the shaft, out of modern frogged bricks (55), giving a late 19th or 20th century date for its disuse.

The finds

Late Iron Age and Roman pottery

T. Scott Martin

Introduction

A total of 301 sherds weighing 3.4kg was recovered from 19 contexts, the bulk of which came from Roman features. This material was classified using the Chelmsford typology published by Going (1987, 2-54), which is standard for all Essex County Council Field Archaeology Unit projects. Analysis was primarily concerned with identifying the variety of fabrics and forms, and providing dating evidence for features and layers. Quantification was by sherd count and weight by fabric. A total of 17 fabrics was identified, as follows (numbers in bold after Going 1987):

BB2	Black-burnished ware 2 (41)
BSW	Black-surfaced or Romanising wares (45)
BUF	Unspecified buff wares (31)
COLB	Colchester buff ware (27)
COLC	Colchester colour-coated ware (1)
GRF	Fine grey wares (39)
GROG	Grog-tempered wares (53)
GRS	Sandy grey wares (47)
HAB	Hadham black-surfaced wares (35)
HAR	Hadham grey wares (36)
HGG	Highgate grey wares (37)
LRC	Lower Rhineland colour-coats (6)
NKG	North Kent grey ware (32)
RED	Misc. oxidised red wares (21)
RET	Rettendon type flint-tempered grey wares (48)
STOR	Storage jar fabrics (44)
TSG	Samian (60)

The pattern of pottery deposition

The amount of pottery recovered from the site was quite large considering the very small scale of the excavation trenches. The size of the assemblage compares well to other recently published assemblages from Braintree at Grenville Road and College Road (Martin 2000, 103-5 and tables 1 and 4). Although not as well preserved in terms of average sherd weight compared to the assemblage from Grenville Road, it is much better than that recovered from College Road. Unfortunately, the relevant data is not presented in Horsley's (1993) report on the Roman

A ROMAN SITE BEHIND FLACKS HOTEL, 103-5 HIGH STREET, BRAINTREE

pottery from sites in the George Yard area to allow further comparisons. However, future work may provide important information on the nature of Roman pottery deposition within the settlement as a whole and thus provide data from which it may be possible to examine evidence for zoning.

The bulk of the pottery (68%) came from Roman features, the most (61%) from a single pit, while a single layer accounts for a further 19% of all the pottery, so just two features provide 80% of the total assemblage. Disturbance of the top of Roman features by a cultivated soil resulted in small quantities of intrusive medieval pottery being present. This general patterning is discernible at both Grenville Road and College Road.

The pottery

The value of the assemblage as dating evidence is poor as so much of the pottery was recovered from contexts which

also contained intrusive post-Roman pottery. Indeed all but 26 sherds weighing 0.2kg were in contexts that also contained post-Roman pottery. Late Iron Age and Roman period pottery was recovered from five undisturbed features, ditches 41 and 45, and postholes 27, 36 and 39. A further 243 sherds weighing 2.7kg came from contaminated Roman contexts (layer 10 and pit 25), with just 27 sherds weighing 0.4kg from post-Roman and unstratified contexts (layer 9/30, pit 43, context 24).

The earliest excavated feature on the site may be ditch 45. This is probably 1st-century AD in date, even if the dating is not well established given that only two undiagnostic sherds were recovered from it. The remaining features appear to be mid- or late Roman in date where the pottery is sufficiently diagnostic to date contexts. The fill of pit 25 produced 199 sherds of Roman pottery weighing 2kg, although 5 sherds of intrusive

Table 1. The pattern of Roman pottery deposition.

Context type	Feature type	No. of contexts with pottery	Sherds	Wt. (g)	% Wt.	Av. Wt.
Fill	ditch	3	23	233	6.82	10.1
	pit	1	199	2091	61.27	10.5
	post-hole	2	2	3	0.09	1.5
	(fill total)	6	224	2327	68.17	10.5
Layer	-	1	49	665	19.48	13.5
Post-Roman contexts	-	2	24	404	11.84	16.8
Unstratified	-	1	3	17	0.50	5.6
Totals	-	10	301	3413	-	11.6

Table 2. The dating evidence for stratified Roman contexts with pottery.

Feature	Context	Pottery	Dating	No. of sherds
Layer 10	-	<i>Misc. pottery:</i> dishes B2/B4 (BB2), B3.2 (HAB); mortarium D13 (COLB); jars G (GRF & GRS), G - necked (BSW); beakers H24 (COLC), H - folded (BSW); flagon J (BUF).	Late 2nd century (with intrusive medieval sherds)	49
Pit 25	Fill 26	<i>Samian:</i> f37 and f18/31 type bases. <i>Misc. pottery:</i> jars G9 (BSW), G17 (GRS), G23/G24 (GRS), G - necked (GRF, GRS & BSW), G - narrow-necked (BSW), G (GROG & STOR); beakers H1 (GRS), H26 (LRC), H (NKG). Fabrics HGG, COLC, COLB & BUF.	Early to mid-2nd century (with intrusive medieval sherds)	199
Post hole 27	Fill 28	<i>Misc. pottery:</i> Fabric BSW	Roman	1
Pit 36	Fill 37	<i>Misc. pottery:</i> Fabric BSW	Roman	1
Post hole 40	Fill 39	<i>Misc. pottery:</i> Fabric BSW	Roman	1
Ditch 41	Fill 42	<i>Misc. pottery:</i> jars G40 (BSW), G (BSW & GRS). Fabrics STOR, HAR & GRF.	?3rd to 4th century	21
Ditch 45	Fill 46	<i>Misc. pottery:</i> Fabric STOR	Roman	1
	Fill 49	<i>Misc. pottery:</i> Fabric GROG	LIA	1

medieval pottery were also present. This large group appears to be early to mid 2nd-century in date. Layer 10 which overlapped pit 25 also contained a small amount of intrusive medieval pottery, but the presence of a D13 type mortarium suggests a late 2nd century date for its original deposition. The fill of ditch 41 contained material that is tentatively dated to the 3rd century or later.

Discussion

Because of the poor dating of the uncontaminated Roman features, and because all the larger accumulations of pottery appear to be from contaminated contexts, only broad generalisations about the pottery from the site are possible. The pottery appears to be typical of many Braintree sites. The bulk of the pottery appears to fall within a 2nd to early 3rd century date range (Going 1987, Chelmsford ceramic phases 3-5). A small amount of material would fit comfortably into a late 1st to early 2nd century date range (Going 1987, Chelmsford ceramic phase 2), but this is not a significant assemblage component. Compared to the recently published site at College Road, for example (Martin 2000), the only notable difference is the absence of Nene Valley colour-coat and Hadham oxidised red ware. The two sherds of grog-tempered ware from the site, one from the fill of ditch 45 (context 49) and the unstratified sherd from context 24, hint of some activity in the Late Iron Age. Only a residual sherd of Rettendon ware in the fill of pit 43 stretches the chronology of the site into the late 3rd and first half of the 4th century (Going 1987, Chelmsford ceramic phases 6-7).

Medieval and post-medieval pottery

Helen Walker

A small amount of pottery, 22 sherds weighing 404g, was excavated and has been catalogued according to Cunningham's typology of post-Roman pottery in Essex (Cunningham 1985, 1-16). Medieval pottery first appears in the sequence as intrusive material in the top of Roman features. The fill of Roman pit 25 (context 26) contained three sherds of sandy orange ware and two sherds of medieval coarse ware. These are both general categories of locally produced sand-tempered fabrics (described by Drury 1993, 81-6; Cunningham 1982, 359; and Cunningham 1985, 1). Medieval coarse ware was manufactured from the 12th to 14th centuries, and sandy orange ware has the slightly later date range of 13th to 16th centuries. The only significant sherd from this context is from an unglazed sandy orange ware bowl with an everted flanged rim. Roman midden layer 10, above pit 25, produced five sherds of medieval coarse ware including a fragment of sagging base, and a small fragment of flanged rim, either from a bowl or a cooking pot, most likely dating to the 13th to 14th centuries. Single sherds of medieval coarse ware also occur in soil layers 8 and 30. These deposits are interpreted as a post-Roman cultivated soil, and the intrusive pottery in the underlying Roman features is seen as the result of later disturbance from working the soil.

A small post-medieval assemblage (266g) was excavated from levelling deposit 77 in trench 7. Of interest is a red earthenware bowl fragment with an everted flanged rim, and an all-over cream slip-coating

beneath a clear lead glaze, which shows occasional green flecks. Slip-coated bowls and other open wares occur in the late medieval to earlier post-medieval periods, and were produced in Colchester ware (Cotter 2000, 142), and also made in south London from the late 15th to early 17th centuries (Orton 1988, 297). However, the bowl from this excavation is unusual in that the slip-coating is all over the bowl, rather than just on the internal surface. Other vessels in deposit 77 comprise sherds of salt-glazed English stoneware from rounded jugs or mugs and from part of a large jug or bottle. These are most likely to date to the late 17th or 18th centuries, but could be as late as 19th century. There is also a beaded rim from a very large post-medieval red earthenware internally glazed bowl of around 560mm in diameter. The latest datable pottery from this context comprises sherds from a vessel with a pearlware body, showing a grey glaze and brown slip band below the rim; this is an example of industrial slip ware and dates to the early 19th century (Banks *et al.* 1999).

The only other post-medieval pottery from this excavation was a sherd of unstratified Frechen stoneware, made in Rhineland Germany (from context 24). It is from the shoulder of a vessel decorated with a sprigged acanthus leaf, and probably belongs to an inscribed-band bellarmine (a type of jug) dating from c.1550 to 1600 (cf. Hurst *et al.* 1986, fig. 105, pl. 42). Bellarmine of this early date are much less common than the 17th century versions.

The small size of the assemblage makes it difficult to compare to other excavated assemblages in Braintree, although there is only one published site, Tofts Garage, that has produced a large medieval and post-medieval assemblage (Huggins 1986).

Miscellaneous finds

Ros Tyrrell and Owen Bedwin

Copper alloy

A token and a small unidentifiable fragment of copper alloy were found in post-Roman soil layer (9) and Roman pit [25] fill (26), respectively. The token was minted by Hans Schultes of Nuremburg and dates from between 1586 and 1612.

Brick and tile

Eighty-two fragments of ceramic building material, weighing 9.8kg were found on the site, of which 56% (by weight) was Roman. The Roman tile fragments were all *tegulae* (flanged roofing tile), with the exception of a single piece of brick. The Roman midden layer (10) produced the largest number of pieces. The tile was mostly of a reddish orange, well fired, sandy fabric with no other visible inclusions. None of the tiles were complete enough to be worth measuring, although some of the fragments were quite large and unabraded. There were twelve *tegula* flanges, which were classified by the Essex C.C. standard type series, six of type 1 and six of type 4, and two of these had type A1 and B7 cut-outs. Two of the *tegulae* had signatures close to the edges of the tile. These single and double arcs were probably made by the tiler in the moist clay, and are the commonest form of this type of mark. Part of a dog's paw print was also noted.

Clay tobacco pipes

Levelling (77) produced 25 pipe stems, three complete bowls and a fragment of a fourth. These three are Oswald Type 12 (1975, 37) bowls, which he suggests date to c.1730-80. They are marked 'S C' on the heel. This is the mark of the maker Stephen Chamberlain, of Colchester, 1723-1808 (Crummy 1988). Two of the bowls have internal impressed cross marks in the base of the bowl. These impressions are thought to be mould makers' marks. The cross is the commonest of the three known marks but has not previously been found on a Stephen Chamberlain pipe.

Animal bone

Owen Bedwin

This assemblage of about 80 fragments, mainly from the Roman pit [25] and midden layer (10), consisted mostly of well-preserved, unworn fragments of bone derived from the following domestic species: cattle, sheep/goat, pig, horse and chicken. The assemblage is too small to be statistically significant in terms of diet, but its generally good condition is consistent with being primary refuse derived from domestic occupation nearby.

Oyster shell

The excavation produced a total of 387 oyster shells, weighing 3.1kg. Altogether, 83% (by weight) came from the Roman midden (10); most of the remaining shell came from Roman pit [25], and a small quantity was found in Roman ditch [41]. All the material is very abraded and poorly preserved. The minimum number of shells present in the group is 173; 69 of the shells are unbroken.

Discussion (Fig. 1)

The excavation revealed further evidence of Roman settlement in the area of the High Street, along the line of the Roman road to Chelmsford and London. The post-Roman development of the site is represented by a medieval cultivated soil and post-medieval back-yard activity related to the earlier phases of Flacks Hotel.

Ditch [45] may have spanned the Late Iron Age/early Roman transition. The ditch's alignment is different from that of the Roman streets, so it may be a component of the Late Iron Age settlement that preceded the Roman town. Roman activity seems to have begun in the 2nd century, with the type of features normally associated with urban backyards, such as gravel surfaces, pits and rubbish dumps, although there is no evidence of industrial activity. Only one feature, ditch [41], suggests Roman activity extending into the 3rd-4th centuries. This is consistent with the view that during the 4th century the town contracted north-eastwards (Havis 1993, 61).

The gravel surface (11) was probably part of a yard area recorded at the adjacent excavation at 97-99 High Street (this volume, p. 80). Significantly, gravel surfaces on both sites were covered with thick rubbish deposits, and they appear to have formed an

external area to the rear of one or more buildings fronting onto the main Roman road. It is also possible that gravel surface (11) was related to the side-road recorded by Hope at the Fountain site, which is thought to have crossed the west of the Flacks site (Fig. 1). It is impossible to prove or disprove the existence of the side-road from the site evidence; both yard and road would have been surfaced in gravel and there may not have been a clear distinction between them. If a minor road did cross the site it would have been short-lived, as 2nd- and 3rd-century pits and ditches appear to have been dug across its line.

After the Roman period the site appears to have reverted to cultivation. It is possible that the cultivated soil originated in the Saxon period, but no Saxon material was recovered from the site, despite the presence of sunken-floored buildings close by. The cultivated soil contained 12th-16th century pottery and a Nuremburg token of 1586-1612.

However, the possibility of medieval development along the lower end of the High Street should not be discounted. Although Flacks Hotel, which is cellared, has destroyed most of the evidence for frontage development on the site itself, the recent identification of part of the present building as a late medieval cross-wing proves medieval occupation. Medlycott (1999, 13-14) argues that plots were developed along the entire length of the High Street by the end of the medieval period. It is suggested elsewhere in this volume (Historic Buildings Notes and Surveys) that no. 106, and the timber-framed building incorporated in Flacks, may represent a phase of medieval town planning. The post-medieval evidence was of urban backyard character, with evidence of yard surfaces, a well, pits and a soak-away.

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A Roman site at Marlborough Road, Braintree

by Maria Medlycott

The site

In the 1970s a local historian, Mr Terry Turner of Braintree, undertook a watching-brief and limited recording exercise on a Roman site discovered during building work at Marlborough Road, on the Fairview housing estate, on the north-eastern side of Braintree (Fig. 1). When he left the area in 1983, the finds and site notes were passed to Mr John Hope of the Brain Valley Archaeological Society; at this point the finds were washed and labelled. In 2000, the Brain Valley Archaeological Society passed the archive on to the Essex County Council Heritage Conservation Branch in order to progress the publication process. This report is a synthesis of the evidence based on the site notes and the finds. The pottery was examined and spot-dated by T.S. Martin of the Essex County Council Field Archaeology Unit. The more unusual items will be placed in Braintree Museum, as will the written archive; the remainder of the ceramics have become the basis of the Braintree Museum and Essex County Council handling collections. In addition to the Roman site, Christine Couchman (then of the Essex County Council Archaeology Section) excavated and published two prehistoric pits on the site in 1976, one Neolithic and one Middle Bronze Age (Couchman 1977).

The Marlborough Road site is located c.1.3 km to the east of the small Roman town of Braintree and about 400m to the north of the main Roman road of Stane Street (A120) which led to Colchester (Fig. 1). It is located on the break of slope on the southern side of the Blackwater river valley, being set along the spring-line and flanked to east and west by alluvium-filled water-courses, at least one of them spring-fed, which drained down into the Blackwater.

The nature of the site records means that it is only possible to offer a generalised interpretation, as it was not possible to link the finds to the features (Fig. 2). However the excavator considered that at least two timber-framed Roman buildings were present. The easternmost of these he noted as having an *opus signinum* floor; however the site plan shows this as a mortar layer, which in places

was packed down on top of rubble forming a floor surface, whilst in other areas it appears to have been a bedding layer for tiles. A hearth formed from broken *tegulae* embedded in mortar was recorded. This building appears to have been defined by eaves-drip trenches; alternatively these features may represent robbed-out wall foundations. The evidence for the second building consists of a number of lengths of wall-trench, of a form typical to the Braintree area (Drury 1976; Havis 1993). These were straight-sided, flat-bottomed trenches, approximately 0.5m wide, which would have held the cill-beam for a timber-framed superstructure. Burnt daub, plaster, mortar, floor and roof tiles, unmortared box flue tiles, a single tessera, iron T-clamps, nails and window-glass were all noted.

In addition there were a number of rubbish pits, containing domestic rubbish, charcoal and fire-cracked flints. One portion of the western watercourse contained a sharpened stake, which had anchored a length of woven wattle, perhaps placed to consolidate the stream edge. A number of ditches were also recorded, two of which drained into the western watercourse. There were two large depressions (up to 20m in diameter), which may have been cut as sand or gravel extraction pits; they had been back-filled with domestic debris in the Roman period.

The pottery (approximately 100 kg) suggests that the site was founded in the 1st century AD, thrived throughout the 2nd and 3rd centuries before being abandoned or declining sharply in the earlier 4th century. It comprised local wares, regional imports from the Nene Valley, north Kent, Colchester, London and a few Hadham wares, as well as foreign imports in the form of hunt cups, Samian and amphora from the Lower Rhineland, Gaul and southern Spain respectively. The range of forms includes jars, dishes, bowls, cups, flagons, bottles, an unusually high number of platters and lids, as well as cooking vessels, storage jars, mortaria and amphorae. The range and quality of the material suggests a reasonably high-status site.

The other finds included box-flue tile, which showed evidence of scorching, some *tegulae* and

A ROMAN SITE AT MARLBOROUGH ROAD, BRAINTREE

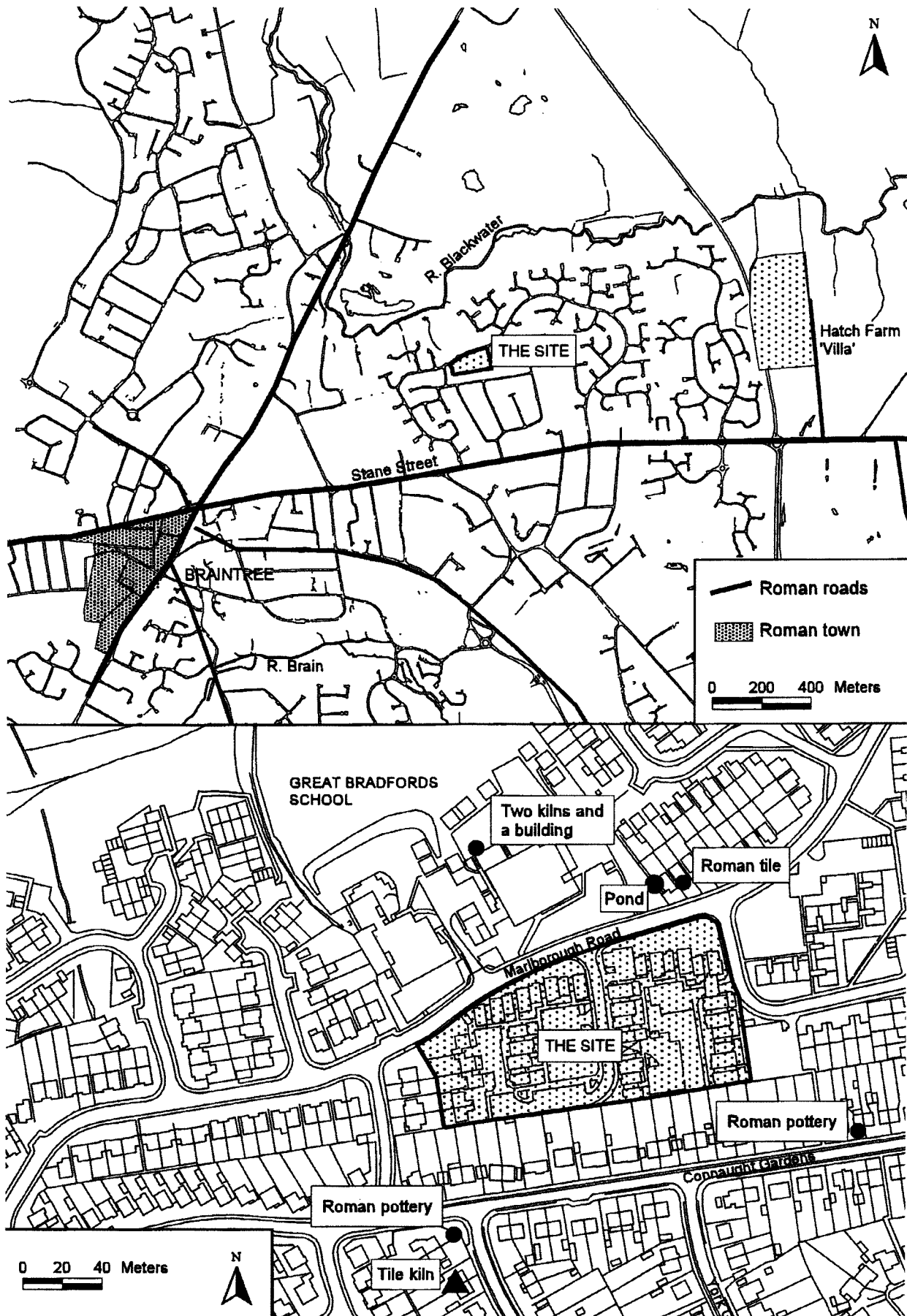


Fig. 1 Marlborough Road, Braintree. Location plan. (© Crown Copyright. Ordnance Survey. Licence no. MC100014800).

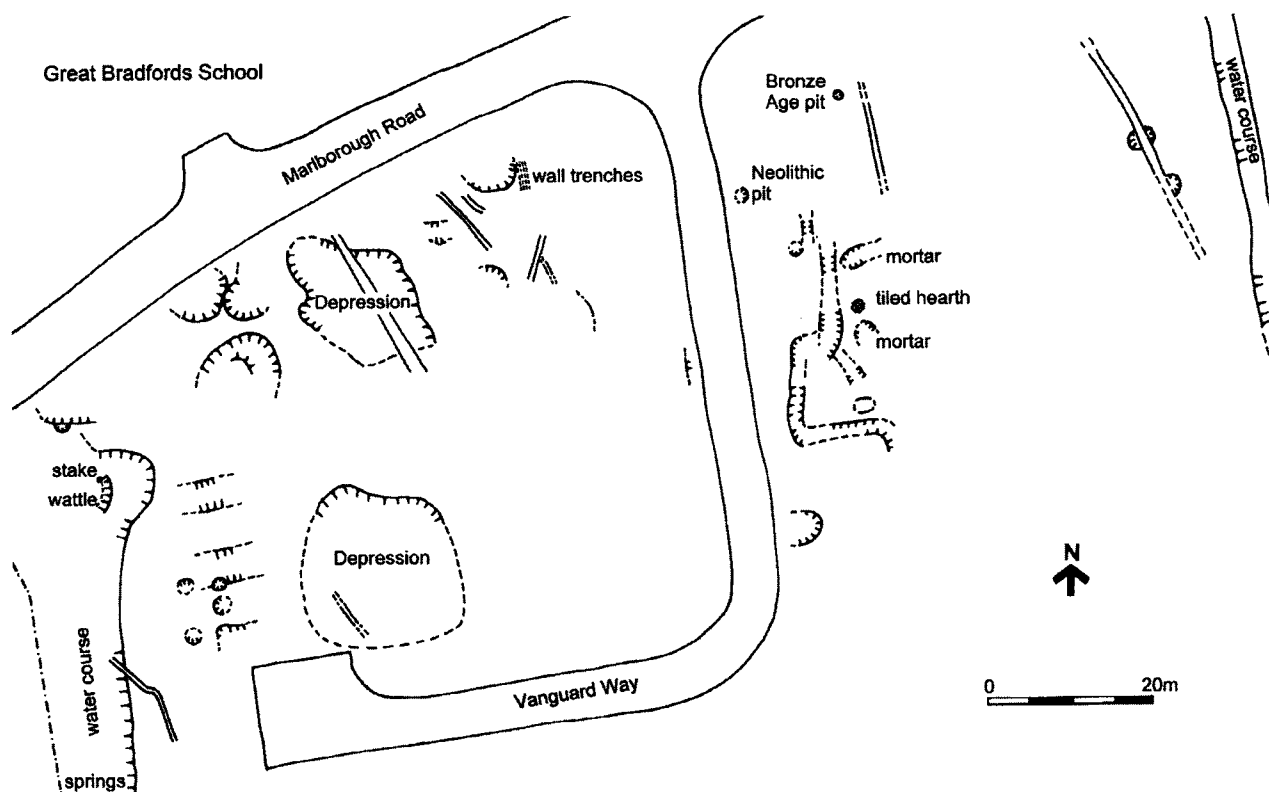


Fig. 2 Site plan for Marlborough Road.

imbrices, glass, a small quantity of building stone, fragments of lava and pudding-stone quern, a whetstone, a coin of Tetricus (AD 270-3) and a bronze and iron fitting. In addition, the excavator's notes list a terret and a sestertius of Hadrian (AD 134-138); neither can now be traced.

Archaeological context

It is clear that the Marlborough Road site formed only one part of a much larger Roman complex (Drury 1976, site 38). 120m to the south-west, the remains of a Roman tile kiln were observed in 1966 during the building of a housing estate. The remains survived to a height of about 4 ft, 'it must therefore have been built in a pit' (Drury 1976). There was much vitrified tile and burnt clay but no further details of the kiln could be recorded. Wasters in Braintree Museum include a bonding tile, a distorted tegula and burnt clay lumps. Roof and box-flue tiles had previously been found on the site in 1960. Roman pottery was found immediately to the north of the kiln site in 1970. Observations made during building work at Great Bradfords school noted evidence for a Roman building and two kilns. A watching-brief on the cutting of a water main on the eastern edge of the school grounds in 1975 revealed a Roman feature some 11m long and 1.5m deep below the present surface, filled with layers of grey silt and very dark organic material,

and containing several large pieces of *tegula*. This seems to have been a shallow pond or water-filled depression. Trial-trenching in the south-east corner of the school revealed four undatable postholes, one undatable stakehole, and several areas of modern disturbance. Two small abraded sherds of Roman pottery and a few fragments of Roman tile were also discovered in modern contexts. Approximately 60m to the south-east of the Marlborough Road site schoolgirls in 1961 unearthed 'upwards of 40lb. of Romano-British pottery' on a field which was part of Great Bradfords Farm; this site was inspected by M. R. Hull of Colchester Museum (Drury 1976). Taken as a whole the evidence suggests the presence of a substantial farmstead or villa site, with at least three buildings and a range of other features, including an industrial component in the form of the tile kiln.

Approximately 1.3km further to the east and 400m to the north of the main Roman road is a second possible villa site at Hatch Farm (Drury 1976). A number of trenches were excavated in 1949 by Major J.G.S. Brinson at Hatch Farm: these located a shallow ditch, pond and possible gravel surface. The pottery was largely of 3rd to 4th century date, with some 2nd century or earlier ceramics also present. The discovery of numerous fragments of Roman tile, box-flue tiles and tesserae

indicates the presence of a Roman building on the site.

The spatial distribution of the Marlborough Road and Hatch Farm sites is of interest. They are located at 1.3km intervals, from the Roman town to Marlborough Road and from Marlborough Road to Hatch Farm, and both sites are also sited c.400m to the north of Stane Street. This pattern repeats itself down the valleys of the rivers Brain and Blackwater as well as the smaller Cressing Brook valley. Here the villas/large farms are all sited along the crest of the valley-slope at the junction of the boulder-clay and the river-gravels, which also forms the natural spring-line. The spacing of the Roman sites along the Brain valley is of interest also, averaging a distance of between 2 and 2.8km (1.5-2 Roman miles) between sites. Marlborough Road and Hatch Farm may have been more closely spaced due to greater constraints on land, or a greater density of settlement, in the immediate proximity of Braintree town.

Roman pottery of intrinsic interest

T.S. Martin

A total of 74 sherds representing nine vessels recovered from the site are worth detailed attention because of the range of decorative motifs represented (Fig. 3). All of the sherds under consideration probably date to very end of the 1st or to the early 2nd century. Apart from vessel No. 1, most of the sherds are in poor condition and few of the vessel forms can be identified with any real certainty. However, where identifiable, the bulk of the forms are imitation of common samian forms. All of the vessels described are relatively rare site finds, although they are widely distributed throughout south-eastern England.

Vessels with stamped decoration

1. Bowl loosely imitating Drag. 29 with two bands of alternating ring and block stamp decoration. The decoration is made up of ring stamp resembling, but not directly paralleled by Rodwell's R2.9 and block stamp B21 (Rodwell 1978), and is set between cordons. Some of the cordons were clearly made after the decoration was applied as these cut through several of the stamps. The ring stamps were applied left to right as the next stamp always overlaps the previous on the right-hand side. This suggests that the block stamps were applied first, with the size of the zone for the ring stamps being dictated by the size of the block stamp.
2. Bowl probably loosely resembling Drag. 37 in a soft, fine grey fabric. The exterior surfaces are abraded. A band of notched rouletting is set between zones of ring stamps that correspond to Rodwell's R2.5. These stamps are linked by a scored line made after the stamps had been applied as in several instances the lines cut across part of the ring stamp. The

vessel falls within Rodwell's Group 4C. A vessel in Rodwell's corpus from Colchester is a close parallel (Rodwell 1978, fig. 7.13, no. 101).

3. A second vessel similar in form to No. 2, but in a grey-brown fabric with red-brown interior. The ring stamps are comparable to Rodwell's R2.11 and a number of these are not linked by incised lines. The overall scheme is comparable to Group 4B vessels, however.
4. Fragment of a bowl imitating Drag. 29. Dark grey fabric with black-surfaces. The decorative scheme comprises two types of ring stamp. The first, which is not recorded by Rodwell, comprises a single circle, while the second comprises two concentric circles with a raised dot in the centre.

Vessels with compass inscribed semi-circle decoration

5. The rim of an imitation Drag. 37 bowl in a red fabric with black surfaces. There is also pale grey core. The inscribed semi-circles are large and deeply scored. There are suggestions that combed decoration led from the semi-circles downwards towards the base.
6. The top portion of an imitation Drag. 27 cup.

Miscellaneous vessels

7. Carinated bowl with combed wavy line decoration in a fine grey ware. There is a band of rouletting just below the carination. This is presumably a local product.
8. Rim sherd, probably from a bowl, in a fine grey ware. There are traces of a possible block stamp just below the cordon.
9. Body sherd with fine barbotine dot decoration (not illustrated). The silvery external surface suggests that this could be a Highgate Wood product.

Discussion

The significance of the range of vessels presented here is that they are decorated with a variety of motifs that fall into a relatively narrow date range. Decorated coarse wares are a rarity in any period making the quantity of examples recovered from the Marlborough Road site noteworthy in itself. The range of motifs represented is fairly wide and includes block stamps, compass inscribed semi-circles, combed wavy lines and fine dots applied en barbotine. The latter is the most common and warrants no further comment. Early stamped wares are known from antiquarian explorations in Braintree. The Kenworthy collection contains three vessels in this category (cf. Drury 1976, fig. 45.102, 103 and 104). However, these vessels are unprovenanced. All of these vessels are included in Rodwell's corpus (nos. 14, 100 and 60 respectively) as well as a further vessel in Braintree Museum (corpus no. 40), which is also lacks provenance. The Marlborough Road examples provide a useful addition to the corpus of known examples from Braintree. Little work has been done on the incidence of combed wavy line motifs on Romano-

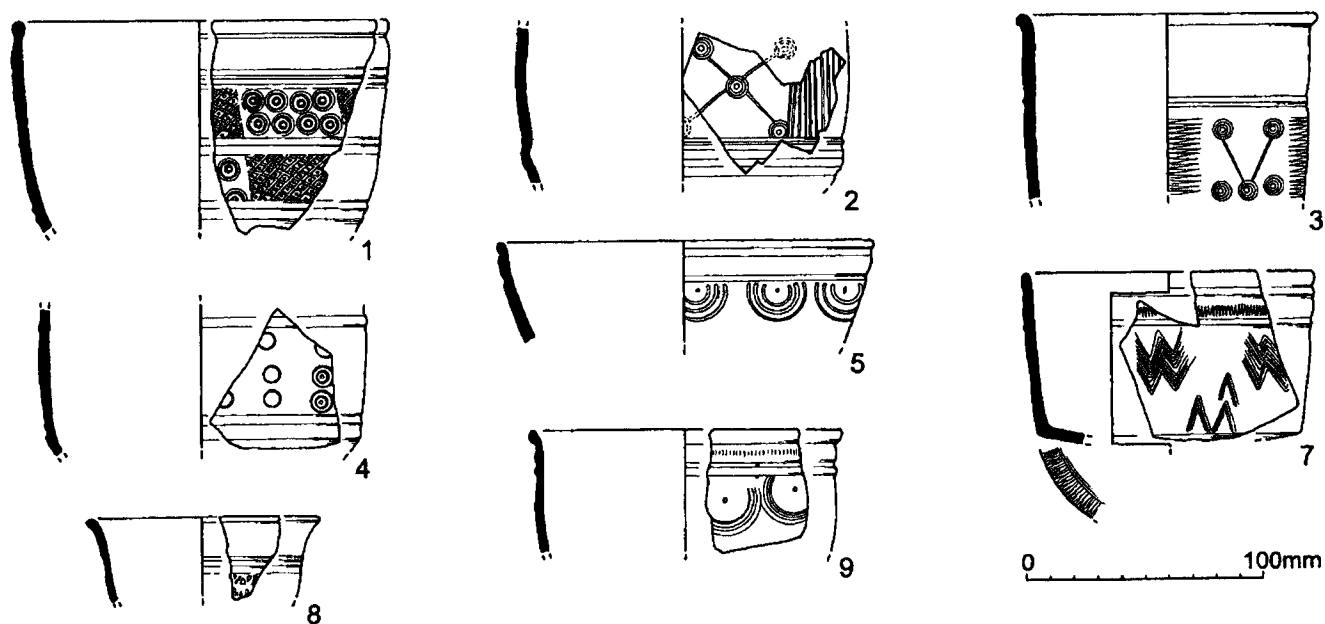


Fig. 3 The pottery.

British pottery. However, they appear to have a relatively wide date-range and are not exclusive to the early Roman period.

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A Roman agricultural landscape at the Old Golf Course site, Mill Hill, Braintree

by Ron Humphrey

with contributions by B.J. Precious, F. Raymond, T.P. Smith, K. Stabler, A. Wardle, S. Warman and F.C. Wild

This excavation revealed a single Middle Bronze Age pit, an undated, but probably prehistoric, ditch, and part of a field system of Late Iron Age and Roman date. The Late Iron Age and Roman activity on the site spanned the 1st to the 4th centuries AD. No direct evidence for structures or buildings was found but the ditches contained a large quantity of pottery and other occupational debris. The field system appeared to continue to the west, north and east of the excavated area. It is probable that rural Roman occupation associated with the field system was located on the higher, flat ground to the east.

Introduction

The excavation was carried out by AOC Archaeology Group during January and February 2000 on behalf of Course Design Ltd, prior to housing development. This followed an evaluation in May 1999 by AOC (Cavanagh 1999). The excavation area (c.1.2ha) was targeted on archaeological remains located during the evaluation in the north-east section of the development site, which lies on the south-east side of Braintree, centred on national grid reference TL 768 220 (Fig. 1). The site was located on the west-facing slope of the Brain valley at between 50.5m and 54.7m OD. The ground slopes more steeply to the west of the excavated area, towards the River Brain, which is 0.12km distant. The ground levels off immediately east of the excavated area. The natural deposits were variable across the site, consisting mainly of Boulder Clay with areas of sandy gravel, sandy silt and clean sand.

Archaeological background

To the north-west of the site, in the base of the valley, evidence for multi-period occupation was reported in the 19th century by Kenworthy (Drury 1976). This included a collection of worked flints dating to the Mesolithic period, Bronze Age flint work and pottery, Early and Middle Iron Age pottery, Roman pottery and building material (indicating the probable presence of a Roman structure in the immediate vicinity), and 12th century pottery. Undated finds included a considerable quantity of bone, amongst which were the frontal bones from a human skull.

Braintree itself was one of the Roman small towns of Essex, situated on the main east-west route of *Stane Street*. There is also evidence for Late Iron Age activity on the site of the later Roman town, including a ditched enclosure containing round houses. The Roman town has been identified by the limits of find spots and appears to have occupied a triangular area between the Roman roads of *Stane Street* (Rayne Road) and the Sudbury to Chelmsford route (London Road), some 1.75km to the north-east of the excavation site.

The archaeological evaluation of the old golf course site consisted of 17 trenches (Fig. 2), four of which contained significant archaeological deposits. The results of the evaluation are incorporated into this report.

Period I. Earlier prehistoric (pre-Middle Bronze Age)

The earliest evidence for activity within the general area of the site was from a few stray finds of worked flint tools and debitage. These were largely undiagnostic but are indicative of both Mesolithic and later prehistoric activity.

Period II. Middle Bronze Age

A single, small, isolated pit (1070) of Middle Bronze Age date was located in the south-west part of the site. It was sub-oval and was filled with a mid yellow brown silty clay, which contained a large quantity of pottery sherds from a Bucket Urn. As the sherds were scattered throughout the pit and there was no trace of cremated bone, it seems unlikely that this was a burial.

A shallow, undated ditch (1030, 1038), which ran east-west for over 26m, 10m to the north of the Middle Bronze Age pit, may also be of this date. The eastern and western extents of this ditch were unclear. It was filled with a leached, green-brown, silty clay. The leached appearance of the fill (contrasting with many of the Roman feature fills on site), combined with the lack of later finds from it, may suggest that this ditch was of prehistoric, possibly Middle Bronze Age date. However, it may have been a field boundary ditch of almost any later period.

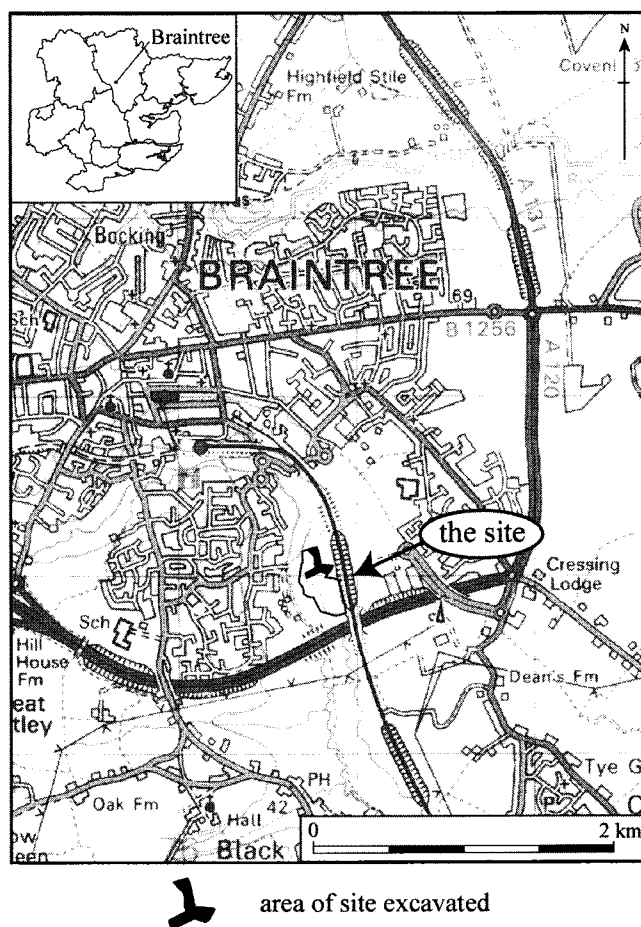


Fig. 1 Braintree, Mill Hill, Old Golf course site, location plan.

Period III. Late Iron Age and Roman

The majority of the archaeological features were dated to the Late Iron Age and Roman period. The features were broadly dated by pottery, from the 1st to the 4th century AD, and were limited to the central and northern parts of the site. Pottery of Late Iron Age date was relatively rare, although there were a number of simple-rimmed, hand-made vessels in grog-tempered ware that were present within contexts which also produced Roman pottery. There were also several large fragments of triangular-shaped loom weights in a red-brown fired clay, which attest to the presence of Iron Age occupation. The pottery assemblage consisted of large amounts of fragmented body sherds from grog-tempered wares, which were produced in this area from the Mid to Late Iron Age period into, at least, the early 2nd century AD. It is not always possible to distinguish in the hand those vessels of purely Iron Age date and therefore the true extent of Late Iron Age occupation is difficult to assess. This is borne out by the archaeology, which suggests that most of the features on the site are of Roman date.

The archaeological features were scattered and generally difficult to interpret. It is probable that

the Roman activity continued to the east, onto the higher, flat ground beyond the proposed development area and is related to rural Roman settlement, given the quantities of finds recovered. No obvious buildings or structures were revealed within the area of excavation.

1st to early 2nd century AD

Large boundary ditches

The central area contained a large north-west to south-east aligned boundary, which ran for over 55m and consisted of a sequence of intercutting ditches. An L-shaped ditch was located to the east of the boundary and appeared to be part of the same system. The pottery recovered from this ditch system dates it broadly to the later 1st century AD. The fills of the ditches indicate that they silted naturally as they went out of use, incorporating material from nearby Late Iron Age and Roman occupation and activity. A number of sections were excavated across the intercutting ditches, which allowed the main elements of the system to be followed across the site. The ditches probably delineated fields and had been recut and remodelled numerous times so that the extent of several of the ditch cuts identified in the excavated sections could not be determined.

The earliest elements of this system were, on stratigraphical evidence, north-west to south-east aligned ditches (1066), (1051) and (1071, 1086). Ditch (1071, 1086) ran for over 34m across the site to the limits of excavation, but ditches (1066) and (1051) could only be identified for short lengths as they were obscured by later recuts of the ditch system (Figs. 3 & 4). Ditch (1071, 1086) diverged from the boundary alignment at its south-eastern extent. The eastern excavated section of this ditch contained a single fill with three sherds of pottery dated as 2nd to 3rd century, which were probably intrusive to the context. The western excavated section contained a moderate quantity of pottery dated as mid to late 1st century within the lower fill and a few sherds of the same date in its upper fill. Ditches (1066) and (1051) both had a terminal at the south-east end. The fill of (1066) contained a few sherds of undiagnostic Roman pottery and the fill of (1051) contained a moderate quantity of pottery dated as 1st to 2nd century AD.

Ditch (1066) was truncated by ditch (1064), which was only identified in section and was itself heavily truncated. It contained a few sherds of pottery dated as 1st to early 2nd century AD. Similarly, ditch (1051) was truncated by undated ditch (1053), which was also only seen in section. The L-shaped ditch (1011, 1015, 1034, 1106) truncated ditch (1064). It had a terminal at the south-east end and ran into the limit of excavation to the north-east. A large quantity of pottery was recovered from the ditch with a collective date range of late 1st to early 2nd century AD.

The main length of boundary ditch (1023, 1055, 1080, 1099) truncated the L-shaped ditch (1011, 1015, 1034, 1106), ditch (1071, 1086) and ditch (1053). It ran for over 55m to the limit of excavation at the north-west end and terminated at the south-east end of the site. The depth of the ditch varied along its length: the central part was excavated much wider and deeper, possibly as a response to drainage needs. The fills contained a large quantity of



Fig. 2 Braintree, Old Golf Course site, evaluation trenches.

pottery dated as late 1st to early 2nd century AD. The uppermost fill of segment (1086) of this ditch contained a moderate quantity of pottery that dated the context to the mid 2nd to early 3rd century AD suggesting that the upper part of the ditch silted at this date.

Ditch (1020, 1059) truncated ditch (1/012, 1023, 1055, 1080, 1099) and was identified at the south-east end of the main boundary where it terminated. It contained a large quantity of pottery dated as mid to late 1st century AD. Ditch (1081) also truncated ditch (1/012, 1023, 1055, 1080, 1099) and was recorded towards the north-west end of the main boundary. A terminal was identified at its south-east extent; its north-west extent was unclear. It contained a large quantity of pottery dated as mid 1st century AD.

Smaller ditches

Two short lengths of ditch (1049), (1084) were located 12m north of the main boundary ditch. These were aligned north-east to south-west and ran parallel to each other, 4m apart. Both had clearly defined terminals at either end and both contained a large amount of pottery dated as 1st to early 2nd century AD. These may be drainage ditches for a structure or activity area of which no other elements were preserved.

Other features

Two pits (1061) and (1018) were dated to the 1st to early 2nd century by pottery. Pit (1061) truncated ditch (1064)

and was small and oval and contained three fills of dumped debris, which included a moderate quantity of pottery and charcoal. Pit (1018) was irregularly shaped with gradually sloping sides and a sloping base and was filled by a yellow brown clay silt with frequent inclusions of large flint nodules and a few sherds of pottery. The function of this pit is uncertain but the presence of the flint nodules may suggest that the feature was actually a form of drain, possibly part of a structure of which no other trace survived.

A large feature (1/017) was recorded in evaluation Trench 1 and was originally thought to be a pit or ditch terminal. A moderate amount of pottery dated as late 1st to early 2nd century AD was recovered from its upper fill. On excavation, this feature was found to be a silt filled depression of natural origin. There were a number of similar features in this area of the site. It is possible for such features to act as catchment areas for archaeological finds that have worked down through the soil profile through bioturbation. Five coins spanning the 1st to 4th centuries AD were recovered, using a metal detector, from similar natural silt patches (1002) in the central western part of the site (see Coin Report).

A scatter of undated pits and postholes (1008), (1025), (1036), (1048), (1040), (1044), (1046), (1042), (1079), (2/006) were located within the central and south-east part of the site. These were generally small and sub-circular or sub-oval. Pit (1036) was filled with dark grey to black silt and charcoal with occasional burnt stones. Pit (1048) was filled with black ash and charcoal with occasional burnt stones. Neither of these pit fills appeared to be burnt *in situ*, but may have been dumps of hearth rakings. Several of the pits (1040), (1042), (1044), (1046) and a possible posthole (2/006), were located to the north of the main boundary ditch (see above) and it is possible that these were natural depressions rather than cut features.

2nd century AD

During the 2nd century AD, the field system in the central and eastern part of the site appears to have gone out of use. The focus of activity seems to shift to the northern part of the site where ditches probably representing another field system or paddock enclosures were established. These features were much less substantial than the earlier boundaries. The central part of the site was not entirely unused during the 2nd century as two pits of this date were recorded here.

Ditches

Several short lengths of ditch were located at the north end of the site. These were dated as 2nd century AD by pottery and appear to be elements of a ditch system on a north-west to south-east and north-east to south-west alignment, which was separate to the ditch system located in the central and eastern part of the site.

Ditch (1109, 1111, 3/020) was aligned north-west to south-east and ran for 22m with a clear terminal at the north-west extent and an unclear terminal at the south-east extent. It had silted naturally, as had all the ditches in this area, and contained a moderate amount of pottery with a collective date of 2nd century AD. Ditch (1121, 3/010) was located 10m to the north-west of ditch (1111,

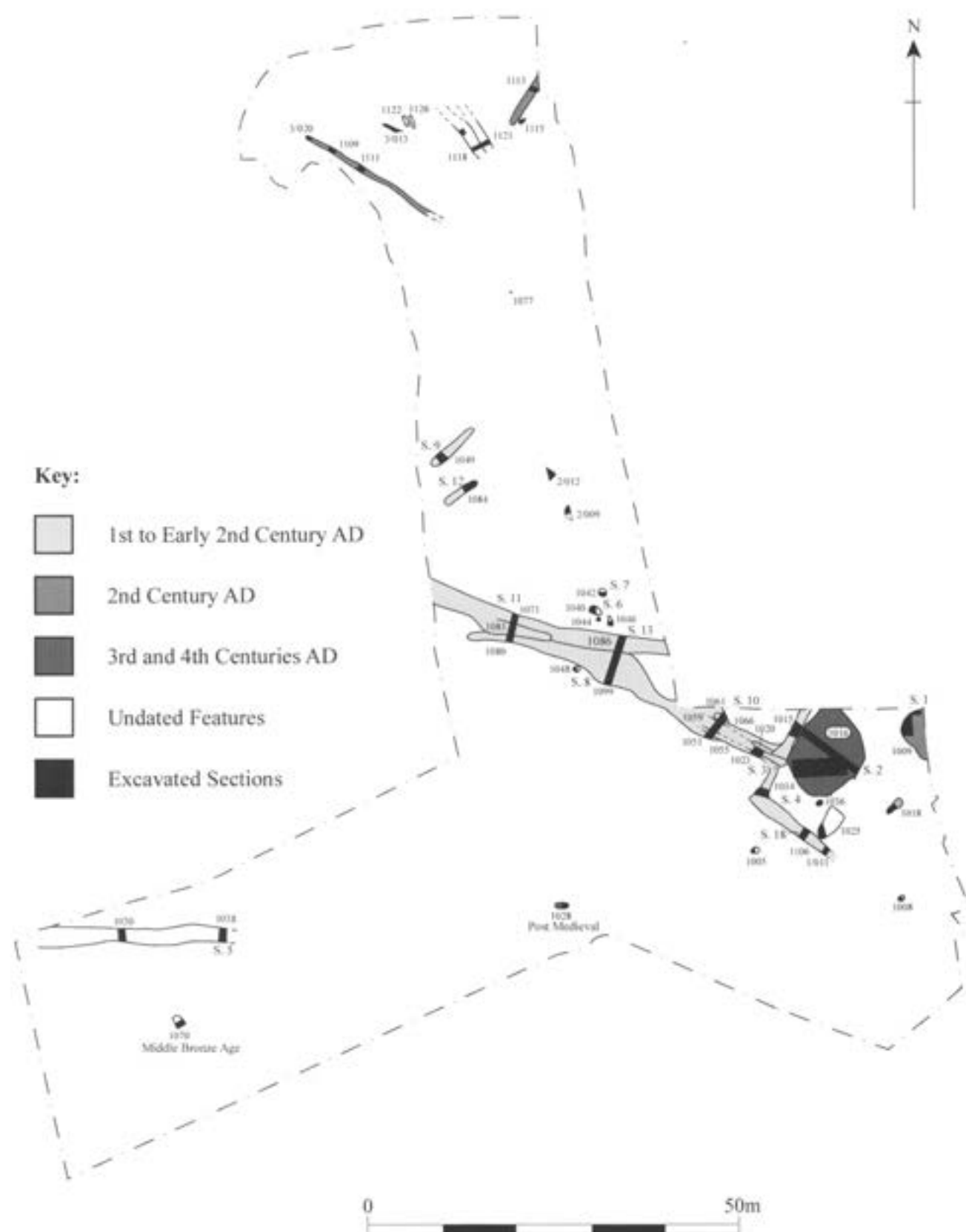


Fig. 3 Braintree, Old Golf Course site, plan of features.

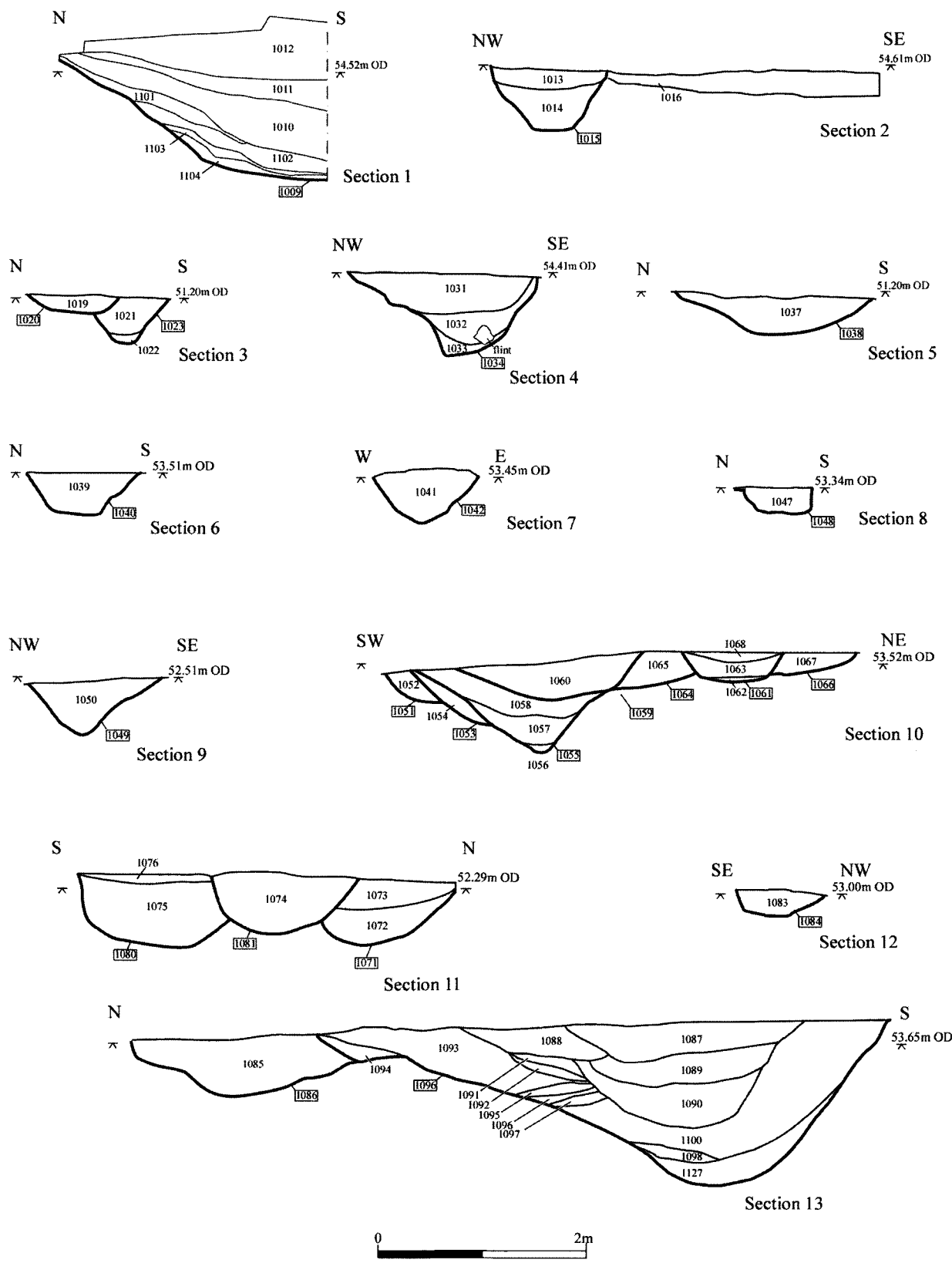


Fig. 4 Braintree, Old Golf Course site, sections.

1109, 3/020) and ran almost parallel to it for 8m. It also contained a moderate quantity of pottery dated as 2nd century AD or later. This ditch was recut on the south-west side by ditch (1118, 3/008), which was a similar size and shape and ran on roughly the same alignment. Ditch (1118, 3/008) only contained a few sherds of residual Late Iron Age/Early Roman pottery.

Ditch (1113, 3/005) ran at 90 degrees to the above ditches, to the limit of excavation. It had a terminal at the south-west end and contained a moderate quantity of 2nd century AD or later pottery.

Poorly dated/undated features at the north end of the site
Several features in this category were located around the 2nd century AD ditches in the northern part of the site. Pits (1122, 3/015), (1126, 3/017) and (1115) were small, shallow and oval or elongated oval in plan. Pits (1122, 3/015) and (1120, 3/014) were undated; pit (1126, 3/017) was filled with dark grey/black silty clay with frequent charcoal inclusions, which was probably dumped, burnt material. Pit (1115) contained a single sherd of undiagnostic Roman pottery. Post holes (1124) and (1077) were small, circular, undated and isolated. A small, undated gully with stake holes along its base (3/014) was recorded in evaluation Trench 3 in the north part of the site. This was interpreted as possibly having held a hurdle fence. This feature was not seen during the main excavation, despite careful cleaning to locate it, and it is possible that it was actually of natural rather than human origin.

Pits

Small pit (1006) of unknown function had a lower fill of black charcoal and silt and an upper fill of mid yellow brown clay silt, which contained a very small amount of 2nd century or later pottery. A large, possible quarry pit (1009) was located at the east limit of excavation. It was sub-circular/oval with steeply sloping sides and was filled with a succession of seven dumped and silted fills, including bands of redeposited natural orange and yellow silty clay. The earliest fill to contain datable finds was the fourth fill, which contained pottery dated to the 2nd century AD. Three other fills contained moderate amounts of pottery; the pottery recovered from the upper fill was dated as 3rd to 4th century AD, suggesting that this large feature was still partially open to this date and acting as a catchment for general occupation debris.

3rd and 4th centuries AD

A large but relatively shallow depression to the east of the L-shaped ditch (see above) was filled by clay silt (1016) and may have been a wear related depression, which subsequently silted. It contained a large amount of pottery dated as 3rd century AD and later. A single, small, oval pit (2/010) was located north of the main boundary ditch. It contained a single sherd of pottery dated as mid 2nd to 3rd century AD. Adjacent to this pit was an irregular feature interpreted as a burnt out tree stump (2/012). It was filled by a brown grey silty sand with lenses of red sand and occasional charcoal pieces, which contained a small amount of pottery dated as 2nd to 3rd century or later.

The dating of the latest activity on site is suggested by the pottery (the date range of some extends into the 4th

century), along with the recovery of two coins of late 3rd-century, and two of 4th-century date (the latest probably Decentius, c.351, see Coin Report). However, they were recovered from ditch (1077) and natural silt patch (1002) where their presence is likely to be intrusive.

Period IV. Post-medieval and modern

A single, small, isolated post-medieval pit of unknown function (1028) was located in the southern part of the site. It contained post-medieval roof tile and slate. The excavation also revealed three large WWII bomb craters (not shown on plan), which had been filled with local industrial soot and cinders (information from a local resident).

The finds

The prehistoric pottery

Frances Raymond

A small assemblage of Middle Bronze Age pottery (83 sherds) was recovered from a single pit (1070). The sherds are part of a Bucket Urn with a raised horizontal cordon, made from a fabric tempered with crushed burnt flint and a slightly micaceous sand (Fig. 5). The cordon is decorated with fingertip impressions and the body of the vessel carries a series of complex motifs composed of fingernail impressions. The style of decoration is typical of the area, being broadly reminiscent of the Ardleigh Urns. The sherds are in good condition. Eleven flint-tempered sherds, the majority very abraded, were also found within residual Roman contexts. These are also probably of Bronze Age date.

The Roman pottery

B. J. Precious

The pottery has been recorded according to the Study Group for Roman Pottery (SGRP) guidelines, using codes currently in use at the Museum of London Archaeology Services (MOLAS), and sherd count as the principle measure. In order to determine the fragmentation of the Roman pottery, weight has also been used as a measure. A small number of fabrics or forms have been identified as probable rather than certain. These have been upgraded to certainties within the tables used in the text to provide more concise and viable statistics.

Introduction

The site produced 2370 sherds weighing 28,500 grams, including 94 sherds of prehistoric and 2 sherds of post-medieval ware. Ceramic evidence suggests that there was activity on the site from the Middle Bronze Age to the 18th century AD. Most significantly, there is evidence to suggest that there is a ceramic *continuum* from the Late Iron Age into, at least, the early 2nd century AD. This clearly

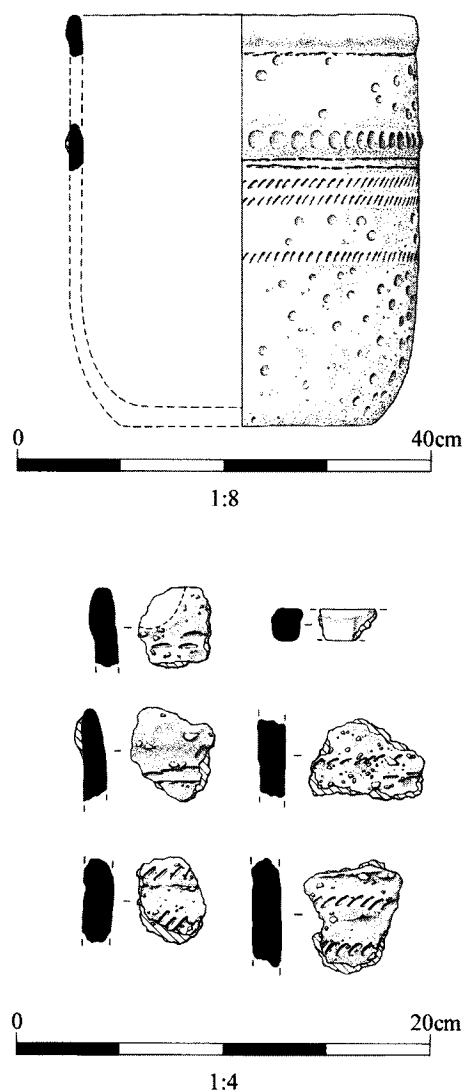


Fig. 5 Middle bronze Age bucket urn.

includes the period of the Roman Conquest, and this assemblage provides crucial evidence for the interface between two different ceramic cultures.

A relatively high proportion of the pottery is either abraded or very abraded grog-tempered wares, but also present are some samian, sand-tempered and oxidised wares. It is unclear as to whether this is a result of taphonomic processes or possibly soil conditions. Several single vessels, mainly from the L-shaped ditch, had been smashed into small fragments. On the whole, the sherd/weight ratio is low with the average sherd weighing only 12 grams. Nevertheless, the size and range of the assemblage, together with the concentration of early Roman pottery, provides valuable evidence for the manufacture and trade of ceramics during this period.

There are several sherd links between contexts from the same feature, but very few from unrelated features. It seems that the deposition of the Roman pottery occurred as discrete events, and within relatively discrete phases. Bearing this in mind, the Roman pottery assemblages from related features have been combined into 'ceramic groups' (CGROUP). Apart from fills of the main boundary and L-shaped ditches, the groups consisted of too few sherds to provide reliable statistics; therefore they have been combined into 'macro-groups' (MGROUPS) of comparative size, date and function.

Dating

Pottery of exclusively Late Iron Age date is rare, although a number of simple-rimmed, hand-made vessels in grog-tempered ware are present within contexts that also produced Roman pottery (for example, Fig. 11, 2 and 4-6). Some of these vessels are campanulate in shape and others have multiple cordons, similar to vessels of gallo-belgic tradition. They are often highly burnished or have combed decoration, both typical of Late Iron Age pottery in this area. Several large fragments of triangular shaped loom weights in red-brown fired clay were recovered which attest to the presence of Iron Age occupation, and two features produced pottery of Late Iron Age to early Roman date - the secondary fill of the L-shaped ditch (1/009) and the primary fill of ditch (3/020). In addition, a number of the Roman contexts contained residual earlier material including flint-tempered wares of prehistoric date.

The true extent of Late Iron Age occupation is difficult to assess as the assemblage consists of large amounts of fragmented body sherds of grog-tempered wares, which were produced in this area from the Mid to Late Iron Age into, at least, the early 2nd century AD, and it is not always possible to distinguish in the hand vessels of exclusively Iron Age date. This is borne out to some extent by the archaeology, which suggests that most of the features on the site are Roman in date.

Fig. 6 shows that the overall dating profile of the ceramics from the site is mainly concentrated within the 1st century with a strong representation within the mid to late 1st century. The presence of early collared flagons (1A) and butt beakers (3A) in fine cream fabrics, and gallo-belgic white wares, together with early samian from South Gaul (SAMLG), is typical of groups of this date. Coarse wares from this period include simple, bead-rimmed jars in hand made grog-tempered wares (GROG, 2A). Several fragments of flint-tempered, prehistoric pottery also occurred within these groups.

Vessels of later 1st and, in particular, early 2nd century date, are also well represented, defined by the presence of ring-necked flagons with a flaring

A ROMAN AGRICULTURAL LANDSCAPE AT THE OLD GOLF COURSE SITE, BRAINTREE

Table 1: The 'macro-groups' used for pottery analysis.

Mgroup	Roman Phase	Description	Sherds
1D	1 1st-early 2nd C	Fills of ditches: 1086,1071; 1066,1051; 1064; 1020,1059; 1081; 1049,1084	686
1DB	1 1st-early 2nd C	Fills of the main boundary ditch: 1/012, 1023,1055, 1080	575
1DL	1 1st-early 2nd C	Fills of the L-shaped ditch: 1/011, 1015, 1034, 1106	569
1O	1 1st-early 2nd C	Fills of: feature 1/017; pits 1061 and 1018; context 1068	69
2D1	2 2nd C	Fills of ditches: 1111,1109, 3/020, 1121, 3/010	93
2D3	2 2nd C	Fills of ditches: 1113, 3/005	64
2Q	2 2nd C	Fills of quarry 1009 and pits: 1006, 1115	76
3P	3 3rd-4th C	Fills of pits: 2/010, 2/012, depression east of L-shaped ditch	85
3X	3 3rd-4th C	Field walking; subsoil - 1001; top soil - 1000; unstratified	55

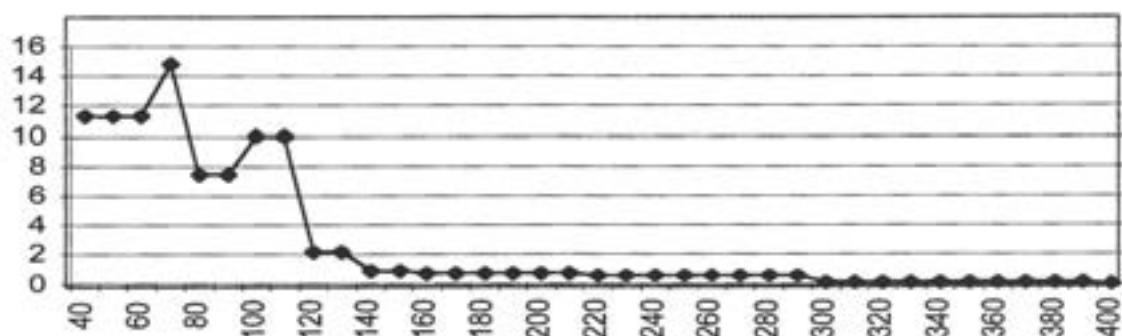


Fig. 6 The overall dating of the Roman pottery from Mill Hill, Braintree, as a % of sherds.

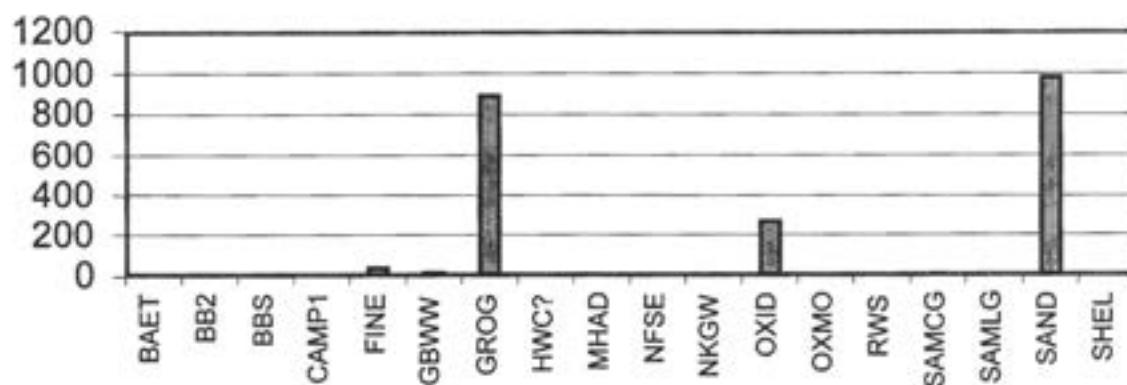


Fig. 7 The Roman fabrics from Mill Hill, Braintree, by sherd count.

mouth (1B2), and ovoid and everted-rimmed beakers (3B & 3E). The increasing use of the fast wheel is also indicative of this date, although wheel-made, necked jars in grog-tempered wares may continue to be made into the early 2nd century. Undecorated equivalents in sand-tempered wares (SAND, 2T) are more likely to be 2nd century in date. There is a distinct decline after c.AD 120, which is mainly defined by the presence of Central Gaulish samian (SAMCG), traded from the Continent from the early to later 2nd century, and the advent of wheel-made black-burnished ware (BB2 & BBS).

Pottery of probable 3rd century date is rare, and includes two examples of sand-tempered, 'D' rimmed bowls, as Camulodunum type 306 (4C306), which are generally dated from later 2nd to the 4th century. Groups where these wares are present also contain residual, earlier ceramics. Pottery dating from at least the mid 3rd to the 4th century consists of a single late, sand-tempered bead and flanged bowl (SAND, MX). Casual field-walking from the area by a local resident, yielded a sherd from the Much Hadham kilns and a single example of a probably white-slipped, Oxford mortarium, both of mid to late 3rd to 4th century date.

The wares

Fig. 7 illustrates the range of wares from the site and, as would be expected from an assemblage of this date, sand and grog-tempered wares form the majority. Unsourced, but probably locally produced, oxidised wares form a significant minority (276 sherds), and miscellaneous fine wares together with samian from Central Gaul, and white wares from *Gallia belgica* are present in small quantities. The other fabrics occur only as occasional sherds.

Imported wares are rare but significant in that there is a range of fabrics from different areas of the Roman Empire. A single amphora containing olive oil from *Baetica* in Spain was found, but these are relatively common on sites of this date. However, the presence of wine amphorae from Campania is more unusual, especially in this case. The fabric clearly contains the volcanic black-sand indicative of vessels from this area of Italy, but only the basal stump remains, so positive identification of the form is not possible. It is certainly a wine amphora and the base is typical of Dressel 2-4 types, but the same type of base is found on the earlier Dressel 1 amphora, dated from 130–50 BC. As the site is of such an early Roman date, together with the presence of Mid to Late Iron Age material, it is possible that this could be the case.

Other early Roman imports are a butt-beaker in a fine, gallo-belgic white ware, and a collared flagon in a fine, but silty, white fabric from the Pas de Calais region of northern France. It is therefore somewhat surprising, given the early bias of the material, that there is very little early samian from the site. However, that which does occur is of Claudio-Neronian and Neronian date (see report below by Felicity C. Wild). Samian of 2nd century date from Central Gaul is more common, and of Hadrianic

to early Antonine date. It mainly occurs in groups of 2nd century or later date and from field-walking or topsoil deposits. The earliest Central Gaulish samian occurs in a secondary fill of the main boundary ditch.

Fine wares, apart from imported vessels, are rare despite the number of sherds. They are mainly represented by a single vessel, an early butt beaker in a fine grey ware of probable local origin (Fig. 11, 1). The remaining fragments (13 sherds) are also beakers.

Oxidised wares, generally in fine, silty white or cream fabrics but occasionally orange in colour, are most likely to be of local origin. They are the third most common fabric, but the group is mainly represented by three vessels broken into very small pieces – a ring-necked flagon (64 sherds), and thin-walled vessels, probably beakers (68 sherds), one being an early type with a rounded body and a tall neck (3H – 48 sherds). Other vessels in this fabric include probable flagons, a necked jar and a lid. A further ring-necked flagon occurs in a red-brown, sandy oxidised fabric with a white slip.

Wares imported into the area from Romano-British kiln sites come from production areas situated in reasonably close proximity to the site, but occur in very small amounts. They include two sherds of wheel-made black-burnished ware from the Colchester area, a cooking pot and triangular-rimmed bowl, both with lattice decoration, and a cooking pot in a grey ware copy. A sherd from the kilns at Much Hadham may be from an open vessel, and a few sherds from a jar in a fine, dark-grey silty fabric are likely to be from the Highgate Wood kilns, north of London. A probable Kent product is a sherd of a jar or beaker in a fine grey ware with a black core containing minimal clay pellets, and there is a single, white ware mortarium from the Oxford kilns. Two sherds of shell-tempered wares may well have been manufactured locally as there is evidence for shell-tempered production in the Essex area (Davies *et al.* 1994, 99 and 102-105).

Grog and sand-tempered wares

The emphasis of the assemblage clearly lies in the use of locally made grog and grey, sand-tempered wares, with the latter being slightly more common than the grog-tempered pottery. Fig. 8 shows that both fabrics are present in high quantities in features dated from the 1st to early 2nd century (Roman Phase 1). Grog-tempered are more common during this period but are considerably reduced by the mid 2nd century and later (Roman Phases 2 and 3). Sand-tempered wares are also common during Phase 1, although less so than grog-tempered wares; there is a distinct fall during Phases 2 and 3 but, again, to a lesser extent than the grog-tempered pottery. As would be expected, this suggests that sand-tempered wares continue to be manufactured well into the later Roman period.

Fig. 9 shows the breakdown of the distribution of these two major wares into macro-groups within the largest and most complex of the Roman phases – Phase 1. Grog-tempered wares are more common than grey, sand-tempered vessels within the fills of the main boundary ditch (1DB), the L-shaped ditch (1DL), in particular, and the groups from other features (1O), but the reverse within the fills of the remaining ditches from Roman

Phase 1(ID). An abundance of grog-tempered wares is generally an indicator of an early Roman assemblage; however, distinctly early Roman forms are represented within both fabrics, therefore the higher presence of one of these fabrics over the other is not necessarily a dating indicator. However, the earliest material from the site comes from the L-shaped ditch (1DL) and from ditch (3/020 - 1D) where grog-tempered wares are most common.

The grog-tempered wares

Based on the illustrated vessels, which are representative of the grog-tempered wares as a whole, the fabrics, with some slight variation, can be divided into two main groups: those that have moderate to abundant grog inclusions and no organic inclusions (Fig. 11, 2, 4-5, 9-12 and 14-15; Fig. 12, 16 and 20), and those that have sparser

amounts of grog temper but with moderate to abundant amounts of black, shiny rounded and elongated particles of organic material (Fig. 11, 3, 6-8, 13; Fig. 12, 17-19). It appears from this that the fabrics are not confined to vessels that are entirely hand made, hand made and finished on a slow wheel, or wheel made.

The majority of the vessels are jars - vessels used as cooking pots. A number are burnt, but not over a broken edge, and one vessel has a deposit, probably the remains of cooked products. Within this group the majority are necked jars (Fig. 11, 6-11), some of which are similar to those of gallo-belgic tradition (Fig. 11, 7-8). Larger versions of similarly necked jars, which were used as storage vessels, are the second most common group (Fig. 11, 12-14). Also falling within this group is the more remarkable *dolium*, or very large storage vessel (Fig. 11, 15). Early Roman, hand-made types with simple bead or

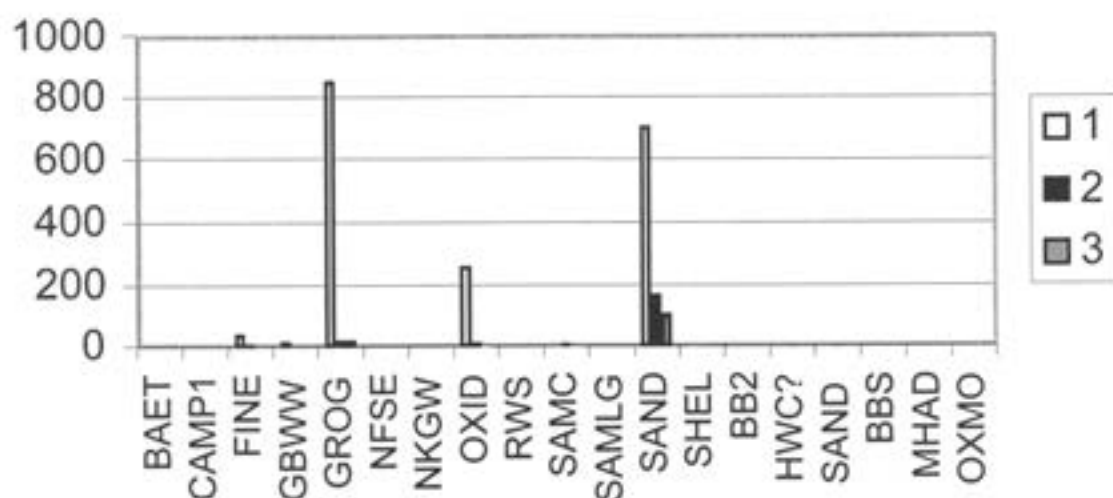


Fig. 8 The Roman fabrics by phase and sherd count.

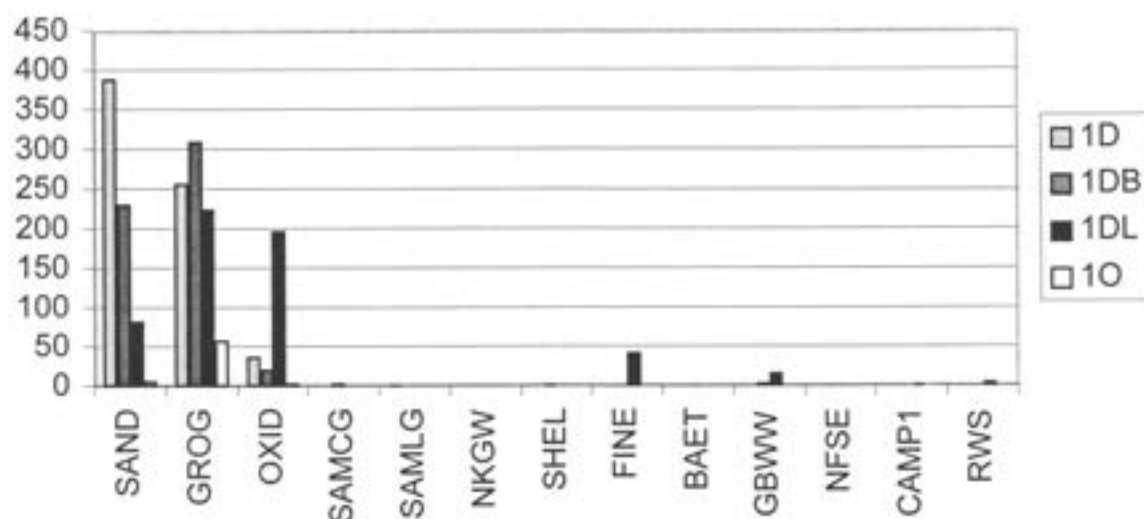


Fig. 9 The Roman fabrics from Phase 1 by sherd count.

upright rims (as Fig. 11, 2-6), are slightly less common. Wide-mouthed jars or bowls are less common, but are very similar in style to the necked jars (Fig. 12, 16-18), and definitive bowls (as Fig. 12, 19) are rare. Other forms include a strainer with holes made after firing (Fig. 12, 20), and a small number of lids.

The grey sand-tempered wares

All the illustrated grey, sand-tempered wares are in the same fabric. It is virtually identical to the background silty matrix of the grog-tempered wares, including the occasional, larger rounded quartz inclusions. The fabric of the butt-beaker (Fig. 11, 1) is a much finer variant. In contrast, later Roman sand-tempered wares are in much coarser, sand-tempered fabrics.

In common with the grog-tempered wares, jars are the most common vessel, but here there is a larger variety of forms. Necked jars are well represented, but most have otherwise undiagnostic features. Illustration 24 is an exception with a distinctive decoration of burnished wavy lines on the shoulder similar to some Alice Holt types (Davies *et al.* 1994, fig. 86 nos. 544-546). Early Roman forms include a single example of a bead-rim jar (Fig. 12, 21) and one with a lid-seating, together with a jar with an everted rim or beaker (Fig. 12, 22). Other beaker forms include a probable butt-beaker and a variant form (Fig. 12, 23). 2nd-century forms consist of a narrow-necked jar with lattice decoration on the shoulder (Fig. 12, 25), and three examples of cooking pots, similar to black-burnished ware types, also with lattice decoration. In contrast to the grog-tempered wares, storage jars are rare in this fabric.

Bowls are only present as single examples and are mainly later Roman types, the latest being a bead-and-flanged bowl. A 'D' rimmed bowl similar to Camulodunum form 306, and an undecorated flanged bowl of black-burnished style also fall into this category. A round-bodied flanged bowl is more likely to be of later 1st to early 2nd century date. Other forms include a simple-rimmed dish, a campanulate cup similar to Dragendorff form 27, and a lid.

Function

Analysis of the pottery assemblage, based on the combination of the fabrics and forms, reveals a site where the principal function was to prepare and cook food (kitchen) and serve the ingredients (kitchen/table – see Fig. 10). The presence of a *dolium*, and other large vessels shows that they were also storing ingredients. At first glance the population, principally those of Roman Phase 1 but also Phase 2, that used this pottery would seem to be of relatively low status and the assemblage to be typical of rural settlements. However, the occupants were clearly Romanised or influenced by Roman customs, based on the presence of flagons (liquid holders) and drinking vessels (drinking), together with amphora imported from the Continent containing olive oil and wine, and imported fine table wares (amphora and table). This suggests that the occupants had access to markets supplying these more exotic wares and were wealthy enough to afford them.

The Samian ware

Felicity C. Wild

The site produced two small sherds of South Gaulish ware, one of form 15, of Claudio-Neronian date, the other of form 27, probably Neronian. The other 14 sherds were Central Gaulish and Hadrianic-early Antonine, comprising one example each of form 18/31 (5 sherds), 18/31R (4 sherds), 3 with decoration too abraded to be identifiable, and Form 37, Central Gaulish. Three non-joining fragments are of the same bowl, two of ovolo, one of base. The two internal grooves around the bowl, just above the level of the ovolo, are rare on form 37, though a regular feature of form 30. The base fragment shows ridges below the decoration with a dot rosette superimposed, probably at the base of a wavy-line border. A closely similar arrangement can be seen on a bowl in *Quintilianus'* style, with the cursive signature of Ianaurus I, cut after firing (Stanfield and Simpson 1958, pl. 69.9), though the rosette on the sherd from Braintree probably consists of seven dots rather than eight. The

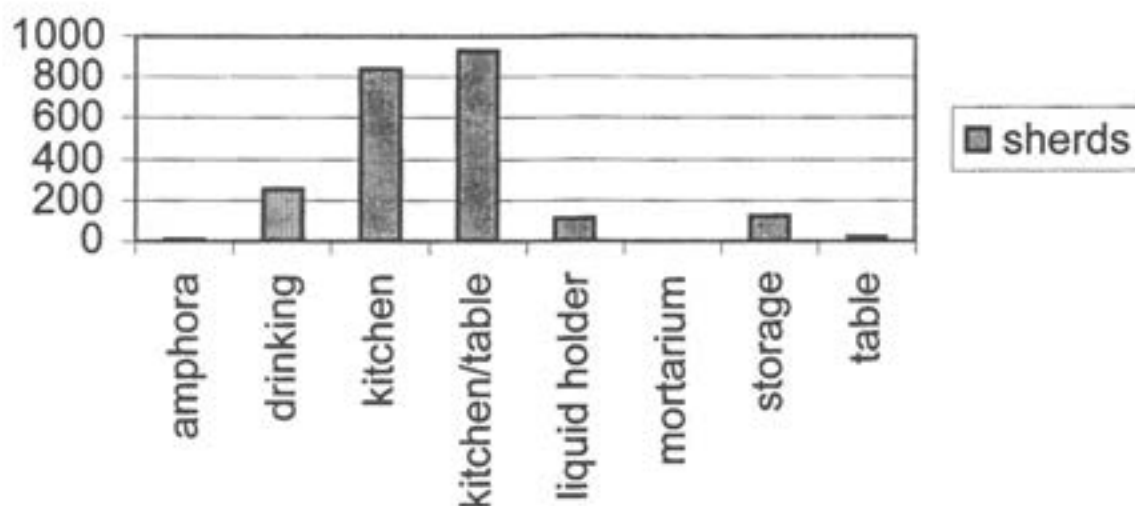


Fig. 10 The function of the Roman pottery by sherd count.

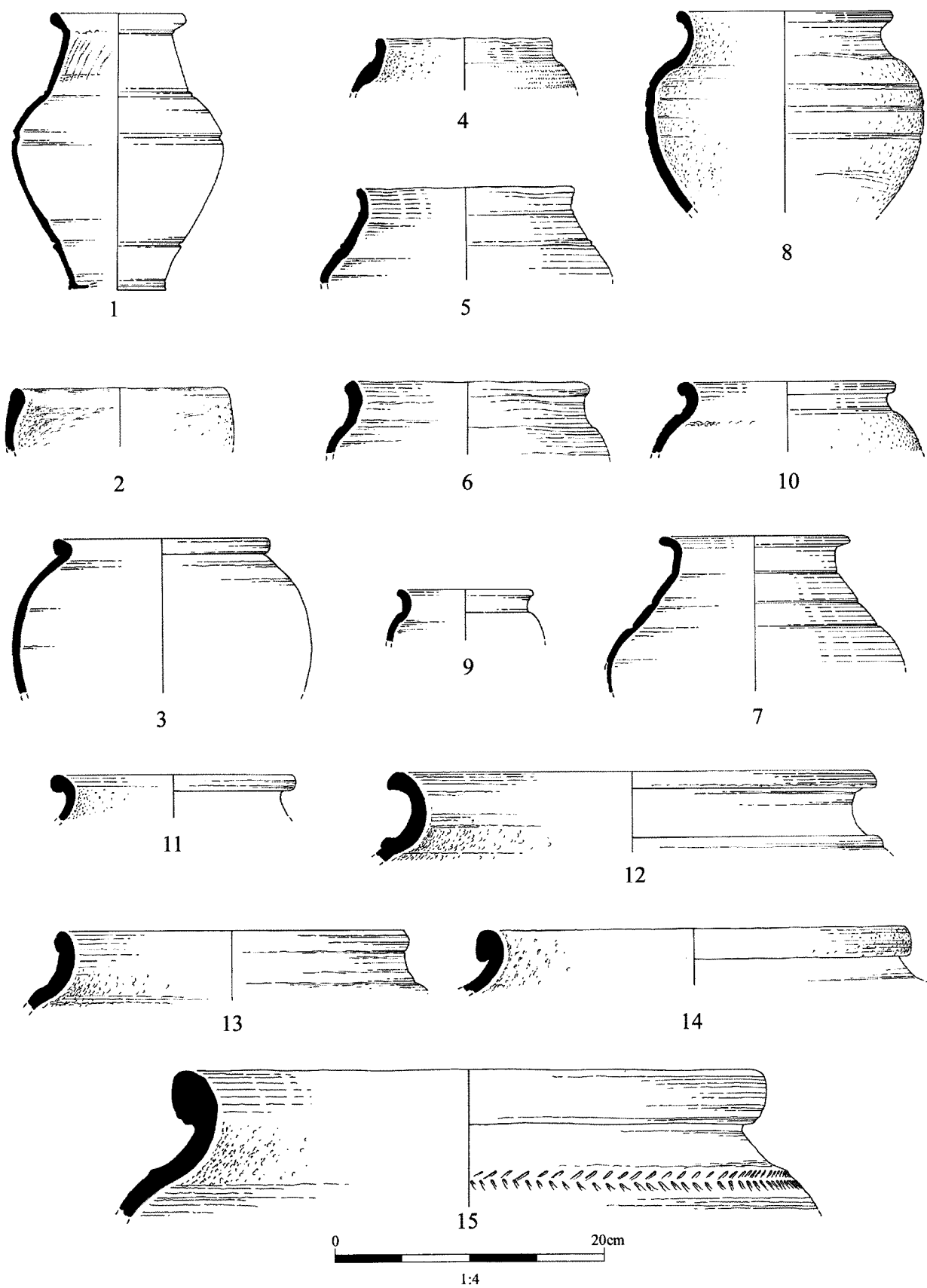


Fig. 11 Late Iron Age and Roman pottery.

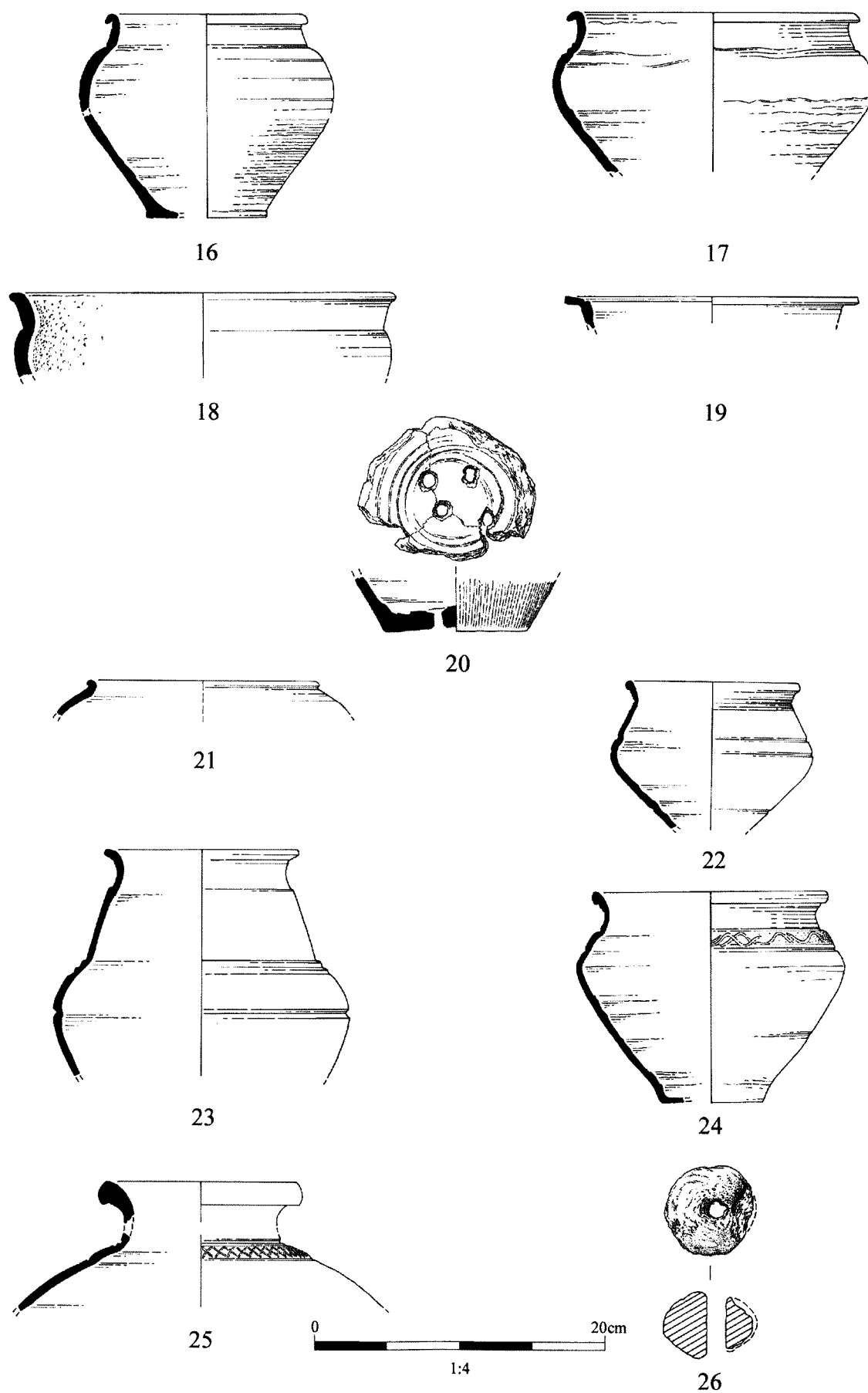


Fig. 12 Roman pottery.

ovolo matches the egg and tongue of Rogers 1974 B29, though the tongue appears to be faintly corded rather than plain. Whether the present piece had the terminal rosette separated by a slight gap from the tongue, is uncertain. With the rosette terminal, the ovolo was used by Rogers's potter Secundinus III, who was connected with the Quintilianus Group; with and without the rosette it was used by his potter Me..., who used a similar seven-beaded rosette at the base of his wavy-line border (Rogers 1999, fig. 14,1). The general connections suggest a date c.AD 125-145.

Catalogue of illustrated pottery

(Figs. 11 & 12)

1. Fabric: FINE, Form: 3A, context 1014, ditch 1015. A typical butt beaker of Neronian date in a fine, red-brown fabric with a light grey external surface and red-brown interior. The vessel is wheel made with an abraded interior surface and appears to have been smashed during deposition. The fabric is very soft and consists of a fine silty matrix (<0.1mm) with sparse larger, rounded quartz (1.0 - 1.3mm) and occasional fragments of quartzite. Sparse to moderate amounts of silt-sized black, together with rare rounded, red particles of iron ore (<0.5mm) are present and moderate to abundant flakes of white mica are visible in the surface (F, <0.1 - 0.2mm). (41 sherds; 382g; 17% EVE; 10cm diameter).
2. Fabric: GROG, Form: 2A, contexts 1072, 1074, ditches 1071, 1081. A hand made jar with an inturned, simple rim of late Iron Age to early Roman date. The fabric is fairly hard with a soapy feel, and dark brown in colour, burnt to black on the exterior and below the rim on the interior. Inclusions other than abundant fragments of pale brown to dark brown grog (SA and R <2.8mm) are rare consisting of sparse rounded, clear and opaque quartz (R, 0.2 - 0.4mm) and silt-sized quartz particles, red iron ore (R <0.1mm), and sparse limestone. Some of the grog in it appears to have decayed the fabric. (GROG1 - 4 sherds; 48g; 23% EVE; 15cm diameter).
3. Fabric: GROG, Form: 2A, context 1019, 1021, ditches 1020, 1023. A wheel made jar with a bead rim, produced by rolling over the lip, of Neronian to Flavian date. The fabric is fairly hard with a silty, slightly soapy feel with a dark grey core and lighter grey margins. Parts of the vessel have been burnt black over the rim and other parts are light red brown in colour, due to firing conditions or usage. The fabric consists of a matrix of silt-sized quartz (SA <0.1mm) with rare larger particles of quartz (R, 0.2 - 1.4 mm), and sparse sub-angular grey and black grog (0.4 - 1.4 mm). Moderate amounts of generally rounded, but also elongated, shiny black particles of ? organic material weep into the matrix (<1.5mm). The elongated examples in the surface appear to be ridged, possibly straw. Sparse limestone is also present and occasional clay pellets occur. Moderate amounts of white mica are visible in the surface (F, <0.1mm). (GROG2 - 24 sherds; 231g; 41% EVE; 14cm diameter).
4. Fabric: GROG, Form: 2AV, Context 1072, 1074, ditches 1071, 1081. A hand made and wheel finished jar with a simple, upright rim and slight neck with a low sloping shoulder. It is burnished on the exterior rim and over the interior. This dark grey fabric is fairly hard with a soapy feel and a silty quartz matrix filled with moderate amounts of sub angular to angular grog of dark grey to red-brown colour. Rare rounded particles of black iron ore, sparse rounded, ill-sorted quartz (R, 0.4- 1.0 mm), and sparse to moderate amounts of white mica are visible in the surfaces (F, < 0.1mm); occasional particles of limestone constitute the remaining inclusions. It is of late Iron Age to early Roman date. (GROG1 - 2 sherds; 40 g; 20% EVE; 14 cm diameter).
5. Fabric: GROG, Form: 2AV, context 1073, 1074, ditches 1071, 1081. A hand-made and wheel-finished jar with a simple, upright rim and slight neck with a cordon delineating a low, sloping shoulder. The exterior is burnished from a slight cordon and groove at the shoulder and over the rim. This dark grey fabric is fairly hard with a soapy feel and a silty quartz matrix containing sparse to moderate amounts of grey, black and red-brown sub-angular grog (0.5 - 1.8 mm) and moderate amounts of black shiny ?iron ore particles weeping in to the fabric (R, <0.2 - 1.4mm). Sparse ill-sorted, larger, rounded quartz grains (R 0.4 - 1.2mm) and occasional flint (SA, <2.0mm) and limestone inclusions (R <0.4mm) are also present together with sparse white mica (F, <0.1mm) visible in the surface. The vessel appears to have been burnt in patches on the exterior and over the rim. It is of late Iron Age/Belgic tradition but is a type that continued into the early Roman period. (GROG1 - 3 sherds; 101g; 23% EVE; 16cm diameter).
6. Fabric: GROG, Form: 2T, context 1/008, ditch 1/012. A hand-made and wheel-finished necked jar with a fairly upright rim with a slightly raised shoulder delineated by a slight groove at the base of the neck. The vessel, which is blackened on the exterior and on the upper interior of the rim, is burnished on the exterior and over the rim. This dark grey fabric is fairly hard with a soapy feel and a silt quartz matrix containing sparse to moderate amounts of sub-angular grey, black and light brown grog together (SA, 0.5 - 2.0 mm) with moderate to abundant black shiny ?organic inclusions (R - SA, 0.2 - 1.8 mm), some of which are elongated. This fabric is similar to no. 5, but lacks the larger quartz inclusions, and has sparse rounded particles of white limestone (R, 0.1 - 1.5mm) and sparse white mica visible in the surface (F, <0.1 mm). The vessel is of 1st to early 2nd century date. (GROG2 - 1 sherd; 58g; 18% EVE; 16cm diameter).
7. Fabric: GROG, Form: 2T, context 1068, pit 1061. This necked jar is of Belgic tradition and delineated on the low, sloping shoulder by a series of three grooves. It is wheel made and burnished on the exterior and over the rim. The vessel has burnt

- patches on the exterior varying from dark to red-brown, which may have been due to either firing or usage. The fabric is virtually identical to that of no. 5, but lacks the limestone and has more white mica ($F < 0.1\text{mm}$). As the vessel is much thinner walled the inclusions are more compacted. The vessel is of late Iron Age to early Roman date. (GROG2 - 9 sherds; 191g; 58%EVE; 13cm diameter).
8. Fabric: GROG, Form: 2T, context 1032, ditch 1034. This wheel made vessel is similar to no. 7, above, with three grooves on the body wall, but with a high, rounded shoulder and a deeper neck. It is similarly thin-walled and is burnt on the exterior from the shoulder up and over the rim and blackened on the interior. The fabric is also virtually identical but rounded white limestone is present in sparse quantities (0.2-1.0mm). Some of the black organics are elongated with ridges similar to straw or grass. The vessel is of late Iron Age to early Roman date. (GROG2 -39 sherds; 387g; 5% EVE; 14cm diameter).
 9. Fabric: GROG, Form: 2T, context 1068, pit 1061. A small necked jar or beaker burnt on the shoulder at the neck and over the rim. The vessel is wheel made and burnished at the neck. The thin-walled fabric is dark grey to black in colour and is fairly hard with a soapy feel. The main inclusion is moderate amounts of grey to light brown sub-angular grog (SA, 0.3 - 1.8mm), set in a silty quartz matrix with occasional larger quartz inclusions (R, $< 1.2\text{mm}$), and sparse white mica visible in the surface (F, $< 0.1\text{mm}$). The vessel is of 1st to early 2nd century date. (GROG1 - 3 sherds; 22g; 23% EVE; 10cm diameter).
 10. Fabric: GROG, Form: 2T, context 1073, ditch 1071. A wheel made, necked jar with a slight groove at the base of the neck above a fairly high rounded shoulder, and burnishing on the exterior from the neck and over the rim to the interior. The fabric is as no. 5, but lacking the flint, and is harder fired. It has a single, large and rounded quartzite pebble (3.8mm). The vessel is blackened in patches on the exterior in parts and red-brown on the interior, which may either be the result of firing or usage. It is probably of later 1st- to early 2nd-century date. (GROG1-1 sherd; 56g; 17% EVE; 16cm diameter).
 11. Fabric: GROG, Form: 2T, context 1021, ditch 1023. This vessel is virtually identical in date, fabric and form to no. 10, above, but with a thicker more rounded lip to the rim. (GROG1 - 18% EVE; 18cm diameter).
 12. Fabric: GROG, Form: 2V, context 1068, pit 1061. A curve-rimmed storage jar with a sharp, almost triangular lip and a prominent cordon at the base of the neck. It is of 1st to early 2nd century date. The vessel is wheel made and burnished on the exterior at the cordon and rim and over the rim on the interior. The red-brown fabric is fairly hard with a soapy feel and contains abundant angular to sub-angular grog (0.2 - 2.4mm) set in a silty matrix. Sparse small black? iron ore particles are present (R $< 0.1\text{mm}$) and moderate amounts of white mica are visible in the surface. Large, mainly rounded fragments of quartz are occasionally present ($< 1.2\text{mm}$), together with a single fragment of shell (A, 1.5mm). (GROG1 - 4 sherds; 178g; 9% EVE; 33cm diameter).
 13. Fabric: GROG, Form: 2V, context 1090, ditch 1099. A storage jar with an almost upright rim with a thickened lip and a low, sloping shoulder. The vessel is wheel finished and burnished from the neck to the rim on both the exterior and interior. The fabric is dark red-brown in colour and blackened in parts on the exterior and interior. Moderate to abundant amounts of pale brown to black grog (A-SA 0.4 - 2.0 mm) are the main inclusion set in a silty matrix, together with sparse black shiny? organic particles which occasionally weep into the fabric (R, 0.1 - 1.2mm), and rare limestone (R, 0.2 - 0.8mm). White mica is visible in the fabric in sparse quantities and moderately in the surface (F, $< 0.2\text{mm}$). The vessel is of 1st to early 2nd century date. (GROG2 -6 sherds; 173g; 21% EVE; 26cm diameter).
 14. Fabric: GROG, Form: 2V, context 1074, ditch 1081. This storage jar has a thick rolled rim, which has been squared off at the edge. It is wheel made and although the surfaces are abraded faint burnishing can be detected on the exterior of the rim. The fabric is soft with a silty feel and is dark grey in colour with red-brown margins. Silt-size particles of quartz make up the bulk of the matrix (SA $< 0.1\text{mm}$) together with sparse amounts of sub-angular to rounded grog or clay particles (0.4 - 1.8 mm). Rare larger and rounded quartz can be seen (R, 0.5 - 1.5mm) with sparse red and black? iron ore (R, $< 0.1 - 0.8\text{mm}$); white mica is abundantly visible in the surfaces. The vessel dates from 1st to the early 2nd century. (GROG1 - 1 sherd; 69g; 9% EVE - 26cm diameter).
 15. Fabric: GROG, Form: 9D, context 1057, ditch 1055. This *dolium*, or very large storage jar, is wheel made with a rolled rim and low sloping shoulder defined at the neck by a stabbed chevron decoration below which a zone of quite fine ribbing is visible. The rim is blackened on both the interior and exterior and there are also traces of a black shiny deposit which may be tar, which suggests that a commodity may have enclosed by a lid-covering and sealed with the tar. The fabric is red-brown in colour with grey-brown surfaces and is fairly hard with a slightly soapy and silty feel. Abundant fragments of angular and sub-angular grog can be seen (0.4 - 2.5mm) together with sparse, rounded limestone (0.9 - 1.5mm with one at 5.0mm) and occasional fragments of shell ($< 0.6\text{mm}$). Sparse amounts of red iron ore are also visible (R, 0.2-0.8mm), together with sparse large rounded quartz ($< 2.5\text{mm}$), occasional flint, and white mica which is sparse to moderate in the surface. The design on the shoulder is reminiscent of that on North Kent shell-tempered jars of Flavian to mid 2nd century date (Davies *et al.*, 1994, 102-104). (GROG1 - 1 sherd; 1428g; 37 % EVE; 46cm diameter).
 16. Fabric: GROG, Form: 4, context 1074, ditch 1081. A wheel-made bowl with a curved rim and a high shoulder of 1st century date. The vessel is

blackened in parts on the exterior and interior which appears to be the result of use as a cooking pot. Burnishing is apparent in parts but as the vessel is abraded the precise area cannot be distinguished. The fabric is similar to no. 5, above, but lacks the flint. (GROG1 - 13 sherds; 326g; 26 EVE; 14cm diameter).

17. Fabric: GROG, Form: 4, context 1057, ditch 1055. This vessel is very similar to no. 16, above, but is more obviously a bowl, and is delineated at the base of the neck by two grooves and a cordon. It is wheel made but with a thin wall and slightly distorted body, and is burnished at the neck and over the rim. The fabric is very similar to that of no. 3, above, containing moderate to abundant amounts of black, shiny? organic material, but lacking the larger quartz. (GROG2 - 18 sherds; 288g; 33 % EVE; 18cm diameter).
18. Fabric: GROG, Form: 4, context 1/001, topsoil. An everted rimmed bowl, possibly burnished on the exterior at the shoulder and over the rim, but the burnt exterior precludes positive identification. This wheel made vessel has been used as a cooking pot and is of 1st century date. The fabric is virtually identical to that of no. 3, above, including the sparse amounts of larger, rounded quartz. (GROG2 - 6 sherds; 54g; 8% EVE; 24cm diameter).
19. Fabric: GROG, Form: 4, context 1057, ditch 1055. A wheel made flanged bowl with bead at the interior edge and a sloping body wall, of 1st century date. The exterior and interior surfaces are an oxidised, light red brown colour and the core is dark grey. The fabric is virtually identical to that of no. 3, above, but in a finer variant. (GROG2 - 1 sherd; 11g; 6% EVE; 18cm diameter).
20. Fabric: GROG, Form: 9H, context 1074, 1081. The base of a jar pierced with four holes after firing for use as a strainer, but the exterior has been burnt to an oxidised red-brown colour. The vessel is wheel made but not very evenly suggesting that it was made on a slow wheel, and of 1st to early 2nd century date. The fabric is very similar to Illustration 5, above, but lacking the flint. (GROG1 - 4 sherds; 146g; 100% base).
21. Fabric: SAND, Form: 2A, context 1021, ditch 1023. A small bead rim jar or beaker with a high sloping shoulder. The fabric is fairly hard with a silty feel. The surfaces are very dark grey in colour and the exterior is slightly uneven with sparse elongated voids (<3 mm) where inclusions have been burnt out during firing. The core is of mixed colours with a medium grey at the centre surrounded by a red-brown streaks which are enclosed by brown cortex and a dark grey exterior margin. The fabric is very similar to no. 1, which is a finer variant, and to the basic background matrix of a number of the grog-tempered wares, being composed of silt-sized quartz sand (SA <0.1) with occasional larger rounded quartz (R, <1.0 mm). Sparse, rounded white limestone (0.1 -0.5) and rare black shiny ?iron ore (R, 0.1 -0.4 mm) together with occasional clay pellets (R, 0.2-0.3mm) and white mica, which is visible in moderate amounts in the surface, are also

apparent in the fabric. The vessel is of 1st century date. (1 sherd; 9g; 6% EVE; 12cm diameter).

22. Fabric: SAND, Form: 2, context 1101, pit 1009. A small everted jar or bowl with a sharp carination at the girth defined by two grooves and a cordon. This vessel, of 1st century date, is wheel made in the same fabric as no. 21. (7 sherds; 45g; 18% EVE; 14cm diameter).
23. Fabric: SAND, Form: 3AV, context 1013, ditch 1015. A curve-rimmed beaker with a groove at the neck delineating a low sloping shoulder and a rounded girth defined by two grooves and a cordon with a further groove at the centre of the girth. The vessel is wheel made and is burnt to an oxidised red brown colour in patches on the exterior. Abrasion precludes the identification of any burnishing. This beaker is similar in style to the typical butt-beaker shown above (see no. 1), but is a later development of probable Flavian date. The fabric is identical to no. 22. (25 sherds; 192g; 20% EVE; 12cm diameter).
24. Fabric: SAND, Form: 2T, context 1050, ditch 1049. A wide-mouthed, necked jar with a rounded lip and a shoulder defined by two grooves and a wide cordon. This cordon is decorated with burnished intersecting wavy lines. The vessel is wheel made with burnishing at the neck and rim and is of later 1st to early 2nd century date. The fabric is identical to that of no. 22. (42 sherds; 320 g; 21% EVE; 16 cm diameter).
25. Fabric: SAND, Form: 2R, context 1112, ditch 1113. A narrow-necked jar defined at the neck by a wide cordon delineated by two grooves, above a low, sloping shoulder, of early to mid 2nd century date. The cordon is decorated with burnished acute lattice. The fabric is a slightly coarser variant of no. 22, with the silt-sized quartz being marginally larger (SA, 0.1- 0.2mm). (6 sherds; 162g; 36% EVE; 14cm diameter).
26. Fabric: SAND, Form: 9, context 1014, ditch 1015. A complete spindle whorl which is hand made of, almost certainly, local clay and of Late Iron Age, or possibly Conquest period, date. The object is burnt, oxidised to a red-brown colour towards the upper part and grey towards the base, suggesting that it was bonfire fired. The clay is mainly composed of large, rounded and multi-coloured quartz grains (most 0.2 - 0.4 and less commonly 0.8 -1.2 mm, occasionally < 3.0mm). Occasional fragments of flint and sub-angular quartzite (both < 2.0 mm) can also be seen together with sparse black and red ? iron ore (R, <0.2mm) and white mica (F, <0.1mm), and rare, rounded limestone (0.5mm). (Complete object; 20g).

Roman ceramic building material

Terence Paul Smith

Two abraded fragments of Roman ceramic building material were recovered. A small fragment, possibly from a brick, was recovered from natural silt-filled depression (1/017) and a brick fragment was recovered from topsoil (1000).

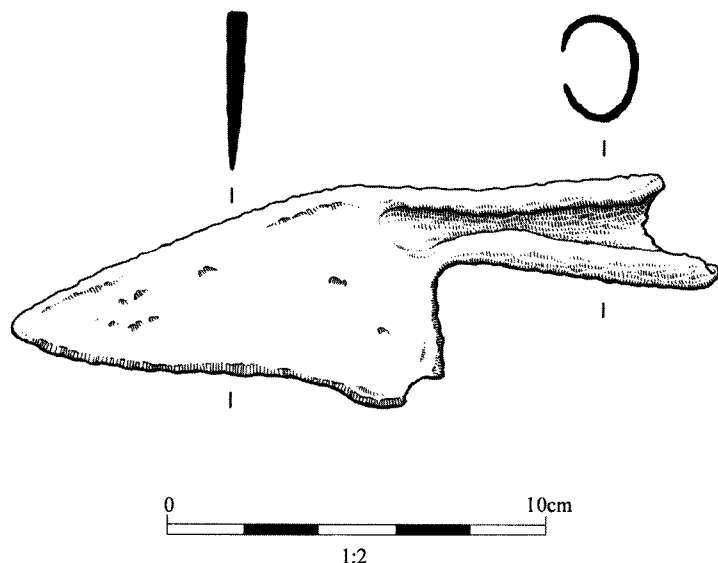


Fig. 13 Roman iron cleaver.

Coins

K. Stabler

1. Silver. Ae of ?Decentius, c. 351. 1.5g. Context 1076, post hole 1077.
Obv -
Rev ...VOT V MULT X...
2. Copper alloy. Sestertius, unknown. 1st-2nd century. 18.9g.
Context 1002
Obv -
Rev -
3. Copper alloy. Ant, ?Tetricus, 270-273. 0.8g.
Context 1002
Obv ...ICVS PF AVG
Rev -
4. Copper alloy. Ae, Allectus, 287-296. 2.1g.
Context 1002.
Obv IMP C ALLECTVS PF AVG
Rev (PAX AVG) S/A/ML
5. Copper alloy. As, Claudius 41-43. 8.8g.
Context 1002.
Obv (ANTONIA AVGVSTA)
Rev (TI) CLAVDIS CAESAR (AVG PM TRP IMP) S/C
6. Copper alloy. Ae, Unknown, 335-341. 0.9g.
Context 1002.
Obv -
Rev (Gloria Exercitus, 1 standard).

Miscellaneous finds

Frances Raymond & Ron Humphrey

A limited collection of miscellaneous finds representative of general Late Iron Age and Roman domestic activity were recovered. None are illustrated. The majority of the metal objects were metal detector finds from an area of subsoil, context 1002.

1. Fine micaceous sandstone; length 66mm, width 60mm, irregular shape. Possible whetstone/rubbing stone with traces of use-wear. Unstratified.
2. Coarse sandstone; rotary quern stone, three fragments; length 243mm, width 140mm, depth 45mm. Contexts 1/001, topsoil; 1087, ditch 1099.
3. Lava stone; rotary quern stone, very fragmentary and abraded. Context 1013, ditch 1015 (27 fragments), context 1085, ditch 1086 (1 fragment; length 143mm, width 85mm, depth 26mm).
4. Copper alloy; curved, cylindrical object, part of a ring or fastening; length 22mm, diameter 6mm. Context 1002.
5. Lead; small, domed weight; diameter 21mm, width 9mm. Context 1002.
6. Lead/iron; weight with lead body and iron loop; length 40mm, width 31mm. Context 1060, ditch 1059.
7. Ceramic triangular loomweight fragments of Iron Age type from four contexts 1057, ditch 1055; 1065, ditch 1064; 1074, ditch 1081; 1119, ditch 1121.

The iron objects

Angela Wardle

1. (Fig. 13) Iron socketed cleaver; in very good condition, almost complete; length 189mm; maximum width of blade 59mm; length of socket 78mm; maximum width of socket 31mm. Context 1002. The blade is triangular with a concave edge, worn by use, which runs almost parallel with the line of the handle. The back of the blade is sharply down-turned from the socketed handle and there is a pronounced step between the edge and the handle. The end of the open socket is broken and traces of a wooden handle may be represented by a piece of charcoal contained within the iron corrosion products at the junction of the socket and blade.
The tool is closest in form to Manning's cleaver type 6 (Manning 1985, 121, fig 30; 123, Q102), although it is smaller than the examples given there. The presence of a socketed handle suggests that it is a cleaver rather than a knife, but Manning questions whether type 6 cleavers should be regarded as a form of billhook. In most examples the cutting edge and the handle are not parallel, as the socket is set at a sharp angle to the blade, as seen on billhooks. The difference is important in identifying the function of the implement because cleavers were generally used in butchery, while billhooks were used for chopping undergrowth and thin branches (ibid. 55). Manning (ibid. 123) discusses a group of tools with angled blades, thought to be billhooks or

choppers (e.g. Rees 1979, fig 227a; 227b), to which type 6 cleavers bear some resemblance. He concludes, however, that the latter are probably cleavers, although related to the angled billhooks. One argument is that some examples of the type, one of them from a Neronian context at Baldock (Manning & Scott, 1986, no. 538), have an edge which runs parallel with the line of the handle. There are three similar examples in the collections of the Museum of London. One is unprovenanced (29.94/23), while the other two from the Walbrook area (11858, Bank of England; 19256, Bucklersbury House) are likely to date from the late 1st/2nd century.

The Braintree tool is another example of this relatively rare form. Technically, it should be regarded as a cleaver, but it is quite small and may well have been used as a multi-purpose knife. It could date from any part of the Roman period, although as noted above the known examples come from the 1st or 2nd century. The context, a subsoil layer, contained coins dating from the 1st to the 4th century.

2. (Not illustrated) Incomplete; length 80mm; max width 28mm; thickness approximately 15mm; length of notch 12mm. Context 1114, pit 1115. Flat bar, severely corroded. An x-ray shows that one side is almost straight but the other is curved, making the object taper to each end. Examination of the x-ray suggests that one end, which is slightly narrower than the other, is complete, while the other is fractured. The most noticeable feature is an open rectangular notch cut into the curved side.

The identification of this object remains uncertain. It is tempting to see it as part of a tool, but the notch serves no obvious purpose. One possibility is that it is the corroded branch of a horseshoe, the rectangular nail hole worn through completely. The curvature on the outer face would support this, although the other side is probably too straight for this interpretation. Its context, a pit fill containing undiagnostic Roman pottery, also makes it less probable.

The more likely explanation is that it is part of a mount or fitting, the sort of strapping found on so many Roman sites, that could have a multitude of functions. Such objects are rarely illustrated in reports, an exception being the publication of the ironwork from the villa at Gadebridge Park, in Hertfordshire (Manning 1974). A good selection of miscellaneous scrap is illustrated, some bearing a superficial resemblance to the fragment from Mill Hill (ibid. nos. 581-600).

Animal bone

Sylvia Warman

The animal bone from this site was mostly recovered from contexts dated to the 1st to 2nd century AD with a little from contexts dated to the 3rd century AD. It was generally in poor condition. The species identified were cow (*Bos taurus*) and horse (*Equus caballus*). The remainder of the material was classified by size, either

cow sized or sheep sized. In view of the fact that few specimens were identifiable to species or element, a calculation of the minimum number of individuals was not attempted. The full classification can be found in the site archive. The cow and cow-sized bones had been butchered, presumably for human consumption. Considering that this location would have been rural during the Roman period it is interesting that no boar, deer or hare bones have been identified as might be expected if hunting was practised.

Discussion

The site at Mill Hill provided evidence for prehistoric activity in the area in the form of a small scatter of flints of Mesolithic and later prehistoric date, a Middle Bronze Age pit and an undated, but probably prehistoric ditch. None of this evidence is indicative of intensive earlier prehistoric occupation of the site, but there does appear to have been some activity during these periods as was suggested to the north-west of the site in the base of the valley where Mesolithic flints, Bronze Age flints and pottery and Early and Middle Iron Age pottery was discovered in the 19th century by Kenworthy (Drury 1976).

The main feature of the site was part of a field system of Late Iron Age and Roman date. The area of excavation located the edge of this system, which appears to continue to the north, west and east. It has been noted that many Roman rural excavations have revealed landscape fragments - small slices, transects, edges of the arable of villas, farms or small towns (Going 1996). The Mill Hill site presents a similar problem in interpretation to sites such as Buildings Farm, Great Dunmow (Lavender 1997) where no obvious settlement focus could be linked to the ditches and enclosures revealed.

The main phase of activity is dated by pottery to the 1st to early 2nd century AD. The field system was initially laid out in the 1st century AD, at the end of the Iron Age or soon after the conquest, and consisted of a main boundary which was recut and extended several times. A number of other features such as pits, isolated postholes and short lengths of ditch which may have functioned as the drainage ditches of structures of which no other trace survives, also dated to this period, but there was no clear evidence for structures or occupation within the area of excavation. The amounts of pottery and other occupation debris within the ditches suggest that occupation was located nearby, probably to the east, on the higher, flat ground beyond the limit of the excavation. The pottery excavated is typical of rural settlements but also suggests that the occupants of the settlement were Romanised or influenced by Roman customs (see Pottery report). This implies that the occupants had access to markets supplying these more exotic wares and were wealthy enough to afford them.

The Late Iron Age occupation in Braintree was located north of the London Road (Havis 1994; Garwood & Lavender 2000). This evolved into a Roman small town, with the earliest Roman evidence, 1st century timber buildings, unsurprisingly found within the area formerly occupied during the Late Iron Age (Wickenden 1996). The Mill Hill site lies 1.75km to the south-east of the area of Late Iron Age occupation and subsequent Roman town and, as such, represents an area outside the urban centre but probably within its influence. It is possible that the development of the Iron Age settlement into a Roman town, which appears initially to have been deliberately planned with minor roads and major boundary ditches running at right angles to London Road, the Roman Sudbury to Chelmsford route (Medleycott 1999), may have been the catalyst for the development of field systems such as at Mill Hill, in the rural hinterland of the town.

The main field system at Mill Hill appeared to go out of use during the early 2nd century AD and a much less substantial system of ditches was established in the northern part of the site. Activity on the site was much reduced by this time, suggesting a shift of focus of occupation or activity. 3rd- and 4th-century activity on the site was represented by pottery from a probable wear depression and the upper parts of earlier pits, which would have remained partially open into this period. Several coins of late 3rd- and 4th-century date recovered from a subsoil layer also indicate that there was a Roman presence in the area of the site at this time. It is possible that the site was encompassed within a field system consisting of much larger plots or possibly a more open landscape by this time, possibly reflecting a change of agricultural practice such as an increase in sheep farming. It is unfortunate that the soil at Mill Hill was not more favourable to the preservation of bone as there is no data to support this theory.

This remodelling and lack of settlement evidence on the site in the later Roman period may reflect wider changes within the countryside such as the increasing of size and style of production on farmsteads. At Mucking, a ditch-enclosed farmstead appears not to have been rebuilt after a later 2nd century fire, but to have gone out of use and been converted to arable fields. The field system surrounding the farmstead was remodelled into larger plots and pottery of post mid 4th-century date was only found in the upper fills of ditches, suggesting that these had ceased to be maintained well before the end of the 4th century (Going 1996).

Evidence from excavations within Braintree suggests that the Roman town began to contract at or shortly after the mid 4th century (Havis 1993). Activity at the Mill Hill site appears to be much

reduced during the 3rd and 4th centuries, with the latest evidence for activity being a coin, probably of Decentius, c.351 AD. The Mill Hill site may reflect the decline of the town itself and that of the region identified by Going (1996) who concluded that 'a complex interplay of agricultural, climatological and other factors may have tipped the region into a full scale decline in the 4th century', or this apparent reduction of activity may be explicable there in other ways such as reorganisation of farming practice.

Acknowledgements

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A Late Iron Age and Romano-British farmstead at Ship Lane, Aveley. Excavations on the line of the A13 Wennington to Mar Dyke road improvement, 1994-5

by Stuart Foreman and David Maynard

with contributions by V. Fryer, H. Major, T.S. Martin, P. Murphy, P.R. Sealey, S. Tyler, H. Walker and S.H. Willis

A Late Iron Age and Romano-British rural site dating to the 1st-5th centuries AD was excavated near Ship Lane, Aveley. The earliest phase (Phase 1a) consisted of a small farmstead, with evidence of at least one roundhouse, within a system of large rectilinear enclosures and fields laid out around the middle of the 1st century AD. Domestic occupation of the farmstead was short-lived, ceasing in the early 2nd century, although the enclosures/fields may have continued in use into the 4th century (Phase 1b). Artefactual and ecofactual evidence suggests the occupants were relatively impoverished, and practised a regime of mixed subsistence farming. The abandonment of the farmstead may be linked to population movements noted elsewhere on the gravel terraces of the Thames in the Roman period. In the late 4th or early 5th century (Phase 2), the surviving elements of the field system were replaced by a series of smaller rectangular enclosures, interpreted as livestock enclosures. One of these contained a small structure and a well, and it is thought that this resumption of activity might have been linked to the management or movement of livestock grazing on the coastal wetlands. Occupation of the site appears to have ceased by the mid 5th century, with a single Saxon feature (Phase 3) and little medieval or later activity (Phases 4 and 5).

Introduction

Between 1991 and 1995 a programme of archaeological investigation was conducted by Essex County Council Field Archaeology Group on behalf of the Highways Agency, prior to construction of the Wennington to Mar Dyke stretch of the A13 Road Improvement Scheme. The new road forms a loop to the south of Aveley, following the northern edge of the Mar Dyke valley (Fig. 1), linking Junction 30 of the M25 with the A13 south-east of Wennington.

This report describes the results of a sample excavation of a Late Iron Age and Romano-British site west of Ship Lane, almost due south of Aveley (TQ 566 794), directed by Stuart Foreman in 1994-5. A second site, a Pleistocene (Ice Age) sequence through Thames terrace deposits near Purfleet Road to the west of Aveley (Fig. 1), was evaluated by David Bridgland (Earth Science Consultancy) as

part of the same programme of investigations. An interim report on both sites was prepared for the Highways Agency (Bridgland and Foreman 1996). The present report has been revised by David Maynard from Stuart Foreman's 1996 interim report. A re-examination of the Late Iron Age and Roman pottery from the excavation has led to minor revision of the site chronology, resulting in the elimination of most of the sub-phases detailed in the original report. In addition, reconsideration of the excavated evidence has led to a significant change in the interpretation of Structure C. Otherwise, the conclusions of the 1996 report remain unchanged. Further investigation of the Pleistocene sequence in 1996-7, which recovered internationally important mammal remains, will be published separately (Schreve *et al.* forthcoming).

Topography and geology

The site lies near the top of a south-facing valley slope, around 16m OD, overlooking the Mar Dyke and, beyond it, the Thames estuary (Figs. 1, 2). Drift geology comprises sandy soils developed on Thames river terrace gravels of the Corbets Tey formation (Bridgland 1994), overlying Chalk bedrock. The soil is distinct from the heavier London and Boulder Clays to the east and north, being light, easily worked and well drained (Allen and Sturdy 1980, 6). The site lies on the southern edge of the gravel terrace, with an alluvial flood plain extending between it and the Thames.

Archaeological and historical background

The Pleistocene predecessors of the Thames laid down extensive deposits of sand, gravel and loam that have attracted settlement from the Neolithic onwards. Over the last twenty-five years this rich potential has been confirmed by the excavation of several important archaeological sites on the terraces overlooking the north bank of the Thames. These include the Neolithic causewayed enclosure at Orsett (Hedges and Buckley 1978), the Late Iron Age/early Roman defended enclosure at the Orsett 'Cock' (Carter 1998), the extensive multi-period settlement and Saxon cemeteries at Mucking (Clark

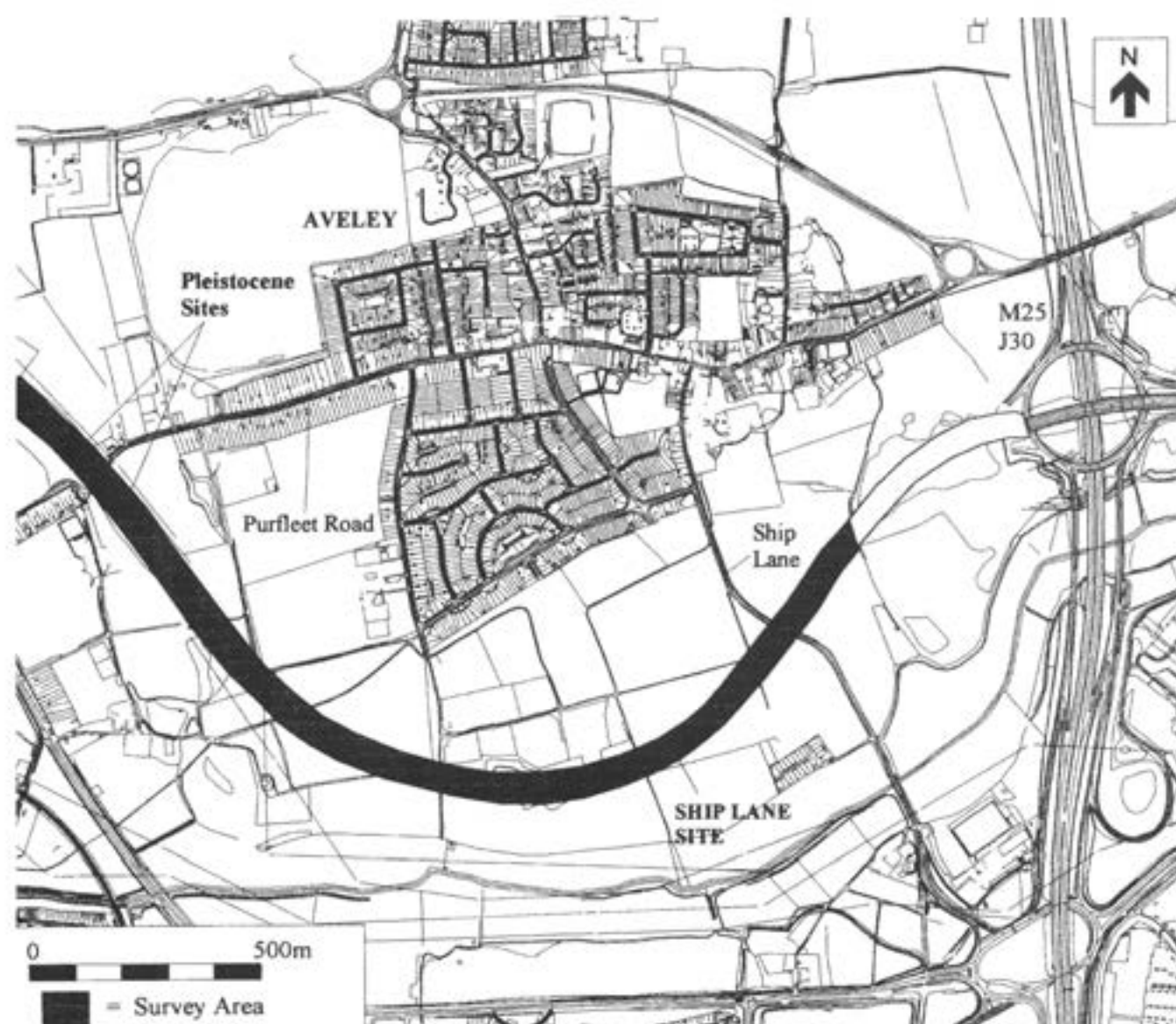


Fig. 1 Ship Lane, Aveley. Site Location map (© Crown Copyright Ordnance Survey. All rights reserved. Licence no. MC100014800).

1993; Hamerow 1993) and the wide range of sites uncovered by the construction of the Grays By-pass in 1979-80 (Wilkinson 1988). The coastal flood plain between the gravel terraces and the Thames has historically been used for seasonal grazing of livestock (Ward 1987; Sealey 1995, 76-7).

The Essex Heritage Conservation Record (EHCR) showed no sites of archaeological significance within the road corridor. However, a Roman pottery group, thought to represent a cremation burial (EHCR 5023), is recorded approximately 100m north of the road corridor (Fig. 2). There are extensive crop-marks near Aveley, including the ring ditches and enclosures at Belhus Park (EHCR 5102-5) and the multi-period field systems and settlement enclosures excavated at Moor Hall Farm, Rainham, and Hunts Hill Farm, Upminster (Greenwood 1982; EHCR 5083, 5085, 5097).

In the Middle Ages, Aveley manor occupied most of the southern part of the parish, including the road corridor (Fig. 2), and documentary evidence suggests the site fell within the manorial demesne from at least as early as the 14th century (Cal. Inq. P.M. XIV 7-11; ERO D/CT 12). At this date, the manor possessed a poorly maintained deer-park, which may have extended into the study area. The manor house (EHCR 5079) stood next to the church, but had been demolished by 1578. In the early 16th century the Savoy Hospital acquired the manor; on the dissolution of the hospital it was granted to the City of London, to become part of the endowment of St. Thomas's Hospital. Much of the demesne land south of the village, which may have formed part of the deer-park, had been divided into holdings and let out to tenants by 1578. These holdings survived, although further subdivided, into the mid 19th century, when many of the field boundaries were removed.

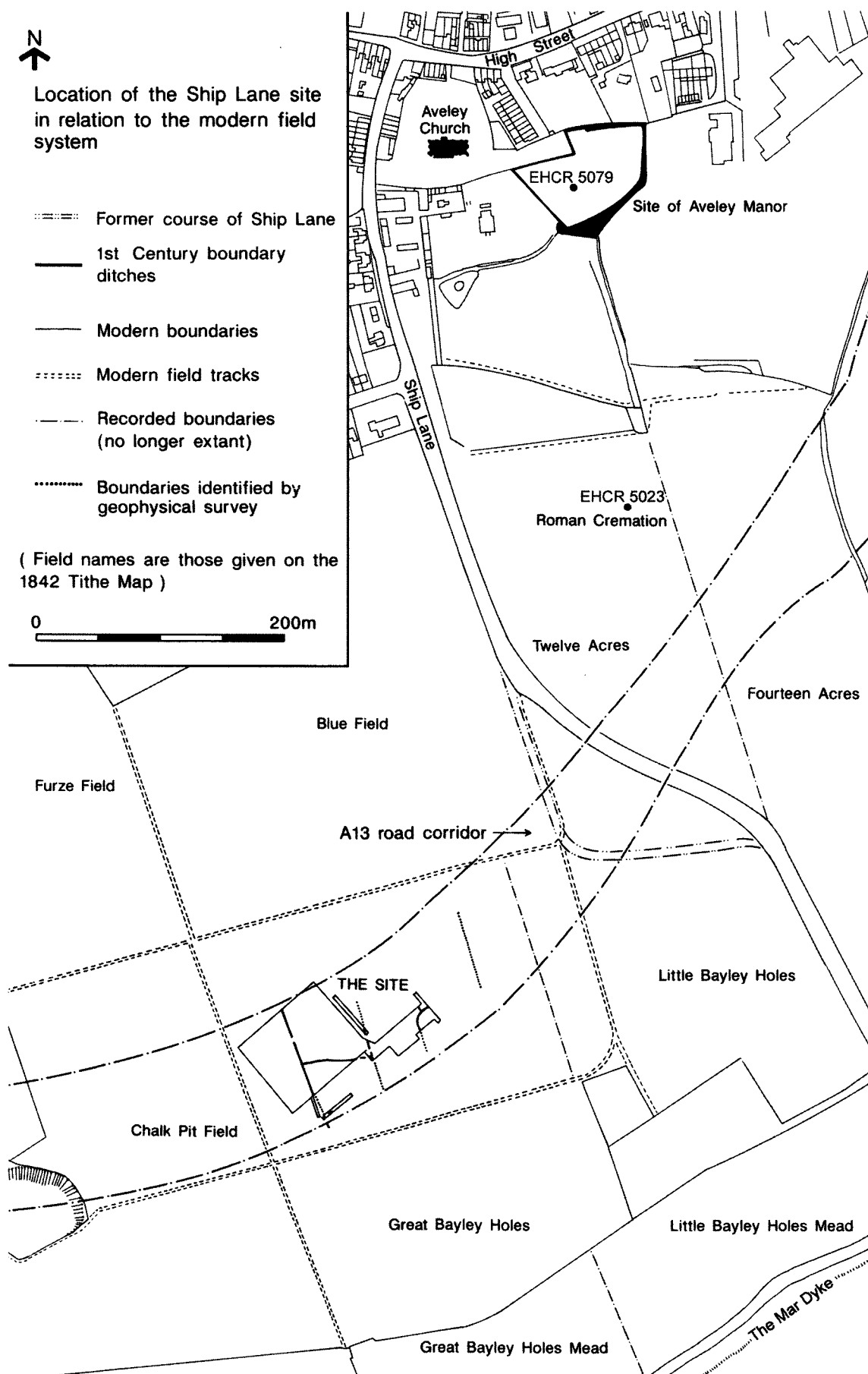


Fig. 2 Ship Lane, Aveley. Site location map showing the site in relation to modern and post-medieval field boundaries.

Archaeological evaluation of the A13 road corridor

Following an initial desktop study (Wallis 1991), a fieldwalking survey of those sections of the road corridor under cultivation identified a concentration of prehistoric flints and Roman pottery to the west of Ship Lane (Germany and Bridgland 1992). No other archaeological sites were identified, especially as many areas had been disturbed by post-war gravel extraction. In September 1994, a geophysical survey of the road corridor confirmed the presence of an archaeological site west of Ship Lane (Fig. 2). Linear magnetic anomalies suggested ancient field boundaries coinciding with the concentration of fieldwalking finds (Geophysical Surveys of Bradford 1994).

In October and November 1994, nineteen evaluation trenches were excavated along the road corridor for a distance of 400m to the south-west of Ship Lane, up to the western boundary of the field known as Great Bayley Holes. Of these, the eleven trenches in the west of the field uncovered archaeological features. After consulting the Highways Agency and development control staff within the Essex C.C. Archaeological Advisory Group (now Heritage Advice Management and Promotion), the evaluation results were considered to be significant enough to proceed directly to area excavation without preparing a formal evaluation trenching report.

The excavation

An excavation area measuring c.80 x 70m, with an extension to the east measuring c.60 x 20m, was opened up in the area of densest features uncovered by the evaluation trenching (Fig. 3). The excavation incorporated many of the evaluation trenches, and features recorded during the evaluation are described as part of the excavation results. A large area was exposed to enable the overall layout of the site to be understood, but while all features were planned, the excavation policy was to investigate a sample of the more important ones. As a result, selected features and key relationships were excavated in detail to understand and date the most important areas of site. These areas are described and illustrated in greater detail in the report and are indicated by the box-outlines on Fig. 3.

Topsoil was stripped by machine to a depth of 0.3m. A layer of post-medieval ploughsoil, varying in thickness from 0.1m to 0.7m, and sealing all but the post-medieval features, was also removed by machine. The archaeological features were cut into the underlying sandy subsoil, which was much disturbed by periglacial activity, root action and animal burrowing. Many features were quite shallow, suggesting truncation by ploughing. No ancient surfaces survived, and the few spreads of

material encountered merely represent the fills of depressions formed by deeper areas of disturbance.

Phasing and dating scheme

The phasing scheme followed in the interim report (Bridgland and Foreman 1996) has been revised to reflect detailed changes in interpretation, although the overall site chronology remains unchanged.

Table 1. Ship Lane, Aveley. Correspondence of revised and original phasing/dating schemes.

This report	Bridgland and Foreman 1996	Period / Date (AD)
Phase 1a	Phase I	Late Iron Age/early Roman: mid 1st-early 2nd century
Phase 1b	Phases II.1, II.2	Roman: 2nd-4th century
Phase 2	Phase II.3	Latest Roman: late 4th-early 5th century
Phase 3	Phase II.4	Saxon
Phase 4	Phase II.5	medieval
Phase 5	Phase II.6	post-medieval

Phase 1a includes the main period of Late Iron Age and early Roman settlement, dating from the mid 1st to early 2nd century AD. Phase 1b covers minor activity from the end of Phase 1a to the 4th century. A late 4th-century or later reorganisation of the enclosure system forms Phase 2. Many of the excavated features contained either residual Phase 1a pottery or no dateable material at all, making the phasing of many discrete features uncertain, although the general sequence is clear. The relatively small pottery assemblage did not allow for fine resolution of dating, and it remains uncertain whether or not the beginning of Phase 1a preceded the Roman conquest. Similarly, Phase 2 is hard to date with any precision, as pottery assemblages in late Roman Essex show little change after c. AD 390.

Phase 1a. Late Iron Age/early Roman (mid 1st-early 2nd century)

In this phase, major boundaries were laid out, forming a series of enclosures, some of which survived through much of the Roman period. Domestic settlement, represented by one, possibly

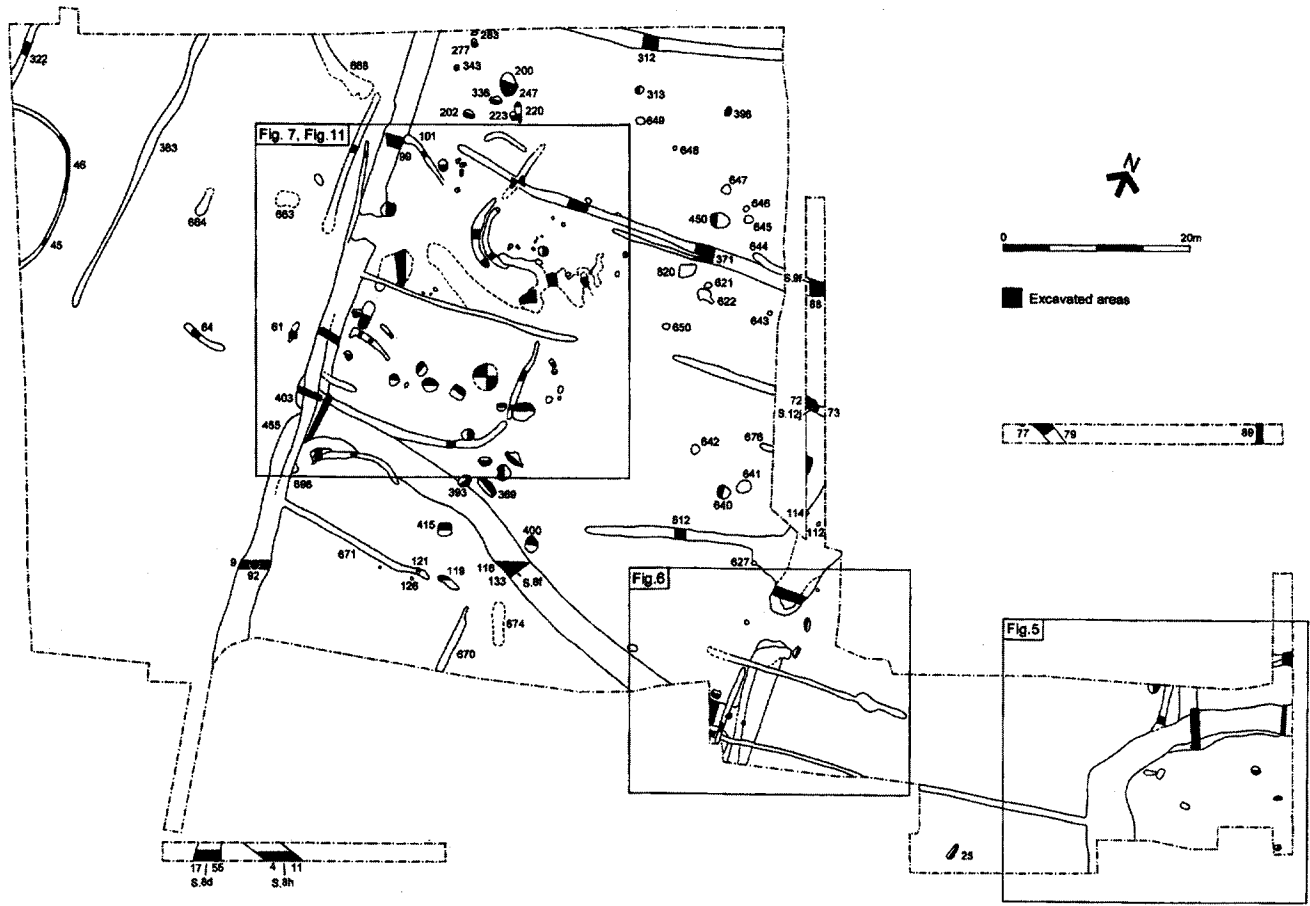


Fig. 3 Ship Lane, Aveley. Site plan.

two, roundhouses and several pits, probably began at the same time that the boundaries were established.

Original enclosure system: layout and development (Fig. 4)

In its earliest form, the enclosure system included two parallel ditches (Boundaries E and F), orientated approximately north-south, both interrupted by entrances. The ditches were 55m apart, linked by two almost perpendicular ditches (Boundaries G and H), orientated roughly east-west, thus forming at least one rhomboidal enclosure c.55 x 45m. A third ditch (Boundary D), 45m further to the east, formed the corner of an enclosure on a slightly different alignment to the other boundaries. The proposed roundhouses (Structures A and B) were situated in an enclosure defined by Boundaries E, F and G, with a large rubbish pit nearby.

The Phase 1a ditches typically had broad U-shaped profiles and were filled with clean, silty sand. The ditches showed some evidence of recuts, and their characteristic profile and fill sequence suggests gradual silting and periodic clearance (e.g. Fig. 6a). However, charcoal-rich deposits containing quantities of pottery and burnt clay, representing occupation debris, were found in the top of many of the ditches.

Boundary D (Figs. 4, 5)

A large ditch at the eastern end of the site formed a curving, almost right-angled boundary. The primary ditch cut (499) was 3-4m wide and 1.1m deep, with a broad, rounded profile (Fig. 5). A secondary ditch (500), 2.0m wide and less than 0.5m deep, ran northwards from 499. Where their junction was recorded in section (Fig. 5), ditches 499 and 500 appear to have been continuous, suggesting they were contemporary. However, the fills of ditch 500 were cut by later recuts of ditch 499, implying that 500 was allowed to silt up while the main ditch continued to be cleared. Gully 503/505, 1m wide and only 0.2 m deep (Fig. 5), ran north from ditch 499 immediately to the west of 500, and was probably a later phase of the same boundary.

The main ditch 499 and the secondary ditches 500 and 503/505 were all truncated by a recut (375), which closely followed the line of 499, but was only 2.7m wide and 0.7m deep (Fig. 5). The sequence represented by ditch 499 and its recut 375 suggests gradual silting and periodic clearance, possibly with more recuts than that recorded as 375. The fills of the primary ditch 499 are poorly dated, but recut 375 contained a relatively large amount of pottery dated to the mid/late 1st century AD.

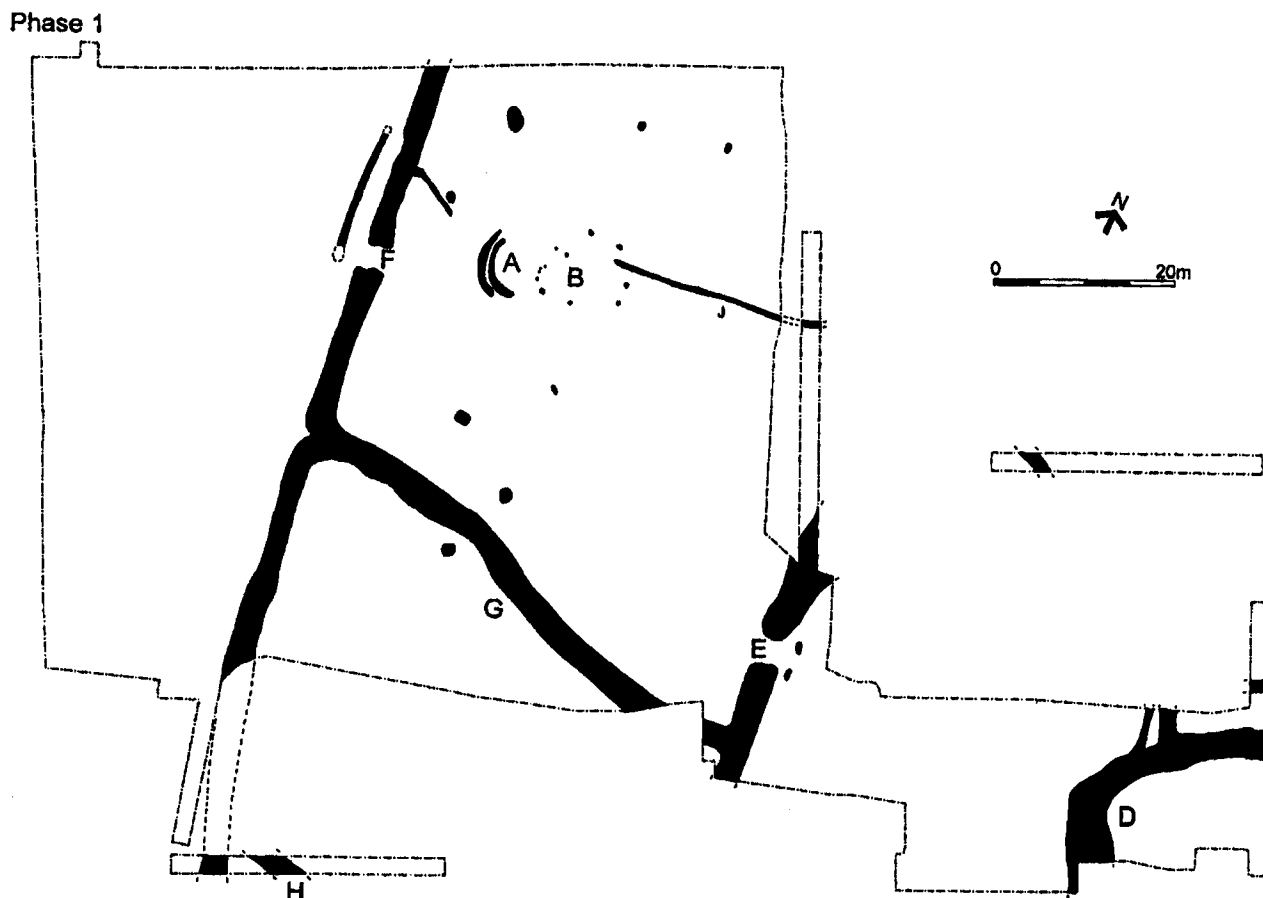


Fig. 4 Ship Lane, Aveley. Phase 1 features.

Boundary E (Figs. 4, 6)

To the west of Boundary D, two large ditches formed a north-south boundary interrupted by an entrance 3.2m wide. The northern ditch (318) was 3.7m wide and 1.2m deep and had a broad, moderately steep-sided profile (Fig. 6a). The fills of this ditch represent a very clear sequence of silting and clearance profiles, with 483 and 481 in particular representing the fills of clearances of the bottom of the ditch. The primary fills of this ditch contained very little pottery, but the latest fill (317) produced a small quantity dated to the late 1st and early 2nd centuries AD. This included a sherd from a Gauloise 4 wine amphora, which was produced from the mid 1st century up to the early 3rd century.

The southern ditch (515) was 3.2m wide, 0.9m deep, with a similar profile to 318. An excavated segment, located at the junction of Boundaries E and G, provided a well-defined stratigraphic sequence, indicating successive boundary renewal episodes (Fig. 6b). In section, ditch 515 of Boundary E appears to have cut ditch 516 of Boundary G at right angles, but the fills of the two ditches were very similar, and they shared a common upper fill (521). It is more likely that they were contemporary and silted at the same time.

A pair of post holes (406, 492) at the junction of Boundaries E and G cut the fill of both ditches 515 and 516 but were cut by later recuts of these ditches. They

may represent a pair of boundary markers. Both post holes contained dense charcoal deposits and were lined with a very thin layer of burnt clay, suggesting that the posts had been burnt *in situ*. A recut (405), 0.8m wide and 0.5m deep, with a steep-sided U-shaped profile (Fig. 6), ran up the line of the ditch 515. It cut the fills of ditches 515 and 516, as well as post hole 492, and is the latest feature in the sequence. The primary ditch cut 515 contained a small quantity of pottery dated to pre-AD 70, while pottery from the recut 405 is dated to the late 1st/early 2nd century. Two post holes (326, 354) which flanked the east side of the entrance in Boundary E (Figs. 4, 6), may have marked the main entrance to the enclosure to the west of the boundary.

Boundary F (Figs. 3, 4, 7, 8)

Further west, a series of large ditches formed a second north-south boundary parallel with Boundary E. Ditches 455 to the south and 403 to the north both turned eastwards to merge with Boundary G at right angles. An entrance 3.2m wide interrupted the two lengths of ditch (99 and 28/403) to the north of the junction with Boundary G. The southern length of ditch (9 and 17/55) was less intensively investigated and is only shown on the general site plan (Fig. 3). The fills of the Boundary F ditches typically consisted of a clean, yellowish brown silty sand with some gravel lenses and very few finds. Only ditch segment 403 produced definitive dating evidence,

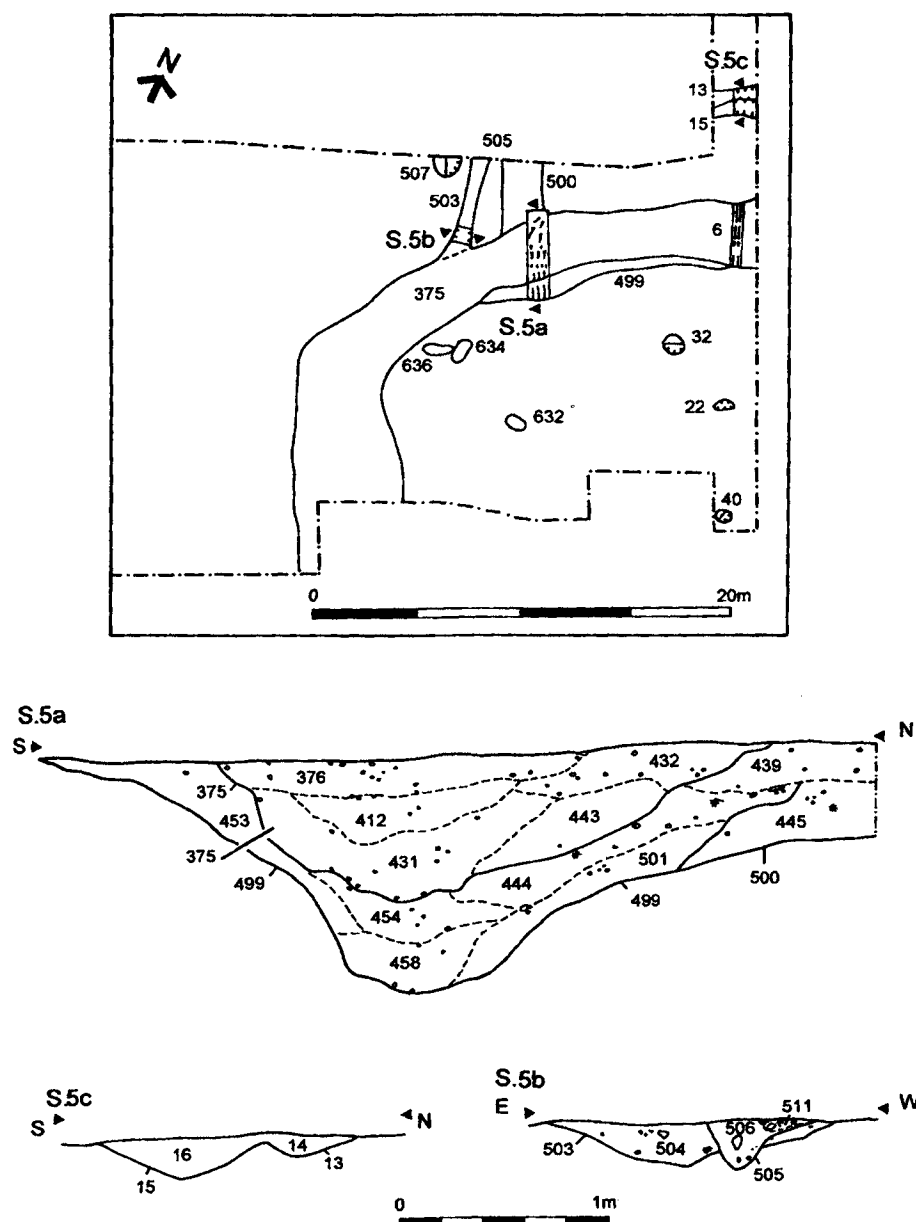


Fig. 5 Ship Lane, Aveley. Boundary D.

and pottery became increasingly scarce towards the north and south ends of the site.

Variations in the ditch profile are visible in the five segments excavated along the length of Boundary F. The ditch to the north of the entrance (99) was 2.1m wide and 0.7m deep, with a steep V-shaped profile (Fig. 8a). The ditch to the south of the entrance (28) was disturbed along its western edge by a later recut (see Phase 2, ditch 31/330), but was about the same size (c. 2m wide and 0.6m deep) as that to the north, although with a less steep-sided profile (Fig. 8b). Further south, where it turned to meet Boundary G, the ditch (403) was much broader, at c. 3.5m wide and 1.0m deep (Fig. 8c). The two ditch segments to the south of the junction with Boundary G (Fig. 3, ditch segments 9 and 17/55) do not provide good evidence. The profile and fills of ditch segment 9 were disturbed by a

large medieval pit (Phase 4, 92) which was not at first recognised in excavation. At the extreme south end of the site the ditch is represented by two cuts (17, 55). The stratigraphic relationship between them was not determined, although the deeper of the ditch cuts (17) was of similar dimensions to most of the other ditch segments to the north (Fig. 8d). The only datable pottery associated with Boundary F came from the primary fill of ditch 403 (420), dated to the mid/late 1st century AD.

A trackway 2m wide ran for at least 15m along the western side of Boundary F. A gully (386), whose southern end terminated opposite the entrance, marked the western, outer edge of the trackway. The fill of the gully (387) produced a small quantity of pottery pre-dating AD 70, implying that it was contemporary with the ditches forming Boundary F.

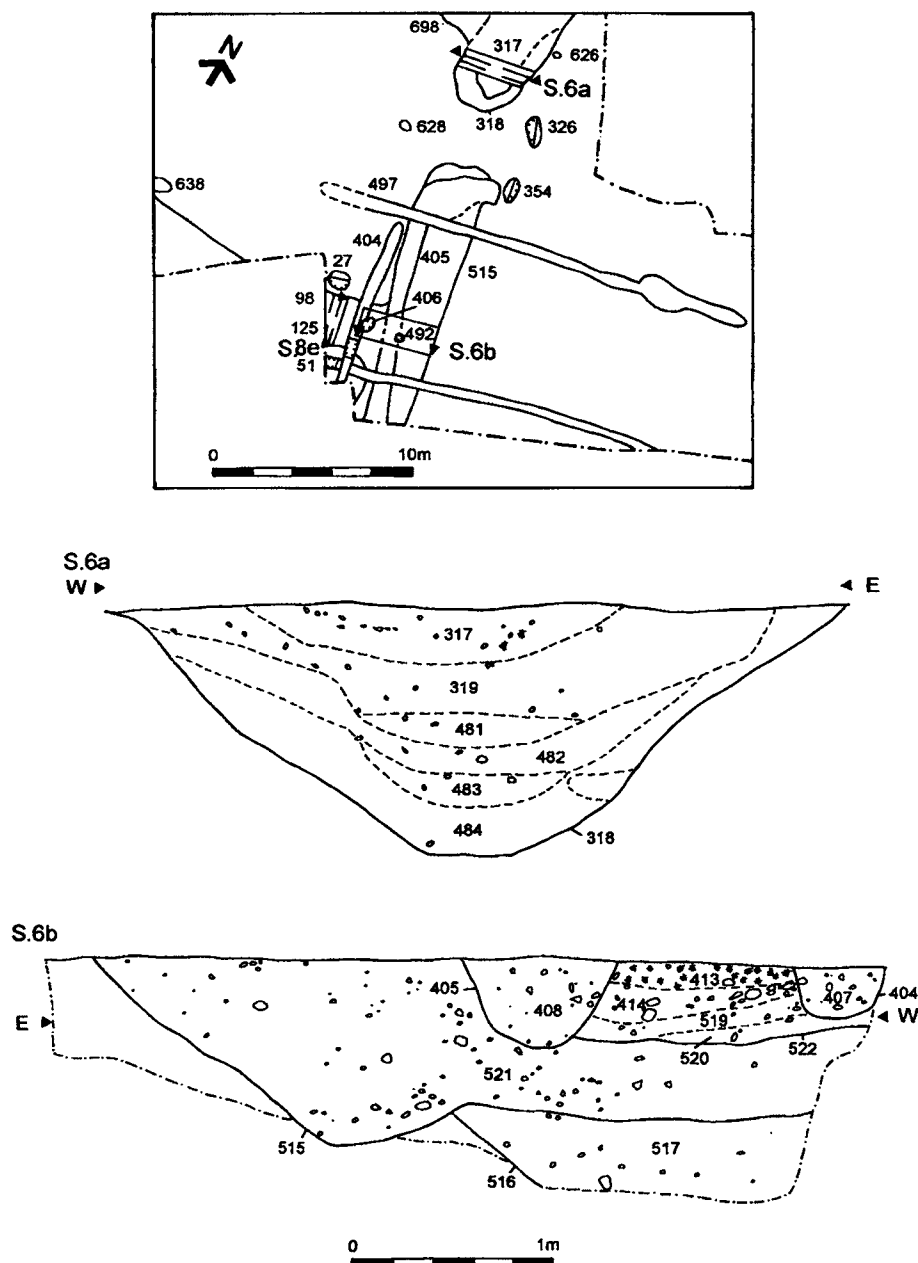


Fig. 6 Ship Lane, Aveley. Boundary E.

Boundary G (Figs. 3, 4, 6, 7, 8)

Boundary G ran between Boundaries E and F. Ditch segment 125, near the junction with Boundary E to the east (Fig. 6), was 2.4m wide and c. 1.2m deep, with a moderately steep-sided V-shaped profile (Figs. 6, 8e). It was mainly filled with clean silty sand, but its upper fills were in marked contrast as they contained a considerable quantity of occupation material, particularly burnt clay, burnt flint and charcoal (97/96 and 413/414/519/520).

A segment excavated across the boundary further west (Figs. 3, 8f) indicated two distinct ditch profiles (133, 116), of which 133 appears to have been the earlier. The fills of both ditch cuts produced Late Iron Age or early Roman pottery, although some or all of this may be residual. Three conjoining sherds of medieval pottery were also recovered from the fill of the later cut 116; they could be

intrusive, as evidence elsewhere suggests the Boundary G ditches were no longer extant by the 4th century. However, a segment excavated at the western end of Boundary G (Fig. 7), where the ditch separated into two at the junction with Boundary F (356, 360), showed a third cut (358) not detected elsewhere (Fig. 8g). A third cut may have been present in segment 116, but went unrecognised during excavation.

Four post holes (393, 400, 638, 27) which lie along the north side of Boundary G are mostly undated, but may have formed a fence line (Figs. 3, 6, 7).

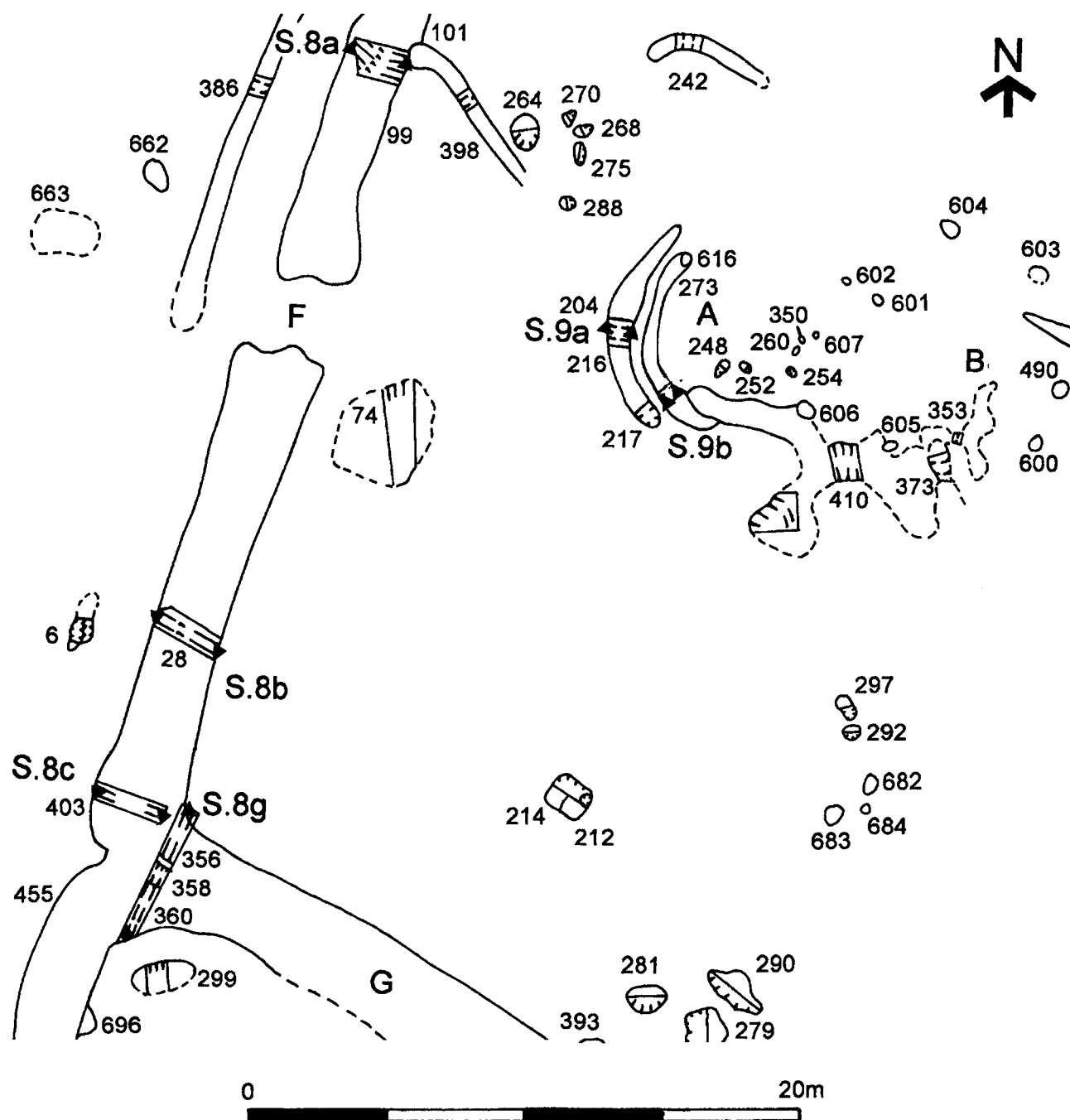


Fig. 7 Ship Lane, Aveley. Boundary F, structures A and B.

Boundary H (Figs. 3, 4, 8)

Boundary H was only investigated during the evaluation, as it lay beyond the southern edge of the excavation area (Fig. 3). The ditch ran approximately east-west parallel to Boundary G, and it presumably formed another transverse link between Boundaries E and F. The original ditch cut (11) had a moderately shallow, V-shaped profile, 1.9m wide and 0.4m deep, and was recut (4) with a similar profile and alignment (Fig. 8h). The stony, light greyish brown silty sand (5) filling the recut included a small 1st-century AD pottery group.

Structure A (Figs. 4, 7, 9)

Structure A lay 10m to the east of the entrance in Boundary F. It survived as two concentric, but severely truncated, semi-circular gullies (204 and 273), 0.4m apart, of which only the western sides remained (Figs. 7, 9a, 9b). The inner gully (273) contained two sherds of pottery dated to the 1st century AD. A post hole (616) cut into the top fill of this gully and may have been a part of the structure. Post holes 248 and 252 fall within the area of Structure A, and may represent internal features. Post hole 248 contained two sherds of 1st-century pottery.

Although the shallow, concentric gullies of Structure A lack any obvious post-settings, they probably represent a wattle-and-daub wall based on concentric rings of small posts and stakes, surrounded by an eavesdrip gully. The surviving arc can be extrapolated in a number of ways, but a minimum external diameter of c.9.5m, and an internal diameter of c.6m, can be suggested. The absence of internal roof supports may be explained by the use of shallow-set post-bases long since ploughed out.

Structure B (Figs. 4, 7, 9)

This structure is less confidently identified than Structure A, and may perhaps be an extension of the latter. If Structures A and B are separate buildings, it is not possible to determine which of the two was the earlier as none of their component features were in direct stratigraphic relationship. Seven shallow post holes (604, 603, 490, 600, 606, 607 and 602) can be grouped to give a circular structure with a diameter of c.10m (Figs 4, 7). Two further post holes (601, 605), which may be internal features, can also be tentatively included. There is insufficient evidence to date the structure, though it apparently pre-dates Boundary J, dated to the mid/late 1st century. Post holes are apparently missing from the south side of the circle, but they may have been obscured by the severe root disturbance affecting this area. The only feature in the vicinity with datable pottery was a length of gully (373), containing a sherd of pottery dated to the 1st century AD. Features 350, 260 and 254 formed a cluster of undated post holes in the same area (Figs 9c, 9d), which could be related to either structure, although they lie closest to the extrapolated circle of Structure B.

Pit 200 (Figs. 3, 4, 9)

Pit 200, to the north of Structure A (Fig. 3) was a large, vertical-sided feature, 1.3m deep, with a flat base. The pit contained numerous interleaved fills, with the lowest sloping downward from east to west (Fig. 9e). The composition of the fills was mainly silty sand or sandy silt with variations in the colour, texture and frequency and type of inclusions. Several particularly dark, greyish

brown silty fills (474, 245, 469, 239) included concentrations of pottery, bone, burnt flint and charcoal, indicating periodic rubbish dumping from the east side of the pit. Several layers of redeposited natural soil in the west (465, 461, 466, 463, 462) indicate occasional collapses of that side of the pit, which was markedly undercut as a result, showing that it was unlined. Pit 200 produced the largest pottery group from the site (83 sherds), dated to the late 1st century AD, with the majority of the finds deriving from the rubbish deposits in the lower part of the pit.

Boundary J (Figs. 3, 4, 9)

This shallow ditch or gully (88/377) formed a minor east-west division (Boundary J) 40m north of Boundary G (Figs. 3, 9f). Unfortunately the feature was obscured for much of its length by a later Phase 2 gully following the same course. Gully segment 88 produced a small group of pottery dated to the mid/late 1st century AD, suggesting Boundary J was in use in Phase 1a. However, the boundary's western terminal overlapped the proposed Structure B. Given that Boundary J was reused in Phase 2, it is presumed to have been later than Structure B, although it could possibly have been contemporary with Structure A on the grounds of both spatial relationships and pottery dating.

Phase 1b. Mid/late Roman (2nd-4th century)

The Phase 1a boundary ditches had largely silted or been filled in by the early 2nd century, and it is likely that activity related to Structures A and B and pit 200 had also ceased by this date. Period 1b is characterised by a small number of gullies, pits and post holes containing 2nd-4th century pottery, suggesting only a very low level of activity. The top of the Phase 1a pit 200 remained open and was not finally filled until Phase 1b. The Phase 1a boundary ditches may also have continued to be visible as shallow depressions, but the absence of later recuts or clearances suggests that they were not actively maintained.

Phase 1b features are very difficult to identify due to the high proportion of residual pottery across the site and the fact that the majority of features are dated by very small amounts of pottery. Much of the mid and late Roman pottery that was recovered was demonstrably residual in later features, and it is possible that some Phase 1b features dated by only a few sherds may in fact belong to Phase 2. Despite this, it is considered that the site was not completely abandoned after the silting of the Phase 1a boundary ditches, although there was a sharp downturn in the level of activity.

Pit 200

The upper fills of the pit (459, 227, 226, 476, 201, 475) sloped inwards towards the centre at a shallow angle, filling a shallow depression in its top. They contained two small, abraded sherds that are probably 3rd century or later in date and a large residual component of 1st-century material. This suggests that the pit remained

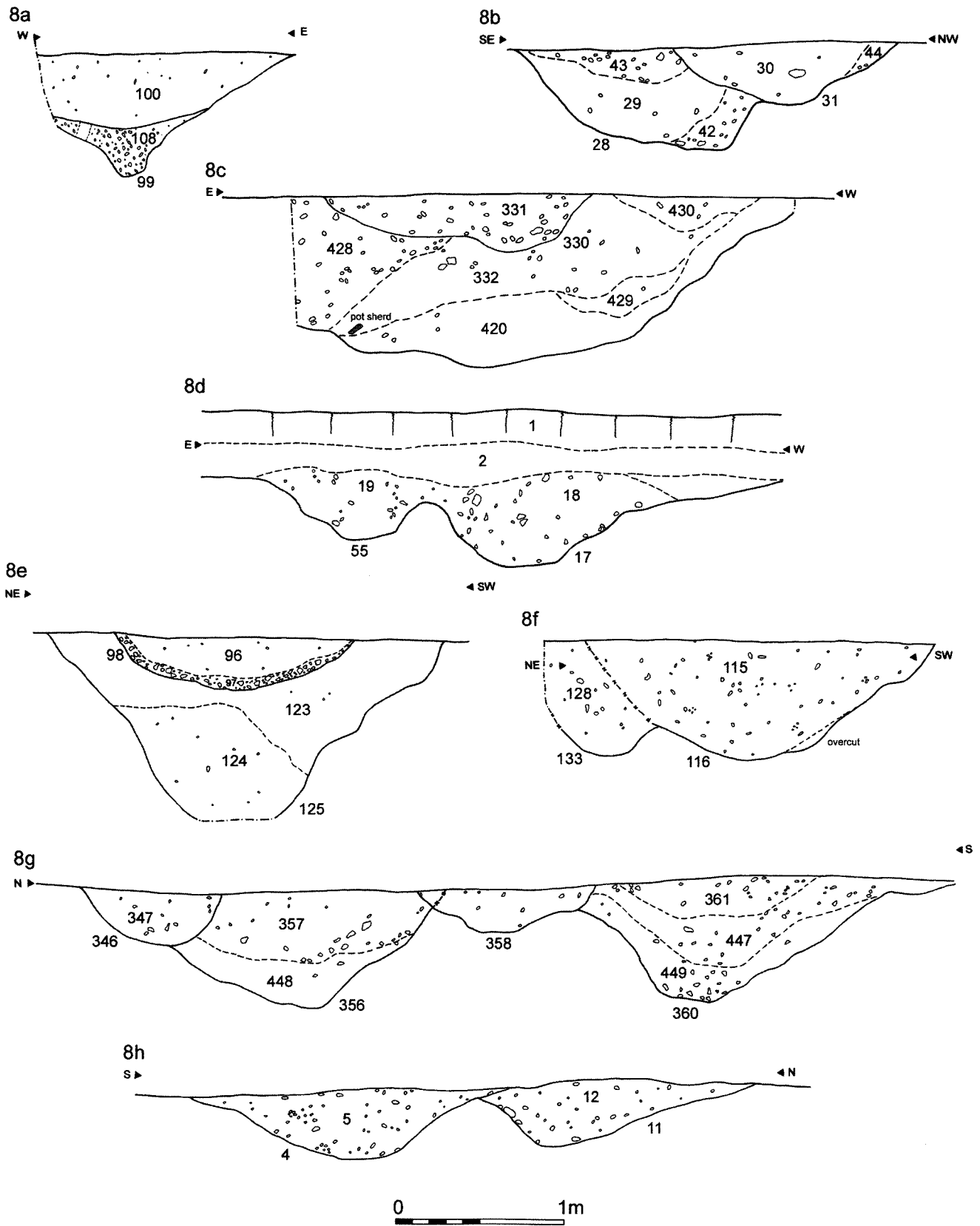


Fig. 8 Ship Lane, Aveley. Sections: boundaries F, G and H.

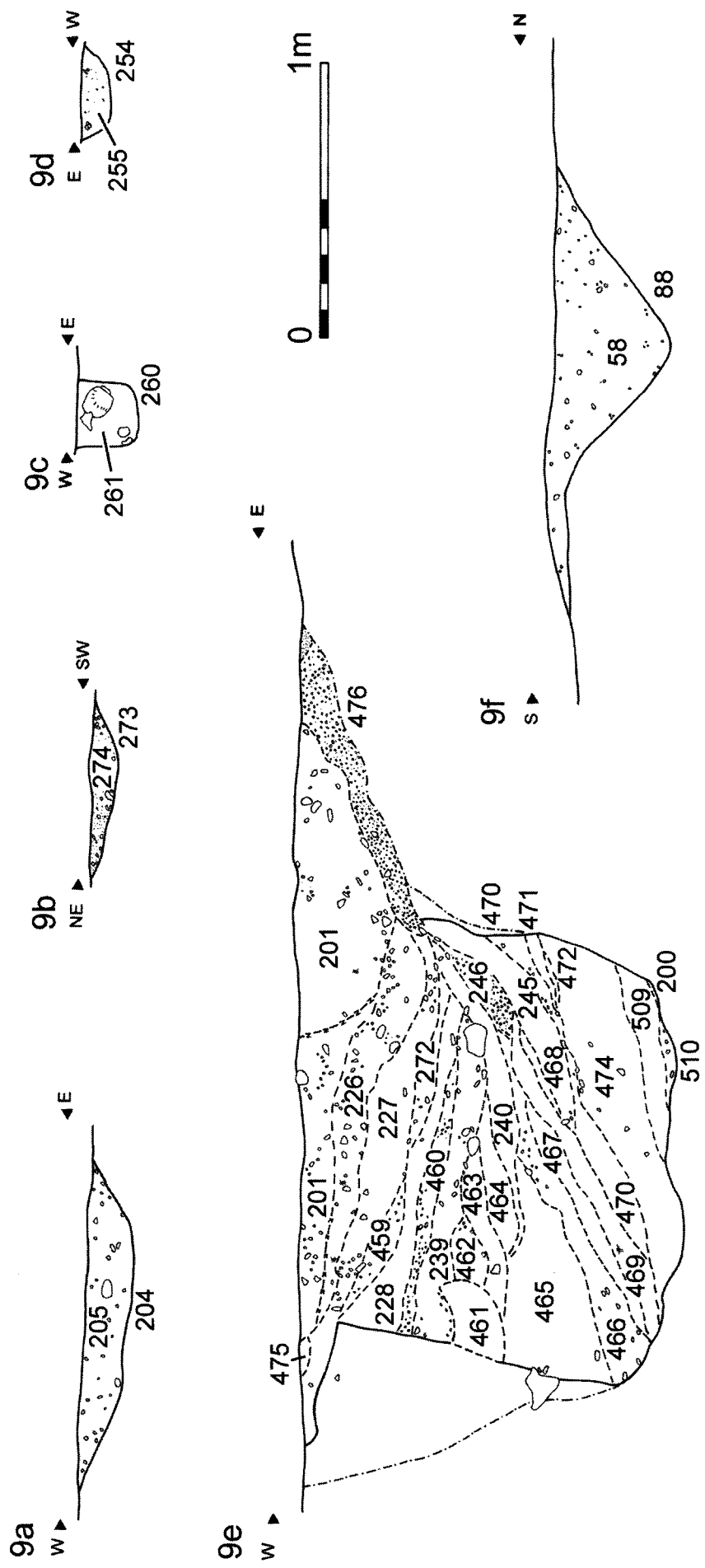


Fig. 9 Ship Lane, Aveley. Sections: structures A and B, Pit 200 and boundary J.

visible as a hollow for some time before finally being levelled up.

Gullies (Figs. 3, 4, 5)

Gully 13 ran parallel to the northern arm of Boundary D (Fig. 5); the small quantity of pottery recovered from it suggested a 2nd/3rd-century date for the feature. A short length of gully was recorded during the evaluation (79) to the east of the main excavated area (Fig. 3), and is included in Phase 1 on limited dating evidence. The significance of this feature is not understood as its orientation does not match any of the prevailing alignments particularly closely.

Pits and post holes (Figs. 3, 4, 7)

A number of scattered features contained pottery dating them to Phase 1b. Post hole 212, east of the junction of Boundaries F and G (Fig. 7), contained pottery which suggests a date in the mid 2nd to mid 3rd century. The post hole cut the corner of a larger pit (214), which contained pottery of the same date. Pit 297, northernmost of a cluster of pits mid-way between the eastern end of Boundary J and Boundary G (Fig. 7), contained a small quantity of mid to late 2nd-century pottery. A rectangular pit (396) in the north-eastern corner of the site (Fig. 3), which also produced quernstone fragments (Miscellaneous finds, nos. 6 and 10), contained pottery of mid 2nd-century or later date.

Phase 2. Latest Roman (late 4th–early 5th century)

In this phase (Fig. 10), the disused Phase 1 boundaries were replaced by a system of gullies, perhaps supplemented by fences or hedges, which delineated a series of smaller enclosures. In one of these a small structure was erected, alongside a well and other features. The nature of the occupation was probably not domestic, but is thought to have been connected with livestock management.

The Phase 2 boundaries formed a rectilinear plan based on the alignment of the north-south Boundary F of Phase 1. This boundary, at least, may still have been visible, although largely silted-up, as its line was repeated in the Phase 2 layout. However, even if the other Phase 1 boundaries were still visible, they were not incorporated in the new layout, in particular where Phase 2 boundaries crossed the line of Boundary E. The Phase 2 boundaries must therefore represent a new layout. Several of the enclosures were longer and narrower than in Phase 1, which suggests a change in use of the site. One of the enclosures, on the east side of Boundary F, contained a small structure (Structure C), and a well.

Boundary F entrance (Figs. 10, 11, 12)

The entrance in Boundary F, first seen in Phase 1, assumed a new importance in Phase 2. During this phase, the entrance was flanked on its north-east side by a large post-pit (129) containing late 3rd to 4th-century pottery (Fig. 11). A complete upper millstone (132) (Miscellaneous

finds, no. 8) was placed horizontally over the top of a central post-pipe (131) (Fig. 12a). The post hole may have contained a boundary marker or gatepost; no companion post hole was noted on the south side of the entrance. The function of the millstone is uncertain: it could have been deposited as a termination offering marking the removal of the post; alternatively the central hole of the stone might have been used as the post setting. The undoubted 4th-century date of the post-pit demonstrates that Boundary F was visible in some form at the start of Phase 2.

Enclosure containing Structure C (Figs. 10, 11, 12)

This enclosure was sited against the east side of Boundary F, immediately south of the entrance marked by post-pit 129, and measured c. 20m x 14m internally. It was formed by a group of shallow gullies (0.1m deep) which cut the Phase 1 ditch 28/403 forming Boundary F (Figs. 10, 11). In the north, gully 206 extended for 24m in a straight line eastwards from Boundary F, and its profile showed clear evidence of natural silting (Fig. 12b). Gully 73 continued the alignment to the east, beyond the limit of excavation, resuming after a gap of about 10m (Fig. 10). Gully 346/258 marked the south side of the enclosure, and its relationship, cutting the Phase 1 ditch 403, is clearly recorded in both plan and section (Fig. 12g). At first, gully 346/258 ran parallel to gully 206, before curving north and continuing as gully 218 to form the eastern side of the enclosure. The shallow nature of the gullies (often less than 0.1m deep) suggests that the gaps between gullies 206 and 73, and at either end of gully 218, may have been the result of plough damage, and were not a feature of the original layout. Only residual 1st-century pottery was recovered from the enclosure gullies, although their stratigraphic relationship with the Phase 1 Boundary F clearly places them in Phase 2.

Structure C (Figs. 10, 11, 12)

Little of Structure C survived due to plough damage. The western part of its north wall was represented by a 0.4m wide foundation of large flints (37) packed in a shallow trench (20) (Figs. 11, 12c). The wall line was slightly curved and appeared to form a corner in the north-west. The foundation may have supported a timber superstructure resting on a cill-beam, or, perhaps more likely, cob walling. The rest of the structure is less confidently identified, although its south wall may be represented by gully 680 (unexcavated), and post holes 324, 477 and 479 may also be related to it. A shallow sunken hearth (383) with evidence of a scorched clay lining (385) appears to have lain within the structure (Figs. 11, 12d). The exact form of Structure C is difficult to determine, and the interpretation offered here results in a much smaller structure than that originally suggested in the interim report (Bridgland and Foreman 1996). This included gully 206 which, on the clear evidence of natural silting, cannot have been a wall trench. Structure C is tentatively dated to the 4th century on the basis of a sherd of Rettendon ware in foundation trench 20, and twelve sherds of pottery, including an Alice Holt jar form, in post hole 324.

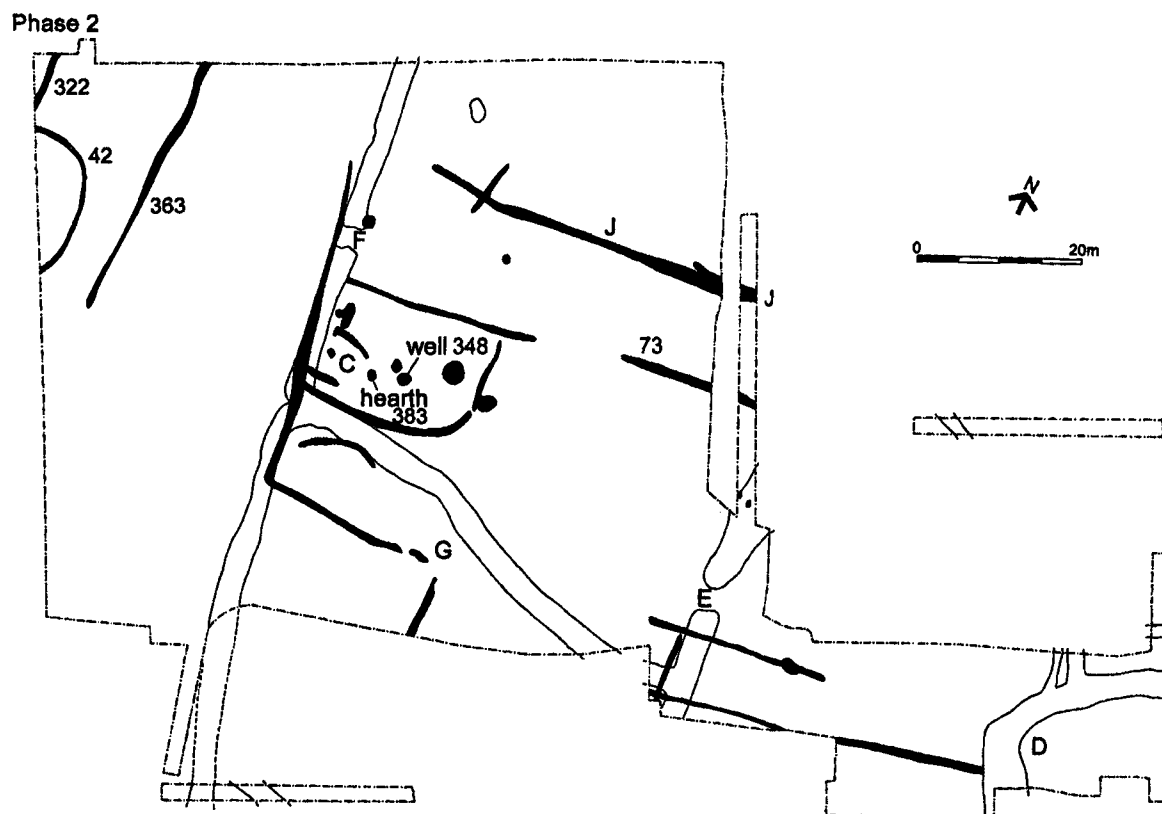


Fig. 10 Ship Lane, Aveley. Phase 2 features (black: earlier, disused features shown as open shapes).

The well and other features adjacent to Structure C (Figs. 11, 12)

A large, vertical-sided circular pit (348) to the east of Structure C is interpreted as a well (Fig. 11). It was excavated to a depth of 1.2m and augered for a further 5.2m without reaching either the bottom or the water table. The lowest fill consisted of dirty, sandy silt with chalk fragments. Towards the bottom of the excavated segment, the feature was lined with dark brown sand (422), surrounding a central core of lighter brown sand (423, 424), suggesting that a timber lining may originally have been present, but had decayed *in situ* (Fig. 12e).

A pit (433), immediately north of Structure C (Fig. 11) contained a small quantity of late Roman pottery; this cut a larger rectangular pit (437) which contained 1st-century AD pottery and an iron reaping hook (Miscellaneous Finds No. 3). It is uncertain whether pit 437 belongs to Phase 1, or whether the pottery is residual and it belongs in Phase 2. Pit 304 marginally cut gully 218 forming the east side of the enclosure, and must also be a Phase 2 feature. To the south of the enclosure, a shallow gully (294/302) formed an arc c. 9.5m long (Fig. 11), cutting the southern side of Boundary G, which had silted up by this time. The gully cut a pit (299), which contained late 4th or early 5th-century Alice Holt grey ware in its upper fill, even though the gully itself contained only 3rd-century pottery (Fig. 12f).

Final recut of Boundary F (Figs. 11, 12)

After the enclosure gullies around Structure C had silted up, a shallow ditch (330/31/338), 1.35m wide and 0.35m deep (Fig. 11), was dug on the same alignment as Boundary F, extending across the entrance and probably closing it off. The recut could be distinguished in plan from the Phase 1 boundary ditch for a distance of c.18m south of the entrance. Its relationship, cutting both the Phase 1 ditch and enclosure gully 346, is clearly recorded in both plan and section (Fig. 12g). The fill of recut 330 produced Roman pottery with a wide date range, much of it clearly residual, but with the latest material dating from the late 4th century or later.

Replacement of Boundary E (Figs. 3, 10)

Two post holes (112 and 114) were cut into the latest fill of Boundary E, to the north of the entrance, replacing rather than supplementing the ditch. A possible parallel is known from Ardale School, where a double line of posts formed a boundary along the axis of a previously silted-up Late Iron Age enclosure ditch (Wilkinson 1988, 37).

Enclosures east of Boundary F (Figs. 3, 5, 6, 10, 11, 12)

Boundary J of Phase 1 was recut (333/335) on a slightly different alignment and extended west toward Boundary F (Figs. 11, 12h). The recut contained pottery of late 4th-century or later date, as well as a large element of residual 1st-century AD material. Gully 236, which intersected Boundary J, also contained a small amount of late Roman pottery.

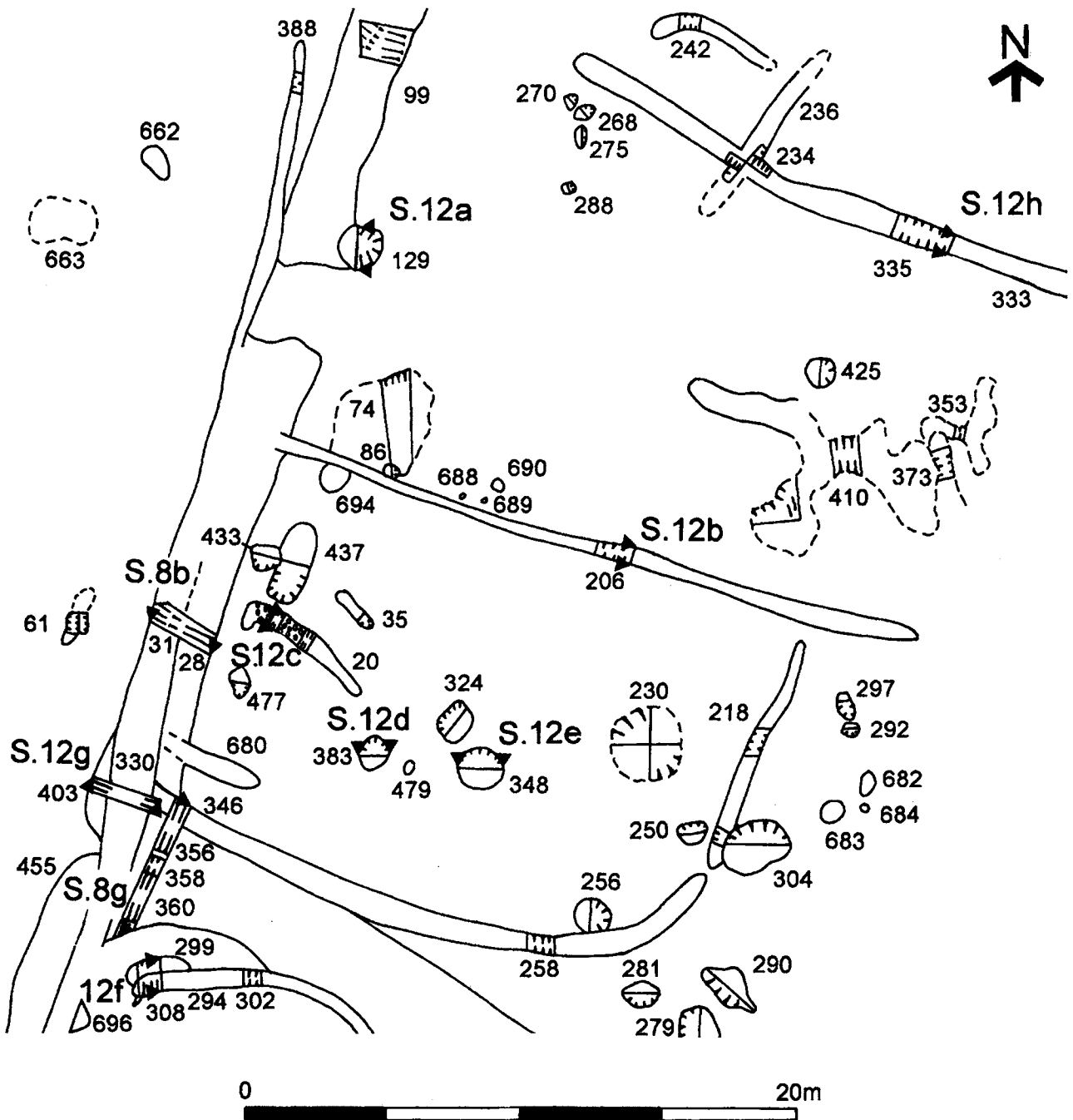


Fig. 11 Ship Lane, Aveley. Boundary F, structure C and enclosure.

Most of the remaining linear features are likely to belong to Phase 2, though they frequently lacked reliable dating evidence, generally containing only residual 1st-century AD pottery derived from the underlying Phase 1 ditches. The plan and stratigraphy of the gullies suggests that they were laid out in relation to Boundary F, which was certainly extant at the start of Phase 2, and that Boundaries G and E were either no longer visible or filled in as part of the process.

Enclosures west of Boundary F (Figs. 3, 12)

At the western edge of the excavated area was a narrow, shallow gully (45), 0.2m deep, forming an irregular semi-

circle c.17.5m in diameter. A small circular post hole (46), 0.25m deep and 0.42m in diameter (Fig 12i), cut into the base of the gully, contained a coin of Constantius II (348-57 AD). This feature may have been the foundation of a timber fence forming a small enclosure. Two further north-south aligned gullies (322, 363) are also probably of this phase, although neither contained any datable material.

Other Phase 2 features (Figs. 3, 11)

To the east of Boundary F and its recuts (Fig. 11) was a small post hole (268) containing three sherds of pottery, including Alice Holt grey ware. It was one of a cluster of

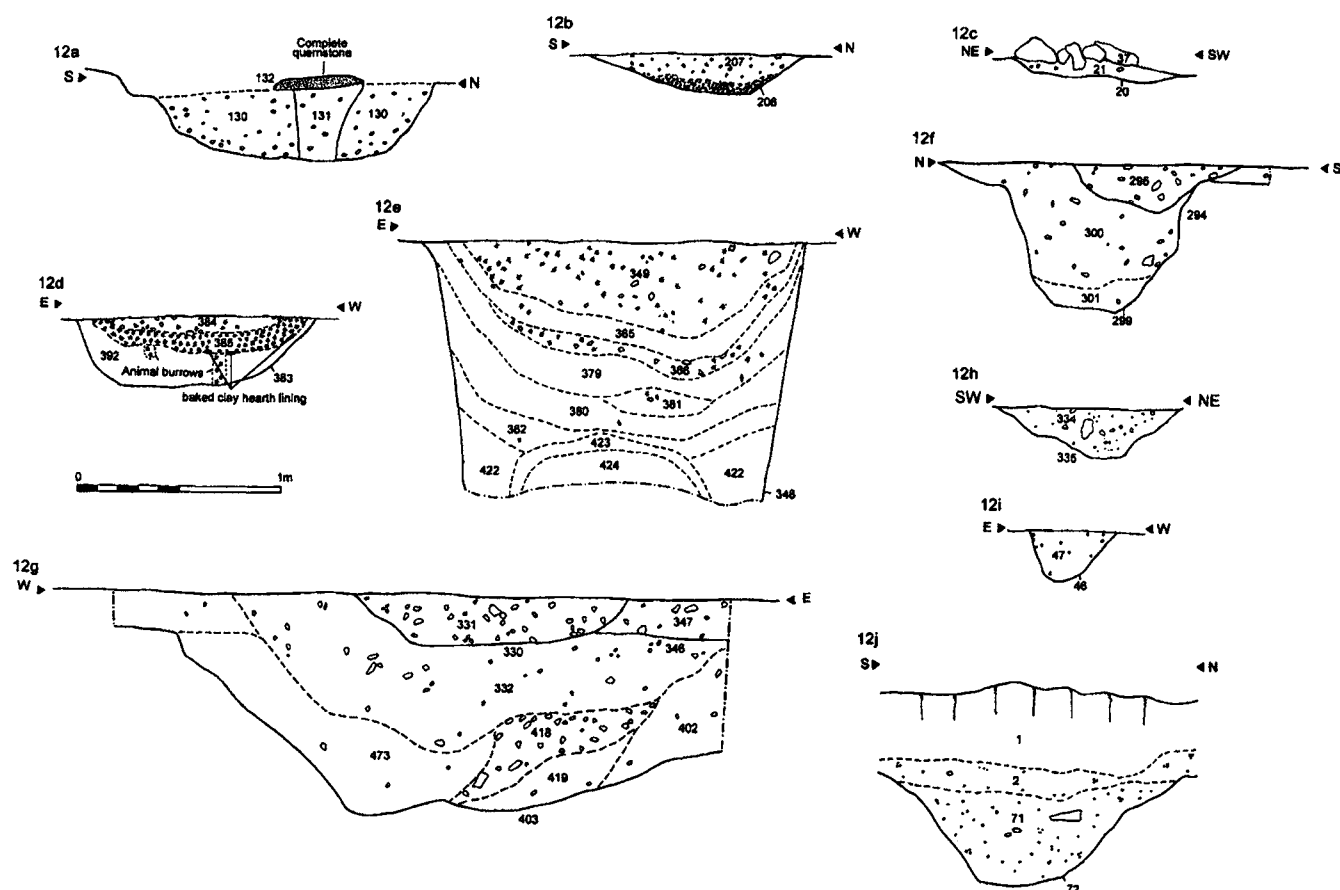


Fig. 12 Ship Lane, Aveley. Sections: phase 2 features.

four similar, but undated features (268, 270, 275, 288), which formed a rough alignment and may therefore be related. Pits 202 (Fig. 3) and 425 (Fig. 11) were both isolated and not obviously associated with other Phase 2 features, but contained late Roman pottery. Late Roman pottery was also found in an amorphous feature (410) to the north of the enclosure containing Structure C (Fig. 11).

Phase 3. Saxon (Figs. 3, 12)

The only Saxon feature identified was pit 72 (Fig. 3), which cut through the Phase 2 boundary gully 73. The fill (71) contained a small quantity of undiagnostic Saxon pottery and a small amount of burnt bone (Fig. 12j).

Phase 4. Medieval (Fig. 3)

A large pit (92), measuring 2.8m wide and 1.8m deep, cut through Boundary F, largely obliterating the profile of the Phase 1 boundary ditch. The pit was excavated during the evaluation trenching and it appears that its fills and those of the earlier ditch were not distinguished. Its uppermost fill (10) contained a small group of medieval pottery. The lower fills consisted of three dense charcoal layers, interleaved with clean sandy silt deposits; the uppermost charcoal layer (82) contained a single Saxon sherd. The pit fills either contained residual Roman pottery or were contaminated with material from the earlier ditch.

Phase 5. Post-medieval (Fig. 3)

A post-medieval ditch (312), containing bottle glass, roof tile fragments and residual 1st century AD pottery, crossed the north edge of the site from north-east to south-west. Ditch 512 followed a parallel course, suggesting that it is of a similar date, although it only contained residual Roman material.

The Late Iron Age and Roman pottery

T.S. Martin, with S. Willis and P. Sealey

Introduction

A total of 752 sherds (9552g) of pottery of this date came from 107 contexts. The 1994 evaluation produced 141 sherds (1657g) from 27 contexts, while the main excavation provided a total of 611 sherds (7895g) from 80 contexts. The pottery was classified using the Chelmsford typology published by Going (1987, 2-54). Additional references were sought in the *Camulodunum* type series (Hawkes and Hull 1947, 215-73), Young's (1977) Oxfordshire corpus, Lyne and Jefferies' (1979) Alice Holt/Farnham industry typology, and Monaghan's (1987) study of the Upchurch and Thameside industry where forms are present that are not included in the Chelmsford typology. For the Late Iron Age material, reference to Thompson's corpus of grog-tempered 'Belgic' pottery (Thompson 1982)

is only made where a form is not found in either Going or Hawkes and Hull. Analysis is primarily concerned with identifying the variety of fabrics and forms, and providing dating evidence for site features. Quantification is by sherd count and weight by fabric.

A total of twenty-five fabrics, including three amphora fabrics, were identified. Essex C.C. mnemonic codes are used below for consistency as not all of the fabrics are found in Going. The following fabrics were identified (numbers in bold after Going 1987):

ALH	Alice Holt grey ware	43
AIT	Italian amphoras (Dressel 2-4)	
ASG	Gallic amphoras (Gauloise 4)	56
ASS	South Spanish amphoras (Dressel 20)	55
BB2	Black burnished ware 2	41
BSW	Black-surfaced wares	34/45
ESH	Early shell-tempered ware	50
GRF	Fine grey wares	39
GROG	Grog-tempered ware	53
GRS	Sandy grey wares	47
GRS (H)	Hand-made sandy grey ware	
HAW	Hadham white-slipped wares	14
HAX	Hadham oxidised wares	4
LSH	Late shell-tempered ware	51
MICW	Miscellaneous Iron Age coarse wares	
NKG	North Kent grey ware	32
OXRC	Oxfordshire red colour-coated ware	3
PORD	Portchester D	
RED	Miscellaneous oxidised wares	21
RET	Rettendon-type flint-tempered grey ware	48
STOR	Storage jar fabrics	44
TSG	Samian	60
VRW	Verulamium region white/Brockley Hill wares	26
WCS	Miscellaneous white- or cream-slipped sandy red wares	15
WFS	White fine sandy ware	

Site chronology

As is typical of rural sites in Essex, the bulk of the pottery (64%) came from ditches and gullies, and with one notable exception (Phase 1, pit 200), relatively little came from pits, wells or post holes. Even the pottery from the major boundary ditches, where there were sequences of fills, included a high proportion of residual material, corroborating the stratigraphic evidence for frequent recutting or clearance of these features. There were no large sized groups (100 sherds or more) and few medium sized groups (between 30 and 100 sherds). Most groups consisted of fewer than 30 sherds, so that of

the 107 contexts producing Late Iron Age and Roman pottery, 93 contained less than 100g of pottery. This suggests that the quality of the dating evidence is not high.

Phase 1a (mid 1st-early 2nd century)

Phase 1a is the most important in terms of the volume of pottery being discarded on site. The earliest contexts in this phase are characterised by small, largely undiagnostic groups. Dating, therefore, is frequently based less on the fabrics present and more on the absence of certain fabrics, while the presence of an identifiable vessel form is often of little help in refining site chronology, as the forms tend to be long-lived. The absence of closely datable imported wares compounds the problem. The earliest contexts are identified by the presence of common Late Iron Age ceramic types, and there is also a complete absence of fully Romanized fabrics and forms. Although the quantities of pottery are not large, the dating evidence shows that Boundaries D-H all probably originated at this time. The earliest Roman contexts contained pottery that places them in the Claudian-Neronian period (c.AD 45-70). Although contexts of this period often contain greater amounts of pottery, this is partly offset by high levels of residual material. The early Roman period is reasonably well represented in terms of the number of site features. The later stages of Phase 1a appear to be dated to the Flavian to Trajanic period (c.AD 70-120).

Phase 1b (mid 2nd-4th century)

Phase 1b represents the final infilling of Phase 1a boundary ditches and pits, with only a small number of new features represented. The pottery from this phase comes mainly from the top fills of the earlier ditches and pits, and from small pits and post holes. Phase 1b is marked by the deposition of small amounts of pottery that is characteristically Hadrianic and later in date. While the start date of Phase 1b lies in the mid 2nd century, its terminal date is difficult to elucidate from the ceramic data because of high residuality, an absence of diagnostic vessel forms and the relatively small amounts of material involved. However, this is likely to lie sometime in the first half of the 4th century at the latest. The pottery evidence suggests that the level of site activity was greatly reduced and/or the nature of occupation had altered in this period. The small quantities and broad date range of the pottery from Phase 1b, and its presence in the upper fills of the Phase 1a boundary ditches, suggests a gradual demise of the boundaries over a long period of time.

Phase 2 (?early to mid 5th century)

Compared with Phase 1b, Phase 2 is much more clear-cut, as most of the Phase 1 boundaries were abandoned and replaced by a series of shallow gullies forming a network of rectilinear enclosures. Phase 2 is well defined both stratigraphically and ceramically, but there are problems in placing it within precise calendar years. All of the pottery used to date this phase is typically latest Roman in Essex; that is, dating to the second half of the 4th century onwards. At Aveley, there is strong reason to believe that this material may have been deposited in the 5th rather than at the end of the 4th century. The reasons for assigning such a late date are outlined below. It is

worth emphasising that latest Roman pottery is present in primary and intermediate fills and not just top and single fills of features, and was widely distributed over the site.

The illustrated pottery (Figs. 13 and 14)

The illustrated pottery is arranged firstly by phase and then by feature. Pottery that is residual in later contexts has been returned to its correct phase. A total of 31 vessels have been drawn to provide a clear impression of the character of the pottery assemblage and key dating evidence. This material comes from 22 contexts distributed among 17 features. Very fragmentary vessels are not illustrated.

Phase 1a (Late Iron Age and early Roman contexts)

Ditch 375, fill 376

1. ESH, G (*Cam* 254).
2. BSW, G (*Cam* 231A).
3. NKG, small flask/bottle.

Ditch 4, fill 5

4. ESH, G (*Cam* 254).
5. GROG, storage jar.

Ditch 499, fill 453

6. ESH, G (*Cam* 254).

Gully 236, fill 235

7. GROG, G with incised decoration.

Gully 386, fill 387

8. GRF, G8.

Gully 405, fill 408

9. GROG, C (*Cam* 214Bb).

Gully 88, fill 58

10. NGWFS, H (*Cam* 113).

11. ESH, G5.1.

Pit 200, fill 245

12. ESH, G (*Cam* 254).

Gully 405, fill 495

13. GRS, C1.1.

Phase 1a pottery in Phase 1b contexts

Pit 200, fill 201

14. GROG, G possibly related to the pedestalled *Cam* 220Bb, although insufficient of the profile remains to be certain.

Phase 1a pottery in Phase 2 contexts

Post hole 247, fill 229

15. GROG, G (*Cam* 254).

Gully 333, fill 334

16. GROG, G20.

Gully 333, fill 233

17. GRS, G6.

Phase 1b (mid to late Roman contexts)

Pit 200, fill 201

18. GRS, E2.3. This form commences in the Antonine period and continues into the later 4th century. This vessel also dates the final infilling of pit 200.

Post hole 396, fill 397

19. GRF, G24. A long-lived vessel type that is not closely datable. At Chelmsford it was current from the 2nd century onwards.

Phase 1b pottery in Phase 2 contexts

Gully 294, fill 294

20. Central Gaulish samian f18/31 with the stamp of Dagomarus and graffito on the underside of the vessel.

Gully 294, fill 295

21. GRS, G5.4.

Unstratified pottery probably belonging to Phase 1b Context 599

22. HAX, B10.

Phase 2 (latest Roman contexts)

Ditch 330, fill 331

23. OXRC, C (Young 1977, type C78).

24. LSH, G27.

Gully 333, fill 334

25. AHL, G41.1 storage jar body sherds.

Gully 333, fill 372

26. AHL, B6 (Lyne and Jefferies 1979, type 6C.1).

Gully 410, fill 411

27. AHL, G (?Lyne and Jefferies (1979) type 1.36).

Pit 433, fill 441

28. LSH, G27.

Post hole 129, fill 131

29. OXRC, D12.2.

Well 348, fill 349

30. AHL, B6 (Lyne and Jefferies 1979, type 5B).

31. PORD, G27.

Pottery supply

Phase 1a. Late Iron Age and early Roman (1st to early 2nd century AD)

In this period the site lies within Thompson's Pottery Zone 2, which is linked to Kent and north Essex. Zone 2 assemblages are characterised by an abundance of shell-tempered coarse jars and non-grog-tempered wares, but little in the way of imports. Analysis of the fabrics present in contexts of this date shows a number of traits that appear to be both typical and atypical of south Essex. At Aveley, shell-tempered pottery is fairly common, while other non-grog fabrics are rare. However, the main fabrics are locally-made grog-tempered wares.

In Phase 1a, grog-tempered fabrics account for 35% and shell-tempered pottery 30% of all pottery by weight (Table 2). Vesicular shell-tempered pottery was produced at Mucking (Jones and Rodwell 1973, 15) and in Kiln I at Gun Hill alongside grog-tempered and sand-tempered wares (Drury and Rodwell 1973, 79-84), so one would expect it to occur in reasonable quantities at Aveley. More typical of Zone 2 is the lack of imported pottery. The only imported fabric that may have been reaching the site in the pre-conquest period is North Gaulish white fine sandy ware (Stead and Rigby 1989, 137-41). However, in Roman London, these wares also occur in pre-Boudican horizons in small amounts (Davies *et al.* 1994, 146), which suggests continued importation into the post-

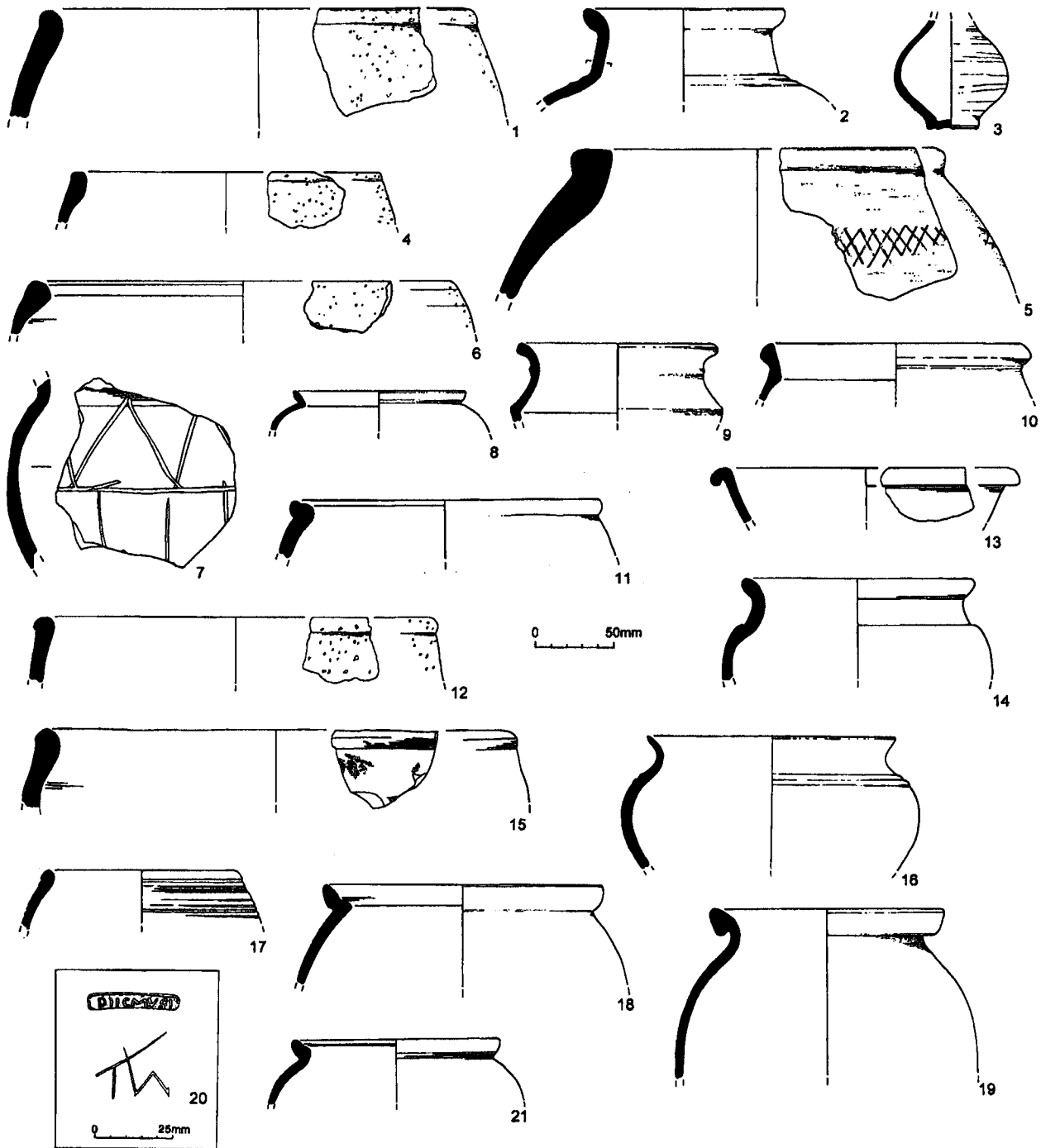


Fig. 13 Ship Lane, Aveley. Roman pottery: phase 1.

conquest period. At Aveley, North Gaulish white fine sandy ware amounts to just over 1% of all Phase 1a pottery measured by weight.

The tradition of using grog-tempered pottery at Aveley continued throughout Phase 1a. Romanizing black-surfaced wares are characterised by the use of sand temper alongside the more usual grog-temper and account for approximately 10% of Phase 1a pottery by weight. Furthermore, many of the vessel forms are also common to both the black-surfaced

wares and the Late Iron Age grog-tempered wares, which suggests that the former may have evolved from production of the latter. In London grog-tempered pottery was produced at Highgate Wood (fabric B) in the pre-Boudican period (Davies *et al.* 1994, 74). Indeed, the presence of large quantities of grog-tempered wares in the pre-Boudican levels in London emphasises the importance of this tradition in the region generally (Davies *et al.* 1994, 168). At Aveley it is possible that some of the grog-tempered

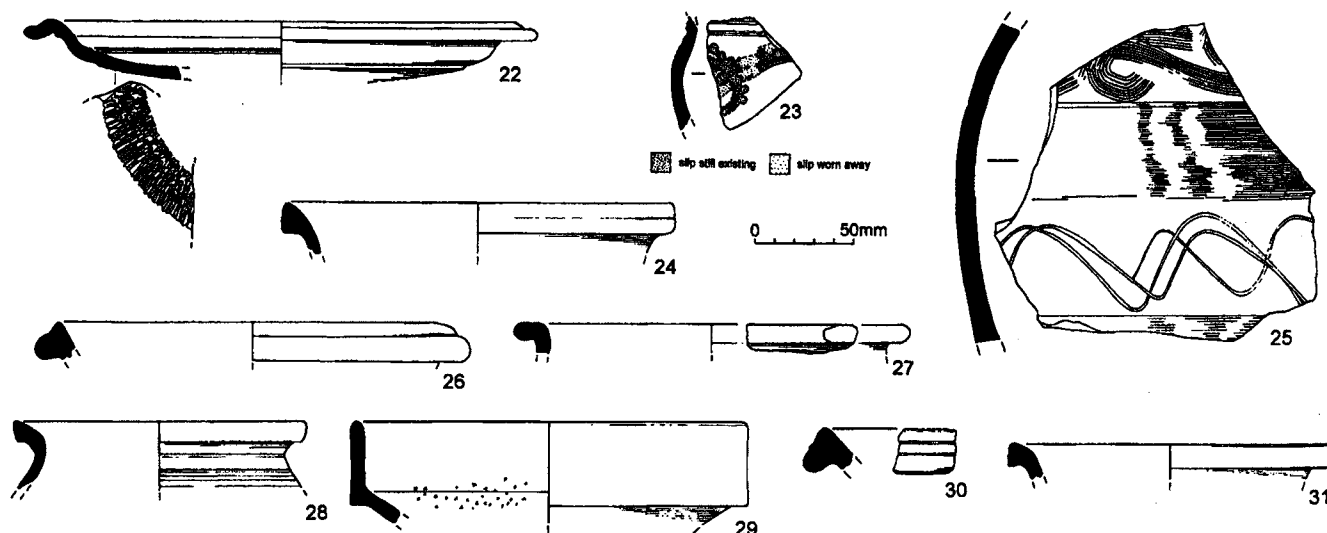


Fig. 14 Ship Lane, Aveley. Roman pottery: phase 1b? and phase 2.

vessels recovered from the site were produced in the Claudian-Neronian period. This is certainly true of the shell-tempered fabrics.

The post-conquest period sees the arrival of Romanized sandy grey wares. These represent just 7% of Phase 1a pottery and were almost certainly locally made. However, without more diagnostic pieces, it is impossible to tie down a specific source, although Mucking is perhaps a candidate. Fine grey wares stand at just over 2% and were probably also locally made. Pottery from outside the region remains rare. The range of imports is confined to South Spanish olive oil amphoras, Gallic wine amphoras, which have a combined total of 1%, and perhaps some North Gaulish white fine sandy ware. Although unstratified, the Italian wine amphora is most likely to have been a post-conquest arrival as well. It is notable that early samian is entirely lacking. Early Romano-British traded wares in Phase 1a features include small quantities of Verulamium Region white ware and North Kent grey ware. These were current up to, and including, the mid-2nd century.

Examination of vessel form provides clear links with nearby production sites at Orsett, Mucking and Gun Hill, West Tilbury. Parallels with the Colchester/Ardleigh region are also discernible, but these are less strong. Jars are the main vessel class in Phase 1a; a wide variety of types have been recognised, some of which are specific to a particular fabric or fabric group. In shell-tempered fabrics the range of forms present is confined to ledge-rimmed jars (G5.1 and G5.2), large round-shouldered bead-rimmed cooking pots (*Cam* 257) and club-rimmed vessels (*Cam* 254). The latter form is also the most common Late Iron Age jar form at Ship Lane. A comparable range of forms was identified at the

nearby Orsett 'Cock' site (Cheer 1998, 89). The range of grog-tempered ware jars was also limited. Necked jar types corresponding to G16 and G20 were identified alongside the corrugated G15 type. A pedestal base could be from a *Cam* 204 jar, or a bowl of *Cam* 210 type, but insufficient of the vessel survives to be certain. It is notable that several *Cam* 254 type jars were also present in grog-tempered fabrics (Fig. 13.15).

Jars are also the chief vessel class represented in black-surfaced wares. The range of forms includes the narrow-necked *Cam* 231, a possible narrow-necked jar corresponding to Going's G38.4 type and a possible G18.1 type vessel. There were also a number of unclassifiable necked-jar rims as well as a vessel that correlates with Thompson's B1-1 range. The jar forms that first appeared in the second half of the 1st century AD include two vessels that correspond to Monaghan's thin-walled corrugated 4J1 type. These were considered to be rare by Monaghan (1987, 132), so their presence at Aveley is notable. The other forms of this period were all in unspecified fine or sandy grey wares. These included the small squat round-bodied G8, the neckless bead-rimmed G1 and the ledge-rimmed G6. The range of other vessel classes includes cups, flagons, amphorae and beakers, but these are rare and often confined to single examples. The only identifiable cup and flagon types correspond to Thompson forms E1-4 and G6 respectively. The amphorae are discussed separately by Sealey below, while the beakers comprise examples of butt beakers in a white fine sandy ware (*Cam* 113) and a possible H9 type in grog-tempered ware.

Phase 1a is difficult to characterise, as there are aspects that are both typical and atypical. The importance of grog-tempered pottery is in marked

Table 2. Ship Lane, Aveley. Stratified pottery by phase quantified by sherd count and weight.

Fabric	Phase 1a			Phase 1b			Phase 2		
	Sherds	Wt. (g)	% Wt.	Sherds	Wt. (g)	% Wt.	Sherds	Wt. (g)	% Wt.
ALH	1	3	0.08	-	-	-	10	498	15.23
ASS/ASG	2	49	1.33	-	-	-	-	-	-
BB2	-	-	-	1	4	0.26	1	11	0.33
BSW	30	384	10.48	8	48	3.13	24	161	4.92
ESH	99	1133	30.93	33	232	15.13	56	414	12.66
GRF	9	95	2.59	33	470	30.65	19	117	3.58
GROG	90	1297	35.41	27	311	20.28	57	888	27.17
GRS	22	257	7.01	48	303	19.76	48	422	12.91
GRS [H]	4	111	3.03	-	-	-	-	-	-
HAW	-	-	-	-	-	-	1	5	-
HAX	-	-	-	3	38	2.47	-	-	-
LSH	-	-	-	-	-	-	2	31	0.94
MICW	10	64	1.74	6	21	1.36	6	22	0.67
NKG	7	164	4.47	2	43	2.80	6	78	2.38
OXRC	-	-	-	1	3	0.19	3	50	1.52
PORD	-	-	-	-	-	-	1	17	0.52
RED	3	33	0.90	1	9	0.58	5	31	0.94
RET	-	-	-	-	-	-	2	17	0.52
STOR	1	6	0.16	-	-	-	1	376	11.50
TSG	-	-	-	-	-	-	4	126	3.85
VRW	3	17	0.46	4	51	3.32	1	3	0.09
WCS	1	10	0.27	-	-	-	1	1	0.03
WFS	3	39	1.06	-	-	-	-	-	-
Totals	285	3662	-	167	1533	-	248	3268	-

contrast to nearby Ardale (Thompson 1988, 86), which has an assemblage that is said to be typical of Zone 2. This may indicate that pottery assemblages in south Essex are less homogeneous than has previously been thought. However, further local assemblages are needed from this part of Essex to see if this apparent difference is real or an aberration. The variety of vessel types present seems exceptionally narrow for a site of this period. It would seem that there is domestic activity given the preponderance of jars, although platters are conspicuous by their absence. The evidence indicates impoverished occupation and little suggestion of Romanization in the lives of the inhabitants.

*Phase 1b: mid and late Roman
(mid 2nd to 4th century AD)*

From the mid-2nd century, there appears to be a marked decline in the quantity of pottery being discarded and contexts of this phase often contain a high level of residual material. Grog-tempered

pottery stands at just over 20% and shell-tempered wares 15% of all Phase 1b pottery by weight. However, the fine grey wares dominate the assemblage at just under 31% while sandy grey wares stand at just under 20%. The small amount of mid 2nd- to mid 3rd-century material suggests little in the way of domestic activity nearby. Fabrics diagnostic of this period are few. Imports are rare and restricted to small quantities of plain Central Gaulish samian, although these only appear as residual in Phase 2 contexts. Verulamium region white wares probably continue to reach the site in small quantities until the mid 2nd century as do North Kent grey wares. In Phase 1b Verulamium region white wares represent over 3% of all pottery by weight. After c.AD 160/70, this industry goes into decline and its products cease to be traded over long distances (Marsh and Tyers 1978, 535).

Sometime in the late 2nd century or later, Hadham oxidised ware makes its first appearance, accounting for c.2% of Phase 1b pottery. Dating is problematical here, as virtually no vessel forms are

identifiable in this fabric, and it is possible that this material could relate to Phase 2 occupation. The clearest indications that some activity may have continued into the late 3rd and 4th centuries is the presence two undiagnostic sherds of Rettendon ware. At Chelmsford there is good evidence that points to a decline in this ware after c.AD 360/70 (Going 1987, 10), although there is tentative evidence for continued production of this fabric in the second half of the 4th century at Inworth (Going 1987, 88-9). It is possible that these may also relate to Phase 2.

Another feature of Phase 1b contexts is that the range of vessel forms also wanes. To a large extent the paucity of closely datable pieces reflects the fragmentary nature of the assemblage. Apart from the dishes, many of the vessels assigned to this period could have just as easily arrived in Phase 2. Several jar and bowl-jar forms fall into this category, but are not exclusively latest Roman in date. Dish forms B2.2 and B3.2 comprise the only identifiable open forms, and are known exclusively in sandy grey wares at Aveley. B2.2 dishes fall within a mid 2nd- to early/mid 3rd-century date range at Chelmsford (Going 1987, 14) and were produced in large quantities at Mucking (type B), particularly in the early to mid-3rd century (Jones and Rodwell 1973, 20-22). The B3.2 dish was produced at Mucking (type A.6) alongside B2.2 vessels in Kiln II but in much smaller quantities in the early to mid 3rd century (Jones and Rodwell 1973, 39). This form was also produced in North Kent (Monaghan 1987, types 5F3 and 5F8) from the mid 2nd and throughout the 3rd century.

The range of jar types is greater although the forms are often not as closely datable. G5.4 and G5.5 jars belong to the same general period as the two dish types; at Chelmsford they were common in 2nd- to early/mid 3rd-century horizons (Going 1987, 23) and were also produced at Mucking (type F). The G24.1 jar is a long-lived type and was current from the 2nd century onwards. At Mucking, this form was particularly common and corresponds to type J (Jones and Rodwell 1973, 26). Lid-seated bowl-jars (E2.3), the everted-rim jar form G9.3, and the narrow-necked G34/G35, are among the latest grey ware forms to reach the site. The bowl-jar type was produced from the late 2nd century onwards. At Mucking this form corresponds to type G and was given a start date of c.AD 200 (Jones and Rodwell 1973, 24). The everted-rim jar was also produced at Mucking (type P) as were a number of narrow-necked jars (type N).

The pottery from Phase 1b is unlikely to represent domestic activity, while the small amounts recovered from the site suggest that there was no sustained occupation. It is notable that Romanized vessel types like mortaria are absent

and that as the phase progresses datable vessel forms generally become increasingly hard to identify. Indeed, the range of types present seems especially limited. Occupation can at best be seen as transient, impoverished, and very much in decline throughout. How long Phase 1b lasted is difficult to ascertain from the available evidence though a date not later than the mid-4th century is certain. Given that various forms that were produced by local pottery industries from the late 3rd century onwards are absent, a terminal date earlier than the mid-4th century is probable.

Phase 2. Latest Roman (?early to mid 5th century)

The assemblage associated with features of this period is fairly unusual and presents a number of dating conundrums. It is dated by the presence of fabrics and forms that are typical of latest Roman horizons over much of Essex. The range of latest fabrics comprises small amounts of late shell-tempered ware (Figs. 14.24 and 25), Portchester D (Fig. 14.31), Oxfordshire red colour-coated ware (Fig. 13.12 and Fig. 14.29) and Alice Holt grey ware (Fig. 14.25-28 and 30). At Chelmsford, Going (1987) noted that none of these fabrics were common until the period after c.AD 360/70. In theory, Phase 2 deposits ought to be comparable with those of Ceramic Phase 8 at Chelmsford (Going 1987, 115-7), ditch 21 at Shillingstone Field, Great Sampford (Martin 1998), and the late shrine group from Great Dunmow (Going and Ford 1988). However, the assemblage that defines Phase 2 is radically different given that there are no locally-made vessels that are obviously contemporary with these latest fabrics. Moreover, these latest Roman fabrics visibly stand out from the mass of Late Iron Age and earlier Roman material on the site. Residual Late Iron Age grog-tempered wares account for 27% of all Phase 2 pottery. The amount of residual pottery of mid and late Roman date is minimal, and while it is possible that some of the late Roman material could have arrived at the same time as the latest Roman sherds, the evidence as a whole suggests that this is unlikely.

The only fine ware definitely reaching the site in Phase 2 was Oxfordshire red colour-coated ware. Only two forms are identified, a D12 wall-sided mortarium (Young 1977, type C97) and a bowl that corresponds to Young's type C77. The mortarium (Fig. 14.29) was produced from c. AD 240 onwards, while the bowl form (Fig. 14.23), with its characteristic white-painted decoration, was dated to the period c. AD 340-400+ by Young (1977, 166). Painted Oxfordshire products seem to have arrived quite late in the 4th century at a number of sites in East Anglia. At Caister-on-Sea, Norfolk, the evidence suggested that Oxfordshire red colour-coated ware vessels did not arrive until the 4th century, and probably the latter part (Darling 1993,

209). Nene Valley colour-coated wares are, unusually, absent, given that these are always present on sites occupied in the 4th century in Essex.

Compared with the fine wares, the range of coarse wares shows greater diversity of source. Late shell-tempered ware is widely distributed in central and south-east England in the 4th century. The only form identified at Ship Lane is the G27 type jar with horizontal rilling, which is also the most common type in this fabric to be found in Essex. It is likely that these vessels were made at Harrold, Bedfordshire (Brown 1994, fig. 37.302-5), rather than the Nene Valley or Lakenheath, Suffolk. Although these sources cannot be ruled out, the absence of Nene Valley colour-coated wares from the site argues against this source.

Alice Holt grey ware exhibits the widest range of vessel forms and is also the main latest Roman fabric found at Ship Lane. The range of forms includes large storage jars (Lyne and Jefferies 1979, type 4.45), necked jars (Lyne and Jefferies 1979, type 1.36) and dishes (Lyne and Jefferies 1979, types 5B and 6C.1). Large storage jars (Fig. 14.25) are the most widely distributed of the Alice Holt products. In Essex they have been noted at Chelmsford (Going 1987, form G41.1) and Great Dunmow (Going and Ford 1988, fig. 54, nos. 21-2). The dishes (Fig. 14.26 and 30) are typically late forms, although form 6C.1 has a relatively narrow date range and appears to have arrived c. AD 330 (Lyne and Jefferies 1979, 50). Alice Holt grey ware is present in London and north-west Kent in small quantities from the late 1st/early 2nd, but is most common from the later 3rd century onwards (Pollard 1988, 211). However, in the Chelmsford area this fabric does not appear in any quantity before the second half of the 4th century AD (Going 1987, 116).

Portchester D ware from the Tilford/Overwey kilns in Surrey (Fulford 1975, 299) accounts for less than 1% of Phase 2 pottery. The only form present is a horizontally rilled jar closely resembling G27 vessels in form (Fig. 14.31); comparable jars were also produced by the Alice Holt industry (Lyne and Jefferies 1979, type 3C.11). Portchester D ware is thinly though widely distributed in Essex, and has been recorded at, for example, Sewardstone Hamlet, Waltham Holy Cross (Huggins 1978, fig. 5.43), although not called so, and latterly at Chelmsford, where it may have been previously confused with Brockley Hill wares (Going 1992a, 111). In London, it first appears in contexts dating to c. AD 270 to 350/60, but in very small quantities, as at Dowgate Hill (Symonds and Tomber 1994, 73). It is not until the later 4th century, however, that this fabric is found in any quantity (Symonds and Tomber 1994, 77). Lyne and Jefferies have suggested that

Portchester D ware continued to be produced up to the mid 5th century (1979, 61).

A wide variety of forms have been identified in the four latest Roman fabrics, although jars remain the dominant vessel class. Although the assemblage assigned to this period forms a very minor component of the total site assemblage, there are a number of aspects that warrant detailed consideration. The complete absence of the plain-rimmed dishes (B1.2 and B1.3) and the straight-sided bead-and-flanged dish (B6) – which was developed during the later 3rd century – from among the locally made grey wares is curious. These forms were produced by most if not all potteries that were operating in the 4th century, including the Hadham, Nene Valley and BB1 kilns, for example, as well as local producers like Mucking (types A and D).

The final Roman sequence at Aveley is marked by the presence of a range of ceramics that are all imported into the region. While this suggests that the inhabitants of the settlement had access to pottery traded over long distances, there is a notable absence of imports such as late amphora, *Céramique à l'éponge* and Mayen ware. Moreover, several common late Romano-British wares such as Hadham grey and black-surfaced wares, vessels with 'Romano-Saxon' style decoration, and Nene Valley colour-coated wares, are also missing from the assemblage. These Romano-British products are invariably present on sites occupied in the later 4th century, as are locally made products. Indeed, in most latest Roman groups in Essex, locally-made pottery remains the dominant component. Locally made coarse ware vessels are present that could have been produced at this date, but these are all long-lived types and could have reached the site in the 3rd or even the 2nd century. The presence of latest Roman fabrics seems to indicate a phase of renewed activity on the site during the late 4th/early 5th century. This also seems to be the most Romanized period on the site, with mortaria occurring for the first and only time. The Phase 2 assemblage looks to be more typically domestic than in any other period.

The overall character of the Phase 2 assemblage is thus very unusual and without parallel at present. However, the possibility that Phase 2 falls within an early to mid 5th century date range fits the evidence well, especially when viewed against our present understanding of the very final stages of pottery production within a Romano-British cultural context. The length of time Roman pottery continued to be produced after c. AD 400 has been discussed by a number of specialists, but it seems that a date of c. AD 450, at the latest, is one that is commonly accepted (Fulford 1979, 120). Between these two dates Romano-British pottery traditions

Table 3. Ship Lane Aveley. Pottery datable to the period c.AD 270/80 to 400+.

Fabric	No. of Sherds	Wt. (g)	Comments
ALH	11	501	Abraded jar rim (G41.1), body sherds of storage jar (G41.1), bowl or dish rims (Lyne and Jefferies 1979, types 5B and 6C.1), necked jar rim (Lyne and Jefferies 1979, type 1.36)
RET	2	17	Undiagnostic body sherds
LSH	2	36	2 jar rims (G27.2)
OXRC	6	63	Wall-sided mortarium (Young 1977, type C97), mortarium body sherd, bowl with white painted decoration (Young 1977, type C77), abraded rim sherd
PORD	1	17	Jar rim (G27.2)
HAX	4	124	Base, body sherds, dish rim (B10)
Totals	26	758	

went into a final decline. All of the fabrics that characterise Phase 2 can be shown to have been in production c. AD 400, but the lack of coinage causes major problems in dating. Consequently, any attempt to construct a chronology for the 5th century is reduced to guesswork.

Going (1992b, 112) has attempted to use his 'economic long waves' as a tool to loosen up final site phases. He sees very little difference between the early 3rd and the early 5th century except that there was no ceramic revival in the mid 5th century. Aveley is good example of a site where contexts are present that, without the absence of contemporary locally made Romano-British pottery, would have been assigned to the later 4th century. Here it is possible to use the pottery evidence to make chronological adjustments to allow a more extended site chronology.

One characteristic of later Roman marketing patterns is that the products of the large industries like Oxford and Alice Holt were distributed over wider areas. There is little doubt that significant changes took place after c.AD 360. Moreover, Going (1992b, 102) noted that there was no reappearance of local coarse ware production in this period in Eastern England apart from very minor concerns and a handmade ware marketed in Kent. While there is some evidence that the Rettendon ware kilns may have continued production into the second half of the 4th century, this industry is unlikely to have survived much beyond c.AD 400. Going observes that by the AD 390s, East Anglian pottery assemblages had reached their ultimate form and that later assemblages do not contain material from markedly different sources or show signs of innovation (1992b, 102). Phase 2 clearly belongs to this ultimate stage. Moreover, the very small size of the assemblage may well reflect the fact that demand for pottery had fallen to what are essentially prehistoric levels. Whatever date range

is applied to Phase 2, the pottery evidence indicates that the activity occurred at a time when only the large regional and 'national' pottery industries were operating. Based on our present understanding of the final years of Romano-British pottery production, then this must have been sometime in the 5th century.

How far the site continued into the 5th century is impossible to discern, although the final phase may have been relatively short-lived, perhaps not extending beyond c.AD 430/40. Phase 2 also seems to have coincided with a period when pottery was in short supply and only available from a limited number of suppliers. These suppliers were also the main players in the 4th-century pottery market. It was only the likes of the Oxfordshire potteries that were able to distribute their products over an increasingly wider area as the 4th century progressed. In Essex, Oxfordshire products are not found in any meaningful quantities until the end of the 4th century.

The Samian

S.H. Willis

Four sherds of samian pottery were recovered in the excavations. All four come from Central Gaul and date to the 2nd century AD, with the date range spanning that century. Bowl, cup and dish forms are represented. The sherds are in good condition, with little sign of abrasion or weathering. The catalogue below gives an estimate of date of each sherd in terms of calendar years.

1. Base sherd, Central Gaulish (Les Martres-de-Veyre), Drag. 18/31 dish, 116g, diameter of foot-ring 80mm, c.AD 100-120. Stamped, with stamp reading DIIGMVSII, i.e. Dagomarus during his Les Martres phase (*cf.* Terrisse 1968, pl. 52). A graffito is present on the underside of the foot-ring Context 294 (Fig. 13.20).

2. Base sherd, Central Gaulish (Lezoux), from a cup, 3g, diameter of foot-ring 46mm, c.AD 120-200 Context 325 (possibly c.AD 120-150).

Context 331

3. Body sherd Central Gaulish (Lezoux), Drag. 37 bowl, 10g, c.AD 140-200. A very small area of decoration is extant including part of a rosette, and part of an unidentified motif or figure type, in what may be a freestyle design Context 331.
4. Body sherd Central Gaulish (Lezoux): form not identifiable, less than 1g, c.AD 120-200. Possibly the same vessel as the above item Context 331.

The amphoras

P.R. Sealey

The excavation produced a total of four sherds from three types of amphora. Two sherds of Dressel 20 amphora were recovered, one from context 518 and the other unstratified. Other amphora types were represented by single sherds, a probable Gauloise 4 from context 317 and a Dressel 2-4, unstratified. Both of the stratified amphora sherds came from the fills of Boundary E.

Dressel 20 is the olive oil amphora from the province of Baetica in the south of Spain. It reached Britain from the Late Iron Age until the third quarter of the 3rd century AD, when the form developed into the smaller Dressel 23. Wine amphoras are represented by Dressel 2-4 and Gauloise 4. The former consists of a body sherd in a hard red fabric with light yellow outer surface corresponding closely to the standard Italian fabric from southern Latium and Campania, the so-called northern Campanian fabric (Tomber and Dore 1998, 89-90). Dressel 2-4 is the standard wine amphora of the early empire, with a *floruit* in the 1st century AD (Peacock and Williams 1986, 106), although production in Italy is attested as early as the mid 1st century BC (Sealey 1985, 47) and as late as the early 3rd century AD (Freed 1989). The second wine amphora is represented by a body sherd in a fabric typical of Gaul (Tomber and Dore 1998, 93-4), presumably from a Gauloise 4 amphora. The form reached Britain from the later 1st until the 3rd century AD (Peacock 1978, 49).

The assemblage of amphoras from Ship Lane is small but interesting. The presence here of Dressel 20 amphora on a native rural settlement is a reminder that the trade in Baetican olive oil with Britain was by no means exclusively under the control of the Roman state for the benefit of military garrisons and administrative personnel. The Italian and Gaulish wine amphoras hint at the many and various sources of the wines reaching Britain in the early Roman period (Sealey 1985, 127-33).

Conclusions

The pottery from Ship Lane, Aveley, represents an important addition to the list of assemblages recovered from sites along the course of the A13. The value of the assemblage is partly negated by its relatively small size and by the fact that there are instances where 'good' groups appear to be contaminated by later pottery. It does nonetheless provide some useful information from which it is possible to provide a chronological framework for the changes that took place in the rural landscape at Ship Lane.

From a ceramic standpoint, the main period of occupation lies in the Late Iron Age/Romano-British transition, as it is to this period that the bulk of the pottery belongs. Thereafter, there was a considerable reduction in the amount of discarded pottery, culminating in a probable hiatus within the mid- 3rd to late 4th century. This was followed by strong evidence for re-occupation or a final surge of activity associated with a range of pottery types that first appear in any quantity in Essex in the period after c.AD 360/70. However, this late ceramic assemblage is atypical of late 4th-century horizons elsewhere in the county, and an early to mid 5th-century date is considered to be a strong possibility. Whatever is the true significance of this very late assemblage, the very small quantity of latest Roman pottery from the site would suggest that Phase 2 occupation was either short-lived or that pottery was in exceptionally short supply throughout its duration.

Saxon pottery

Susan Tyler

Two sherds of undiagnostic Saxon pottery were recovered, from pit 72 (fill 71) and in a residual context in pit 92 (fill 82).

Medieval pottery

Helen Walker

All the medieval pottery (22 sherds weighing 95g) was recovered from the evaluation, suggesting that much of this material may be intrusive from the ploughsoil. However, this is unlikely to be the case for pit 92, where shell-tempered ware and Mill Green ware were found in association in the upper fill (10). The most common finds were early medieval shelly wares (11th-12th centuries); there are also eight sherds of Mill Green fine ware (mid 13th to mid 14th century).

Miscellaneous finds (Fig. 15)

Hilary Major

Roman coin (identification by Phil McMichael)

Constantius II, AD348-357

Obverse: Laureate head R. [D.N.] CONSTAN...

Reverse: Fallen horseman [FEL TEMP] REPAR[TIO]

Context 47 (post hole 46), SF2, Phase 2

Copper alloy

1. (Not illustrated) An incomplete pair of plain tweezers, loop broken. The blades taper slightly towards the loop. The type can be LIA or Roman. Length 56mm, width 4-5mm. Context 115 (ditch 116), SF6, Phase 1a.
2. (Not illustrated) Buckle pin, incomplete; not intrinsically datable. Surviving length 24mm. Context 208 (gully 209), SF10, Phase 2.

Iron

Apart from the illustrated reaping hook, the remainder of the iron from the site comprised a strip fragment, a bar fragment, one definite and two probable nails.

3. Socketed reaping hook, point missing. This is probably Rees' Type 1b, with a gently curving blade and an open socket (Rees 1979, 452-455), which can be Iron Age or Roman. Socket width 33mm, blade width 38mm. Context 438 (pit 437), SF8, Phase 2.

Stone

Querns and millstones

4. Sarsen. Fragment, probably from the corner of a saddle quern. It has been scorched after being broken, and one broken edge has been re-used for sharpening a blade. Dimensions: c.114 x 90 x 46mm. Context 599, unstratified.
5. (Not illustrated) Lava. Upper or lower stone fragment with grooved, worn grinding surface. Thickness 19mm, weight 150g. Context 259 (gully 258), Phase 2.
6. (Not illustrated) Lava, in poor condition. Thirteen fragments, probably all from the same lower stone, with a grooved grinding surface, max. thickness 30mm. Also, a fragment of lava probably from the edge of an upper stone with vertical grooves on the edge. Maximum thickness 38mm, weight 1625g. Context 397 (post hole 396), Phase 1b.
7. (Not illustrated) Millstone Grit. An edge fragment from a quern or millstone, probably from an upper stone. The grinding surface has worn, broad, grooves, and all other surfaces are pecked. Thickness at edge 73mm, weight 1350g. Context 261 (post hole 260), Phase 1.
8. Well cemented quartzitic sandstone, provenance unknown. A complete upper millstone of fairly constant thickness, with a concave grinding surface. The top and edge are well finished, and there are two oval holes in the top, 85mm apart, and measuring 35x30mm and 32x27mm. The grinding surface has extremely faint traces (not drawable) of harp dressing, with grooves c.10 mm

apart. The outer 50-60mm is polished through wear. The grinding surface has patches of a calcareous deposit which are probably of natural origin, but could possibly be from contact with mortar. The central hole is straight sided, and without keying for the rynd, although there are two areas of slight rounding on the edge of the hole, on the grinding surface, which may indicate where the rynd was inserted. Diameter 630mm, maximum thickness c.32mm, diameter of central hole 110mm, weight c.27kg. Context 132 (post-pit 129), Phase 2.

This millstone is something of an anomaly for Essex. Virtually all the Roman querns and millstones from the county are made from Rhenish lava or millstone grit, and none of the others is made from a similar stone to this one, unidentified as it is. The only millstone not lava or grit is one from Great Wakering, made from coarse red sandstone (unpublished, in Southend Museum). As a complete stone, it is also remarkable, since in an area without natural building stone, hard stones such as millstone grit were often reused, for example as building stone or whetstones (cf. no. 9, below). There is very little indication of how the mill was worked. It is presumably far too big and heavy to be worked by hand, and the two holes in the top may have been the seating for a clamp, to which the mechanism for turning the stone was connected. This type of arrangement seems more common on medieval stones than Roman (see, for example, a complete medieval quernstone from Great Yeldham, Major 1995, 184 and fig. 7), although a millstone grit quern from Little Waltham was broken across a non-perforating hole which may have been for a handle clamp (Drury 1978, 112). The location of the rynd seating, on either the upper or lower surface of the stone, would normally suggest whether the motive power came from below or above the quern, but this millstone has no seating for the rynd, which would simply have been wedged into the central hole. The millstone was kindly examined by D. King; he was unable to suggest a good parallel for it. It is faintly possible that it is post-Roman, and it appears to have some similarities to medieval querns, i.e. the use of clamp holes, and the lack of a rynd seating. However, there are still difficulties with this suggestion, as *all* known medieval querns and millstones from Essex are of Rhenish lava. It therefore seems safer to consider it to be Roman, but of an unusual form.

Other utilised stone

9. (Not illustrated) Gritstone, possibly Millstone Grit. A fragment with wear on two opposed faces. It resembles a saddle quern, but is more likely to be a Roman quern or millstone cut down for re-use. The 'top' has a smooth, slightly dished surface with a rounded edge. The 'bottom' is smooth, with a possible knife-sharpening groove across it. Dimensions: 53-90mm thick, 1400g. Context 331 (ditch 330), Phase 2.
10. (Not illustrated) Shelly sandstone, possibly from a source in Kent. A slabby fragment with one straight edge, possibly utilised as a rubbing stone. The 'top' surface is somewhat irregular, but may have been worn in patches. Dimensions: c.200 x 110 x 60mm, 2500g. Context 397 (post hole 396), Phase 1a.

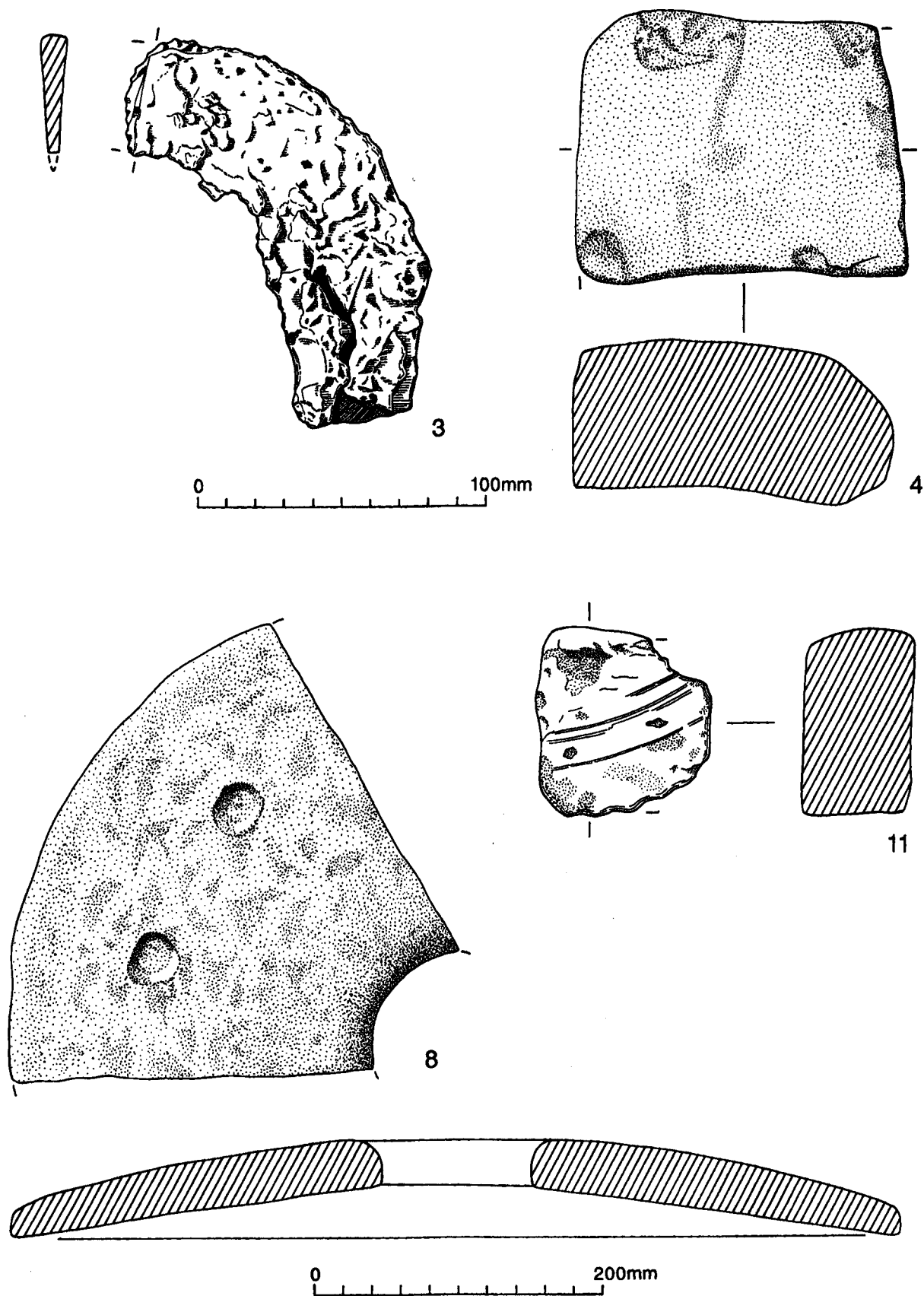


Fig. 15 Ship Lane, Aveley. Roman finds. 3 iron. 4 sarsen. 8 quartzitic sandstone. 11 baked clay 'Belgic brick'.

Tile

Only seven sherds weighing 579g were found.

Salt briquetage

There was a single, spalled sherd of possible salt briquetage, from context 300 (pit 299) of Phase 2.

Baked clay

There was a total of 6105g of baked clay (129 pieces). The majority was in a well-fired fabric with sparse vegetable temper and sparse to moderate sand. There was no definite structural daub, although it is likely that some of the material (less than 10% by weight) was from structural daub, and there is a possible hearth or oven lining from pit 383 of Phase 2. Most of the baked clay appears to derive from triangular loom weights and 'Belgic Bricks', both well known Late Iron Age artefact types, and all incomplete. The distribution of these artefacts is mainly in the southern part of the site, with the bulk coming from the junction of Boundaries E and G.

There were 18 definite or probable fragments from triangular loom weights, two of which had parts of perforations, 10mm and 16mm in diameter, and five definite or probable 'Belgic Bricks', apparently all bar-shaped. As well as the illustrated example, there was one other complete end, with a section of 73x50mm, and two pieces with complete widths of 45mm and 50mm.

11. The end of a 'Belgic Brick' with cut marks across one surface. Weight 178g. 372, ditch 333, SF5, Phase 2.

Faunal remains

Alec Wade

A total of 491 pieces of animal bone weighing 5.882 kg were recovered from all phases. The bone was in reasonable condition though fragmented, resulting in 26.48% of the sample being identified to species level by number (130 pieces) and 76.88% by weight (4.522 kg). The small nature of the assemblage prohibits any reliable statistical, metrical or economic observations from being made. It should be noted that without sieving or environmental sampling bone recovery will be biased towards the larger species, such as cattle, and result in the smaller species, such as sheep or goat, being under-represented in the assemblage.

The quantities of bone by species in the late Iron Age and Roman periods are summarised in tables 4-6. Only 7 bones were recovered from the Saxon deposits, and none from the medieval.

The site has yielded an unremarkable collection of animal bone containing the main domestic species of horse, cow, pig, sheep/goat and dog. Some bones displayed evidence of butchery or working (mostly from Phase 2). Signs of dog or rodent gnawing were rare. This lack of chewed bone together with the overall slight state of surface erosion may indicate that the bone waste was swiftly deposited.

Table 4. Phase 1a: quantification of bone by species.

Taxon	Fragments	Weight (g)	MNI
<i>Bos</i> (domestic)	43 16.04%	1293 49.09%	2
<i>Canis familiaris</i>	1 0.37%	12 0.46%	1
<i>Equus caballus</i> (Horse)	5 1.87%	567 21.53%	1
Large mammal	102 38.06%	529 20.08%	
Medium mammal	12 4.48%	45 1.71%	
<i>Ovis/Capra</i> (Sheep/goat)	6 2.24%	48 1.82%	2
Small mammal	2 0.75%	2 0.08%	
<i>Sus</i> (domestic)	4 1.49%	52 1.97%	1
Unidentified mammal	93 34.70%	86 3.26%	
Total:	268	2634	

Table 5. Phase 1b: quantification of bone by species.

Taxon	Fragments	Weight (g)	MNI
<i>Bos</i> (Domestic)	3 16.67%	46 56.10%	1
<i>Equus caballus</i> (Horse)	1 5.55%	14 17.07%	1
Large mammal	2 11.11%	14 17.07%	
Medium mammal	6 33.33%	6 7.31%	
Unidentified mammal	6 33.33%	2 2.44%	
Total:	18	82	

Table 6. Ship Lane, Aveley. Phase 2: quantification of bone by species.

Taxon	Fragments	Weight (g)	MNI
<i>Bos</i> (domestic)	55 29.57%	2066 70.78%	2
<i>Equus caballus</i> (Horse)	4 2.15%	200 6.85%	2
Large mammal	103 55.38%	608 20.83%	
Medium mammal	11 5.91%	17 0.58%	
<i>Ovis/Capra</i>	5 2.69%	20 0.69%	2
Unidentified mammal	8 4.30%	8 0.27%	
Total	186	2919	

Plant macrofossils
V. Fryer and P. Murphy

A list of the contexts sampled and the full sample assessment is included in the site archive. Samples were taken from a variety of feature types from all site phases. The assemblages were all very small and diverse in nature and probably represent a low-density scatter of charred refuse derived from a variety of sources; they are unlikely to be related to the intended uses of the various features. The condition of the plant macrofossils within the samples was generally poor to moderate. Severe puffing and distortion of seeds and cereal grains had occurred during charring and many were unidentifiable.

Cereals identified included *Avena* sp. (oat), *Hordeum* sp. (barley), including one asymmetrical grain probably of *H. vulgare* (six-row barley), *Triticum diccicum* (emmer wheat) and *T. spelta* (spelt wheat). The seeds/ fruits were predominantly of common segetal species and included *Atriplex* sp. (orache), *Chenopodium album* (fat-hen), *Bromus mollis/secalinus* (rye-brome/lop-grass), *Fallopia convolvus* (black bindweed), *Malva* sp. (mallow), *Medicago/Trifolium/Lotus* sp. (merdick/clover/trefoil), indeterminate grasses, *Plantago lanceolata* (ribwort plantain), *Polygonum aviculare* (knot-grass), *Persicaria maculosa/Polygonum lapathifolia* (red-shank/palepersicaria), *Ranunculus acris/repens/bulbosus* (meadow/creeping/bulbous buttercup), *Rumex* sp. (dock) and *Vicia/Lathyrus* sp. (vetch/vetchling). *Rumex acetosella* (sheep's sorrel), a species common in dry acid soil habitats, was also represented. Species typical of damp grassland/wetland were also present in small numbers and included *Carex* sp. (sedge), *Eleocharis* sp. (spike-

rush) and *Montia fontana* (blinks). Hedgerow/scrub species were rare but included *Rubus* sp. (bramble) and *Sambucus nigra* (elderberry). Other plant macrofossils noted were charcoal fragments, charred root/rhizome or stem, and indeterminate buds. Additional material included probable residues of the high temperature combustion of organic material including cereals and straw/grass, small coal fragments, small mammal or amphibian bone and other bone fragments, the latter three all possibly modern contaminants.

Discussion

A Late Iron Age-early Roman farmstead (1st-early 2nd century)

Little evidence for activity before the Late Iron Age was found, although a few unstratified finds, mostly from fieldwalking, suggest some utilisation of the area in later prehistory. Aerial photographs and the geophysical survey undertaken during the evaluation produced no indication that the excavated system of ditched enclosures extended far beyond the excavated area (Fig. 2). In this light, the Phase 1a ditches are best interpreted as forming enclosures around a small farmstead, analogous with the rectilinear enclosures of similar date and form excavated at Ardale School (Wilkinson 1988, fig. 26), Belhus Park, Hunts Hill Farm, Mucking and Orsett, among others. The tradition of rectilinear ditch-enclosed settlements seems to have developed in the Middle Iron Age in this part of Essex (Drury 1980, 50; Priddy *et al.* 1987, 73; Wilkinson 1988, 121-2). The function of such enclosures was probably partly defensive, and partly to pen livestock.

The layout and stratigraphy of the major ditches suggest that they were laid out in a single episode at the end of the Late Iron Age, although it is not certain whether this event occurred before or after the Roman conquest. The large scale of the Boundary E ditch, its numerous recuts, and the evidence for timber posts in the vicinity of the entrance, suggest that this boundary may have been more important in the 1st century AD than the others, possibly marking the entrance to the farmstead. After the abandonment of the farmstead this boundary appears to have lost its former importance, which may have transferred to Boundary F in Phase 2.

The evidence for early settlement at Ship Lane is restricted to one probable and one possible roundhouse (Structures A and B), a large rubbish pit and a scatter of discrete cut features. The distribution of pottery and other finds suggests that the focus of occupation lay around the roundhouse(s). In the absence of pottery that pre-

dates the 1st century AD, the Phase 1a settlement is best interpreted as commencing in the decades either side of the Roman conquest. The construction of roundhouses as late as the 1st century AD suggests the farmstead was relatively impoverished, as by then rectangular buildings were more common in Essex. Roundhouses have been seen as marginal buildings, representative of a backward looking tradition (Sealey 1996, 60).

The animal bone assemblage associated with the early occupation is too small to be a reliable indicator of the settlement economy. Emmer wheat and spelt were present in the Phase 1a environmental samples, though the high level of residuality and later disturbance prevent any useful conclusions being drawn. However, the fragments of quernstones found in 1st-century AD features support the general impression that a varied subsistence farming economy was operating in the settlement. In spite of their relative poverty, the inhabitants of the farmstead had access to olive oil and wine, as well as a small quantity of imported pottery.

Mid to late Roman (2nd to 4th centuries)

The farmstead buildings were abandoned and the ditches silted and filled with rubbish by the early 2nd century AD; the low level of finds suggests that, while the site was not wholly abandoned, activity until the late 4th century was non-domestic in nature. Field boundaries were evidently maintained for some time, and probably augmented with fences and other forms of barrier, but gradually deteriorated. Exactly how long this occasional maintenance continued is uncertain; the high levels of residual 1st-century AD pottery makes the dating of recuts very uncertain. It is usually assumed that banks and/or hedges supplemented Iron Age and Roman field boundary ditches; the limited environmental evidence at Ship Lane of bramble and elderberry may support this. Even when ditches had silted up, hedges would continue to mark the outlines of fields (Rippon 1991, 55), maintaining continuity in the landscape for long periods with only minimal attention.

Late Roman reoccupation (?late 4th-early 5th century)

At least one element of the Phase 1a system of enclosures, Boundary F, continued to exist in some form into the late Roman period. At the end of the 4th century, or early in the 5th, a series of shallow ditches or gullies were laid out around this boundary, forming a system of narrow rectilinear enclosures. Structure C, probably made of daub on stone footings, was erected near to a well in a small enclosure adjacent to Boundary F. Many of the small enclosure ditches of Phase 2 crossed the line of the Phase 1a ditches and also the line of the putative

banks/hedges, especially any associated with the main north-south boundaries. It would appear that the Phase 2 reorganisation of the enclosures was quite radical, with many hedges grubbed out and the previous system of enclosures completely replaced.

There is some resemblance between the Phase 2 layout of narrow rectangular enclosures and parts of the much more extensive system known at Ardleigh (Brown 1999, fig. 114), although this landscape is largely derived from cropmarks and was apparently abandoned before the remodelling at Ship Lane. The ditched enclosures at Ardleigh are suggested as having served multiple purposes, domestic, agricultural or horticultural (Brown 1999, 181). A complex of small sub-rectangular enclosures of late 3rd/4th century date, excavated to the south of the villa at Chignall, near Chelmsford, were interpreted as serving multiple functions in the rearing and management of sheep (Clarke 1998, 139, fig. 30). These folds were markedly different in form to the enclosures at Ship Lane, which are likely to have served a different function. In the absence of positive evidence of cultivation, the Phase 2 enclosures are interpreted as simple livestock pens and droeways, with Structure C used as a shelter by the herders attending the animals.

Dating of Phase 2 presents problems as the pottery assemblage is both small and atypical of other late Roman sites so far excavated in Essex. In part, the location of the Ship Lane site next to the river Thames and the presumed transient lifestyle of the occupants may explain this, allowing them to participate in trade networks unavailable to many of the inhabitants of rural Essex.

The Phase 2 animal bone assemblage is too small to be of much use in determining the livestock herded by the occupants of the site. It may, however, be significant that a higher proportion is identified as cattle or other large mammal, in contrast to the more varied Phase 1 assemblage. Some of the bones associated with this phase showed signs of working or butchery and the bones were noticeably less fragmented than the Phase 1 material, suggesting less reworking of ditch fills. The faunal remains may not of course supply an accurate picture of the agricultural regime, as they reflect consumption rather than production. In contrast to the slight evidence for a cattle-based site economy, a complete mill stone and a quern fragment were recovered from Phase 2 contexts, suggesting that grain processing may also have been carried out on or close to the site. As with the faunal assemblage, this may only be for immediate consumption by the inhabitants. The form of the settlement economy which can be proposed for Phase 2 is very much dependent on the dating of this phase, depending on whether an early or a late chronology is accepted.

An early chronology would confine occupation to the late 4th and early 5th century, while if the dating suggested in the pottery report is followed, Phase 2 would take place in the mid 5th century.

It has been suggested that Essex and East Anglia formed the centre of a textile export industry in the late Roman period, and that the coastal salt marshes were used for grazing sheep (Sealey 1995, 76-7; Wymer and Brown 1995, 160), although this has recently been disputed (Barford 2000, 278-9). This postulated regime can be set against other evidence that suggests an increase in the number of cattle raised relative to sheep in the late Roman period (Clarke 1998, 136; Going 1997, 42). It can be argued that the salt marshes provided high-quality grazing for livestock generally, and the herding taking place at Ship Lane, Aveley, did not necessarily centre on sheep, although the faunal assemblage evidence is inconclusive. The 4th century saw an intensification of crop production that may have led to a decrease in suitable grazing land, already limited by dry soils. The coastal wetlands, unsuited for arable farming, would then have formed an increasingly valuable resource at a time when agricultural land was being extensively exploited.

Alternatively, if the mid 5th century date suggested in the pottery report is adopted, the activity is likely to have been very different. With the ending of Roman authority, reversion to essentially prehistoric agricultural practices would have gradually taken place, accompanied by a redistribution of population and reoccupation of Iron Age sites (Wilkinson 1988, 122-3). The agricultural regime of the mid 5th century would have been far less intensive, and arable cultivation on the marginal clays and brickearths to the north and east of Aveley would no longer have been economically sustainable. Reoccupation of the Ship Lane site, if it took place in the mid 5th century, may have centred on pastoralism. While the incoming Saxons may have filled some of the spaces in the settlement pattern (Wilkinson 1988, 122), the inhabitants of the Ship Lane site would appear to have been culturally Romano-British.

Settlement fluctuation in the first millennium AD. The chronology of the Ship Lane site broadly supports the model of settlement fluctuation proposed by Wilkinson (1988, 122-3), although any discussion is hampered by the inadequate publication of much of the work carried out in the area. It is suggested here that greater emphasis should be placed on the consistent evidence for dereliction on gravel terrace settlement sites, which points to a widespread population shift during the Roman period. The gravel terraces of the Thurrock area were undoubtedly thickly populated in the Late Iron Age and early Roman periods, but there is still

hardly any direct evidence of late Roman settlement.

Published evidence for late 3rd and early 4th-century settlement on the gravel terraces is limited. Primrose Island, Stifford Clays, produced small amounts of 3rd and 4th-century pottery (Wilkinson 1988, 17), while the Orsett 'Cock' enclosure appears to have been occupied throughout the Roman period (Carter 1998). Given the scarcity of late Roman settlement evidence, and the consistent indications of abandonment of Late Iron Age and early Roman sites, it is difficult to escape the conclusion that a genuine population shift, away from prehistoric river terrace settlement sites, occurred during the early Roman period. This is unlikely to reflect a decline in population, but may indicate localised population movements towards proto-urban settlements during the Late Iron Age, or expanding urban nuclei during the Roman period. Centres of affluence along the north bank of the Thames, themselves partly a response to the growth of London, may also have provided a focus for local population movements (Wilkinson 1988, 122).

The varying dates at which the excavated sites were abandoned suggests that the settlement shift occurred over a period of at least 150 years, indicating that long-term social and economic forces, rather than deliberate policy, were behind the movement. It is also possible to see a link between settlement size and date of abandonment, with smaller, less well-established farmsteads such as Belhus Park and Ship Lane abandoned soon after the end of the 1st century AD. Occupation at larger sites, with a longer settlement history, such as Ardale School and Mucking, continues on into the 2nd and early 3rd century respectively. Such ancient settlement sites, perhaps representing estate centres rather than dependent farmsteads, may have been more resistant to the social and economic forces which were affecting the Ship Lane settlement by the later 1st century AD. Its early demise perhaps suggests that the inhabitants of poorer farmsteads were the first to be drawn towards developing towns and nucleated settlements.

The settlement shift can perhaps be explained in terms of changing land use. The growth of the urban population, in particular that of London, must have required improvements in agricultural productivity to support it. In the Roman world, such requirements were usually met by acquiring more land rather than improving what one had (Millett 1991). In the context of south-west Essex, increased productivity may have been achieved by increased exploitation of formerly marginal brickearths and clay soils. The brickearths that occupy the northern part of Aveley parish, being easier to work than the clay, have historically been regarded as good arable.

However, they require heavy fertilisation, the chalk required for this being brought from pits in the south of the parish. Prehistoric and early Saxon farmers may therefore have considered the land marginal or suitable only for pasture.

Traditional prehistoric settlement sites, located on the gravel for access to the easily worked river terrace soils and to the resources of the Mar Dyke and the Thames, may then have been abandoned in favour of sites more suitably placed for exploiting the clays and brickearths to the north. A settlement shift away from the gravel terraces, beginning in the mid 1st century AD, and largely complete by the early 3rd century, offers a background against which to place the origins and early development of the rectilinear field and road system of the Thurrock landscape. The rectilinear landscape is largely confined to the clays and brickearths, which may not have been enclosed or subject to rigidly defined patterns of land ownership before the Late Iron Age. Conversely, the differently aligned field systems that occur on the gravel terraces, particularly around Mucking and Orsett, may be explained by the presence of long-established prehistoric boundary systems and patterns of land ownership in the immediate vicinity of major prehistoric centres.

Post-Roman settlement

Evidence for Saxon activity at the Ship Lane site is restricted to a sherd of pottery from pit 72 and a residual sherd from pit 92. The medieval pottery was all recovered during the evaluation, either in single fill features, or the top fills of features, suggesting that some of it may be intrusive from the ploughsoil. However, pit 92, which coincided with the line of Boundary F, was certainly medieval in date. The location of the Ship Lane site, around 700m south-west of the Aveley church-hall complex, suggests that it fell within the core agricultural lands of Aveley manor from at least the late Saxon period, and within the manorial demesne from the 14th century onwards. There is little suggestion of a Late Iron Age or Roman origin for the current field pattern; even the major boundaries clearly changed during the Roman period and all appear to have been abandoned by the 5th century. No archaeological evidence was found to suggest the maintenance of the field system beyond the end of Phase 2. In addition, the layout excavated at Ship Lane appear to have been part of a very localised system, the orientation of which was dictated more by local topography than any other controlling factor. There is nothing in the archaeological record to suggest the modern field system inherited any elements of the Roman system; the approximate north-south and east-west alignments of the Roman and also the present field systems both follow the slope of the valley-side. An element of framework

may have been imposed by the survival of trackways (Rippon 1990, 55), but there is nothing to suggest an overall design and the field pattern is markedly less regular than that to the east (Wilkinson 1988, fig. 95). Place-name evidence, and the possibility that the study area lay within a deer-park, both suggest re-growth of woodland by the early medieval period. It is suggested that the present field system dates, at the earliest, to Saxon clearance of abandoned and overgrown land.

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Barkingwic? Saxon and medieval features adjacent to Barking Abbey

by Graham Hull

with contributions by Sheila Hamilton-Dyer, Susan Pringle, Jenny Robinson and Alan Vince

An excavation in the immediate vicinity of the abbey was carried out by Thames Valley Archaeological Services in 1998. Evidence of a river landing stage and industrial processes hint at a trading zone or 'Barkingwic' in the 8th and early 9th centuries. Some prehistoric, Roman and medieval industrial deposits were also found. The primary record from unpublished sites nearby suggests that the abbey mentioned by Bede was located due west of the 12th-century abbey. Discontinuity of the site use, coinciding with Scandinavian incursion in the late 9th century, was noted in the pottery sequence. The abbey was re-established in the 10th century and flourished until the Dissolution. A backfilled watercourse was excavated and may have been a landscape element forming a western boundary for the Saxon and medieval abbey.

Introduction

A planning application in advance of retail development, submitted to the London Borough of Barking and Dagenham, sought permission to build on land to the west of Abbey Road, Barking (NGR TQ 4393 8378) (Fig. 1). Four archaeological evaluation trenches were dug by Newham Museum Service in 1995. Each trench measured 5m by 10m and highlighted the survival of Saxon and medieval deposits (Truckle *et al.* 1997). An excavation was commissioned by Mr T. O'Brien of Glenlynn Chartered Surveyors, on behalf of their clients, Estates and Agency Holdings PLC. The project was carried out by Thames Valley Archaeological Services and monitored for the Borough Council by Mr N. Truckle of the Greater London Archaeological Advisory Service.

The site lies within a retail estate that has replaced an industrial zone of the town and is c.100m to the south of the ruined medieval abbey of St. Mary, a scheduled ancient monument. The river Roding runs approximately 30m west of the site, which lies on a geological transition between Pleistocene terrace gravels and Holocene peat and fine grained alluvial deposits laid down by the Roding (BGS 1976).

The total area of the development site was c.2800m² but the footprint of the proposed new retail unit that formed the excavation area covered c.1200m². The excavation is referred to throughout as Abbey Retail Park (or ARP97) and the report details the excavation results and specialist analysis, where possible, by phase. The faunal and column sample evidence do not lend themselves to phased integration and are presented as separate reports. The archive will be deposited with Valence House Museum, Dagenham, Essex (acc. no. LDVAL4106).

Brief chronology of the abbey

The early history of the monastic house at Barking is given by Bede in his *Ecclesiastical History of the English people*. Erkenwald, it is stated, founded two monasteries before becoming bishop of London in 675; one for himself at Chertsey and another for his sister, Ethelburga, at *In-Berecingum* (Barking) in the province of the East Saxons. The Chertsey Register gives a foundation date for these monasteries of 666 (VCH ii 1907, 115). Bede notes that the convent was built in a '...restricted space...' and that the nuns' graveyard lay to the west. The house was a double foundation, built for men as well as women. This arrangement was relatively common in England from the end of the 6th century to the 8th century, with an abbess presiding over the whole community (Gilchrist 1994, 25). The chief endowment for the Barking monastery, granted in the late 7th century, came from East Saxon princes (Hodilred's Charter, VCH ii 1907, 115).

The possible desertion/destruction of the abbey, caused by invading Danes during the 9th century, is suggested in 870 when '...the whole congregation of virgins in this church were burnt by the pagans' (VCH ii 1907, 116). There is, however, no supportive documentary evidence for this event and it may be a 19th-century myth (Morris pers. comm.). Further, there are no accounts of martyrs in the Barking Ordinale (Loftus 1979, 101–4). The abbey was reputedly refounded by Edgar in c.990 (Tolhurst 1927) and was for nuns alone (Elkins 1988, 1). Williams (1996), however, argues that the abbey was deserted in a planned withdrawal between c.870 and

BARKINGWIC? SAXON AND MEDIEVAL FEATURES ADJACENT TO BARKING ABBEY

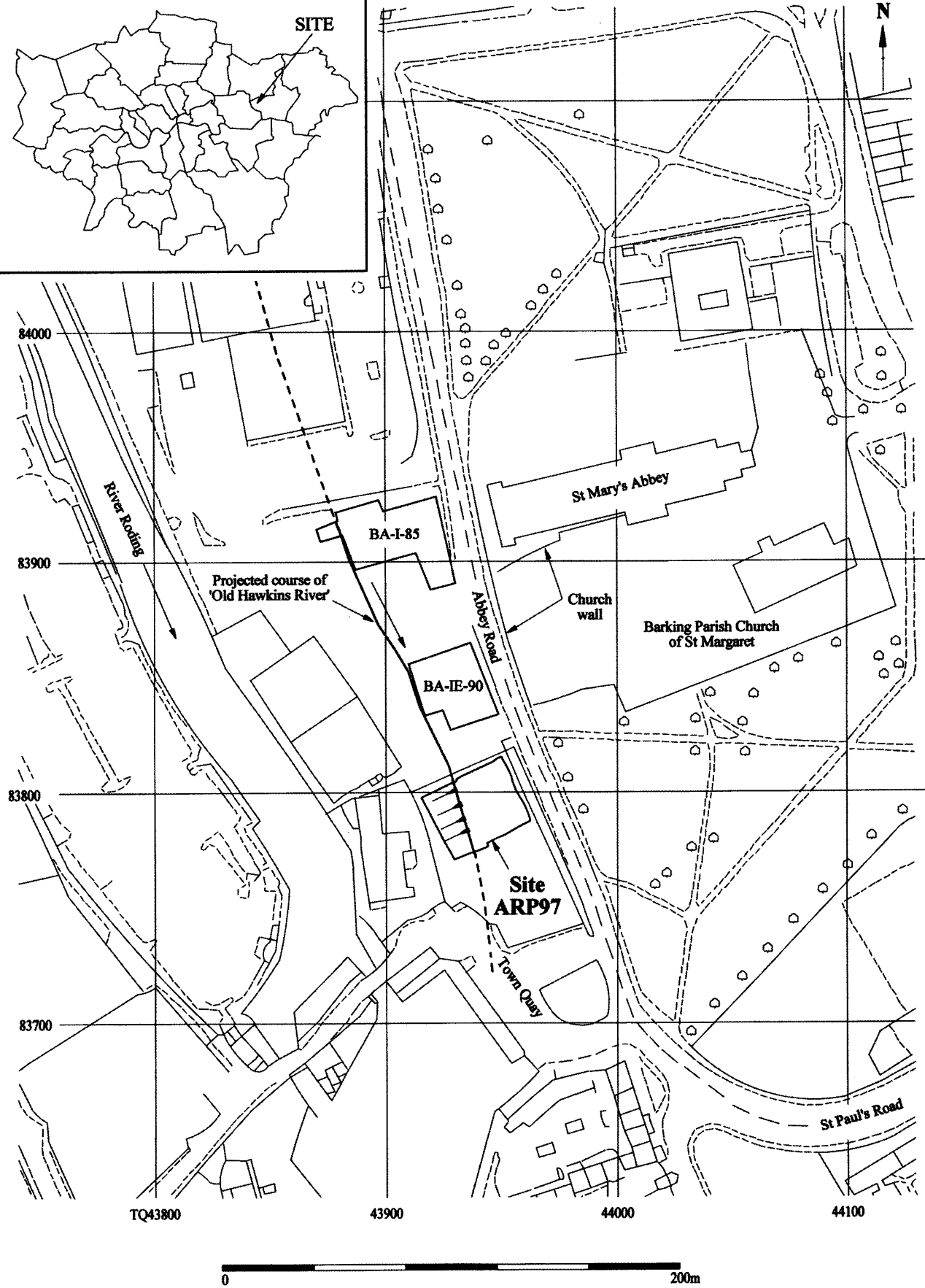


Fig. 1 Site location plan, also showing previous excavations (BA-I-85 and BA-IE-90) and projected course of 'Old Hawkins River'.

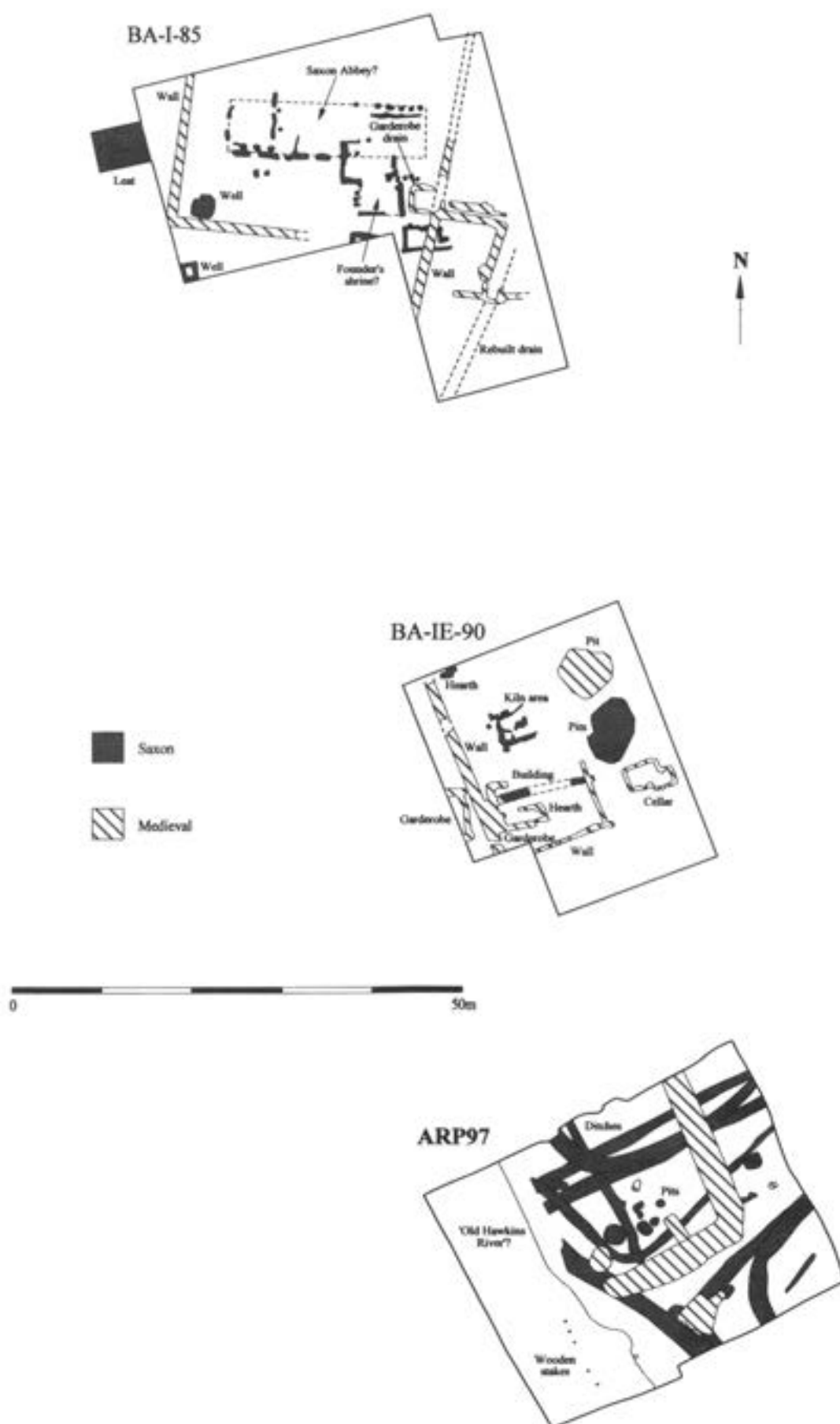


Fig. 2 Barking Abbey excavations: 1985 (BA-I-85), 1990 (BA-IE-90) (from McGowan 1996) and 1998 (ARP97).

940 and that the community may have found refuge within the walls of London.

Immediately after the Conquest, the abbey was confirmed in the possession of the incumbent abbess by William I (Loftus 1979, 116). The new king stayed at the abbey and received the submission of Saxon nobles there. Domesday (1086) records that the manor of Barking was held by St Mary (i.e., the abbey), as were landholdings in Essex, Middlesex, Buckinghamshire, Bedfordshire and Surrey (VCH i 1907, 448). The abbey's wealth made it one of the premier religious houses of England.

Clapham's excavations (1913) showed that much of the abbey that survived was constructed in the latter half of the 12th century, with additions in the early 13th century (Tolhurst 1927). Some work also seems to have been done in the 15th and 16th centuries (Clapham 1913, 83, 85). At the Dissolution, the abbey was valued at £1084 6s. 2½d., and it was the third wealthiest in England (VCH ii 1907, 120). The abbey was surrendered to the King's Commissioners in 1539 and the buildings destroyed between June 1541 and December 1542 (Clapham 1913, 72–3). The site and demesne of the abbey were granted by the King to the Earl of Southampton for life. It was eventually bought by Barking Urban District Council in 1910 when Abbey Road was constructed. Factories were then built on the west of the new road.

Archaeological and historical background

The abbey environs have been archaeologically investigated from the 18th century (Lethieullier 1724; King 1875; Clapham 1913). Detailed publication of sites excavated in the 1980s has not occurred and the discussion outlined here is based on the author's examination of the primary records of the two main adjacent investigations (BA-I-85 and BA-IE-90). The archives for these sites, excavated by Newham Museum Service, are held in Valence House Museum. These important sites are only published in interim form (Stone 1986; MacGowan 1987, 1988, 1991, 1996).

Saxon activity on site BA-I-85 (Fig. 2) was represented by a series of intercutting pits. The finds from these pits include glass vessel sherds, pottery, loomweights, spindle whorls, pin beaters, iron styli, a number of decorated bone combs (one of which bears a zoomorphic design), a bronze manicure set, gold thread, millefiori glasswork and a weaving sword. A Saxon kiln (BA-IE-90) provided evidence that glass was being worked on the site. The clay underlying the kiln base was archaeomagnetically dated to between AD 825 and 1025. The high status finds belong to the early 8th century and are comparable to artefacts from

Whitby (Peers and Raleigh Radford 1943, 27–83) and Jarrow (Cramp 1976, 239).

The BA-I-85 pits stratigraphically pre-date a north-south aligned timber building erected on sleeper beams and upright posts, with clay floors. The sleepers were levelled with Roman tile and major corner posts stood on post pads of either single large stones or columns of Roman tile. The building had subsided into the pits but both floors and walls had been repeatedly relaid and repaired. Sceattas dated to AD 710–730, loomweights and pottery were found between the repaired floors. Surrounding the building was an area of rammed, river-rolled pebbles forming an area of hardstanding. A long narrow building, divided into two cells, was located to the north of this. Also of timber, the building was constructed on sleeper beams, posts in trenches, and earth-fast posts. It was aligned east-west and measured c. 5m by 30m. To the north of this was a possible drystone building measuring c.5m by 5m and also evidence of two hearths constructed of Roman tile. Ipswich ware pottery was found in the later hearth. To the south, and running parallel to the long narrow building, was a dwarf wall. This ran west to a timber-lined leat with evidence of timber uprights. This has been interpreted as a horizontal mill (MacGowan 1996). Dendrochronology suggests that the leat was constructed in the early 8th century and repaired later in the same century.

Three wells were recorded in the excavation; one lay within the confines of the long narrow building, the other two were timber-lined and have been dendrochronologically dated to the 8th and 9th centuries. The association of wells within and close to early churches is well known (Friar 1996, 241–2; Rodwell and Bentley 1984, 30–1; Morris 1989, 84–92). A hearth on the site was dated archaeomagnetically to the early 9th century. Perhaps significantly, no hearths were found within the excavated buildings, suggesting neither domestic nor industrial activity.

The long, narrow, east-west aligned building may represent the remains of an 8th/9th-century Saxon church. The simple ground plan of the building is two celled. The post and beam evidence is suggestive of cruck-supported roofing (Welch 1992, 20) and there appears to be an entrance to the building at the west. It should be born in mind that the early buildings on the Northumbrian monastic sites, including the church at Lindisfarne, would have resembled secular structures (Cramp 1976, 222–3). The timber buildings interpreted as 7th- to 9th-century churches at Nazeingbury, Essex (Huggins 1978), show considerable parallels with the Barking structure. The documentary evidence indicates that Nazeingbury was a cell or dependency of Barking from c.700 (Bascombe 1987) and might suggest that

the buildings at both places were commissioned and constructed by the same individuals. Detailed comparison of construction techniques and building dimensions might prove instructive. This pattern, of closely grouped small timber buildings, has further parallels with other early Christian monastic sites, in particular Hartlepool (Cramp and Daniels 1987).

The relationship of the putative church to a stratigraphically earlier, circular ditch may be significant. This ditch apparently disturbed a 1st-century AD cremation urn and stratigraphically predated any other post-Roman features on the site. The siting of the abbey may have exploited a pre-existing focus of non-Christian religious activity (Friar 1996, 121; Morris 1989, 46–92; Rodwell and Bentley 1984, 31–4; Rodwell 1989, 133). The superimposition of the 8th-century monastery at Tynemouth upon a series of circular Romano-British huts and a circular enclosure (Cramp 1976, 219, fig. 5.5) bears some resemblance to the activity observed at Barking. Cramp (*ibid.*, 204) and Morris (1989, 111) have recognised the not infrequent location of monasteries in secluded, and sometimes marshy, marginal environments. The abbey site at Barking was on the very edge of a gravel terrace and this, combined with a mid 17th-century map description of the area to the immediate west of this as 'Abbey Marsh' (Fig. 17) and accounts of the flooding of abbey land to the south (VCH ii 1907, 119), suggests that the early abbey was indeed sited with a degree of liminality in mind.

The later 12th-century abbey church and associated structures excavated by Clapham (1913) lies less than 15m to the east of the narrow Saxon building; it is also aligned east-west. It is significant that the site of the earlier building seems to have been respected, at least until the 14th/15th century, when a sewer was excavated across the site. The Saxon buildings lie within the medieval precinct walls found in the excavation. The 1652/3 map and later maps and illustrations (*op. cit.*) seem to suggest that at least parts of these medieval walls survived above ground until the late 19th century. The 8th/9th-century building may have been incorporated within the precinct of the late 12th-century abbey. Norman adoption and promotion of the cults of Anglo-Saxon saints has been recognized as an important factor in the exchange of ruling elites in the post-Conquest period (Ridyard 1988).

Lockwood (1986, 15) has noted that the 12th-century abbey was pushed up against the wall of the parish churchyard. The parish church predated the abbey by c.50 years (*ibid.*, 14). Lockwood asks, 'Had, for example an earlier church dedicated to the blessed mother of God and containing the shrines of St. Ethelburga and St. Hildelitha stood hereabouts?' The southernmost Saxon timber building, with coins beneath the floors, was interpreted as a

'founders shrine' (*ibid.*). This was immediately adjacent to the building suggested here as a Saxon church.

Bede refers to the narrowness or restricted space on which Saxon Barking Abbey stood. In the light of this interpretation it may be that the early 8th-century chronicler was referring to the narrowness of the building itself or the confines of the *vallum monasterii*. The significance of the very high status deposits in the intercutting pits may have been under-interpreted by the excavators. Bede's report of the exhumation of 'Christ's Servants' for reburial in a mass grave may have relevance (see Rodwell 1989, 165; Welch 1992, 62–4; and for discussion of pre-Conquest building on earlier cemeteries at Whitby, Cramp 1976, 227; and Monkwearmouth, Cramp 1976, 231). There is, of course, a danger in accepting Bede at face value. For example, there is potentially a problem reconciling the topographic description of the location of the nun's new graveyard south-west of the oratory (Cramp 1976, 206) and the close proximity of a watercourse to the west of the hypothesized church. Did the nuns act on the indications of the 'heavenly light'? Could a graveyard be set on the other side of a small stream (and outside the known medieval abbey precinct)? How accurate is Bede's account, based as it is on hearsay and written some 60 years after a miracle? Space within the precinct did, however, seem to be at a premium in the 12th century, as the siting of the new abbey would seem to suggest (*op. cit.*).

Several medieval buildings, including one with a cellar, were revealed at site BA-IE-90 (Fig. 2), which lay between BA-I-85 and Abbey Retail Park. Two pitched-tile hearths had evidence that lead was being melted in the late medieval period. A chalk footing for a wall, interpreted as the western precinct boundary of the abbey, and a garderobe, were also examined.

Methodology and excavation results

The excavated area measured 40m by 30m. Reinforced concrete for a 20th-century factory floor lay over a homogeneous layer of 19th/20th-century made ground, which covered the entire site. This deposit was removed by machine under archaeological supervision. Below this layer, cut archaeological features were found to intrude into naturally occurring river gravel. The gravels slope gently down from Abbey Road (c.3.65m OD) to the west (c.3.4m OD). Previous archaeological work in the vicinity, and the shallowness of some of the features, would suggest that horizontal truncation of perhaps 0.5m has occurred, probably in the 19th/20th century.

The archaeological deposits were characterised by ditches, pits and a few postholes. All archaeological deposits were excavated by hand. Pits and postholes

were fully excavated, and ditches and gullies were sampled to the order of at least 20% of their length. An ancient watercourse in the western part of the site, probably a braid of the river Roding, had been infilled in the post-medieval period. Wide, machine-excavated slots were put through this feature (1012).

On-site visits by specialist advisers were a regular feature of the fieldwork. Archaeological features were exhaustively sampled for flotation, and with both wet and dry sieving, to maximize artefactual and ecofactual information. Column samples were taken through the infill of the former watercourse. Stratified spoil was scanned with a metal detector, operated by an archaeologist, and unstratified spoil was scanned by local metal detectorists under archaeological supervision.

The archaeological features were ascribed to eight phases of activity, ranging from prehistoric to the 20th century. Phasing was assigned using pottery and other artefactual evidence but some features could not be phased as they contained no dating evidence and had no stratigraphic relationships with phased features.

Phase I. Prehistoric

Evidence of prehistoric activity on the site is minimal and is represented by a small pit (222) that contained three flint-tempered sherds of probable Bronze Age pottery and no later material. A number of pits containing only struck flints can be stratigraphically assigned to Phase I (214, 273 and 303). A single gully (171) may also be prehistoric (Fig. 8). These features are relatively discretely clustered.

Forty flints were recovered in total, mostly from residual contexts. The proportion of blades, broken blades and narrow flakes (flakes that have similar dimensions to blades but are not blades in the strict sense of the word) was high. This clearly indicates a strong Mesolithic or earlier Neolithic component in the collection and there are no compelling reasons why all of the material cannot belong to the same period. Mesolithic settlement has a strong riverine bias and activity of this period in a riverside setting is not unexpected (Ford 1998).

Phase II. Roman

Initially, evidence of Roman activity on the site seemed, on examination of the pottery data, to be characterised by four ditches (84, 1004, 1005/1018 and 1011). However, only 18 sherds of pottery, representing six vessels, were recovered and these features have been assigned to the mid Saxon phase on the basis of strong similarity of form with more securely dated features. Roman brick and tile was also recovered from Saxon dated features and seems to have been quarried from London. Much of this material has been sourced to buildings constructed after the early 2nd century.

It is noted that Roman activity has been recorded at Uphall Camp c.1km to the north. A disturbed 1st-century cremation urn was recovered from BA-I-85 and unstratified coins have been found nearby (Clapham 1913; BA-I-85). No convincing evidence, however, for

primary Roman activity was found at this site. A detailed description of the Roman ceramics is in the archive (Pringle 1999) and discussion of residual Roman brick and tile is given below.

Phase IIIa. Mid Saxon (Figs. 3-6)

A number of features have been assigned to this phase: four ditches or gullies (1004, 1005/1018, 1007 and 1011); a hedgeline (433); four pits (151, 157, 328 and 481); and five large, truncated, timber piles (225, 497, 499, 500 and 501).

Pottery evidence suggests that in the first half of the 8th century a pair of shallow ditches or gullies were dug across the site (1007 and 1011). These were orientated from the north-east towards the shallowest part of the riverbank. The gullies then turned through 90°, away from each other, to run parallel to the riverside. A second pair of gullies (1004 and 1005/1018) were dug later, probably sometime between the years 700 and 750, effectively widening the space between the earlier two ditches. The gullies may have been beam trenches for timbers, although no postholes were apparent. Ditch 1004 differed from the other three discussed here in that it bifurcated into parallel gullies towards the south of the site. The two ditch pairs apparently mirror each other. The 'mouth' between the two arms of these ditches opened at the shallowest part of the riverbank. Possibly, there was an entranceway opening from the abbey onto the river in the 8th century.

Five large, truncated timber piles (225, 497, 499, 500 and 501) were found to have been driven into the gravel at the edge of the river, adjacent to the shallow bank (Fig. 4) and at the mouth of the entranceway. Pile 500 was submitted for radiocarbon dating at the British Museum, Department for Scientific Studies, and produced a date of AD 685–775 at 1d and AD 660–820 at 2d (BM 3168). All the wood was in poor condition due to pre-excavation drying out and mineralization. However, some detail did survive and it was possible in most cases to describe how the wood was shaped. The wood was clearly oak and was brought to a point by a broad-bladed axe or adze (Taylor 1998). The largest timber was 1620mm long and 200mm in diameter. The tool marks were chronologically undiagnostic and could have occurred from the Iron Age onwards.

Pit 481 was 0.63m deep, had a diameter of 1.1m, and was positioned at the angle of gully 1007. The sides were near vertical and the base was flat. It contained a few pieces of pottery and re-used Roman brick and tile, perhaps as post-packing. The feature may have been dug to erect a timber upright, perhaps a gatepost? The corresponding position at the angle of gully 1011 was truncated by the later 12th- to earlier 13th-century ditch 1000. The tradition recorded in Ireland of placing crosses outside the enclosure (Herity 1983, 270–3), the Cheddar flagstaff or carved pole proposed by Rahtz (1979, 166–7), and the post-pits recorded outside the enclosure at Hartlepool (Cramp and Daniels 1987, 428), offer further, interesting, possible explanations for this feature.

Excavations at Hartlepool indicate that post-pits and palisade trenches were used to delineate a Saxon monastic enclosure. It could be reasoned that the Barking gullies demarcated a routeway to the edge of the river, at which

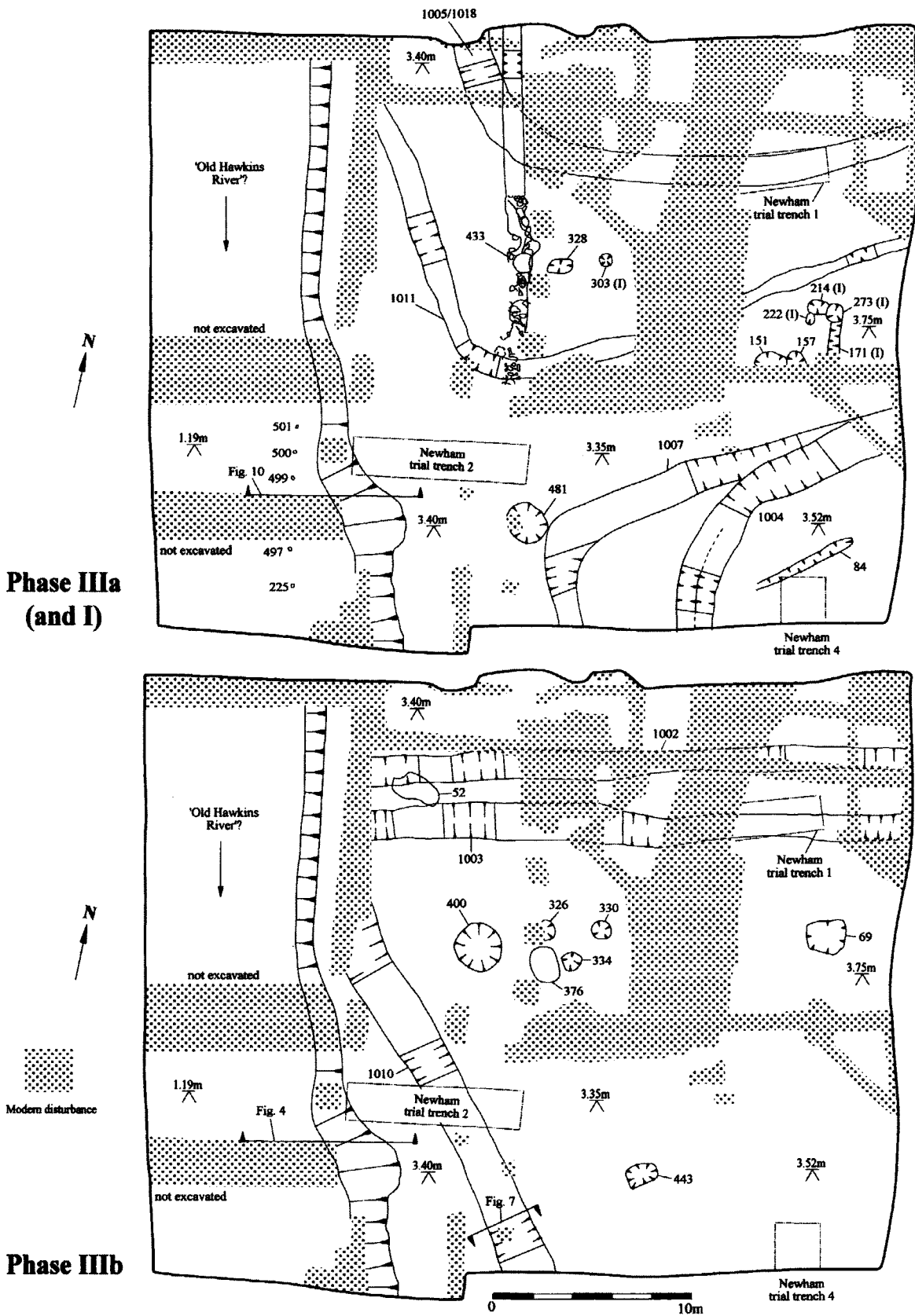


Fig. 3 Phase IIIa, mid Saxon features (also showing Phase i); and Phase iiib, 10th to 12th century features.

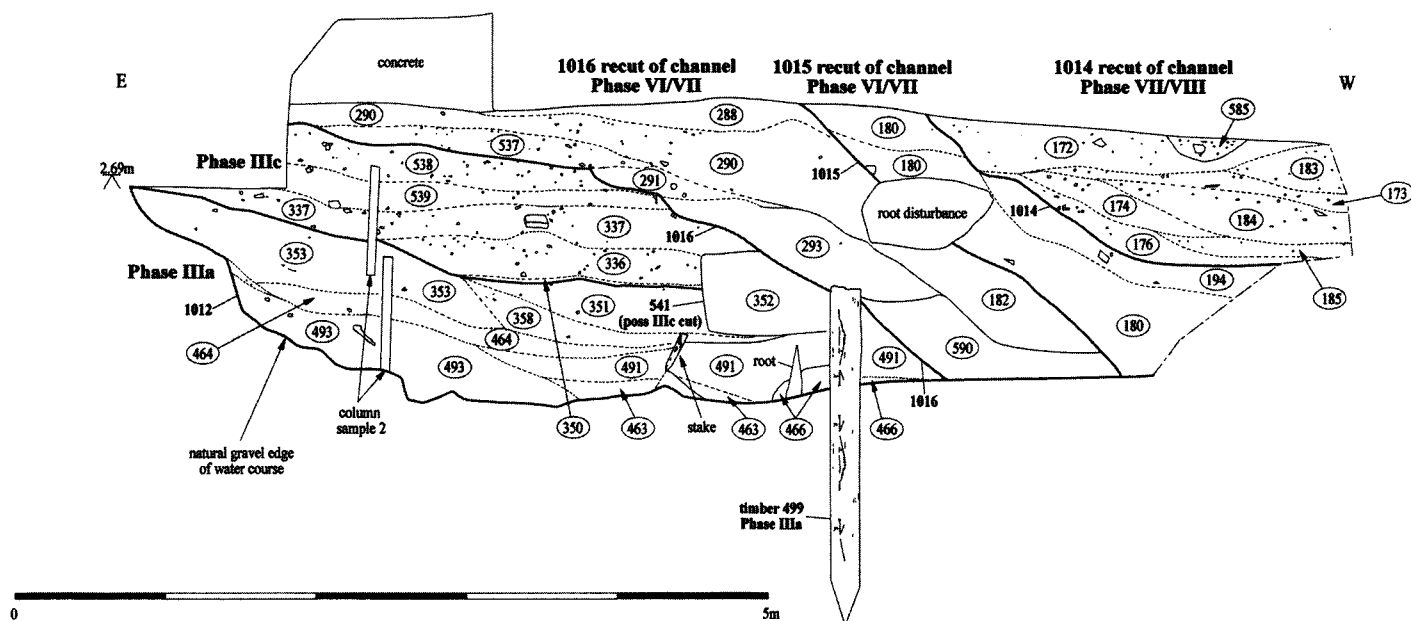


Fig. 4 Section across the hypothesized 'Old Hawkins River', showing Saxon timber pile, 499.

point timbers were piled into the riverside to support horizontal timbers that butted against the bank to form a jetty. Extrapolation of the course of the ditches leads in the direction of the parish church and the core of the medieval town. Historically, the south-west of the medieval abbey precinct had a water entrance. This would have been located in approximately the area being considered here. A more mundane explanation for the ditches may be that they delineated a droveway that led to a watering place or embarkation point.

Hedge line 433 was characterised by a clearly delineated series of root disturbances that were together orientated from north to south. The hedge ran parallel to the stream to its west and stratigraphically post-dated ditches 1005/1018 and 1011. The feature may then have re-established the boundary to the north of the jetty and screened the precinct from view. Pits 151, 157 and 328 were shallow, being less than 0.3m deep, with only a few sherds of pottery in their fills. No indication of function was readily apparent.

It might be suggested that this site, adjacent to the Saxon abbey complex, served as an extra-mural area in the early to mid 8th century, giving access to the wider world beyond the precinct via the rivers Roding and Thames. It may be too early to claim a trading zone of 'Barkingwic', but the presence of a major ecclesiastical centre immediately to the north, certainly consuming, and probably manufacturing high-status goods, begins to make such a notion plausible. The excavation area could possibly be seen as part of an 'outer enclosure' serving as a transitional zone between the spiritual and the secular (cf. Cramp 1976, 204).

The pottery from Phase IIIa demonstrates that there was a phase of Saxon activity focused on the early to mid 8th century, and then a break in the ceramic sequence occurred, to be subsequently resumed in the 10th century (Vince below). The archaeological evidence from Barking certainly supports the concept of a disarticulation of life

there in the later 9th century. This is manifest in the discontinuity of pottery sequences on this and nearby sites and the apparent abandonment of buildings and features. How much of this was directly caused by Scandinavian incursion is debatable but Williams (1996, 93) has plausibly argued that the abbey was probably abandoned in a relatively orderly fashion between 870 and 940 and later sacked, rather than suffering an apocalyptic destruction (VCH ii 1907, 116). As previously noted, there are, significantly, no accounts of martyrs in the Barking Ordinale (Loftus 1979, 101–104).

Phase IIIa pottery

Alan Vince

The assemblage of middle Saxon pottery is quite sizeable for the lower Thames Valley, coming third after the *Lundenwic* sites found along The Strand in the City of Westminster and the previous excavations at Barking itself (Redknapp 1991 and 1992). The majority of the pottery found is Ipswich ware (IPS), varying in texture and appearance but treated here as a single group. Small quantities of chaff-tempered wares (ECHAFG and ECHAFM) and shell-tempered wares (MSSHEL) were also found, together with sherds from a single imported vessel (GRBURN).

Ipwich ware (IPS)

The Ipswich ware is a silty fabric, sometimes with sparse to moderate rounded quartz sand inclusions. It is mainly reduced grey throughout. Under the binocular microscope the quartz is seen to be highly polished, typical of grains from Cretaceous deposits. Sparse flint is also present. The clay matrix includes both silt-sized quartz and muscovite. In comparison with Thames Valley brickearths, the texture is finer, with less evidence for iron-rich compounds or sandstone, and in comparison with southern Essex Tertiary Clays the texture is coarser, with

less muscovite. Nevertheless, whilst the majority of the sherds found are absolutely typical of Ipswich wares, there are some lower-fired, coarser-textured sherds where it is not certain that the sherds are in fact Ipswich-type ware rather than local wares made in a similar tradition.

All the vessels found seem to have been made in a similar manner: the vessels are relatively thick-walled in comparison with earlier and later wheel-thrown products but are similar in thickness to early to mid Anglo-Saxon handmade wares (such as the chaff-tempered wares from Barking). The vessels often have a distinctive ribbed exterior marked with a spiral thumb-wide groove running gently up the body. This is often taken as evidence for the use of a turntable, although it is not impossible for potters to have produced this effect entirely by hand. The interiors of the vessels are sometimes knife-trimmed. Rims were certainly trued-up in a circular movement and this often leads to the development of a slight groove at the neck, cutting across the body spiral. The vessels are often irregularly burnished and in two cases were decorated around the shoulder with a row of individual stamps.

Only two or three vessel types were found in this collection: a small, plain jar, a larger spouted pitcher (five sherds), and possibly an even larger storage jar (known from a single body sherd). At least five of the jars were lightly coated with soot on the outside and had, therefore, been used as cooking pots. In general, however, there is little sign of use on the Ipswich wares. One of the spouted pitcher sherds is pierced by a post-firing drilled hole, probably an attempt to repair the vessel after it had cracked.

Chaff-tempered wares (ECHAFG and ECHA FM)

Ten sherds of chaff-tempered ware were found, probably representing only three or four vessels. Two distinct sub-fabrics can be recognised:

- 1) Sherds with polished, rounded quartz sand (ECHA FG). A sherd of this fabric was thin-sectioned. The fabric was revealed to contain abundant fine sand, composed mainly of quartz with moderate rounded opaque grains, possibly altered glauconite. In contrast to later, locally produced wares, the clay matrix contained neither quartz silt nor muscovite flecks. A few larger, rounded quartz grains were present, some of which were coated with an iron-rich cement. These characteristics are found widely in pottery manufactured in the south-east of England.
- 2) Sherds with a fine-textured, moderately to highly micaceous matrix (ECHA FM). A thin-section was produced of one of these sherds. It contained sparse subangular quartz up to 0.3mm across in a clay matrix containing abundant angular quartz silt, up to 0.2mm. Moderate inclusions of phosphate might either be post-depositional concretion in the pores of the pot or, more interestingly, might indicate the use of animal dung as the source of 'chaff' temper.

The petrological analysis confirms that these two fabrics were produced from different raw materials. The raw materials for both of these fabrics could be found locally and ECHA FM is the typical fabric found in the chaff-tempered wares used at *Lundenwic*. The vessels are poorly-made baggy cooking pots with gently rolled out

everted rims. They are coated with soot and clearly used as cooking pots.

Shell-tempered ware (MSSHEL)

A single shell-tempered vessel is suggested here to be a local copy of Ipswich ware, since the vessel has the typical form (squat jar with rounded rim) and surface treatment (burnishing and ribbing) of the Ipswich ware jars but has a typical south Essex micaceous shell-tempered fabric. The sherds were found in a Phase IIIb context, datable to the 10th to 12th centuries and, if mid Saxon, would be residual in this context. The fabric of this vessel is not identical to that of the mid Saxon shelly wares from *Lundenwic* and neither is the form and treatment (the London vessels are thin-walled baggy vessels with everted rims and thickened necks; they may be Frisian imports, although this suggestion has not been put to the test).

Grey Burnished ware (GRBURN)

A large number of sherds of a Grey Burnished ware vessel were found. Grey and Black Burnished wares are the most common import found on 8th-century eastern English sites and this Barking vessel was comparable visually to the main group of Grey and Black Burnished wares from Fishergate, York (Mainman 1993, 569–76). The sherds come from a bottle with an inverted tear-shaped profile, a form not recorded at *Lundenwic* or York but well known on the continent (see, for example, Evison's 1974 discussion of imported bottles and their local copies).

Discussion

The mid-Saxon ceramic sequence in the Thames Valley seems to be divisible into three: an early period (?7th century), in which chaff-tempered wares are most common; a middle period (?early to mid 8th century) characterised by Ipswich ware with little chaff-tempered ware; and a late period characterised by Ipswich ware, no chaff-tempered ware and coarse gritty and shelly wares. Each phase has its characteristic import types: Walberberg ware in the early period; Grey Burnished wares in the middle period; and Badorf and Tating wares in the late period. Superimposed on this chronological progression seems to be a second, geographical trend in which Ipswich wares get less and less common as one moves further away from the Thames and the east coast. Barking, however, seems to have had a very similar ceramic sequence to London and there is little doubt that the finds belong to the middle phase – early to mid 8th century. The shell-tempered vessel would also be dated to this phase rather than the latest, nor is there any reason, in the absence of stratigraphic evidence, to suggest that the chaff-tempered wares belong to the earlier phase. There is thus ceramic evidence for a hiatus between the mid Saxon activity and the later Saxon activity on the site.

Illustrated phase IIIa pottery (Fig. 5)

- 5.1 Ditch 1007, 110 (111). Fabric ECHA FG. Jar. Thick-walled handmade vessel. Sparse burnishing on exterior. Vertical rounded rim.
- 5.2 Pit 481 (480). Fabric ECHA FM. Cooking pot with short rolled-out rim.
- 5.3 Pit 1001, 43 (42). Fabric IPS. Jar with vertical, rounded rim.

BARKINGWIC? SAXON AND MEDIEVAL FEATURES ADJACENT TO BARKING ABBEY

Table 1. Pottery fabric codes.

Fabric	EDate	LDate	Description
CBW	1270	1500	Coarse Border ware (rare pre-1300 common c.1350)
CHEA	1350	1550	Cheam ware
DUTR	1300	1650	Dutch red earthenware (rare before 1350)
ECHAFG	400	850	Chaff-tempered ware with Greensand quartz sand
ECHAFM	400	850	Chaff-tempered ware with muscovite-rich matrix
EMCH	1050	1150	Early medieval 'Chalky' ware
EMCW	1000	1150	Early medieval coarse whiteware (Crucibles – ill-sorted fabric)
EMFL	970	1100	Early medieval flinty ware (mainly from 1000)
EMGR	1050	1150	Early medieval grog-tempered ware
EMS	970	1100	Early medieval sandy ware (possibly from 900)
EMSH	1050	1150	Early medieval shelly ware (possibly from 1000)
EMSS	1000	1150	Early medieval sand and shell ware
ESUR	1050	1150	Early Surrey ware
GRBURN	700	850	Grey burnished ware
HEDI	?1150	1250	Hedingham ware
IPS	800	850	Ipswich-type ware
KING	1230	1400	Kingston-type ware
LCOAR	1080	1200	Coarse London-type ware
LOND	1080	1350	London-type ware
LSS	900	1050	Late Saxon shell ware
MG	1270	1350	Mill Green ware
MGCOAR	1270	1400	Mill Green coarseware
MSSHEL	700	850	Middle Anglo-Saxon Shell-tempered ware
RAER	1480	1610	Raeren stoneware
RTIL	40	400	Romano-British tile
SAIU	1250	1650	Unglazed Saintonge ware
SEEMS	1050	1150	South Essex Early Medieval Sandy ware
SESH	1150	1250	South Essex Shelly ware
SESHL	900	1050	South Essex Late Saxon Shelly ware
SHELS	1000	1150	London Shell-tempered ware – sandy
SIEG	1300	1500	Siegburg unglazed stoneware
SNTG	1480	1575	South Netherlands Maiolica
SSW	1140	1220	Shelly sandy ware (possibly from 1100)
THET	900	1150	Ipswich Thetford-type ware (mainly from 970)
TUDB	1480	1600	Tudor Brown ware
TUDC	1450	1550	Tudor Redware – calcareous body
TUDFR	1450	1550	Tudor Redware – fine micaceous
TUDG	1380	1500	'Tudor green' ware
WESE	1580	1630	Weser slipware

- 5.4 Pit 69 (62). Fabric IPS. Globular jar with rounded rim.

5.5 Spread 390. Fabric IPS. Globular jar with cylindrical round-topped rim.

5.6 Layer 2. Fabric IPS. Globular jar. Spiral throwing/smoothing marks on outside and smoothing lines on the inside. Flat-topped rim finished off on wheel.

5.7 226 (290). Fabric IPS. Globular jar. Spiral throwing/turning grooves on outside and smoothing marks on inside. Vertical rim with flat top. Trued-up on wheel leaving groove around neck.

5.8 226 (290). Fabric IPS. Globular jar. Throwing/smoothing lines on inside and out. Cylindrical flat-topped rim trued-up on wheel leaving distinct groove around neck.
- 5.9 Ditch 1003, 77 (76). Fabric IPS. Thick-walled vessel, either a large spouted pitcher or storage jar. The sherd may be from just below the neck of the vessel. Band of circular grid stamps just below the neck.

5.10 Ditch 1010, 321 (264). Fabric IPS. Body sherd from ?spouted pitcher. Band of overlapping square stamps, the stamp consists of a grid of 3 by 3 squares. Post-firing hole drilled through the sherd from the outside, probably indicating a repair.

5.11 U/s. Fabric IPS. Body sherd from ?spouted pitcher. Two rows of circular grid stamps on the shoulder.

5.12 Pit 1008, 57 (56). Fabric IPS. Body sherd from globular jar, carination may be basal angle or decorative feature on pot shoulder. Vertical

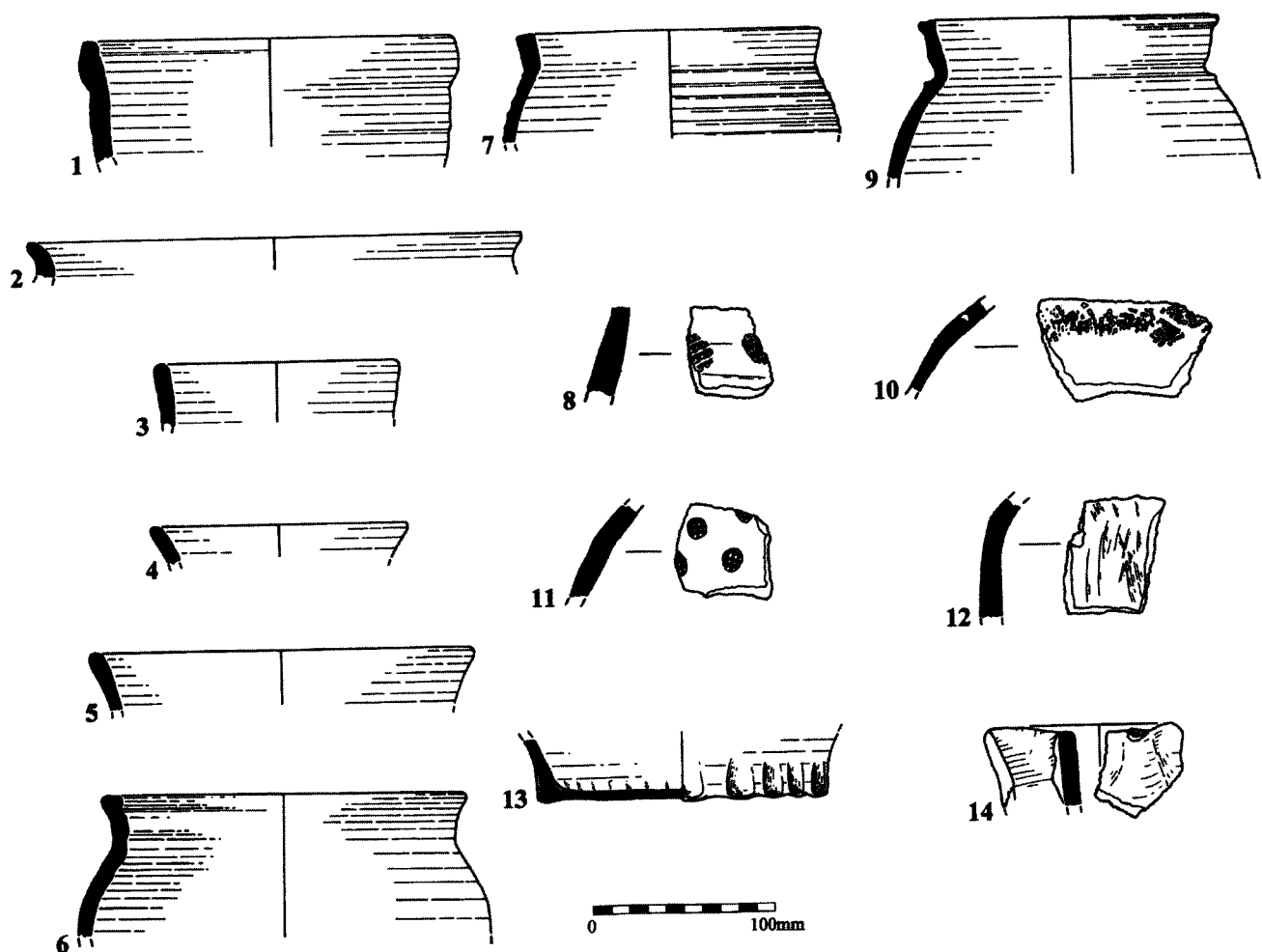


Fig. 5 Phase IIIa pottery.

Table 2. Pottery form codes.

Code	Description	MPRG 1998 Term	MPRG 1998 Reference
CP	cooking pot	jar	4.1
CRUC	crucible	crucible	9.6
DISH	dish	dish	5.3
JAR	jar	jar	4.1
SJ	storage jar	large jar	4.1
SPP	spouted pitcher	spouted pitcher	3.1.15
PIP	pipkin	pipkin	4.3
CAND	candlestick	candlestick	8.1.1
VASE	vase	vase	4.1.8
COST	costrel	costrel	10.7
DJ	drinking jug	jug or mug	3.1
LCUP	lobed cup	lobed cup	6.2.6
CUP	cup	cup	6.2
BEAK	beaker	beaker	6.1
CAUL	cauldron	cauldron	4.4
BOWL	bowl	bowl	5.1

Table 3. Phase IIIa pottery by fabric.

Fabric	Sherds	Weight	EVEs
ECHAFG	6	340	0.02
ECHAFM	4	30	0.04
GRBURN	29	141	0
IPS	76	3122	0.80
MSSHEL	2	140	0.10

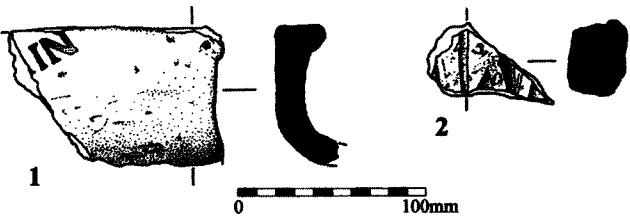


Fig. 6 Stamped Roman tile.

burnishing on both sides of the carination/base angle.

- 5.13 Ditch 1003, 77 (76). Fabric MSSHEL. Jar. Thick-walled handmade vessel with rounded rim and irregular burnishing on exterior.
- 5.14 Ditch 1003, 60 (59). Fabric IPS. Spouted pitcher with flat-topped rim and tubular spout, luted to the rim with added clay.

Phase IIIa brick and tile

Susan Pringle

The major significance of the Roman brick and tile from this site is in its apparent reuse in the mid or late Saxon periods for the construction of hearths, ovens or kilns, probably for 'industrial' purposes, such as the glass-working kiln, which was located approximately 50m to the north of these deposits (MacGowan 1996). Daub, some of which was vitrified, occurs in many of the deposits that contain a high proportion of heat-cracked Roman brick, and provides further evidence that the brick may have been used in oven or kiln structures. Kilns were not, however, located in this excavation.

It seems likely, given the similarities between the material from Barking and that found in Roman London, that the brick and tile was obtained in London during the Saxon period by quarrying Roman buildings. The extent to which this operation was an organized one is not known; presumably the landowners, be they Saxon nobility or the Church, controlled the exploitation of what would have been a valuable resource. Two of the tile fragments from Barking had been stamped.

Stamped Roman tile (Fig. 6)

- 6.1 Pit 21 (20). *Imbrex* with incuse stamp, [.]IN, probably a civilian maker's mark.
- 6.2 ?Pit 52 (51). Flue tile stamped with diamond-and-lattice pattern, possibly Die 21.

Phase IIIb. 10th to 12th century

(Figs. 3, 7)

This phase is characterized by three boundary ditches (1002, 1003 and 1010), seven pits (52, 69, 326, 330, 334, 400 and 443) and a thin silty deposit (376). It would seem that sometime after the late 10th or early 11th century the landscape in the immediate vicinity of the proposed mid Saxon landing stage was remodelled. A ditch (1010) was dug parallel to, and effectively blocking access to, the river. A pair of apparently contemporary parallel ditches crossed the site from east to west, to the edge of the watercourse, across the northern part of the site (1002 and 1003). The area south of the pair of ditches and east of ditch 1010 also seems to have changed function, being less connected with waterside activity and characterised as possibly a kitchen garden and refuse disposal area with indications of industrial activity south of the abbey complex.

Pit 443 was rectangular, measuring in excess of 1.8m long by 1.1m wide and 0.6m deep. The sides were vertical and the base was flat. Pit 69 was markedly rectangular, 0.96m by 1.4m and 0.7m deep. The sides were vertical and it was filled with five dumped layers of burnt material. Two pieces of lead dross, weighing 215g in total, were

recovered from the pit, as were two large-headed iron nails, not closely dateable, but possibly medieval and typical of those used in large structures or even in ship building (Richards 1998). The lead may have been the accidental result of the metal being caught in a fire or of deliberate metallurgical activity, or even the result of sealing sacks or packages. It should be noted that a lead seal with a diameter of 20–22mm, the obverse stamped but unrecognisable and the reverse plain, was metal-detected, unstratified, from spoil.

Evidence for iron working on this site in the late Saxon period, in the form of small smithing hearth bottoms (McDonnell 1983), or fragments derived from them, was found in pits 69 and 400, and in ditch 1003. Pit 400 was near-circular, being just over 2m in diameter and 0.5m deep. The sides were near-vertical and the base was flat; five fills were recorded. On sampling, the slag had rather more unreacted silica inclusions than is normal for an ancient smithing hearth bottom, so it might simply be a hearth/furnace lining slump associated with any high temperature process. The quantity of material recovered, a total of a little over 4.5kg, represents only a very limited amount of activity. This could be interpreted as the product of a small, short-lived period of industrial activity, or a sample of widely-scattered slag distribution produced by a more intense and long-lasting episode of industrial activity (Salter 1998).

Environmental samples 5, 18, 19, 21, 26 and 109, which all contained much oak charcoal, were from pit 69. Other charcoal was absent from this feature and the high concentration of oak charcoal would be consistent with metal working. The presence of a crucible fragment in ditch 1002, and the crucible or mould pieces recovered from evaluation Trench 4, support the argument for metal working in the vicinity and the evaluation indicated that copper alloy was also being worked (Truckle *et al.* 1997).

Phase IIIb environmental evidence

Jenny Robinson

The amorphous, shallow feature, 52, little more than a scoop, was dated by pottery to the late 11th/12th century and contained 870 cereal grains, which at 87 grains per litre represented a high concentration of remains. Much less chaff and far fewer weed seeds were present. Short free-threshing grains of *Triticum* sp. predominated and most of the unidentified cereal grains could have been from wheat. It is not possible to determine whether grains are of hexaploid (bread-type) or tetraploid (rivet) wheat on grain morphology. Little wheat chaff was present, but it was possible to identify one rachis node as being of *Triticum aestivum* tp. (bread wheat). The other grains in the assemblage, *Secale cereale* (rye), *Hordeum vulgare* (six-row hulled barley) and *Avena* sp., could have been from plants growing as contaminants of wheat rather than representing separate crops. Likewise, the weed seeds, of which *Anthemis cotula* (stinking mayweed) was by far the most abundant, could all have grown as weeds of wheat. *A. cotula* tends to occur on heavier calcareous soils, while *Galium aparine* (goosegrass) is characteristic of autumn-sown cereals, although it was only represented by a single seed.

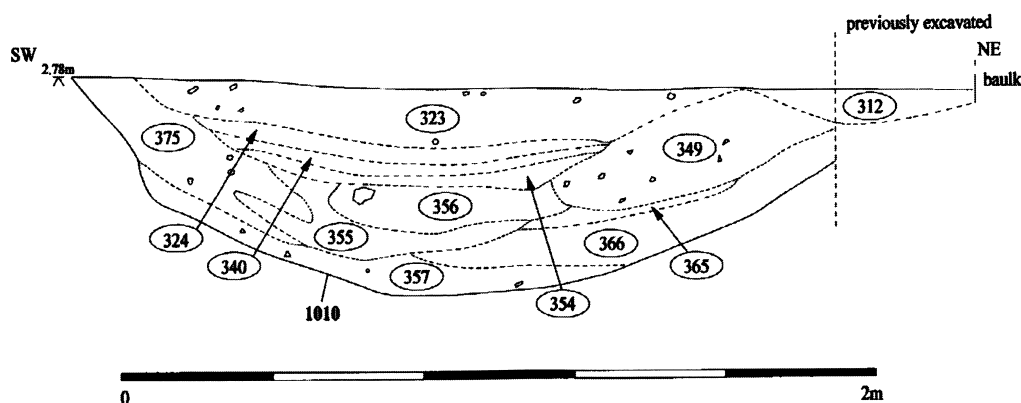


Fig. 7 Section across ditch 1010.

Whereas wheat grain greatly outnumbered rye grain, rye chaff in the form of rachis nodes outnumbered wheat rachis nodes. The carbonized chaff remains did not plausibly represent material from the same crop as the grain. Wheat chaff is more useful as animal fodder than rye chaff, whereas rye straw, including the rachis, was more likely to be used as fuel and was also used to make mats for drying or malting grain. It is, therefore, suggested that the deposit represented the accidental burning of cleaned wheat while it was being parched, prior to grinding, in an oven fuelled on rye threshing waste or perhaps supported on a rye straw mat.

Six environmental samples (five given in Table 4, plus Sample 61) contained seeds of *Asparagus officinalis*. *Asparagus* seed was found in a relatively discrete cluster of features (69, 326, 330, 334, 376 and 1003) and would add to the richly varied diet of the inhabitants of the abbey, and could indicate a vegetable garden. *Asparagus* is a very rare native plant of maritime cliffs and dunes. It has also been cultivated as a vegetable since at least Roman times. As its natural habitat does not occur in the vicinity of the site, the seeds were presumably from cultivated plants. It might seem strange that *asparagus* seeds should ever become charred at all. However, it is traditional to burn the dead stems off *asparagus* beds in winter.

The sample that contained most *asparagus* seeds, Sample 63 from the fill of pit 334, was analysed in full. The pit measured 2m by 1.5m and was 0.43m deep. In addition to nine seeds of *Asparagus officinalis*, there were 71 cereal grains. The grains had mostly been too distorted by heat for identification but some short free-threshing grains of *Triticum* sp. (bread-type wheat) could be recognized. There were also a few weeds, of which *Anthemis cotula* (stinking mayweed) was again the most numerous. The cereals and most of the weed seeds could have resulted from a similar accident to that which resulted in the charred assemblage in feature 52. However, two seeds of *Chenopodium hybridum* (sowbane) were present. In Britain it is now a casual plant of allotments and waste places. Possibly it was growing as a weed on *asparagus* beds.

Phase IIIb pottery

Alan Vince

Twenty-six contexts contained sherds of 10th- to 12th-century date without any later material, and 128 sherds of this date were recovered in total. None of the assemblages was large, the largest being 13 sherds from context 60 (Table 5). Clearly, given the amount of residuality on Abbey Retail Park, not all of these deposits need date to the 10th to 12th centuries and the assemblages are far too small for refined dating within this period to be carried out on a deposit by deposit basis. Much of this pottery comes from the various ditches found criss-crossing the excavation area. Some sherds are fresh looking but much of this pottery is covered with cassy concretions.

Source

Of the ten 10th- to 12th-century wares identified at Abbey Retail Park, all but three have been found in the City of London (Vince and Jenner 1991). However, over half of the sherds have a fabric not noted in the City and here termed SESH (South Essex Late Saxon Shelly ware). Superficially, the ware is very similar to that of London's LSS (of which only one sherd has been positively identified at Abbey Retail Park) but closer examination reveals a medium-textured quartz sand and micaceous silty matrix. Furthermore, the identity of the fossil shell is clearly different under the binocular microscope.

A thin-section of one sherd revealed abundant bivalve shell fragments (ranging from c.0.1mm to 0.5mm in thickness), composed of non-ferroan calcite, together with sparse fragments of fine-grained calcareous limestone, composed of ferroan calcite, angular quartz silt and variable quantities of clay/phosphatic material. This material is probably the remnants of the original matrix of the rock from which the shell was derived. The clay matrix contains sparse muscovite and quartz silt.

Two other possibly local wares were noted; a sandy ware (SEEMS) and a sandy variant of London's EMSH (here termed SHEL). A sherd of SHEL was thin-sectioned. It contains abundant bivalve shell fragments, many of which are noticeably rounded. Dickson's staining method (potassium ferricyanide and Alizarin Red S)

Table 4. Carbonized plant remains (excluding charcoal) from samples with more than five items.

		SAMPLE	5	6	10	10	12	44	63	64	75	77	79
		CONTEXT	39	51	59	66	255	333	329	376	379	386	
		FEATURE	69	60	67	256	334	330	10	10	10	10	
		Sample Volume (litres)	10	10	30	10	25	30	10	10	10	10	10
CEREAL GRAIN													
<i>Triticum</i> sp.	- short free-threshing grain	bread or rivet wheat	+	319	++	++	++	+	10	+	+	++	++
<i>Triticum</i> sp.		wheat	-	25	+	+	+	-	3	-	-	+	+
<i>Secale cereale</i>		rye	-	18	+	-	+	+	1	+	-	+	-
<i>Hordeum vulgare</i>	- lateral hulled grain	six-row hulled barley	-	1	+	-	-	-	-	-	-	-	-
<i>Hordeum</i> sp.	- median hulled grain	hulled barley	-	1	-	-	-	-	-	-	-	-	-
<i>Hordeum</i> sp.	- hulled grain	hulled barley	+	-	-	-	-	-	-	-	-	-	+
<i>Hordeum</i> sp.		barley	-	-	+	-	-	-	-	-	-	-	-
<i>Avena</i> sp.		oats	-	52	-	-	+	1	-	+	+	+	-
Cereal indet.			+	454	++	++	++	++	56	+	++	++	++
Total cereal grain				870					71				
CEREAL CHAFF													
<i>Triticum aestivum</i> tp.	- free-threshing rachis nodes	bread wheat	-	1	-	-	-	-	-	-	-	-	-
<i>Triticum</i> sp.	- free-threshing rachis nodes	bread or rivet wheat	-	14	-	-	-	-	-	-	-	-	-
<i>Secale cereale</i>	- rachis nodes	rye	-	65	-	-	-	-	-	-	-	-	-
<i>Secale</i> or <i>Hordeum</i> sp.	- rachis nodes	rye or barley	-	2	-	-	-	-	-	-	-	-	-
<i>Avena</i> sp.	- awns	oats	-	5	-	-	-	-	1	-	-	-	-
Total chaff items (excluding <i>Avena</i> awns)				82					0				
OTHER CULTIVATED PLANTS													
<i>Asparagus officinalis</i>	- seed	asparagus	+	-	-	-	+	+	9	+	+	-	-
WEED SEEDS													
<i>Raphanus raphanistrum</i>		wild radish	-	1	-	-	-	-	-	-	-	-	-
<i>Agrostemma githago</i>		corn cockle	-	1	-	-	-	-	-	-	-	-	-
<i>Chenopodium album</i>		fat hen	-	3	-	-	-	-	-	-	-	-	-
<i>C hybridum</i>		sowbane	-	-	-	-	-	-	2	-	-	-	-
<i>Malva sylvestris</i>		common mallow	-	-	+	-	-	-	-	-	-	-	-
<i>Vicia</i> , <i>Lathyrus</i> or <i>Pisum</i> sp.		vetch, tare or pea	-	6	-	-	-	1	-	-	-	-	-
cf. <i>Medicago</i> sp.		medick	-	1	-	-	-	-	1	-	-	-	-
<i>Polygonum aviculare</i> agg.		knotgrass	-	1	-	-	-	-	-	-	-	-	-
<i>P. persicaria</i> or <i>lapathifolium</i>		persicaria	-	1	-	-	-	-	-	-	-	-	-
<i>Rumex</i> sp.		dock	-	4	-	-	-	-	-	-	-	-	-
<i>Galium aparine</i>		goosegrass	-	1	-	-	-	-	-	-	-	-	-
<i>Anthemis arvensis</i>		corn chamomile	-	1	-	-	-	-	-	-	-	-	-
<i>A. cotula</i>		stinking mayweed	-	46	-	-	-	-	5	-	-	-	-
Gramineae indet.		grasses	-	2	-	-	-	-	-	-	-	-	-
weed indet.			+	5	-	-	-	-	2	-	-	-	-
TOTAL WEED SEEDS				73					11				
TOTAL ITEMS			++	1030	+++	++	++	++	92	++	++	++	++
CONCENTRATION OF ITEMS PER LITRE				103.0					3.7				

+ 1-5; + + 6-20; +++ 21-100; + + + + + 101-500

Table 5. Phase IIb pottery by context.

Group	Context	10th- to 12th-century sherds	<i>Terminus post quem</i>	Contemporary wares present
1003	34	8	Might be mid Saxon with Roman shelly, or 10th century	SESHL (or Roman)
	60	13	Mixed, two sherds of ?late 12th century, otherwise the latest sherds are early 11th century or later	EMS, SEEMS, SESH (2 sherds), SESH
1002	65	2	Early 11th century or later	EMCW, EMSH
	69	2	Early 11th century or later	EMSS, SESH
1002	70	1	Early 11th century or later	SHEL
1003	77	2	?12th century	EMS, SESH, SESH
1000	81	5	Early 11th century or later	EMSH, EMSS, SESH, SHEL
1002	97	1		
1003	120	4	10th century	SESH
	121	1	Early 11th century or later	SHEL
1003	160	3	Early 11th century or later	EMS, EMSH, EMSS, SESH
1002	193	2	10th century	LSS, SESH
1000	236	1	10th century	SESH
	256	1	10th century	THET
1010	321	1	10th century	SESH
1010	322	3	Early 11th century	EMSH, SESH
	328	1	10th century	SESH
	334	1	10th century	SESH
	390	1	10th century	SESH
	400	2	10th century	SESH
	443	1	10th century	SESH
1007	475	3	10th century	SESH
1012	494	4	Early 11th century	EMSH, SESH
1000	1001	2	Early 11th century	EMSH, SESH
	1003	1	Early 11th century	EMS

stained these shell fragments purple, perhaps indicating a slightly higher iron content than found in other sampled south-eastern shell-tempered wares. Moderate quantities of rounded quartz sand were present, including highly rounded grains (probably derived from Cretaceous greensand) and grains with iron-stained veins (noted often in sands from the Surrey/Hampshire border area, for example). The clay matrix is free from quartz or mica but contains abundant round opaque grains. The petrological analysis confirms that SHEL is a distinctly different fabric, although its components are widespread in south-east England.

Whilst there are points of comparison between the Barking and London ceramics it is clear that the majority of the wares used at Barking come from a different source (Table 6). The absence of imported wares is striking in comparison with London.

Dating

The SESH sherds are mainly similar in manufacturing technique and typology to London’s LSS and probably, therefore, have a similar date range. The remaining wares can be dated by comparison with the City of London to the later 10th to mid 12th centuries and it is likely that this assemblage includes material ranging in date throughout this period. Where features contain only LSS or SESH they have, therefore, been dated to the 10th century or later and all other wares have been given a terminus post quem of the early 11th century (Table 5). Deposits containing sherds of SESH may be of later 12th-century

date but containing earlier material, or may represent a transitional phase during which both ‘early medieval’ and high medieval wares were current. In reality, the assemblages are so small and mixed that this can give only the vaguest of notions of the actual relative date of the deposits.

As noted above, it is possible that all of the mid Saxon pottery dates to the middle of the mid Saxon period but the possibility exists that there is actually an overlap between the use of Ipswich ware and the late Saxon LSS and SESH wares. To test this, the quantity of pottery (by weight, on the assumption that contemporary sherds might be larger) of each ware in the three date groups (1 = 10th century+; 2 = 11th century+; 3 = ?12th century) was examined (Table 7). There is, indeed, a much higher quantity of Ipswich ware in the first group of features.

Function

Almost all of the sherds of 10th- to 12th-century date were from cooking pots, jars, storage jars or dishes; all types used in food preparation (Table 8). The absence of spouted pitchers is noteworthy and shows a complete reverse of the pattern found in the mid Saxon period. This may be due to a change in function of the area from which rubbish was derived between the two periods or to a change in status of the settlement itself. Both glazed and unglazed pitchers were being made during this period and there is, therefore, no cultural reason why they should not have been found at Barking.

BARKINGWIC? SAXON AND MEDIEVAL FEATURES ADJACENT TO BARKING ABBEY

Table 6. Phase IIIb pottery by fabric.

Fabric	Sherds	Weight	EVEs	Comments
EMCW	1	18	0.05	Bayley <i>et al.</i> 1991, 392-6
EMGR	1	7	0	Vince and Jenner 1991, 80-1
EMS	9	307	0.17	Vince and Jenner 1991, 56-9
EMSH	25	502	0.25	Vince and Jenner 1991, 63-8
EMSS	6	101	0.10	Vince and Jenner 1991, 59-63
LSS	1	27	0.04	Vince and Jenner 1991, 49-54
SEEMS	1	27	0	
SESHL	72	1566	0.46	
SHELS	8	247	0.18	
THET	4	115	0	Vince and Jenner 1991, 89-91

Table 7. Phase IIIb pottery by fabric by date.

Fabric	Date group		
	1	2	3
IPS	905	424	368
SESHL	605	215	211
LSS	27	-	-
THET	11	-	-
EMSH	-	249	-
EMS	-	103	175
SHELS	-	73	-
RTIL	-	34	-
EMSS	-	29	-
EMCW	-	18	-
PREH1	-	12	-
R	-	0	-
SESH	-	-	88
SEEMS	-	-	27
MSSHEL	-	-	140
GRBURN	-	-	12

Table 8. Forms of vessels (by weight) found in 10th- to 12th-century deposits at Barking (excluding residual mid Saxon pottery).

Form	Date group		
	1	2	3
CP	389	669	559
CRUC	-	18	-
DISH	33	-	-
JAR	840	427	349
NA	-	13	-
SJ	206	-	47
SPP	80	9	66

Discussion

The 10th- to 12th-century deposits are clearly not very productive and contain definite and probable residual material. It is, therefore, difficult to establish the exact sequence of ware types in use in Barking during this period. Nevertheless, it is clear that Barking relied mainly on local sources, supplemented with wares from neighbouring areas. Unfortunately, the source of most of these regional imports is not known for certain. In London, however, it was suggested that LSS was made well up-river from London, in Oxfordshire. This conclusion was greeted with some caution by other workers (e.g. Mellor 1994, 58-9), partly on the grounds that LSS had been reported from earlier excavations in Barking and elsewhere in south Essex, implying a huge market for this ware. However, from this current work, it is now clear that there is a likelihood that material previously identified from Essex (including material identified by the current author) as LSS is in fact locally produced pottery made in the same tradition, although the one LSS dish sherd found does confirm that the ware is present this far east.

The later wares found in London were all thought to have been made in the lower Thames basin; EMS and EMSS were made close to London, but on the south side of the Thames, whereas EMSH was made further away, and again on the south side of the river. Wares thought to have been made to the north (EMFL, EMCH) and south-west (ESUR) of London are not present on this site. The data from this Barking site, therefore, adds more weight to the suggested provenances of these wares. Furthermore, the relative abundance of EMSH versus EMS/EMSS is also consistent with its source being closer to Barking. The evidence favours these regional imports being mainly the result of trade across the Thames rather than down it.

Illustrated phase IIIb and IIIc pottery (Figs. 8-10)

- 8.1 Ditch 1002, 193 (192). Fabric LSS. Dish with vertical wall and flat top. Sooted exterior.
- 8.2 Ditch 1003, 60 (59). Fabric SESH. Globular cooking pot. Wheelthrown. Rolled-out rim. Sooted exterior.
- 8.3 Pit 334 (333). Fabric SESH. Globular cooking pot. Possibly wheelthrown. Everted rim. Sooted exterior.
- 8.4 Ditch 1003, 120 (1). Fabric SESH. Globular cooking pot, wheelthrown. Everted rim. Sooting on inside of rim.
- 8.5 Spread 390. Fabric SESH. Globular cooking pot. Probably wheelthrown. Everted rim. Sooted exterior.
- 8.6 Ditch 1000, 40 (35). Fabric SESH. Rim of dish, probably wheelthrown. Sooted exterior.
- 8.7 Ditch 1010, 321 (267). Fabric SESH. Dish with simple rounded rim. Manufacturing method uncertain. Thick sooting/burnt deposit on exterior.
- 8.8 Ditch 1002, 65 (63). Fabric EMCW. Spherical crucible with simple rounded rim.
- 8.9 Ditch 1003. Fabric EMS. Globular cooking pot with cylindrical round-topped rim.
- 8.10 Pit 313 (312). Fabric EMSH. Globular cooking pot with everted round-topped rim. Sooted exterior.

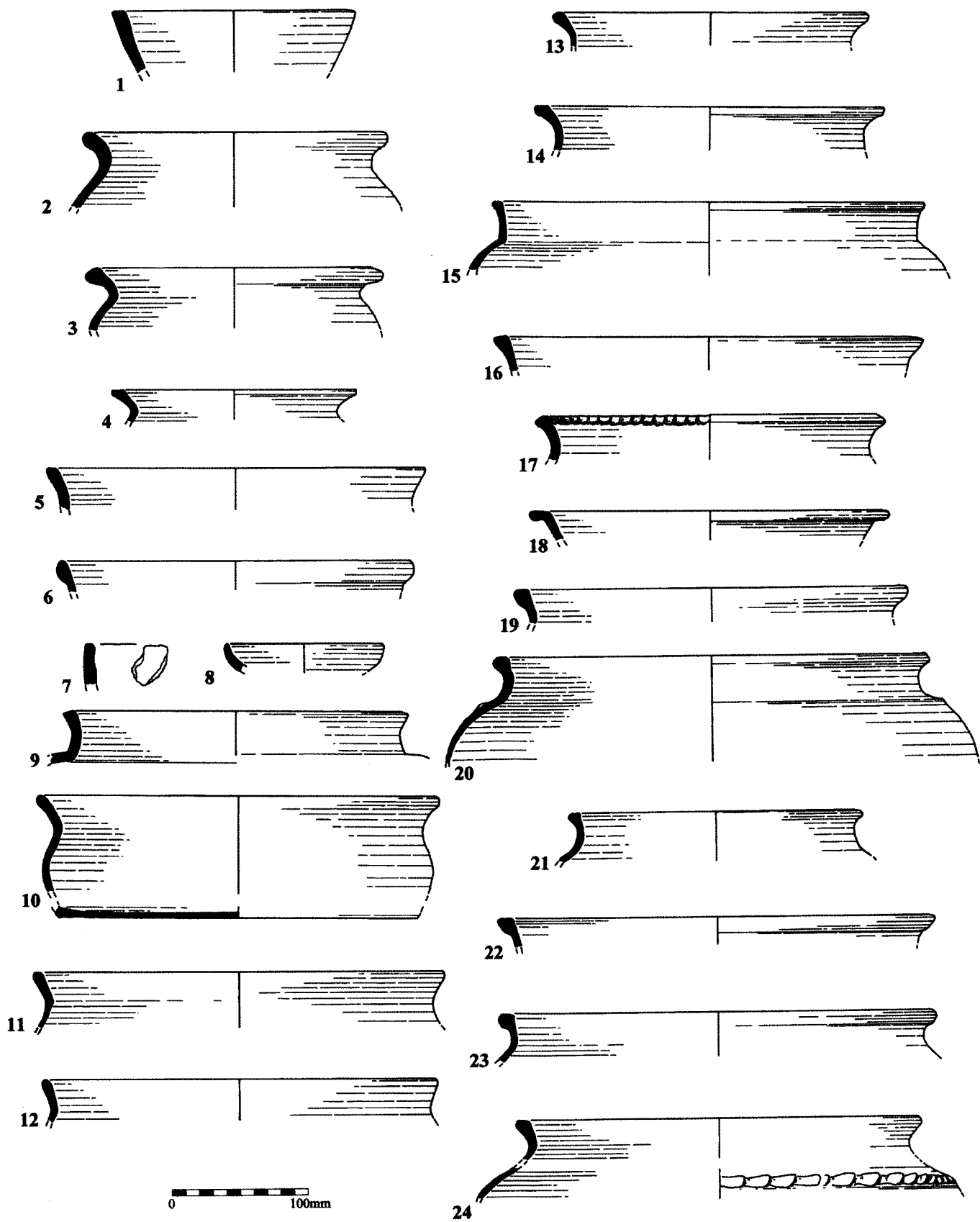


Fig. 8 Phase IIIb and IIIc pottery.

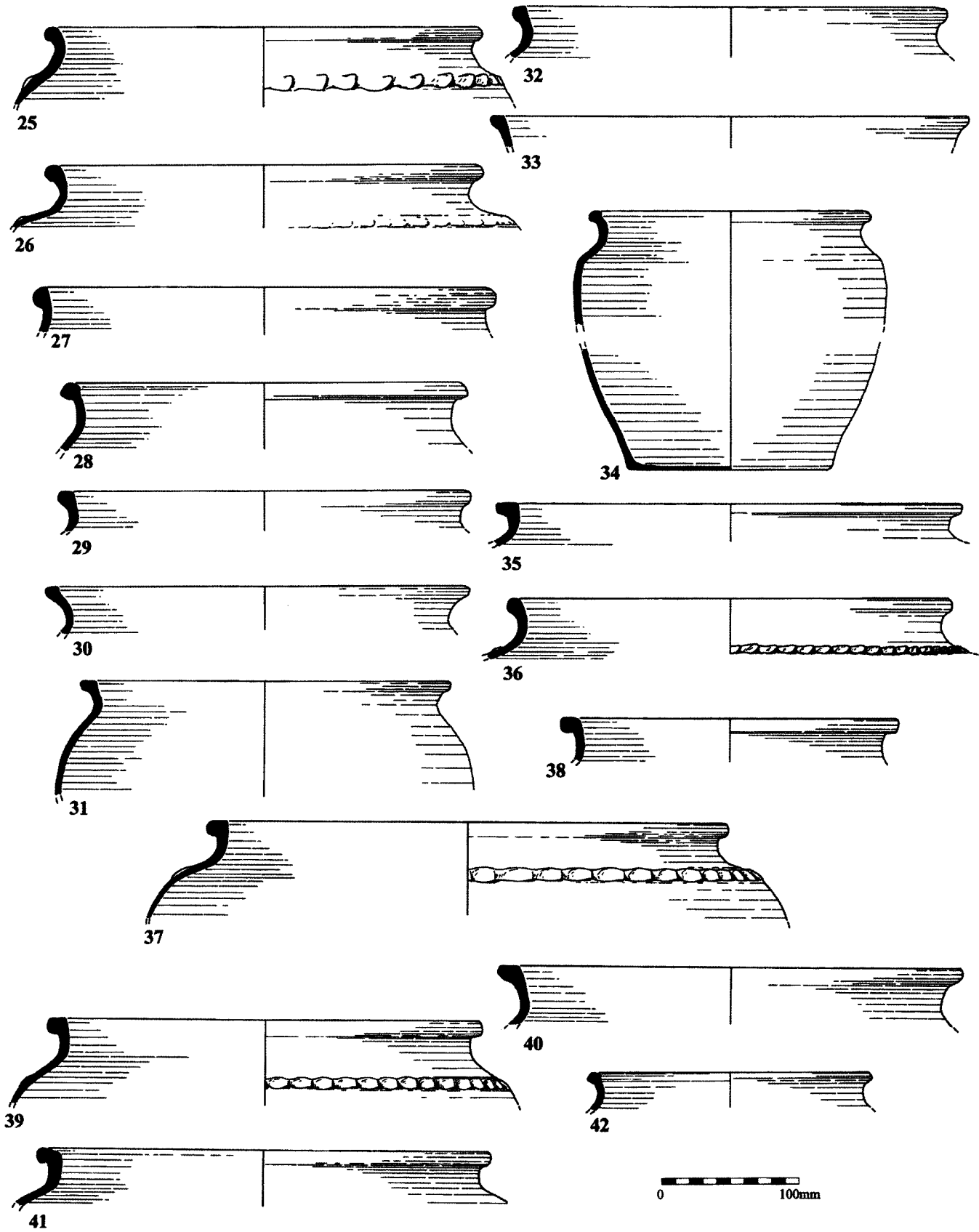


Fig. 9 Phase IIIb and IIIc pottery.

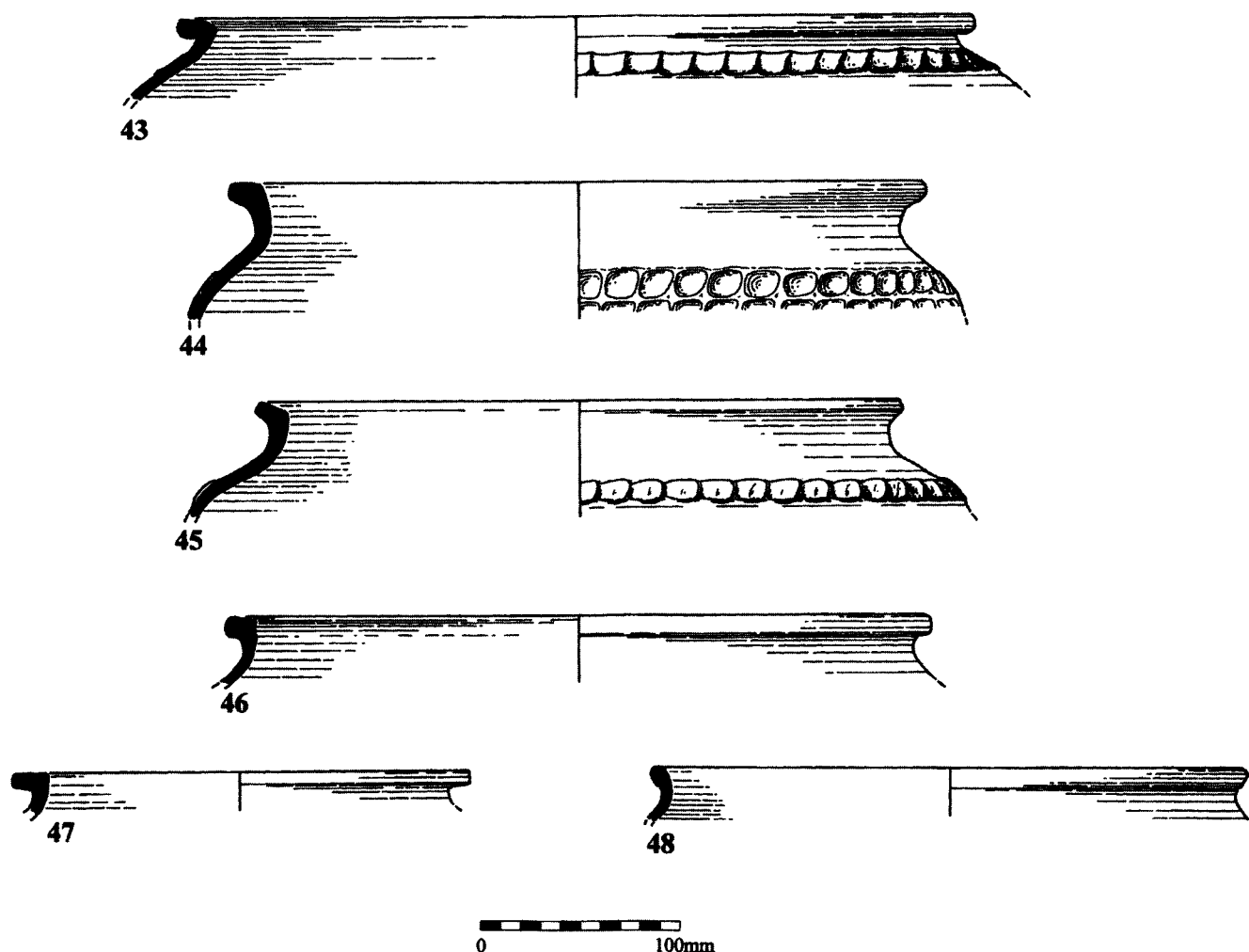


Fig. 10 Phase IIIb and IIIc pottery.

- | | |
|---|---|
| 8.11 U/s. Fabric EMSH. Globular cooking pot with everted round-topped rim. | 8.21 U/s. Fabric SESH. Globular cooking pot with rolled-out rim. |
| 8.12 Ditch 1000, 417 (391). Fabric EMSH. Globular cooking pot with cylindrical rim with rounded top. Sooted exterior. | 8.22 U/s. Fabric SESH. Globular cooking pot with rolled-out squared rim. |
| 8.13 Ditch 1000, 1001 (5). Fabric EMSH. Globular cooking pot with everted rim. Sooted. exterior. | 8.23 Layer 186. Fabric SESH. Globular cooking pot with rolled-out rim. |
| 8.14 U/s. Fabric SHELS. Cooking pot with rolled-out squared rim. Sooted exterior. | 8.24 Layer 212. Fabric SESH. Globular cooking pot with rolled-out rim. Applied thumbed strip on shoulder. |
| 8.15 U/s. Fabric SHELS. Globular cooking pot with everted rounded rim. | 9.25 Layer 212. Fabric SESH. Globular cooking pot with rolled-out rim. Applied thumbed strip on shoulder. |
| 8.16 Cut 121 (99). Fabric SHELS. Cooking pot with everted rim. | 9.26 Layer 186. Fabric SESH. Globular cooking pot with rolled-out rim. Applied thumbed strip on shoulder. |
| 8.17 Ditch 1000, 81 (82). Fabric SHELS. Cooking pot rim with rolled-out rim. Thumb impressions around top of rim. | 9.27 Slot 1016, 574 (300). Fabric SESH. Globular cooking pot with rolled-out rim. |
| 8.18 Pit 1001, 43 (42). Fabric SESH. Bowl with flat-topped flanged rim. | 9.28 Layer 186. Fabric SESH. Globular cooking pot with rolled-out rim. |
| 8.19 Pit 1008, 94 (90). Fabric SESH. Globular cooking pot with rolled-out rim. | 9.29 Layer 212. Fabric SESH. Globular cooking pot with rolled-out squared rim. |
| 8.20 Layer 212. Fabric SESH. Globular cooking pot with thumbed impressions on shoulder, raised from body of pot rather than an applied strip. | 9.30 Layer 186. Fabric SESH. Globular cooking pot with rolled-out rim. |
| | 9.31 Layer 186. Fabric SESH. Globular cooking pot with squared rim. |

- 9.32 Layer 212. Fabric SESH. Globular cooking pot with rolled-out squared rim.
- 9.33 Layer 212. Fabric SESH. Globular cooking pot with rolled-out squared rim.
- 9.34 Layer 251. Fabric SESH. Globular cooking pot with squared rim. Complete profile. Sooted.
- 9.35 Pit 372 (371). Fabric SESH. Globular cooking pot with squared rim.
- 9.36 Layer 212. Fabric SESH. Globular cooking pot. Squared rim. Applied thumbled strip on shoulder. Sooted exterior.
- 9.37 Layer 212. Fabric SESHS. Globular cooking pot with squared rim. Applied, thumbled strip around shoulder.
- 9.38 U/s. Fabric SESHS. Globular cooking pot. Squared rim.
- 9.39 Layer 212. Fabric SESHS. Globular cooking pot. Squared rim. Thumbled applied strip around shoulder and diagonal thumbled applied strip below.
- 9.40 Layer 186. Fabric SESHS. Globular cooking pot. Squared rim. Thumbled applied strip around shoulder and diagonal thumbled applied strip below.
- 9.41 Layer 186. Fabric SESHS. Globular cooking pot. Squared rim. Sooted exterior.
- 9.42 Slot 1016, 574 (297). Fabric SESHS. Globular cooking pot. Squared rim. Thumbled applied strip just below neck. Traces of a diagonal thumbled applied strip below this.
- 10.43 Layer 212. Fabric SESHS. Globular cooking pot with rolled-out rim.
- 10.44 Layer 186. Fabric SESHS. Globular cooking pot. Squared rim. Thumbled applied strip on shoulder. Traces of vertical/ diagonal applied thumbled strip below.
- 10.45 Layer 212. Fabric SESHS. Cooking pot with rolled-out squared rim.
- 10.46 Layer 186. Fabric SESHS. Globular cooking pot with squared rim. Soot on outer edge of rim.
- 10.47 U/s. Fabric SSW. Globular cooking pot with squared rim.
- 10.48 Layer 251. Fabric SESH. Cooking pot.

Phase IIIc. Late 12th to early 13th century (Fig. 11)

This phase is characterised by a rectilinear boundary ditch (1000), four pits (34, 48, 313 and 372), two layers (114 and 495), a posthole (463), and material dumped into the eastern edge of the river (1012). The abbey is known to have been rebuilt at this time, essentially in the form excavated by Clapham (1913) and examined in part by BA-I-85 and BA-IE-90. The impact of this major work at Abbey Retail Park is probably reflected in more reworking of the local geography. Ditch 1000 ran west from near the east bank of the watercourse, described a right angle, and then headed north. The feature was c.1.5m wide and c.1m deep. High status 12th-century tile, and possibly brick, albeit in small quantities, was recovered from ditches 1002 (Phase IIIb) and 1000 (Phase IIIc). These fragments, manufactured between c.1130 and the end of the medieval period, almost certainly derive from the roofs of buildings of the monastic complex (Pringle 1999).

Fuel ash slag (weighing 15g) was recovered from ditch 1000. This material could either have resulted from soil having been intensely heated so that the individual particles sintered together (became a coherent mass without melting), or possibly from mortar making. However, when the material was cut, it appeared to be sintered soil (Salter 1998).

It might be that the area to the south and west of boundary ditch 1000 was becoming wetter and that dumps of homogeneous layers of clay, in the position formerly occupied by the Saxon landing stage, were being used in an attempt to prevent flooding. Layers 114 and 495 sealed the shallow part of the river bank at the south-west corner of the gravel terrace. The edges of the river were also being used as a dump in the late 12th/early 13th century (1012). It is not clear how much further to the west this dumping was occurring as the medieval deposits were truncated by post-medieval cuts and deposits (1013–1016). It is documented that the Thames repeatedly flooded abbey lands on Barking Marsh to the south during the 14th century (VCH ii, 1907, 119).

The watercourse on the west of the site seems to have been used as a dump at this time, and the outfall of the new abbey draining into it upstream would make the waterside a less attractive resource. This seems to be borne out by the analysis of the deposits within the river, which suggest that human sewage and flax processing waste was deposited there (Robinson below). At the very end of the 12th century, or the very beginning of the 13th century, a considerable quantity of locally-made cooking vessels were dumped on the site, and particularly into the edge of the watercourse (e.g., context 212). This possibly represented a clear-out of old wares at the time of the renewal of abbey buildings. Pits 34 and 48 were small, shallow, amorphous features, whereas pit 313 was a large circular feature, having a diameter in excess of 2.5m and a depth of c.0.5m. Pit 372 was unusually large and rectangular, with vertical sides and a flat bottom. It measured in excess of 3m by 1.5m and was 0.65m deep. A copper-alloy solid-head pin was recovered from the fill of this feature.

Phase IIIc pottery

Alan Vince

In the late 12th or very early 13th century a large quantity of material was deposited on the site, including large fragments of pottery vessels (358 sherds, representing no more than 116 vessels, and quite probably considerably fewer). The majority of these vessels were of locally-manufactured shelly ware (SESH and SESHS) with a small quantity of London area vessels (LCOAR, LOND and SSW, Pearce *et al.* 1985), which provide the dating (Table 9). Sherds of possible Hedingham ware were identified (HEDI) but were found in later deposits.

South Essex Shell-tempered ware (SESH)

SESH is the most common ware found at Barking in the later 12th to 13th centuries. Sparse to moderate shell fragments are present and quartz and muscovite silt is visible usually by eye and, certainly, under the binocular microscope. A thin-section of one sherd revealed sparse

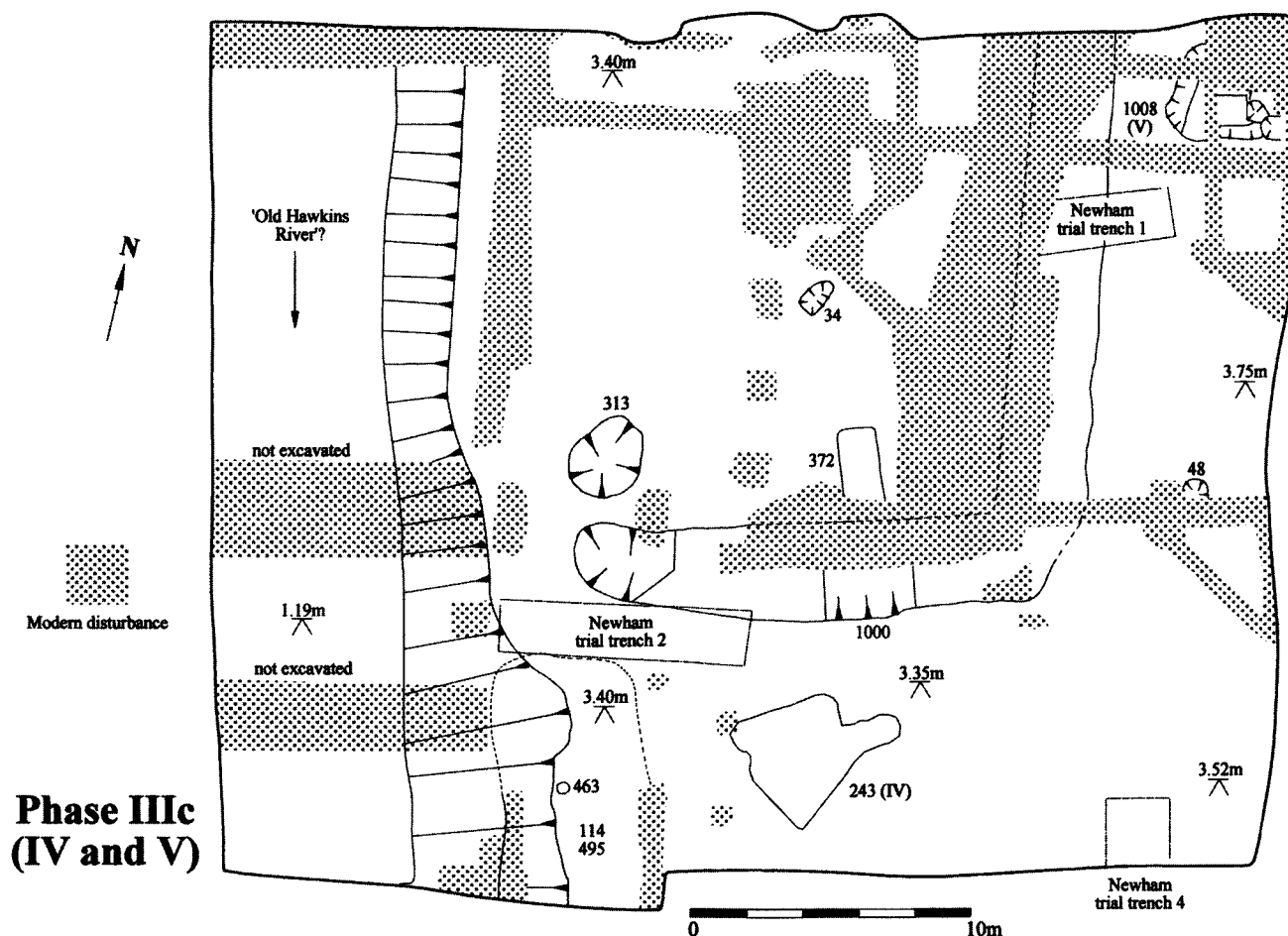


Fig. 11 Phase IIIc, late 12th- to early 13th- century features (also showing Phase IV, later 13th- to early 15th- century features; and Phase V, late 15th- to early 16th-century features).

bivalve shell fragments c. 0.3mm thick and sparse rounded quartz up to 0.5mm across in an anisotropic matrix containing moderate quartz and muscovite silt.

South Essex Shell- and Sand-tempered ware (SESHS)

Although at first glance this ware appears very similar to SESH, and was originally thought by the author to be a sand-tempered variant of the latter fabric, closer study of the rim typology and fabric suggests, in fact, that the ware is indeed the product of a separate, though closely related, industry. All the vessels found at Abbey Retail Park are jars, probably used as cooking pots. These vessels have a squared rim, similar to those found on SESH and London's SSW vessels and, indeed, on much of the sand-tempered reduced ware of the south-east of England.

A thin-section of one sherd showed that the vessels were produced from a silty clay containing abundant muscovite flecks, to which had been added a sand composed of angular flint and subangular quartz grains (the latter finer than the former). Weathering of the flint fragments demonstrated that they were obtained from a detrital source rather than being crushed for use as temper.

Source

The similarity in appearance of the two local fabrics suggests, initially, that they may be variant fabrics produced by a single manufacturing centre, which accounts for about 90% of the pottery used. However, there is in fact a difference in rim form between the two and it is probably more likely that they represent the products of distinct but neighbouring industries situated somewhere in southern Essex. In addition to the sherds of London-type ware, a few sherds of London Shelly-Sandy ware (SSW) and Hedingham ware (HEDI) were found. There were no sherds of imported wares.

Dating

If the pottery deposits are part of a single event then its date comes from the latest sherds present, which are North French style London-type wares of the early 13th century. Since both SSW and early Standard London-type ware jugs are also present, and these types ceased to be used in London before the early 13th century, it is possible that the entire dumping episode dates to the very end of the 12th or very beginning of the 13th century.

Function

Cooking pots predominate in these dumps, with a small number of jugs, one pipkin and one bowl. Many of the

cooking pots were coated externally in soot, confirming their use. In comparison with contemporary assemblages from the City of London, glazed wares are very scarce (Table 10).

Phase IV. Later 13th to early 15th century (Fig. 11)

Residual pottery from this phase was recovered from a number of features across the site. However, other than deposit 243, located in the southern part of the site, no features have been assigned to this period. This phase seems to mark the abandonment of this part of the abbey environs and perhaps the area became waste ground at this time. This abandonment seems to continue into Phase V (below). However, metalwork relating to this phase was recovered. An incomplete copper-alloy coin weight for a 1/4 noble, 1351 to 1464, was metal-detected from unstratified spoil. It has split along the thickness of the flan, resulting in it being less than half the expected weight (Cannon 1998). A large copper-alloy jetton of 'Royal crown' type, c.1415-1497 (ibid.) was unstratified, but probably came from a lower fill of the watercourse. Unusually, it has been struck on one side only and is a stock jetton of the French city of Tournai. The largely fictitious legend reads: MOANON.AMOVR.NOVAR. A cylindrical moulded lead weight with an integral hook at one end was metal detected from unstratified spoil. The object weighed 200g (7oz.). It is not possible to date this piece more precisely than to say it is post-Roman. Copper-alloy objects, although not all stratified, included four brooches or buckles, and are late medieval, probably dating to around the 15th century (Richards 1998). Three of the brooches or buckles were metal-detected from unstratified spoil, while the fourth was from post-medieval infill of the watercourse.

Phase IV pottery

Alan Vince

Ten sherds of Mill Green ware (MG) and 19 of Mill Green Coarseware (MGCOAR) were found, mostly as residual artefacts. Similarly, 26 sherds of Coarse Border ware were found (CBW). These, by contrast, include substantial fragments of vessels, as well as abraded body sherds; a total of no more than 11 vessels. It is likely, therefore, that some of the CBW vessels were contemporary with the deposits in which they were found, which can be dated by associated pottery to the later 15th or early 16th century. No other later 13th-, 14th- or early 15th-century wares were present (apart from a single sherd of Kingston-type ware – KING) and the implication is that very little deposition took place on the site after c.1200. The only deposit that contains solely material of later 13th- to 15th-century date is spread 243, which would be dated to the later 13th or early 14th century if found in London. There is, however, some indication that Mill Green wares continued to be produced and used in Essex after they ceased to be traded to London.

Mill Green ware was produced at Ingatestone, in central Essex (Pearce *et al.* 1982). CBW was produced in the Surrey/Hampshire border area but was the main ware used in the City of London, from where, no doubt, the Barking vessels were obtained. There are no sherds of imported vessels from this period.

Phase V. Late 15th to early 16th century (Fig. 11)

This period is represented by probably four intercutting pits in the extreme north-east corner of the site (group number 1008). These features were typically 1.5m across and 0.5m deep although some lay, in part, beneath the baulk. These Tudor rubbish pits may indicate activity at the time of the Dissolution (1541-2), although the pottery could suggest a slightly earlier date. The predominance of serving and drinking vessels, including those used in formal social display, clearly points to the importance of the abbey at this time. Limestone ashlar located in the river may be associated with the itemized account of the destruction and transportation of the abbey fabric that was made by the Surveyor General to Henry VIII. Of particular interest are the following entries:

'Comyn Laborers – Working not onely in ridding and clering oute the ffayrest and best coyne stone, casting the rubbyshe a syde and not thus working onely but also making and mynding of the hey ways and in lyke manr leveling the grounde for the lande carr. of the said stone from the late abbey to the water syde'; and 'For land carr. of stone at xvid. by the daye from the late Abbey of Barking unto the water syde where the creeke cometh in owte of Teimes to Barking' (Clapham 1913, 72).

A small (<10g) piece of lead dross was found in pit group 1008, and may indicate industrial activity or the presence of a nearby glazed building, although it may also be residual from Phase IIIb activity. A single fragment from a candlemaker's trough may indicate local manufacture of candles, very likely for consumption by the abbey (if indeed this was the function of this vessel). This piece, out of place with the rest of the assemblage, was also recovered from pit group 1008. Fuel ash slag (weighing 165g) was recovered from the same pit group and, in common with that found in the Phase IIIc ditch 1000, was probably sintered soil (Salter 1998).

Phase V pottery

Alan Vince

In all, 157 sherds (no more than 91 vessels) of late 15th- or early 16th-century date were recovered. Most came from intercutting pits 1008 and, to judge by the presence of parts of the same vessel in several pits, it is likely that the pottery can be treated as part of a single deposit (Table 11). The largest group, and the one with most imports, was 252. Two final contexts may or may not be of this date: context 338 contained a single Tudor redware sherd in an otherwise earlier assemblage and context 596 is also dated by a single sherd. Fifty-three sherds of Tudor date were found in later or unstratified deposits.

Most of the red earthenware is of Tudor redware types, some of which are probably London products (TUDB), but the majority of which are Essex wares. A distinction was drawn during recording between silty micaceous fabrics (TUDFR), sand-tempered silty micaceous fabrics (TUDES), and calcareous silty micaceous fabrics (TUDC). Several production sites are known in Essex at this time and the source of these three groups might be determined by comparison with kiln waste and the Chelmsford type series. Surrey whitewares from Cheam (CHEA) and the Surrey/Hampshire border (CBW) form a minor element in the assemblages, alongside Tudor Green ware vessels

Table 9. Quantity of pottery found in late 12th-/early 13th-century deposits and its probable status.

Fabric	Status	Sherds	Weight	EVEs
IPS	Residual	13	660	0.24
EMSH	Residual	7	157	0.18
SESHL	Residual	7	108	0.05
THET	Residual	2	63	0
PREH1	Residual	1	44	0
EMS	Residual	1	24	0
ECHAFM	Residual	1	13	0
EMGR	Residual	1	7	0
EMSS	Residual	1	7	0
TUDFR	Intrusive	2	116	0
SESH	Contemporary	198	5006	1.88
SESHS	Contemporary	79	2179	1.32
LOND	Contemporary	48	779	0
SSW	Contemporary	2	19	0
LCOAR	Contemporary	1	5	0

Table 10. Phase IIIc pottery by function.

Form	Sherds	Weight	EVEs
CP	277	7055	0
CP/SPP	2	54	0.1
JUG	48	839	3.1
PIP	1	40	0

Table 11. Phase V pottery by context group.

Context	Sherds	Comments
49	5	Group 1008
57	20	Group 1008
74	25	Group 1008
187	17	Group 1008
189	10	(RAER; DUTR)
252	65	(RAER; DUTR; SAIU; SNTG; SIEG)
338	1	single intrusive sherd
596	1	single sherd

(mainly lobed cups) from the same area (TUDG). Imports include Low Countries red earthenware (DUTR), Sieberg stoneware (SIEG), a South Netherlands Maiolica (SNTG) sherd, a sherd from an unglazed Saintonge ware vessel (SAIU) and Raeren stoneware (RAER). The latter includes a very unusual costrel spout. In comparison with the medieval pottery from the site, this phase is marked by a significant increase in the quantity of imports. Nevertheless, in comparison with material previously recovered from the abbey’s main drain, the assemblage appears less exceptional. However, no quantified comparison of the two assemblages has been made (Table 12).

Very little of the pottery found was used in cooking or food preparation. Instead, serving and drinking vessels were very common, including types probably used in formal, social display (lobed cups, costrels, drinking jugs). The South Netherlands sherd is from a vase, probably also used as an ornament, for display (Table 13).

Illustrated phase V pottery (Fig. 12)

- 12.1 Layer 252. Fabric DUTR. Bowl with shallow vertical walls. White slipped interior and yellowish glaze.
- 12.2 Layer 252. Fabric DUTR. Cauldron. Complete profile of shallow vessel with everted rim and three feet formed by pulled down clay. Slip coated interior to about neck level. Glaze over white slip and around inside of rim.
- 12.3 Pit 189 (188). Fabric DUTR. Bowl rim with wavy grooved line on inside of rim.
- 12.4 Layer 252. Fabric RAER. Costrel with applied, wheel-thrown spout decorated with template-applied mouldings. Traces of brown slip under salt glaze. Fine sand temper visible under binocular microscope. Possibly Langerwehe?

Phase VI to VIII. Post-medieval

No discrete archaeological features can be assigned to this period. The river was probably completely filled in by the later 16th to 17th century. This was evidenced by a total of 146 fragments of clay-pipe bowl and stem (weighing 493g), including a single 18th-century maker’s mark: E/W (218). Higher quality pipes of this period can be seen in a roulette-decorated stem, possibly from a Dutch pipe c.1700–1770 (518, 526) plus a stem from a Chester pipe c.1720–1750 decorated with a roller-stamped tendril border (43, 42). The remaining marks are all of the period c.1800–1880: ?/B; I/B; T/B; P/E; ?T/H; and S/J. None of these initials, however, can be positively linked to any documented pipemakers (Cannon 1998). A scatter of later post-medieval wares were present, but no coherent assemblages noted. The pottery dates from the later 16th to 18th centuries and includes imports such as Weser ware (Vince 1999; Fig. 3).

The watercourse and its hypothesized new confluence with the Roding was likely to have been established further to the north. The site may have been used as gardens associated with the mill to the south-west and remained so until the construction of a match factory early in the 20th century (Figs. 3–7). Modern features were present across the site (see Figs. 8 and 9) and these concrete piles and beams were related to the construction of the factory.

The backfilled river was partially excavated in the 19th century in order to lay a drain that ran from north to south. A cricket bat (508), found within the drain cut, was bevelled outwards on both faces and a slot for fitting the handle was evident. The name ‘Smith’ was burnt onto the blade. The bat was examined by the keeper of the Cricket History Museum at MCC and it would seem that multi-part bats with separate handles were a mid 19th-century innovation.

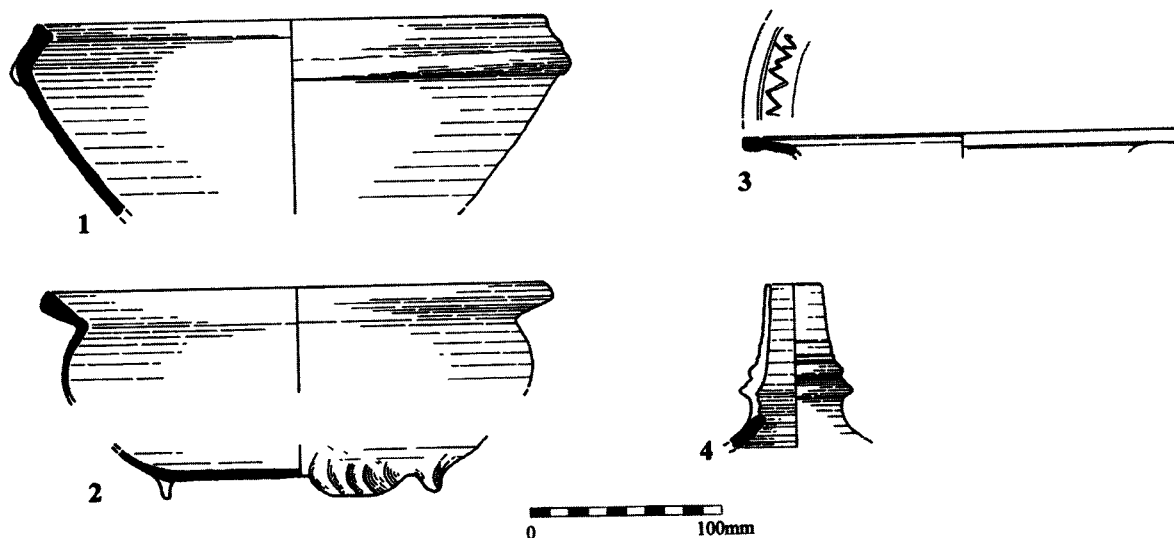


Fig. 12 Phase V pottery.

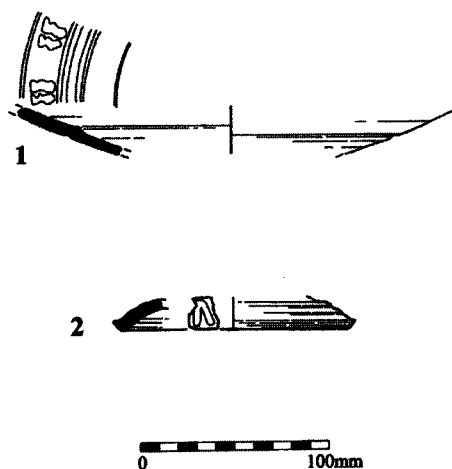


Fig. 13 Post-medieval pottery.

Illustrated post-medieval pottery (Fig. 13)

- 13.1 Pit/posthole 259. Fabric WESE. White-slipped wheel-thrown bowl. Trimmed base. Light brown slip bands on interior, applied whilst pot was on a turntable. Outer pair contain a band of paired E-shaped motifs, one light brown and the other green (the green colour appears to be copper).
- 13.2 Pit 1001, 43 (42). Fabric WESE. Rim of lid with white slip inside and out. Light brown slip-trailed motif on exterior.

Some notes on the faunal remains

Sheila Hamilton-Dyer

The excavations produced a relatively small assemblage of 1904 bone pieces covering several centuries, but offering

some interesting information about animal utilisation at the site (Table 14). Bones of the domestic ungulates typically dominate the assemblage, with some domestic poultry and very few bones of other species. Individual features vary quite widely in content and the assemblage may not be fully representative of animal exploitation in the area as a whole. The mid Saxon ditches (1002, 1003, and 1010) as well as the 10th–12th-century ditch and pit (1007 and 69), have almost equal representation of cattle, sheep and pig. Later medieval features (52, 313 and 1000) contain more cattle. Sheep remains dominate the Tudor pits (1008). There is some indication that pig, always in third place, reduces through time. Many of the bones appear to result from butchery rather than the disposal of carcasses and relatively few of the bones are from slaughter waste.

Interpretation requires caution: as Wilson (1994) points out, meat distribution is complex and does not necessarily represent the composition or age structure of the flocks. This is particularly true of small assemblages, which are more influenced by individual variations in disposal practices. Much of the poultry and pigs could have been raised in the local vicinity, whereas the cattle and sheep may have come from some distance. The material is generally well preserved, yet there are no bones from very young animals, as might be expected if the features contained rubbish from backyard stock raising.

Wild resources are not well represented, but the butchered remains of red and fallow deer indicate some link with hunting and a high status household. Birds are mainly of fowl and goose in almost equal numbers. The teal, heron, crane and marsh harrier are all wetland birds and it is surprising that there are no bones of waders considering the location. The harrier is not a bird known for use in hawking and is rarely found in archaeological material; it was perhaps perceived as a predator of

Table 12. Pottery from Phase V deposits.

Status	Fabric	Sherds	Weight	EVEs
Residual	SESH	7	86	0
Residual	MGCOAR	7	66	0.14
Residual	IPS	5	384	0
Residual	SESHL	3	64	0
Residual	SESHS	3	63	0
Residual	MG	3	14	0
Residual	EMSS	2	20	0.03
Residual	KING	1	59	0
Residual	SHELS	1	52	0
Residual	ECHAFM	1	13	0
Residual	HEDI	1	12	0
Residual	SSW	1	9	0
Intrusive	MOD	1	3	0
Contemporary	TUDFR	43	1287	0.10
Contemporary	TUDES	36	1429	0.23
Contemporary	CBW	20	455	0
Contemporary	DUTR	15	749	0.60
Contemporary	TUDG	12	59	0.12
Contemporary	TUDC	6	81	0
Contemporary	RAER	4	156	1.06
Contemporary	TUDB	3	161	0
Contemporary	CHEA	3	115	0
Contemporary	SAIU	1	9	0
Contemporary	SIEG	1	5	0.10
Contemporary	SNTG	1	3	0

domestic poultry. The crane was bred in England until the 18th century (Reid-Henry and Harrison 1988) and was considered a luxury item in the medieval period (Rackham 1986). Perhaps the heron was also consumed, but neither bone had been cut and both could be incidental remains.

The site is near or within the abbey precinct and comparison of the results of the bone assemblage with the 15th-century *Charthe longynge to the office of the Celeresse of the Monasterye of Barkinge* is most interesting (Dugdale 1846). The chief meat of the convent was beef, bought yearly as oxen and then kept until slaughter on the abbey pastures; extra beef was bought from the market. This was eaten three days a week. Pig, as pork and bacon, seems to have been of secondary but major importance, while mutton was apparently only used for special occasions, five times a year. The use of whole pigs is indicated by descriptions of the portions, which include the cheek, ear and foot. Marrow bones (presumably beef) are specifically mentioned, as are half geese, cocks, hens, eggs and various types of fish. Supply of eggs does not appear to be entirely from their own birds; the cellaress had to provide enough money for the nuns to purchase eggs weekly. Milk and butter is also mentioned, though whether bought in or home produced is not clear.

Cattle is certainly prominent in the assemblage and would have provided the most meat, even in the contexts with slightly greater representation of sheep, as the animals are so much larger. Broken cattle bones, as might

Table 13. Contemporary pottery forms from Phase V deposits.

Form	Functional class	Sherds	Weight	EVEs
CAND	Industrial?	1	93	0
VASE	Display	1	3	0
JUG	Drinking	103	3340	0.23
COST	Drinking	1	95	1.00
DJ	Drinking	3	61	0.06
LCUP	Drinking	6	44	0.10
CUP	Drinking	5	14	0.02
BEAK	Drinking	1	5	0.10
CAUL	Food preparation	9	412	0.43
BOWL	Food preparation	5	307	0.17
PIP	Food preparation	3	123	0
CP	Food preparation	7	103	0
JAR	Food preparation	1	16	0.10

have been used for marrow, were also found. The comparative scarcity of pig bones compared to sheep is curious but there is evidence of the use of the whole carcass and division of the head. Bird bones are mainly of fowl and goose, as expected, but there are also bones of duck and some less usual species. Fish bones are surprisingly few but present; the plaice is probably from a local source but the cod may have been traded from some distance. Saltfish are mentioned in the charter and these are likely to have been cod. Also mentioned are barrels of red and white (pickled and salted) herrings. Bones of herring can be very common from medieval sites, but mainly from sieving of cess pits, and their small size means that they are almost never collected by hand excavation. The above is also true for eel, mentioned for Maundy Thursday. Salt salmon are also mentioned: these are usually regarded as high status fish and are not often found, a picture complicated by the poor survival of bones of this species.

The differences, mainly in the amount of pig and the types of fish, may be explained in a number of ways. Provisioning of the abbey may have changed over time, but the source of the bones from the assemblage must also be considered. Some bones may have been disposed of elsewhere, biasing the present collection; for example, the cesspits may have been closer to the abbey and not encountered in this excavation despite the appearance of some material. Not all of the bone is necessarily from the abbey kitchens and the site may represent mainly rubbish from lay persons housed or working nearby. It is interesting to note, however, that high status serving vessels were found in the Tudor pits (Vince above), and that hunting of deer was the prerogative of the royal court and nobility.

Environmental evidence

Jenny Robinson

Sample columns

Two sequences, comprising in total 24 samples, were taken from the lowest sediments of the channel for waterlogged biological remains. Sample Column 1

comprised relatively fine alluvial sediments. The preservation of seeds in the top of the sequence was very poor but it improved below 0.6m (Table 15). This resulted in a higher concentration of remains and a greater range of species. Vegetational conditions probably remained constant throughout the deposition of the sequence, any differences between the assemblages being due to preservational conditions. Seeds of fully aquatic plants were absent. However, there were seeds from emergent marginal plants, including both *Nasturtium aquaticum* (water-cress) and *Apium nodiflorum* (fool's watercress). There were also seeds from annual plants that grow on seasonally exposed mud, such as *Ranunculus sceleratus* (celery-leaved crowfoot) and *Polygonum persicaria* (red shank). Drier, unstable bankside habitats were suggested by seeds of *Brassica nigra* (black mustard) and *Verbena officinalis* (vervain). There were numerous seeds of *Urtica dioica* (stinging nettle), which probably dominated the vegetation along much of the edge to the gravel and the channel bank. The other drier ground plants represented by their seeds were mostly species of disturbed and waste ground. Conditions appeared to have been largely open, with a bud of *Salix* sp. (willow) and a few seeds of *Sambucus nigra* (elder), perhaps representing occasional bushes along the bank.

Sample Column 2 had waterlogged remains only preserved in the lower part of the sequence and preservation was only good at the bottom of the column (Sample A; phase IIIa; Table 16). As with Sample Column 1, the differences between the seed assemblages in the column were probably due to preservational conditions. A few insect fragments were present in the sample, including *Anobium punctatum* (woodworm beetle) probably from structural timbers formerly on the site.

The range of seeds from aquatic and marginal plants was restricted. Seeds of *Juncus* spp. (rushes) were well represented but rushes are extremely prolific in their seed production. These results imply no more than a few rush plants at the edge of the channel. *Myosoton aquaticum* (water chickweed) probably grew on exposed mud while there were perhaps scattered plants of *Alisma* sp. (water plantain) and *Eleocharis S. Palustris* sp. (spike rush) at the water's edge. Seeds of fully aquatic plants were absent.

The remaining macroscopic plant remains were either from waste ground vegetation along the edge of the channel or from refuse dumped in the channel. The most numerous seeds were from *Urtica dioica* (stinging nettle). *Chenopodium album* (fat hen) was also well represented. They are both weeds of nutrient-rich disturbed ground. Other ruderal plants, such as *Chenopodium polyspermum* (all-seed), *Malva sylvestris* (common mallow) and *Rumex* sp. (dock), were perhaps growing amongst the nettles.

Conditions on the site were very open. There were a few seeds of *Sambucus nigra* (elder), which would have been from bushes growing on waste ground. Otherwise, there were only two thorns of *Prunus/Crataegus* tp. (sloe/hawthorn type), a seed of *Alnus glutinosa* (alder) and a bud of *Salix* sp. (willow) that were probably from isolated bushes and trees along the river bank.

There appear to have been two sources of dumped material: human sewage and crop processing waste. The occurrence of cereal bran and fragments (as opposed to

Table 14. Animal bone by species by context.

Context (Phase)	Type	horse	cattle	sheep/goat	pig	red deer	fallow	roe	cattle-size	sheep-size	mammal	dog	cat	fowl	goose	duck	other bird	fish	Total
1007 (IIIa)	ditch	1	6	3	5	-	1	-	3	5	-	-	-	6	3	-	-	-	33
69 (IIIb)	pit	-	4	5	1	-	-	-	3	3	-	1	-	1	-	-	1	-	19
1002 (IIIf)	ditch	2	39	25	30	1	-	2	29	34	12	-	-	6	3	2	1	-	186
1003 (IIIf)	ditch	-	86	62	90	-	-	-	122	126	46	1	-	17	13	-	9	2	574
52 (IIIf)	pit	1	11	6	4	-	-	-	14	8	-	-	-	-	-	-	2	-	46
1010 (IIIf)	ditch	1	34	46	33	-	-	-	36	79	-	-	-	4	5	2	4	-	244
313 (IIIf)	pit	4	36	7	5	1	1	1	13	5	-	-	-	1	1	1	-	-	76
1000 (IIIf)	ditch	1	45	27	21	1	-	1	54	19	-	2	-	6	-	-	3	1	181
1008 (V)	pits	-	40	47	12	1	-	-	44	32	3	2	2	4	5	3	2	1	198
1012	river	2	36	21	21	-	-	-	44	9	1	1	-	2	6	-	-	-	143
all other features		-	40	34	29	-	-	1	55	36	1	-	-	4	3	-	1	-	204
GRAND TOTAL		12	377	283	251	4	2	5	417	356	63	7	2	51	39	8	23	4	1904
%		0.6	19.8	14.9	13.2	0.2	0.1	0.3	21.9	18.7	3.3	0.4	0.1	2.7	2	0.4	1.2	0.2	
% cattle, sheep, pig			41.4	31.1	27.6														911

Table 15. Waterlogged macroscopic plant remains (seeds unless stated) from Sample Column 1 (feature 573, context 359).

DEPTH (cm)	0-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60	60-66	66-72	72-78	78-84
<i>Ranunculus cf. repens</i>	-	-	-	-	-	-	-	-	-	-	-	-	+	+
<i>R. sceleratus</i>	-	-	-	-	+	-	-	+	+	+	+	+	+	+
<i>Brassica nigra</i>	-	-	-	-	-	-	-	-	-	-	-	+	+	+
<i>Nasturtium aquaticum</i>	-	-	-	-	-	-	-	-	-	+	-	++	++	-
<i>Myosoton aquaticum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Chenopodium album</i>	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Rubus fruticosus</i> agg.	-	+	-	-	-	-	+	-	-	-	-	-	-	-
<i>Apium nodiflorum</i>	-	-	-	-	-	-	-	-	-	+	-	+	+	-
<i>Polygonum persicaria</i>	-	-	-	-	-	-	-	-	-	-	-	-	++	+
<i>Rumex</i> sp.	-	-	-	-	-	-	-	-	-	+	-	-	+	+
<i>Urtica dioica</i>	-	+	+	+	+	+	+	+	+	++	+	+	++	+
<i>Salix</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Verbena officinalis</i>	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Meniha cf. aquatica</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Lycopus europaeus</i>	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Lanium</i> sp.	-	-	-	-	-	-	-	-	+	-	-	-	-	+
<i>Plantago major</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Sambucus nigra</i>	-	+	-	+	-	-	-	-	-	-	-	+	+	+
<i>Pulicaria</i> sp.	-	-	-	-	-	-	-	-	-	-	-	+	+	-
<i>Anthemis cotula</i>	-	-	-	-	-	-	-	-	-	-	-	+	-	-
<i>Lapsana communis</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Alisma</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Juncus bufonius</i> gp.	-	-	-	-	-	+	-	-	-	-	-	-	-	+
<i>Carex</i> sp.	-	-	-	-	-	-	-	+	-	-	+	-	-	-
+ present ++ several														

BARKINGWIC? SAXON AND MEDIEVAL FEATURES ADJACENT TO BARKING ABBEY

Table 16. Waterlogged macroscopic plant remains (seeds unless stated) from Sample Column 2.

	CONTEXT SAMPLE	464 E	493 D	493 C	493 B	493 A
<i>Ranunculus</i> cf. <i>repens</i>	creeping buttercup	-	-	-	-	3
<i>R. flammula</i>	lesser spearwort	-	-	-	-	1
<i>Papaver rhoeas</i> tp.	field poppy	-	-	-	-	1
<i>Brassica nigra</i>	black mustard	-	-	-	-	2
<i>Reseda luteola</i>	dyer's rocket	-	-	-	-	1
<i>Agrostemma githago</i>	corn cockle	-	-	-	-	34 frags
<i>Cerastium</i> sp.	mouse-ear chickweed	-	-	-	-	2
<i>Myosoton aquaticum</i>	water chickweed	-	-	-	-	12
<i>Stellaria media</i> gp.	chickweed	-	-	-	-	14
<i>Spergula arvensis</i>	corn spurrey	-	-	-	+	10
<i>Chenopodium polyspermum</i>	all – seed	-	-	-	-	4
<i>C. album</i>	fat hen	-	++	+	+++	37
<i>C. cf. rubrum</i>	red goosefoot	-	-	-	-	1
<i>Atriplex</i> sp.	orache	-	-	-	-	4
<i>Malva sylvestris</i>	common mallow	-	-	-	-	1
<i>Linum usitatissimum</i>	flax – capsule frag.	-	-	-	-	3
<i>Rubus fruticosus</i> agg.	blackberry	-	-	-	-	1
<i>Prunus</i> / <i>Crataegus</i> tp.	sloe / hawthorn – thorn	-	-	-	-	2
<i>Apium graveolens</i>	celery	-	-	-	-	2
<i>Torilis</i> sp.	hedge-parsley	-	-	-	-	1
<i>Daucus carota</i>	wild carrot	-	-	-	-	1
<i>Polygonum aviculare</i> agg.	knotgrass	-	+	-	-	-
<i>P. persicaria</i>	red shank	-	-	-	-	2
<i>Fallopia convolvulus</i>	black bindweed	-	-	-	+	1
<i>Rumex acetosella</i> agg.	sheep's sorrel	-	-	-	-	1
<i>Rumex</i> sp. (not <i>acetosella</i>)	dock	-	-	-	-	1
<i>Urtica urens</i>	small nettle	-	-	-	-	1
<i>U. dioica</i>	stinging nettle	+	+++	++	++	290
<i>Alnus glutinosa</i>	alder	-	-	-	-	1
<i>Salix</i> sp.	willow – capsule	-	-	-	-	1
<i>Myosotis</i> sp.	forget-me-not	-	-	-	-	1
<i>Solanum</i> sp.	nightshade	-	-	-	-	1
<i>Lycopus europaeus</i>	gypsy wort	-	-	-	-	1
<i>Lamium</i> sp.	dead-nettle	-	-	-	-	2
<i>Plantago major</i>	greater plantain	-	-	-	-	1
<i>Sambucus nigra</i>	elder	-	-	-	-	6
<i>Anthemis cotula</i>	stinking mayweed	-	-	-	-	3
<i>Tripleurospermum</i> sp.	mayweed	-	-	-	-	1
<i>Lapsana communis</i>	nipplewort	-	-	-	-	2
<i>Leontodon</i> sp.	hawkbit	-	-	-	-	1
<i>Sonchus oleraceus</i>	milk-thistle	-	-	-	-	1
<i>S. asper</i>	spiny milk-thistle	-	-	-	-	1
<i>Alisma</i> sp.	water plantain	-	-	-	-	3
<i>Juncus effusus</i> gp.	soft rush	-	-	-	-	90
<i>J. bufonius</i> gp.	toad-rush	-	-	-	-	30
<i>J. articulatus</i> gp.	jointed rush	-	-	-	-	190
<i>Juncus</i> spp.	rushes	-	-	-	-	60
<i>Eleocharis</i> S. <i>Palustris</i> sp.	spike-rush	-	-	-	-	7
<i>Carex</i> spp.	sedges	-	-	-	-	4
	cereal bran	-	-	-	-	+
Gramineae indet.	grasses	-	-	-	-	3

+ present ++ several +++ many

intact seeds) of *Agrostemma githago* (corn cockle) is particularly characteristic of human sewage. *A. githago* is strongly linked to arable cultivation and it was difficult to separate the seeds of this weed from grain because they are of a similar size. The ground seeds were thus a common contaminant of flour and the seed coats, along with fragments of cereal bran, survive the actions of the human digestive tract. Two seeds of *Apium graveolens* (celery) were perhaps dietary waste from the use of celery seeds for flavouring purposes. However, celery is a native saltmarsh plant as well as being grown as a crop, so it is perhaps possible that the plant could have spread up the channel from the estuary, although no other halophytic plants were present.

A few capsule fragments of *Linum usitatissimum* (flax) were present. Some of the weed seeds, including *Chenopodium album* (fat hen), were from plants that also grow as arable as well as ruderal weeds. One of the weeds, *Spergula arvensis* (corn spurrey), often occurs as a weed of flax. It seems likely that flax processing waste was dumped in the channel.

Charcoal

From the dry samples, recovered charcoal (Table 17) was mostly *Quercus* sp. (oak), with smaller quantities of *Corylus* sp. (hazel) and a slight presence of *Fraxinus excelsior* (ash) and *Ulmus* sp. (elm). This suggested that the site had a woodland source of fuel, very probably a managed woodland/coppice rather than needing to exploit scrub or hedgerow sources. The charcoal from the other contexts on the site could have been derived from either domestic or industrial hearths. All the samples were dated to Phases IIIb and c, except Sample 3 from Phase V.

The watercourse (1012) in its landscape

Historical, archaeological and cartographic evidence together allow the construction of an argument demonstrating that a channel running southwards into the river Roding existed in Saxon and medieval times immediately to the west of BA-I-85, BA-IE-90 and within the ARP97 site (1012). The channel may have originated as an artificial watercourse diverted from the Loxford Brook to the north to run south to a confluence with the Roding just to the south-west of the abbey (information from H.H. Lockwood). The proposed channel is referred to here as the 'Old Hawkins River' (Fig. 1). It is further suggested that the watercourse was fully backfilled and diverted in the 16th or 17th centuries. All maps referred to are available for consultation at the Local Studies Library, Valence House Museum.

The 1814 plan from the Lease of Former Abbey Precinct (Fig. 14), the 1846 Tithe Award map (Fig. 15), the 1862 First Edition Ordnance Survey (Fig. 16), and the 1897 Second Edition Ordnance Survey (not shown) illustrate, at most, four strips of enclosed land running sequentially from north to south, sited between the Roding and the abbey ruins. These land plots are shown by Lockwood (1986, 20 and appendix 27) to be tithe free and,

therefore, former abbey property. The lands to the east, including the plots known as Hastings Gardens and the Miller's House, were not tithe free and therefore unlikely to have been in the possession of the abbey by the later Middle Ages (Fig. 15). The tithings were deduced from a 1666 survey (ibid.). The 1652/53 map of the Manor of Barking (Fig. 17) and Lethieullier's 1722 sketch plan of the abbey (ibid., fig. 6) do not show the earlier course of the stream, although the latter does illustrate a feature that might be a pond in the north-western part of the map.

The preponderance of trees on the maps, growing on the narrow strips of land, and the absence of trees on adjacent plots, could amount to historical crop marks. The trees shown on 19th-century photographs and watercolours (Lockwood 1986, figs 8, 12, 14 and 15) seem to be mostly willows and this might suggest a damper environment along the line of the former watercourse. The Hawkins River could have been diverted at a point just north of London Road, where it is shown to make a sharp dog-leg and is constrained by banking. It is known from very early 17th-century documentary sources that the abbess had 'two paire of staires' in order 'to land at the *passage* by water to and from the River Thames' (findings of Town Wharf Commission, 1601, B and DAS 1937, 13).

The excavation at Abbey Retail Park has established that a watercourse, at least 8m wide and 2m deep, and perhaps corresponding to the plot of land shown as 243a (Fig. 15), was gradually backfilled from the mid Saxon period onward. Pottery in dumped layers on the eastern bank of this channel suggests that it was open from at least that date and there is no reason to suppose that it was not open earlier. A dendrochronology date of the early 8th century for a timber pile was obtained here.

To the immediate west of the north-south aligned medieval abbey precinct wall, excavated in BA-IE-90 (Fig. 2), were a pair of garderobes. These could have been located over the proposed braid of the Roding and may account for the human sewage evidenced by the plant remains in ARP97 (Robinson above). On the northernmost site, BA-I-85 (Fig. 2), the extreme west was occupied by a timber-lined leat that was dated by dendrochronology to the early 8th century, with repairs in the late 800s. The leat lay to the immediate west of the medieval precinct wall. A horizontal, directly-g geared mill, as proposed for Saxon Barking (MacGowan 1987), would require a considerable head of water and a mill pool might be considered. The pond shown by Lethieullier on his 1722 sketch plan may have served as a fishpond, as suggested by Lockwood, or may be the remnant of such a mill pool. Clapham's excavations in 1913 recorded c.60m of the medieval

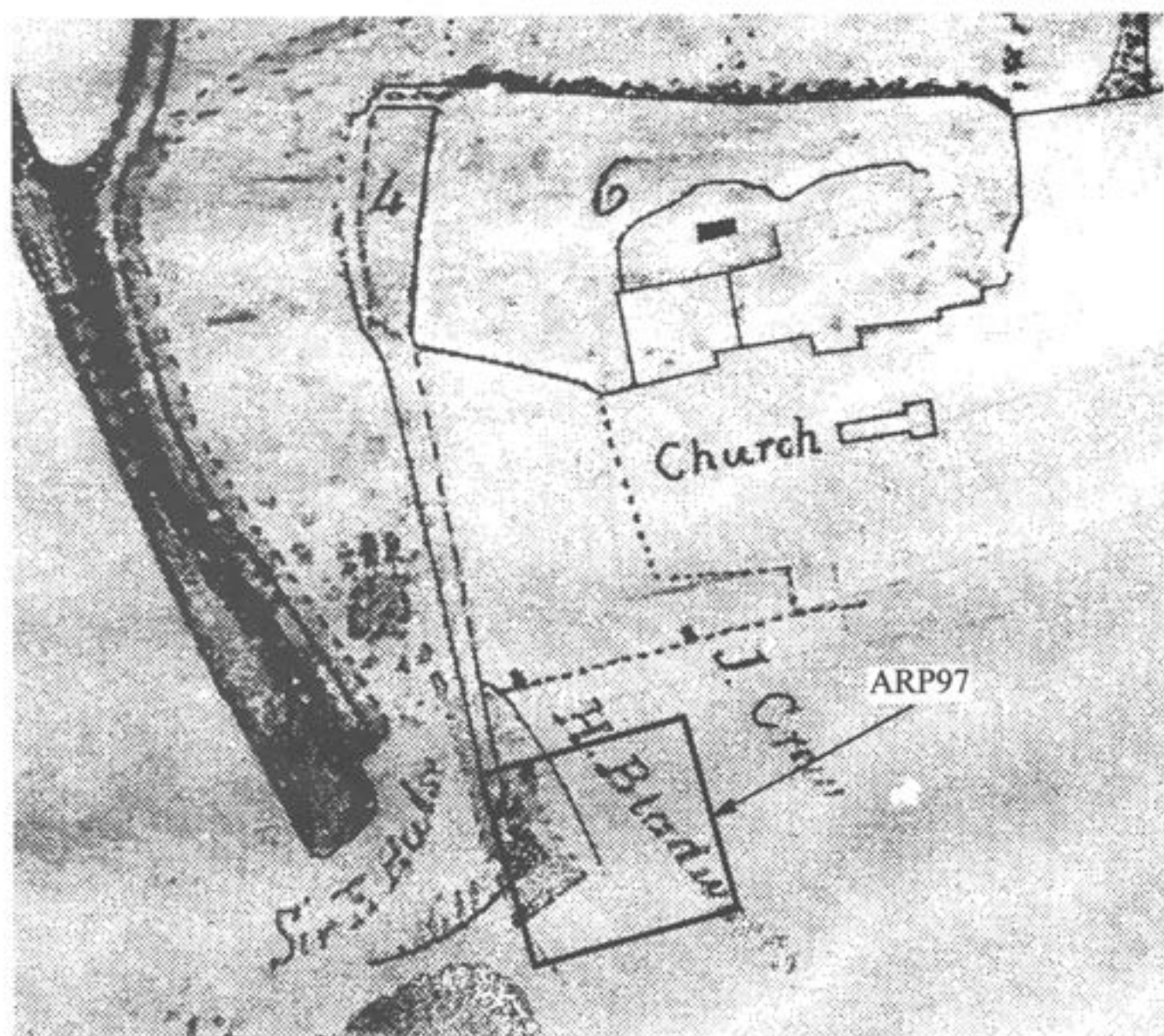


Fig. 14 Extract from the 1814 plan from the Lease of Former Abbey Precinct.

main drain running towards the edge of the gravel terrace in a south-westerly direction. This observation was substantiated in BA-I-85 but attempts to locate it further west were unsuccessful (MacGowan pers. comm.). A continuation of the line of the drain would lead it to enter the proposed Old Hawkins River at a point just to the north of BA-IE-90.

It is possible, in spite of the above discussion, that the Saxon and medieval Roding was wider and that the watercourse seen in the excavation clearly had been deliberately backfilled by human agency rather than silting up naturally.

It is possible, in spite of the above discussion, that the Saxon and medieval Roding was wider and that the watercourse seen in the excavation clearly had been deliberately backfilled by human agency rather than silting up naturally.

negate the argument outlined above, as the watercourse observed in the excavation clearly had been deliberately backfilled by human agency rather than silting up naturally.

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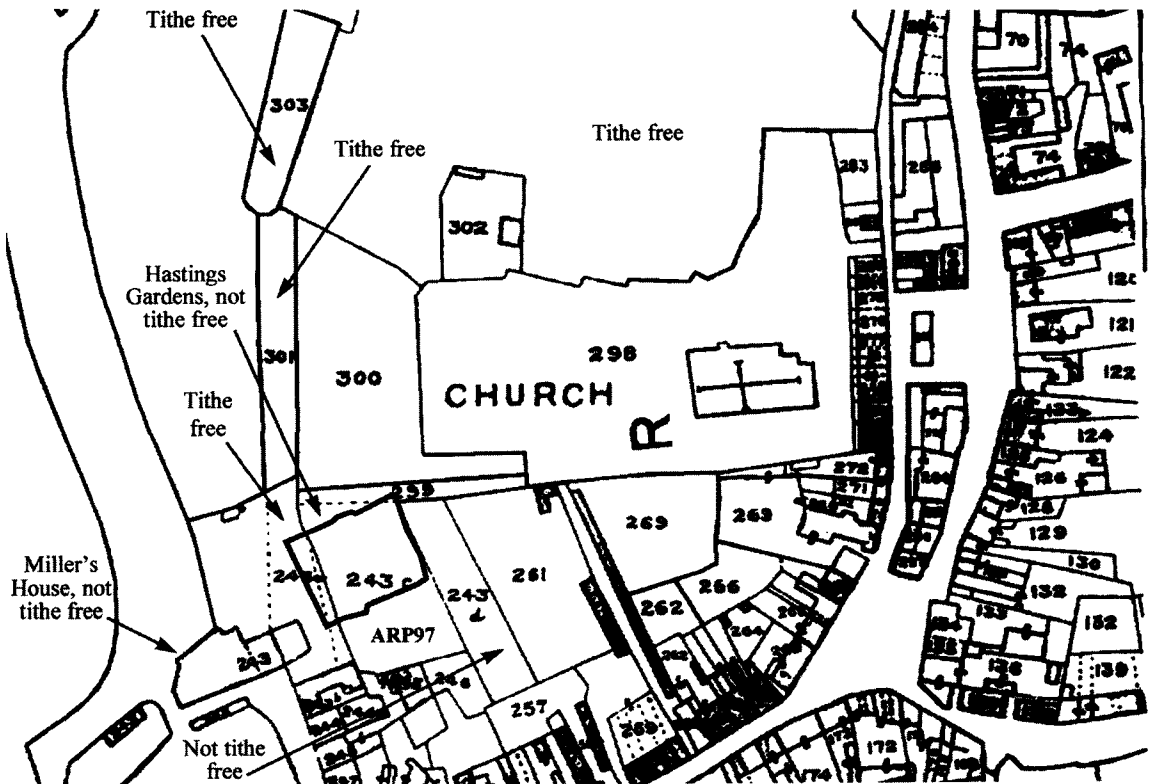


Fig. 15 Extract from the 1846 Tithe Award map of Barking (surveyed 1840).

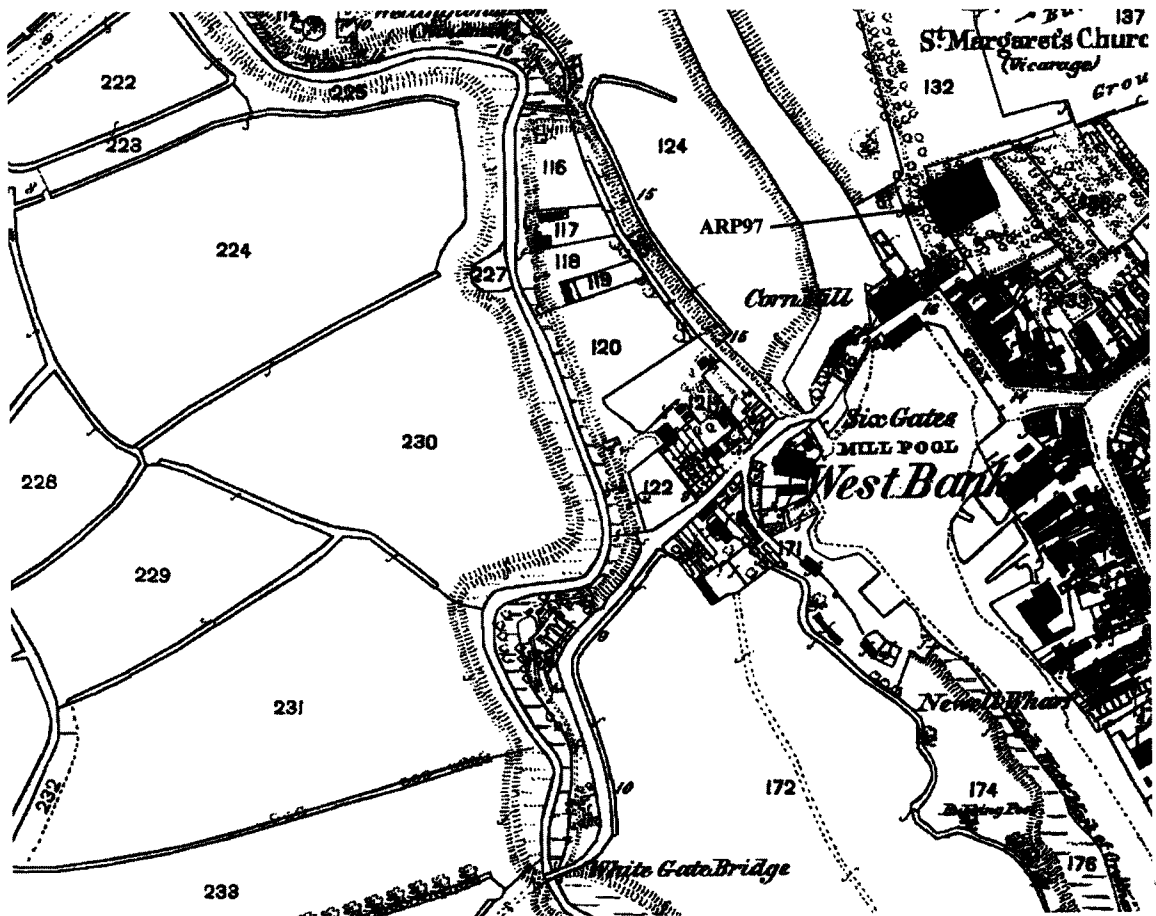


Fig. 16 Extract from the 1862 First Edition Ordnance Survey map.

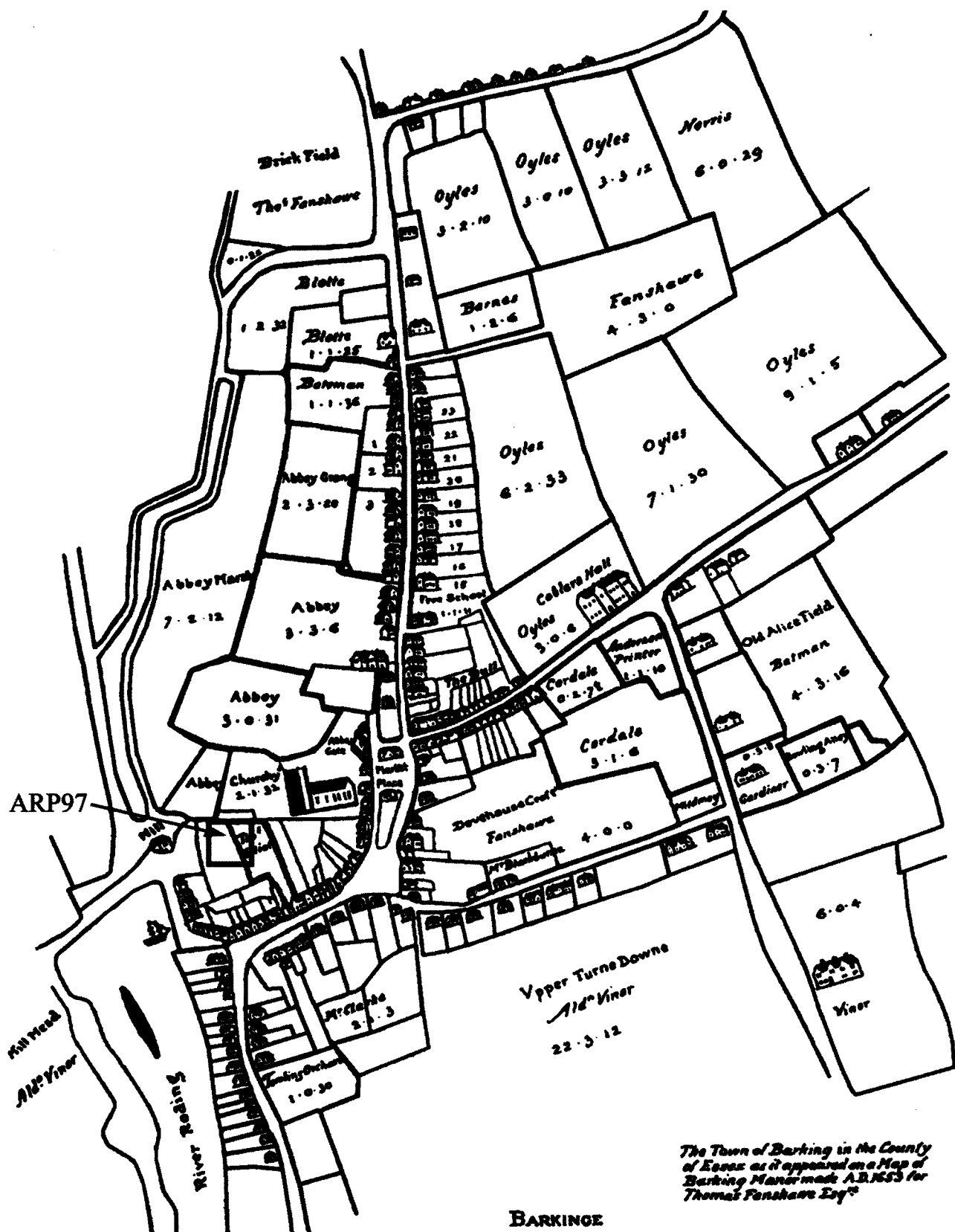


Fig. 17 Map of Barking Manor made in 1653 for Thomas Fanshawe Esq.

Salter of the Material Science Archaeological Group, University of Oxford, for analysis of the slag; Adam Croney for finds illustrations; MCC Museum for analysis of the cricket bat; Steve Ford for worked flint analysis and TVAS project management; Keith Cooper, Rob Court, Adam Croney, Alan Ford, Jez Fry, Malcolm Gould, Luis Huscroft, Pamela Jenkins, Jennifer Lowe, Joanna Pine, Leigh Pollinger and Steve Weaver for their hard work on site; Melanie Hall-Torrance for editing the text and drawings; Leigh Torrance for CAD illustrations; and Jennifer Lowe, Nicola Powell, M. John Saunders and Kate Taylor for other post-excavation work.

In memory of Keith Cooper 1968–2000.

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A moated manor at Low Hall, Walthamstow

by Ian Blair

Introduction

The excavation at Low Hall Depot, Walthamstow E17 (TQ 3637 8808), in the London Borough of Waltham Forest, was undertaken by the Museum of London Archaeology Service (MoLAS) over a nine week period during the summer of 1997 (Blair 1999). The archive for the site can be accessed under the site code (WS-LH97). The site was known to have been that of the medieval moated manor house of Low Hall, and previous evaluation work, which included a ground penetrating radar survey, was undertaken in 1994 (WS-LH94) and 1997 (WS-LH97) by Newham Museum Service (Chew 1994; Douglas 1994; Beasley 1997). The later evaluation demonstrated that structural remains and deposits, relating to the medieval and post-medieval manor house, were present on at least the north and west sides of the central platform. The resultant excavation was commissioned in advance of the construction of a new housing estate, and entailed the stripping of the entire area of the central platform and the crossing point (Fig. 1). The recording of the early timber bridge structure in the waterlogged moat deposits forward of the medieval bridge abutment was carried out as part of a short watching brief after the main excavation.

Considering the size and importance of Low Hall manor from the 14th century onwards there was a remarkable dearth of stratified finds within the excavated area and only a small assemblage of medieval pottery was found. Most of the early pottery from the site was found to be residual within later contexts, and is indicative of the general level of post-medieval and modern disturbance that had taken place across the site. The largest assemblage of finds were associated with the later post-medieval house, with especially large groups of material, mainly of 16th- and 17th-century date, found in the moat adjoining the bridge and gatehouse.

The history of the site has been investigated from a variety of printed primary and secondary material, manuscripts and maps (Phillpotts 2001). Manuscript evidence has been accessed by references culled from the printed material and from catalogues to the relevant document classes

and collections in the record repositories visited. Low Hall manor house is not richly documented in the Middle Ages and no building or repair accounts relating to the manor have survived. Nevertheless, some connections between excavated building phases and changes of ownership have been suggested. It should be stressed however that the lack of securely dated deposits, especially from the earlier periods, means that it is impossible to corroborate these connections. Post-medieval manuscripts have only been used selectively.

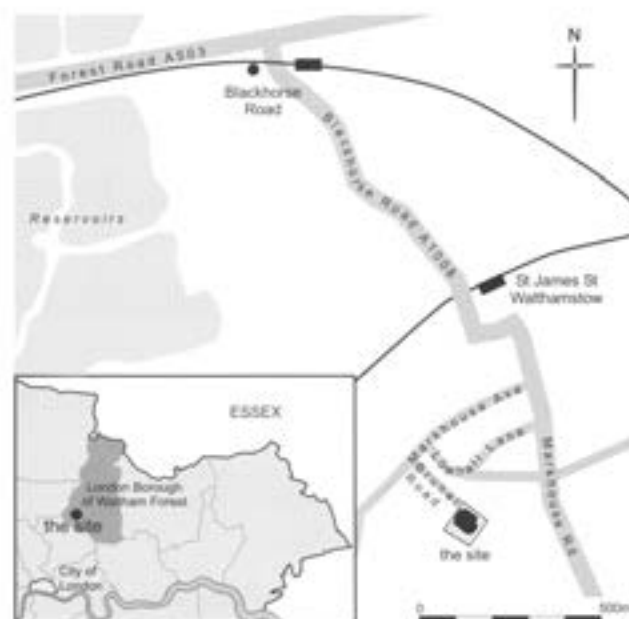


Fig. 1 Site location.

Historical background.

The Middle Ages

The settlement and manor of Walthamstow presumably originated in the late Saxon period. Within the manor a pattern of dispersed settlement within a broader agricultural landscape developed, consisting of a series of hamlets, called Higham Hill, Hale End, Woodend, Chapel End, Church End and King's End. These were linked and serviced by a network of roads and paths (VCHE vi, 241-2). The hamlets appear to have shared a field system.

A MOATED MANOR AT LOW HALL, WALTHAMSTOW

The origin of the place-name is uncertain. In early forms it appears as *Welcumstowe*, which might mean 'place of welcome'. Later confusion with Waltham appears to have led to the form *Walthamstow*. It has been suggested that Walthamstow church was a daughter foundation of Waltham Abbey (Reaney 1935, 105).

The manor and parish of Walthamstow lay in the Hundred of Becontree, part of it lying in the western fringes of Epping Forest. The site of Low Hall lay on the edge of marshland reclaimed from the floodplain of the River Lea. The reclamation probably proceeded from east to west in a series of stages which began in the late Saxon period, and was completed by the end of the medieval period. Earthen banks or walls were constructed along the marsh edge, and the land behind was drained by ditches. This was enclosed and drained in a series of parcels divided by cross-walls or counter walls, which were built out from the gravel uplands and ran perpendicularly to the river, advancing the cultivated area over a period of time. These counter-walls were used as access lanes into the marshes, such as Coppermill Lane and Low Hall Lane.

The process began along the line of Blackhorse Lane and Markhouse Lane. The earliest stages consisted of the formation of arable fields, cultivated in strips running east-west. The site of Low Hall lay behind the embankment of a secondary or tertiary stage, which extended as far as Dagenham Brook, and may have been accomplished in a period of rising population in the 12th or 13th century. It also lay adjacent to one of the counter-wall access lanes. Nearby fields were named Hoppets, indicating small parcels of reclaimed land. Later stages consisted of meadowland, divided into crofts as far as Water Lane and Blackmarsh Sewer, and divided into grazing strips beyond Inn Mead and Out Mead. A strip abutting west onto the River Lea is known to have existed by the late 15th century.

In 1065 the main manor of Walthamstow belonged to Waltheof, son of Earl Siward of Northumbria. Waltheof was executed following a rebellion in 1076, but the manor was retained by his widow Countess Judith, the niece of William the Conqueror, who held it at the time of the Domesday survey of 1086. It consisted of arable land, worked both by the manorial tenants and as part of the desmesne land of the manor. There was meadowland, pasture land, a mill, fisheries along the river, and a considerable stretch of woodland, sufficient to provide pannage for 300 pigs. The demesne stock comprised eight oxen, one pack-horse, 35 pigs, 60 sheep and 20 goats. The tenants probably kept stock in similar proportions. Amongst the tenants the number of villeins had increased from 25 to 36 in the previous twenty years, and the number of bordars had increased from one to

twenty-five (*VCHE* i 555). This may indicate that reclamation from the marshes was in progress, as bordars were often associated with taking marginal land into cultivation. The manor had also grown in value from £15 per annum to £28 and two ounces of gold.

This manor comprised most of the land in the parish to the south of Chapel End, including the long rectangular piece of land called Walthamstow Slip in Leyton parish to the south. In 1103 it passed to Judith's daughter Alice and her husband Ralph de Toni. Ralph may have built the parish church, which was not mentioned in the Domesday survey but existed by c.1108 (Bosworth 1916, 3).

The manor subsequently descended through several generations of the Toni family until the early 14th century. It was later described as Walthamstow Toni or High Hall. From 1261 to the 1280s the Tonis leased the manor to Austin of Hadstock and his son William. The line of the Tonis died out in 1309, and the manor passed to their descendants, the Beauchamp earls of Warwick, who held it as one knight's fee (Lysons 1796, 205-6; *VCHE* vi, 253-4; *Feudal Aids* ii, 175, 225).

In 1281 William of Hadstock granted an annuity of £100 to his daughter Joan and her husband Adam de Bedyk, the king's tailor, one third of which was to be paid out of his manor of Walthamstow. By 1285 Adam held two carucates of land in the manor as the under-tenant of William, who in turn held the manor from Ralph de Toni (PRO JUST1/242 m70). These two carucates became the separate sub-manor of Walthamstow Bedyk, later called Walthamstow Frauncis or Low Hall. Most of the lands of this manor lay south of Ferry Lane and west of Blackhorse Lane and Markhouse Lane (Bosworth 1920, 7). When William of Hadstock died in 1295, he left his house and garden to his wife Johanna, with remainder to his grandson Anthony, son of Adam de Bedyk. His main property was in the city of London (Sharpe 1889-1890, i, 123-4). By 1303 the manor was held as one fortieth of a knight's fee directly from Robert de Toni (*Feudal Aids* ii, 151). It was certainly regarded as a manor in September 1330, when there is a note that Henry Bedyk held a court there. He also held property in London (*CAD* iv, 464 no. A9808). He founded a chantry in Walthamstow parish church in 1335 (Bosworth 1916, 6). His son Sir Thomas de Bedyk was in debt in 1348. At this time he held land in Beauchamp Roding and Walthamstow in Essex, and Bromley and Finchley in Middlesex (*CCR* 1346-9, 498). A few years later he probably faced the problems of a falling rent income and a shortage of labour, as the Black Death of 1349-50 decimated his tenants. The manor remained in the Bedyk family until 1352, when Sir Thomas sold it to Simon Fraunceys (*CCR* 1349-54, 467). It was probably the Bedyks who built

the manor house in its original form, as represented by excavated period 2.1.

Simon Fraunceys was a London merchant, who served as an Alderman from 1336-58, as Sheriff of the city in 1328-9, and two terms as Mayor in 1342-3 and 1355-6. He was also one of London's Members of Parliament six times in the period 1339-52. He traded with Orwell, Bristol and Hull, and Sluys in Flanders. He was sent on an embassy to negotiate with the Count of Flanders in 1334. He and his relative Adam Fraunceys owned a ship called *La Laurence* of Newcastle in 1351. In 1354 he was involved in a quarrel with the Knights Hospitaller over a wharf near the mouth of the River Fleet. He is known to have lent money to King Edward III, the city of London, the Abbot of Beaulieu and the Abbot of Cleve (Reaney 1930, 4-5).

Simon Fraunceys held the manor of Walthamstow Bedyk from the earl of Warwick's manor of Walthamstow Toni by the annual rent of one pair of dice, an interesting variation on the peppercorn rent (*CIPM* x, 348 no. 439). He also bought out other Bedyk property in Beauchamp Roding and the manor of Finchley, and acquired land in Elmdon and the manors of Great Stanmore, Northolt, in 1346 and Downe in 1354 (Reaney 1930, 4-5). These purchases can probably be seen as part of a movement of those who had acquired their wealth by trade in London into country residences and landed society. Many of these residences in Middlesex and Essex were equipped with moats, probably for reasons of fashion rather than defence. The manor houses of Northolt and Downe both lay within rectangular wet moats. At Northolt, Fraunceys dug a new larger moat to enclose an area approximately 65m square, entered by a bridge, and entirely reconstructed the manor house in Reigate stone and brick around two courtyards. A new hall was flanked at each end by two-storey solar blocks, and the previously existing kitchen was adapted and extended into a long range, probably to include a bakehouse and a brewhouse. A continuous series of outbuildings and pentices ran around the two courtyards, built on the levelled backfill of the old moat. The site was excavated by John Hurst and others in 1950-74 (Hurst 1961; Lancaster 1975). Large numbers of Penn tiles found in the excavations probably derive from the floors of Fraunceys' hall and solars. If Fraunceys made a similar investment in his property at Low Hall, the developments of excavated periods (2.2) and (2.3) are probably the result.

Simon Fraunceys died in 1358, leaving the manor of Walthamstow Bedyk or Fraunceys to his widow Maud. In 1361 the earl of Warwick purchased the reversion of the manor (Kirk 1929-49 iii, 132 no. 596). Maud was still living in 1376, but must have

died by 1397 when the manor was held by the earl of Warwick (*CPR* 1396-9, 207).

The two manors were united in the hands of the Beauchamp family for a few generations, when Low Hall was referred to as a manor called Franks in Welcumstowe (Feudal Aids vi, 434). A surviving account of Walthamstow Toni manor for the year 1437/8 makes no mention of Low Hall (ERO D/DU 36/14).

When the male Beauchamp line died out in the 1440s, its lands were split between co-heiresses. Low Hall passed to Anne Beauchamp, who was married to Richard Neville 'the kingmaker', earl of Warwick. After his death at the battle of Barnet, the manor was held by George, duke of Clarence and his son Edward, earl of Warwick (Lysons 1795, 207; *VCHE* vi, 253-4, 256). During all these transactions, the manor of Walthamstow Fraunceys or Low Hall was one of a number of manors actually held by a panel of Beauchamp feoffees, which was formed in 1425. The feoffees ran the estates for the benefit of the successive heirs of Richard, earl of Warwick, who died in 1439. The Beauchamp Trust was administered by John Hugford, who kept it going until his death in 1487 (Hicks 1981, 144, 148, 149; *CIPM Henry VII* iii, 397 no. 728). In 1487 Anne Beauchamp was restored to her inheritance, but only so that she could immediately surrender her lands to the Crown (*CAD* v, 85 no. 11056; *CCR* 1485-1509, 90).

The only medieval mention of the manor house at Low Hall was in 1397 (*CPR* 1396-9, 207). The meadow on the south-west side of the moat contained a rabbit warren and two fishponds in later centuries, which were probably medieval in origin (Law 1966, no. 1016).

The three-field system of the parish appears to have been established before the separation of Low Hall manor from Walthamstow Toni manor. In an early 17th century court case it was noted that the lands of the two manors 'lie promiscuously dispersed and intermingled acre by acre' (PRO REQ2/300/1). Church Field lay to the south of the church; Higham Hill Field or Mill Field lay in the north-west part of the parish to the north of Clay Street and Higham Hill Brook; Broom Field (later called Markhouse Common) lay to the east of Markhouse Lane, opposite Low Hall manor house. The parishioners had annual pasturage rights on these fields after the harvest. Low Hall manor had strips and headlands totalling eleven acres in Broom Field, and great stretches of enclosed arable and meadow to the west of Blackhorse Lane and Markhouse Lane. The meadowlands of Inn Mead and Out Mead had probably also already been allotted into strips before the formation of the manor, as it had only a

few of the strips and parcels here, totalling twelve acres (Clarke 1861, 12-13; Bosworth 1920, 7-8; BL Additional MS 33592, f.66). One of these strips in Inn Mead, forming an acre of meadow adjacent to the River Lea, was left by William Hyll, Vicar of Walthamstow, to the churchwardens of the parish in 1487, to fund a chantry for his soul (Bosworth 1920, 9; Fry 1921, 11).

The excavation

Period 1

Natural topography

The natural geology across the site was only observed in localised areas and the sides of cut features, and was composed of orange-tan brickearth with medium pebbles and iron-pan flecks. The surface of the natural was recorded at 5.9-6.2m OD.

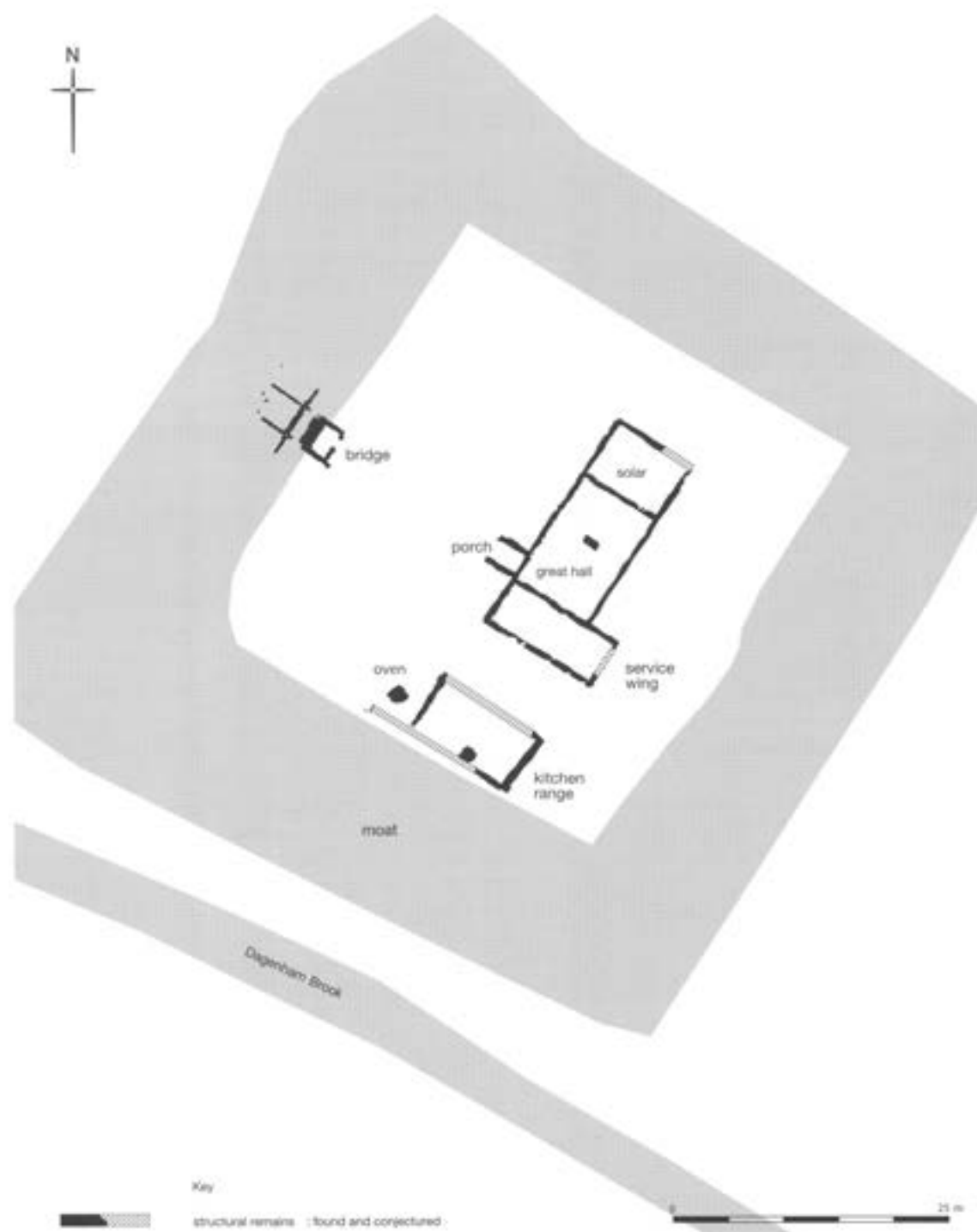


Fig. 2 Early manor house.

Period 2.1

The early manor house (Fig. 2)

The plan of the early manor house comprised four elements: the moat and platform, principal range, kitchen range, and bridge, which together formed part of a single highly organised and unified development.

The central platform enclosed by the moat was square in plan and measured c.42m x 42m, with the projected area of the entire moated site measuring c.70m x 70m. The moat was 10-15m wide, although its outer limits were not seen in the excavation and are principally derived from a projection of the 1865 Ordnance Survey map showing the moated enclosure.

The early manor house occupied a central position on the island some 20m from the bridge. Several of the walls had been substantially robbed, especially at the rear of the building; however, it was still possible to discern its entire plan (Fig. 2). Because of time constraints and in order to provide better photographic contrast, only localised sections of the robber fills were removed. The bases of the construction cuts for the walls showed little variation and were founded at a consistent level of between 5.90-5.97m OD. The foundations were on average 0.40m-0.50m wide and built of chalk and Kentish Ragstone laid in roughly horizontal courses, which survived to a maximum height of 0.47m. The walls were set into shallow construction cuts on a level pre-prepared site, and there was evidence that quantities of mixed gravel and brickearth, probably derived from the cutting of the moat, were then spread around them to raise the level of the surrounding ground by upwards of 0.3m. It is likely that the masonry formed the bases to relatively shallow dwarf walls, which supported a timber frame superstructure to the house.

The building was divided into three sections with the great hall (complete with a centrally placed hearth) flanked at one end by an elongated service wing, and a square solar block at the opposite end. All were of a uniform build and had clearly been constructed at the same time. The side wings, in contrast to the open hall, would have both had an upper storey. The principal doorway into the building was aligned with the bridge and its position is indicated by the twin walls of an external porch sited at the lower end of the hall, at the junction with the service wing.

The projecting end to the service wing probably indicates the position of an external staircase, which would have given access to the upper storey. Unfortunately, no structural remains survived in the adjoining area, which had been heavily disturbed by post-medieval agricultural bedding trenches.

The internal dimensions of the great hall were 10.7m-7.2m (35ft. 10in.-23ft. 6in.), the solar 5.2m-7.2m (17ft.-23ft. 6in.), and the service wing 3.8m-10.2m (12ft. 4in.-33ft. 4in.). The dimensions of the great hall and solar are almost identical to those of the contemporary moated house of Chorley Hall in Cheshire (Cordingley and Wood-Jones 1959), and both houses are comparable in size to a number of medium sized 14th-century unaisled halls throughout England.

Set apart from the main building across a small yard were the remains of the rectangular kitchen range, which was traditionally separated from the main building due to the risk of fire. The walls were more fragmentary than those of the main house, not only because of later robbing or truncation but also due to the use of both stone and timber as footings or ground beams. Masonry only survived along the east end of the building where the full 5.7m width of the structure was present. The foundations were c.0.60m wide and were composed principally of ragstone with some peg tile and chalk. The end wall incorporated a small external buttress on its south-east corner where it joined to the rear wall which was aligned along the edge of the moat. Some settlement of this wall was noted, which is not surprising given its position.

Two structural cuts were defined internally. One is provisionally interpreted as an internal pier to the rear wall, although it contained only loose unmortared blocks of chalk in a silt matrix, and apart from the proximity of the moat would appear more suited to a soakaway.

The second cut was a shallow north-south beam-slot for an internal partition wall and was aligned with the front wall of the manor house. In the room to the west of this division was a neatly made, keyhole-shaped, tile hearth, which was probably the base of a bread oven. The internal floor surfaces were composed almost entirely of brickearth, which was heavily scorched in a wide area around the hearth. Archaeomagnetic dating of the hearth was not viable, although the sampling of an associated scorched surface of a subsidiary hearth, produced a date of 1410-1425 for its final firing. Although the limits of this room are uncertain it is evident that the kitchen range projected some 5m forward of the main body of the house.

The early crossing point was located slightly off-centre on the south-west side of the moat and was composed of two main elements. The forward timber section of the bridge was composed of an oak ground frame of articulated base-plates (Fig. 3). It comprised two parallel longitudinal base-plates [711] and [718] and two adjoining transverse base-plates [712] and [710]. Two pairs of oak round wood retaining stakes [724]-[727] were located outside the longitudinal plates against the edge of the main

KEY:

- a halving lap
- b mortice for principal post
- c mortice for transverse brace
- d mortice for intermediate post
- e mortice for "subsidiary" post
- f chase mortice for longitudinal brace
- g mortice for additional post towards end of longitudinal plate
- h tightening wedge
- i felling cut
- j sapwood

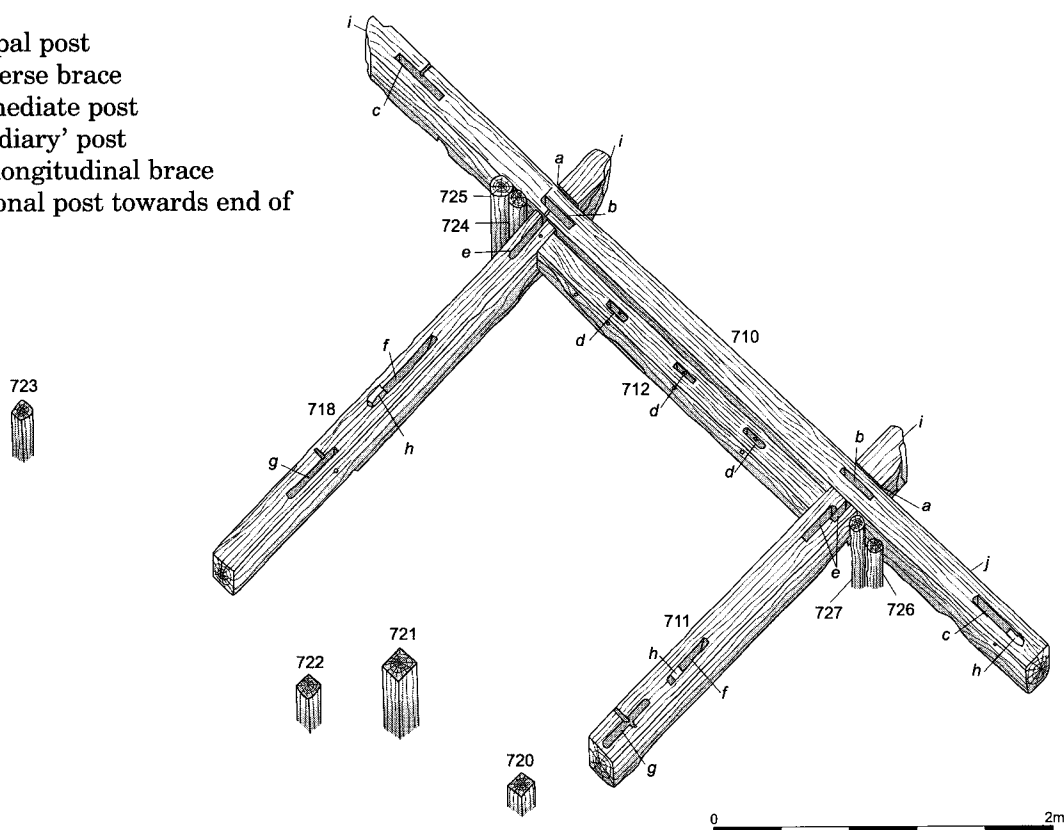


Fig. 3 Axonometric drawing of 14th-century bridge base-frame.

transverse plate. The structure appeared to be open at its west end with no return transverse base-plate present to close it. There was no indication that the structure had been robbed, as the ends of both base-plates were apparently intact, although of different lengths. The west side of the structure appeared to be formed instead by a group of at least four earth-fast squared oak posts [720-723].

All the base-plates were morticed at their upper faces for posts and braces of the superstructure. Each longitudinal plate carried a similar configuration of three mortices, comprising two outer vertical mortices and a central chase mortice, which retained *in-situ* tightening wedges in both plates. The mortices were in corresponding positions in each plate and probably originally housed a pair of 'subsidiary' posts against the edge of the main transverse plate, with longitudinal braces towards the centre of each plate, and a further pair of posts towards the ends of the plates. However, some anomalies were present. The southernmost plate carried an additional mortice, that was either truncated by, or functional with, that for its subsidiary post, and the northernmost plate carried a long chase mortice, which may have been extended. The forward transverse plate carried three mortices at fairly regular c.0.7m centres.

These appeared to align with the mortices for the subsidiary posts in the longitudinal plates, and probably housed intermediate posts of smaller scantling. The main transverse plate carried four mortices. These comprised two inner vertical mortices at the intersection with the longitudinal plates, and two outer vertical mortices, one with an *in-situ* tightening wedge. These mortices housed a pair of principal posts with outward transverse braces.

All of the mortices, except those for the subsidiary posts and the braces in the longitudinal base-plates were single pegged. Peg hole diameter was slightly distorted due to movement of pegs when *in situ*, though the common diameter was 20mm-25mm.

Three of the base-plate timbers were dated by dendrochronology to the summer of 1344, which, based on the premise that green oak was used in waterfront structures and the absence of reused timbers, can be taken as being a secure date for the construction of the bridge. Given the relative paucity of datable finds from the medieval complex, the bridge timbers proved to be the most securely dated remains found on site and by association provide the likely foundation date of the early manor house.

The base-frame of the bridge was characteristic of later medieval timber framed structures in that it appears to have been prefabricated. Following prefabrication the timbers would have been brought to the site for final assembly. It is probable that a water management system comprising sluices for draining and flooding the moat was in place, allowing the bridge to be assembled in relatively dry conditions. The floor of the moat would have been prepared flat, and compression marks present at the lower faces of the timbers indicate the positions of levelling chocks used to maintain a flat upper face of the ground frame. This would replicate the conditions at the framing ground and ensure that the upright elements were vertical. The longitudinal base-plates were the first to be positioned, though the smaller transverse base-plate would firstly have functioned as a spacer, articulating with one base-plate in order to indicate the required spacing of the other. The main transverse base-plate was then positioned, followed by its retaining stakes. Elements of the superstructure including earth-fast piles would presumably have followed. It is unclear when the possibly later mortices for the subsidiary posts and longitudinal braces were cut.

The structure can be identified under a classification scheme for structural supports of minor medieval timber bridges, which is based on a corpus of over forty excavated examples from moated sites in the British Isles (Rigold 1975). The term 'minor' bridge encompasses both short and long forms. These are characterised by the width of moat spanned, with the transition to the long bridge occurring at about 9m.

Three types of support are identified:

1. earth-fast piles. These are very uncommon as the principal type of moat bridge support.
2. isolated trestle. This is the commonest type of moat bridge support, consisting of a transverse base-plate morticed to house posts that rise to support a lintel. The trestle was used in a bay system with isolated units placed in parallel alignment along the axis of the bridge. This type of support lacked proper longitudinal bracing, and the trestles were only stabilised when the longitudinal bearers of the decking were superimposed.
3. self-stable support. This type consists of both transverse and longitudinal base-plates with trestles forming the basic component.

In an application of the classification scheme to the Low Hall structure, a characterisation of the form of bridge represented should first be made. The full span of moat was unavailable as its outer edge lay beyond the edge of the site; however, the width represented indicates that it was at least towards the upper part of the range for the short bridge, and

may be transitional with the long bridge. Additionally, although the number of bays represented is unclear, the structure appears to comprise two types of support, with the possibility of further supports beyond the excavated area at the outer edge of the moat. The types of support represented are: type 3, the base-plated structure, and type 1, the earth-fast piles. The base-plated structure combines both transverse and longitudinal base-plates. The main transverse base-plate appears to represent the developed form of the type 2 trestle, carrying mortices for principal posts and external, symmetrical, probably curved transverse braces. The longitudinal base-plates were chase morticed for straight braces canted towards the principal posts.

The structure is also seen to possess certain anomalies not present in the classification scheme, foremost of these being the presence of an additional transverse base-plate. The plate is morticed for three intermediate posts, which, more commonly, would be carried on the main trestle base-plate. This offsetting of the intermediate posts implies the presence of an additional transverse top plate or lintel, and possibly explains the anomalous additional mortices in the longitudinal base-plates, which would house additional subsidiary posts to support this plate.

It is likely that the structure represents the supports for a defensive bridge, with the base-plated structure forming a self-stable support for the mobile section or drawbridge. The alignment of the support would appear to be in resistance to compression from the east caused by the thrust of the falling section. Both the orientation of the longitudinal bracing and position of the retaining stakes of the main transverse base-plate are set in resistance to compression from this direction.

The anomalous elements of the support possibly indicate a specialised adaptation for the lifting mechanism to be carried on the bridge itself. One interpretation is that the principal posts housed in the main transverse base-plate were single timbers, which rose above the level of the decking to a lifting mechanism. The mechanism may have been one of two main forms: one based on a pulley system, operated by a windlass, or one based on a counterweighted structure. This possibly comprised a longitudinal timber which pivoted on each post, was counterweighted, possibly with a lead weight at its east end, and had a chain or rope attached between its west end and the leading edge of the drawbridge. A similar attached chain or rope at the counterweighted end would enable raising and lowering of the drawbridge. The posts possibly extended above the lifting mechanism to a high lintel, or the lintel may have been positioned at a similar height to the lifting mechanism. In either

position, the structure would have formed a portal into the enclosure.

This form may have necessitated the 'subsidiary' posts housed in the longitudinal base-plates, and the associated transverse base-plate housing the intermediate posts, in order to support a half height lintel. This lintel would provide support, when lowered, for the inner edge of the drawbridge pivoted half way up the principal posts. It would also support the permanent decking between the mobile section and the enclosure platform. The mortices towards the west ends of the longitudinal base-plates possibly housed posts which functioned as shock absorbers for the leading edge of the drawbridge. Their misalignment suggests that they did not support a transverse plate, although they may have supported longitudinal top plates as further supports for the drawbridge.

The earth-fast posts to the west of the base-plated structure possibly functioned as further shock absorbers, or may have been associated with a support for a fixed section of decking beyond the mobile section.

Lying immediately behind the inner timber bridge frame and cut into the edge of the central platform was a well built and substantial rectangular masonry bridge abutment. The abutment had a wedge-shaped profile with its rear wall set in a shallow cut into the natural deposits on

the edge of the platform. By contrast its exposed front wall, which faced into the moat, survived to a height of 1.86m above the timber baseframe of the bridge at a height of c.5.82m.OD. The front elevation incorporated two stepped offsets to its lower section and was built of at least nine courses of squared ragstone. The courses, though horizontal, were of varying depths throughout, with peg tile used to level some of the more irregular stones.

Internally, the abutment had been partially built free-standing before being infilled with brickearth to consolidate the central body of the structure. During the machine removal of the abutment its foundation was seen to extend a further c.1m below its lower offset course and to have a rough bulbous base.

Period 2.2

Solar extension

The first major addition to the main body of the (2.1) manor house was an L-shaped wing, which was added to the front and side of the solar block and more than doubled its size (Fig. 4 and Plate 1). This extension comprised two small rooms (one part cellared), a narrow service corridor, and a large rectangular chamber beyond. The foundations were composed principally of roughly dressed chalk with ragstone and peg tile laid in rough courses.

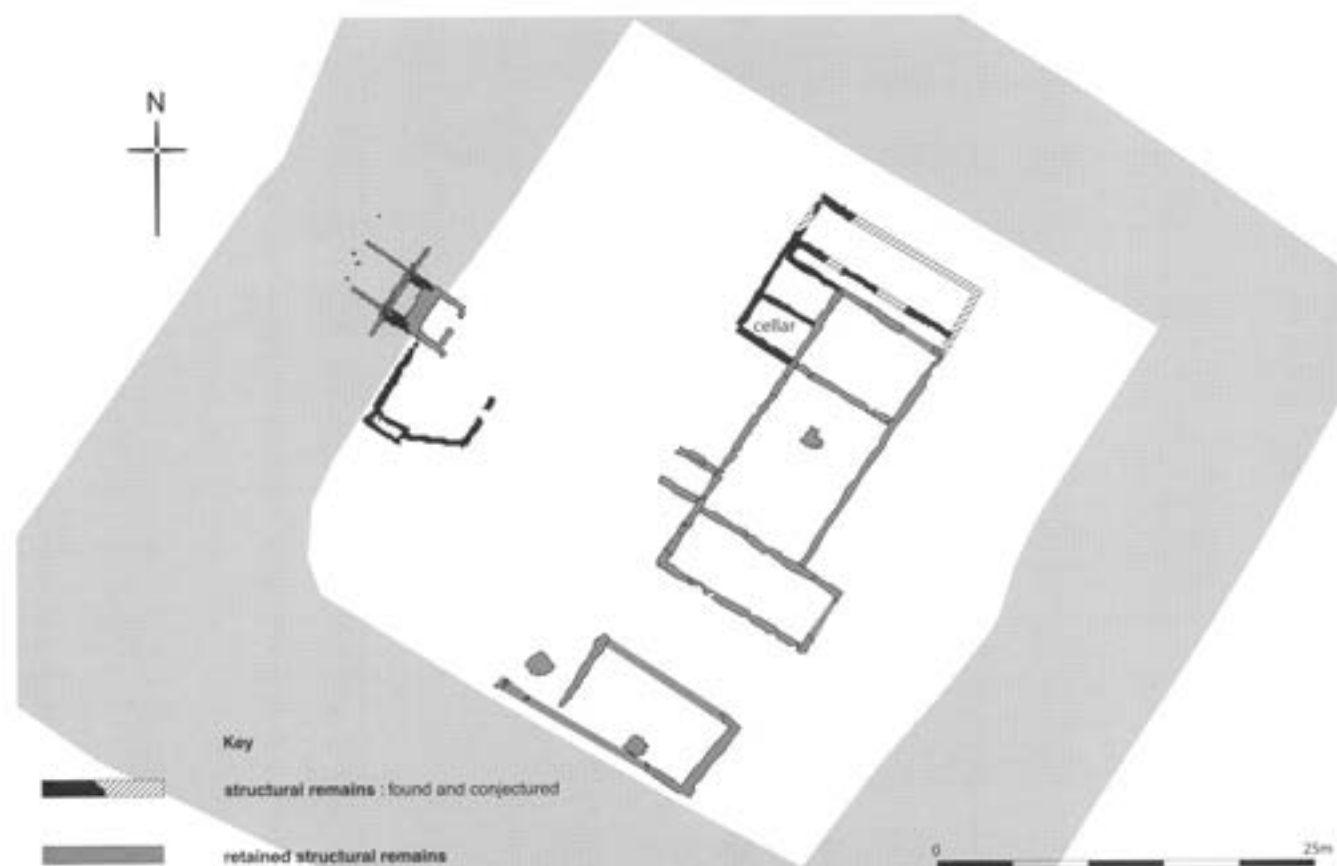


Fig. 4 Solar extension (period 2.2) with gatehouse and bridge extension, (period 2.3).

Period 2.3***Gatehouse and remodelling of bridge***

Possibly around the same time as the (2.2) enlargement of the solar wing, a gatehouse was added to the south side of the bridge abutment (Fig. 4 and Plate 2). The individual footings of the gatehouse were constructed in stages with many lifts and joints discernible within their general build. The first section to be constructed was a curving tile drain, which effectively formed the south side of the building, and emptied into a narrow rectangular garderobe at the moat edge. The garderobe footings were built of ragstone and peg tile, presumably reflecting the durability when subjected to water of these materials, which were used exclusively in all of the medieval moat side structures. The base of the garderobe was roughly tiled at its mouth and sloped from 5.37m-5.13m OD, being on average 0.50m deep. The curvature of its outlet towards the bridge appears to have been a deliberate feature to aid the exit of waste from it, and suggests that the flow of water around the moat was in the same direction. The Dagenham Brook stream, which runs parallel to the south edge of the site, is likely to have supplied the water for the moat, by a system of sluices.



Plate 1 Aerial view of the early manor house showing solar extension.



Plate 2 The medieval gatehouse and bridge abutment.



Plate 3 Modified form of the medieval bridge abutment viewed from the moat.

The front wall of the gatehouse structure was butted against the north side of the garderobe and extended 5m along the edge of the moat, to a central point on the south side of the bridge abutment. The wall was 0.40m-0.50m wide and built of very rough courses of ragstone and peg tile. It incorporated two integral post voids, which originally would have held structural uprights forming part of the timber frame of the building. An unusual feature of the wall was the large proportion of roughly coursed peg tile that it contained, and because of this it is assumed that the external elevations would have originally been rendered.

No trace of the side and back wall of the gatehouse were found, probably because it was made entirely of timber based on surface post pads or shallow sill walls, which have not survived. It is also likely that the footings for the garderobe and drain would have been utilised as a base for the building's superstructure.

Modifications were also made to the front of the stone bridge abutment with the addition of two parallel spur walls, which projected 1.9m into the moat and sealed part of the timber base-frame of the early (2.1) bridge (Fig. 4 and Plate 3). The walls had a rubble core and were faced with large, neatly squared, ragstone ashlar blocks laid in up to five regular horizontal courses. The differing sizes of the blocks suggests that they were reused from another

source, rather than being purpose made for the bridge extension. Because of the irregular depths of these courses, and the consequent non-alignment of their respective joints with those in the abutment, the new walls were butt jointed against its face with only a single block partially keyed into the top of the existing structure.

There are two possible explanations for the addition of these walls over the front of the earlier wooden bridge structure: one is that the base-frame was completely replaced, with another one set over it which had not survived. Alternatively, the base-frame may have been remodelled locally to incorporate the extension walls as part of a single unified structure. The extending of two mortices in the longitudinal base-plates to a point in front of the new walls seems to support the latter interpretation, and suggests that the posts were reset in a forward position and that the lower bridge frame remained in use.

Period 2.4

Internal activity and modifications to the solar

Further modifications to the (2.2) solar extension saw the dismantling of the narrow internal service corridor prior to the subdivision of the large side chamber into two rooms (Fig. 5). A narrow

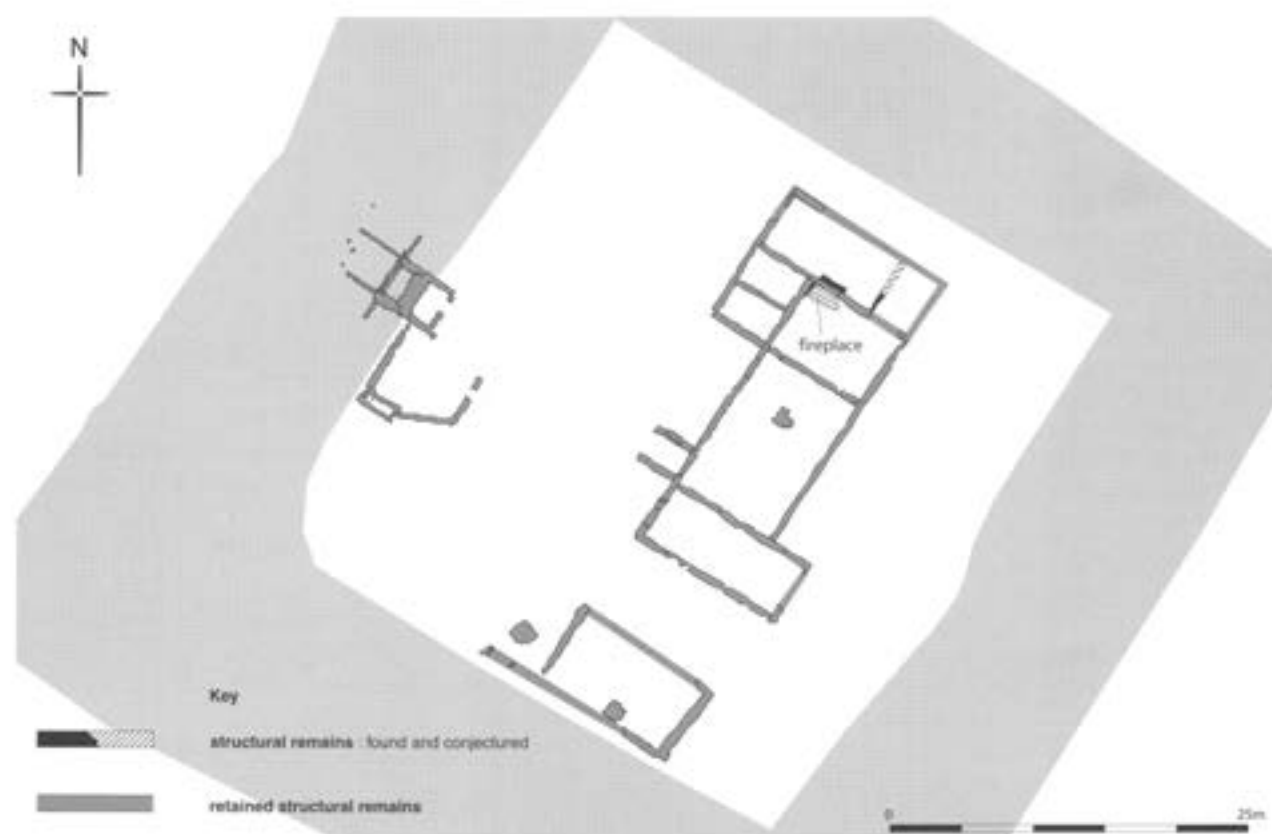


Fig. 5 Solar modifications (period 2.4).

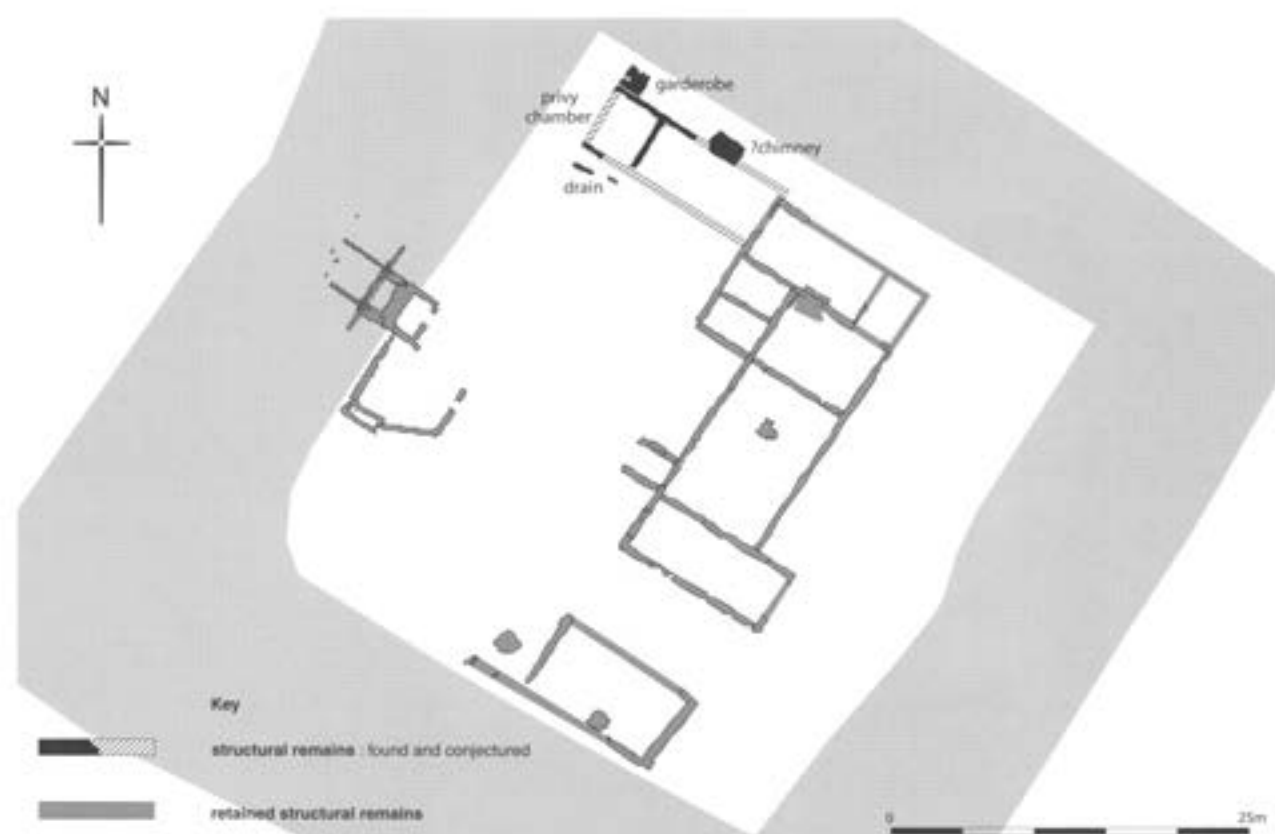


Fig. 6 New cross-wing (period 2.5).

rectangular ragstone footing was added within the larger room against the party wall, in a position immediately behind a new fireplace, which was set into the north-west corner angle of the original solar block. These two juxtaposed elements are clearly associated and constitute the addition of a new fireplace built against the wall, a feature that started to become more common during the 15th century. The localised thickening to the rear of the fireplace was necessary in order to provide the extra space to accommodate the flue within the fabric of the wall. In the great hall the central tile hearth was resurfaced and localised patchy repairs to its clay floor and that of the service wing were undertaken. Found in one of the deposits in the service wing was a silver penny of Henry V (1413-22).

Period 2.5

New wing

The last major change to the plan of the medieval manor house saw a further narrow wing, with footings made almost exclusively of chalk, being added to the front of the (2.2) solar extension along the north edge of the moat (Fig. 6). The remains of this wing were very fragmentary, due to the post-medieval house being constructed over it. However it was clear that the wing was composed of two rooms, with the smaller chamber at its far end. The existence of a second storey can be inferred from the presence of a contemporary chalk lined garderobe or

cesspit against the back wall of the small 'privy' chamber. The cesspit was relatively shallow with a sloping base and was constructed to discharge directly into the moat.

The location of a second, more deeply founded, rectangular chalk footing at a central point to the rear of the main chamber, is suggestive of the base of an external chimney stack or structural buttress.

Two small sections of a narrow external drain with a peg tile base and brick sides, which was found in the courtyard area in front of the end chamber, would have originally discharged into the moat on its west side.

With the addition of this wing the medieval manor house had reached its fullest and final form, which was roughly L-shaped, with both wings facing onto a courtyard and the gatehouse and bridge beyond.

The pottery assemblage from period (2.5) is mixed in date. The presence of Surrey Whiteware, and Cheam Whiteware with early post-medieval redware and slip-coated redware could be contemporary with the latest major changes to the plan of the early manor house. The pottery evidence would give an earliest date for this activity as c.1500, as Cheam Whiteware was still common and the use of post-medieval redwares became widespread after c.1480 and continued in use to 1600.

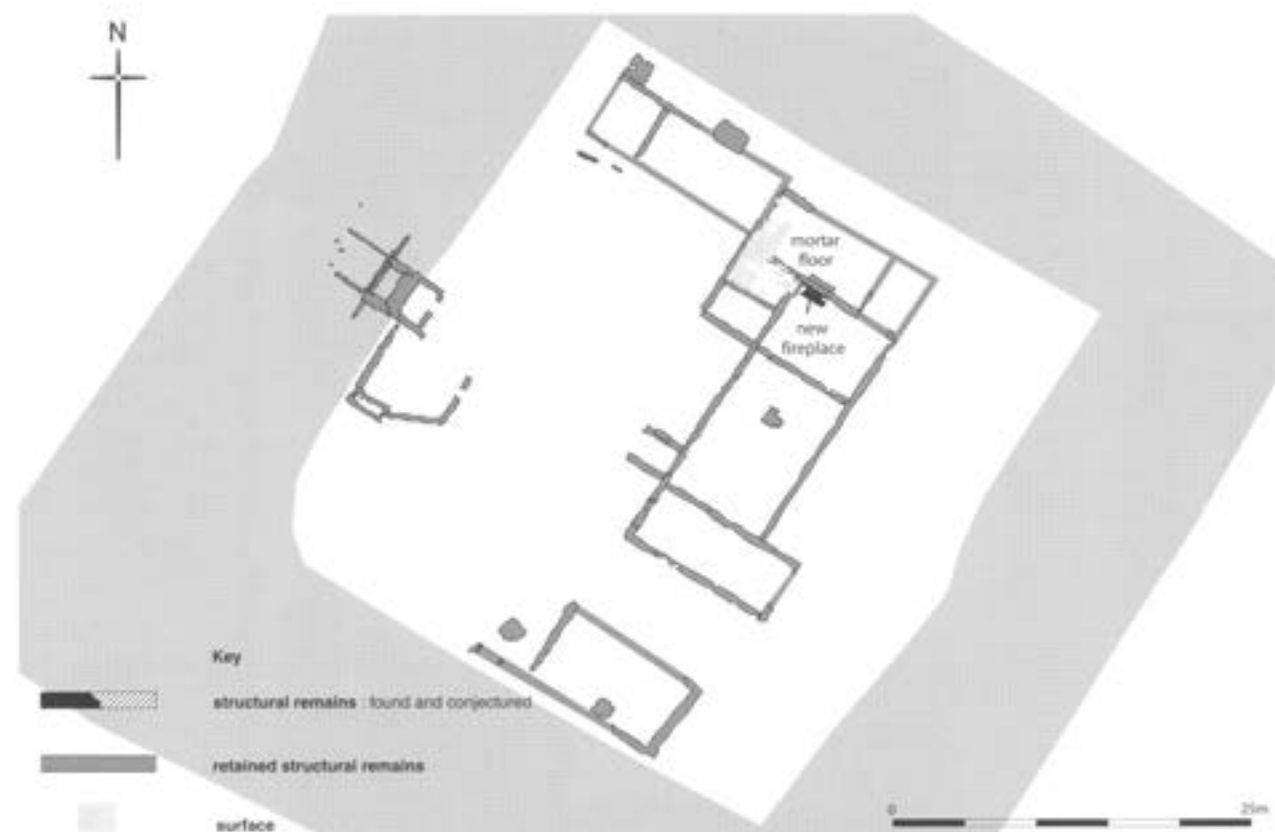


Fig. 7 Final modifications to solar (period 2.6).

Period 2.6

Final modifications to solar

The final period of activity within the solar wing saw the renewal of the base of the (2.4) corner fireplace with a rectangular tile hearth (Fig. 7). Its surface lay at 6.50m OD and was composed of tightly packed peg tiles, set on edge and standing c.0.20m proud of the surrounding floor. The hearth must have been constructed within a temporary wooden shuttering, in order to give structural integrity to the feature whilst the mortar joints were drying and hardening.

Within the adjoining room to the west an internal wall was demolished to amalgamate two rooms and a mortar surface was then laid over its footings. Whether this was a surface in its own right, or the mortar bedding for a robbed tile floor is uncertain. The possible position of a threshold between this room, and the small semi-cellared room to the south, is indicated by a narrow gap in the dividing wall. The presence of four post holes in a central position in the cellar are presumed to represent additional structural supports for an upper floor.

The final modifications to the solar in period (2.6) are represented in the pottery assemblage by one contemporary sherd of early post-medieval redware dated 1480-1600. This pottery was found in the ash rake-out of the solar extension fireplace and

possibly represents the final phases of occupation within the early manor house.

Summary of period 2

The earliest recorded development of the site was the construction of a moated manor house during the 14th century. The house had a tripartite rectangular plan comprising a hall with solar and service wing at either end. The kitchen range was external to the main house at the lower end of the hall parallel to the elongated service wing.

The first bridge was timber with a masonry abutment on the edge of the internal platform. Only the articulated base-plate timbers of the bridge survived. Three of these were dated by dendrochronology to the summer of 1344, which is also considered to be the date for the foundation of the earliest manor house. The trestle frames to support the bridge superstructure were not found, and had clearly been systematically dismantled. It is surmised that these would have originally supported a drawbridge.

Later additions to the house and crossing point saw the extension of the solar, the building of a gatehouse and remodelling of the front of the bridge abutment, and the addition of a new wing along the moat edge (Plate 4).

Although all of the walls of the manor house had been robbed to a low level, a small quantity of



Plate 4 Aerial view, looking towards the bridge, showing the final plan of the medieval manor house complex.

moulded stone was found, which is presumed to have come from the dismantled superstructure of the house. Most of this material was found in contexts relating to the 17th-century house, with the remainder recovered during the initial machine clearance of the site. The worked stone mainly comprised fragments of Reigate stone ashlar, which has been roughly dated from the tooling to the 13th-14th century. An unstratified octagonal pilaster base, with extensive polychrome paintwork applied to its surfaces, has been dated on stylistic grounds to the 14th-16th century.

Despite the richness of the structural remains, which has enabled a provisional plan of the entire medieval manor house and its various extensions to be determined, there was a notable lack of medieval finds. The exception to this was provided by a group of fifty-five 14th-century decorated floor tiles, from Penn in Buckinghamshire. Although none of the tiles were recovered *in situ*, most being found discarded in later moat fills, they would have originally have surfaced the floors within the higher status rooms and private apartments that adjoined the hall.

There are few indisputably 14th century or earlier items, and those that do seem to be of this date were recovered mainly from later contexts. These objects comprise a copper-alloy seal matrix with the head of John the Baptist, with the Latin legend CAPUT IOHIS INDISCO – ‘The head of John on a charger’, and one English jetton. Further supplementary dating was provided by the archaeomagnetic sampling of two hearths, one in the kitchen range and the other in the great hall, which produced early-mid 15th century dates for their final firings.

Historical background.

The post-medieval and modern periods

The crown leased the manor of Walthamstow Fraunceys or Low Hall to a series of tenants in the late 15th and early 16th centuries. In 1488 the custody of the manor was granted by Henry VII to Sir Thomas Lovell for five years for an annual rent of £15 (*CFR 1485–1509*, 129). The following year it provided an annuity of twenty marks for John Whytyng, a servant of the king’s son Prince Arthur (*CPR 1485–94*, 257). In 1520 it was let on a 21-year lease to John Jenyns for an annual rent of £15 8s. (*LPH* iii(1), 298 no. 854/14; *VHM Acc8289/T2*). In 1528 the reversion of the lease was granted to John Lynsey, one of the six clerks of Chancery (*LPH* iv(2), 1772 no. 3991/5), but about this time it was acquired by Margaret, the widow of Sir John Heron, who also held the lease of Walthamstow Toni. Both leases passed to her son Giles Heron, who was executed for treason in 1540 (Lysons 1796, 207; *VCHE* vi, 256; *BL Additional MS 18783*, f.62).

In 1541 the leases of both manors were acquired by Sir Ralph Sadler, who served as ambassador to Scotland and Secretary of State, and whose main residence was at Standon in Hertfordshire. He was Cromwell’s chief agent for King Henry VIII in the Privy Chamber in the late 1530s, and supported Edward Seymour’s bid for the Protectorate in 1547. Sadler held a large number of properties in the area, including Sutton House in Hackney, where he built a new brick house in c.1535 (Phillpotts 1998). The Low Hall lease was for 21 years at the same annual rent of £15 8s. (*LPH* xvi 331, no. 678(58); *PRO E318/35/1921/30*). Sadler did not himself live at Low Hall, but regarded it as an investment. In 1540/1 the house and manor were farmed out to John Webb, who was apparently in possession before Sadler acquired the lease (*BL Additional MS 35826 ff.29v, 37, 37v*).

The principal lands of the manor were the pastures of Bushe Marshe, Hernes Marsh and Butchers Marshe, which was leased out for a year to two butchers of St. Nicholas Shambles, presumably to graze cattle for slaughter. Hernes Marsh and the smaller arable plots were in the hands of local tenants. Sadler was uncertain of his title to some of these lands, and had little control over them. He proposed to improve the drainage and the profit of the pastures by scouring the two great ditches running along both sides of the Low Hall Lane embankment, and the ditches on the north side of Butchers Marshe which fed into them. The Walthamstow tenants were also to be persuaded to scour the ditches on the north-west side of Butchers Marshe. Sadler proposed to convert Butchers Marshe and Bushe Marshe to meadowland by grubbing out trees; he complained that Bushe Marshe was completely overgrown with thorns when he visited (*BL Additional MS 33592, ff.66–67*).

Sir Ralph Sadler later sold his lease of Walthamstow Toni, and in 1550 (when he was Keeper of the Great Wardrobe) he was granted a perpetual lease of Low Hall, for a reserved rent of £10 per annum payable to the Court of Augmentations (*CPR 1549–1551*, 267). In December 1559 he bought out the reserved rent for £209 12s. and converted the lease into a fee simple tenure, effectively buying the freehold from the Exchequer (*CPR 1558–60*, 296; *BL Additional Charter 26024*). In the following year, he sold the manor to Thomas Argall of London and his wife Margaret. Included in the transaction were the court rolls, rentals, terriers, letters patent and other documents relating to the manor, most of which have since perished (*VCHE* vi 256; *VHM Acc 8289/T5*).

While Sadler remained the leaseholder of Low Hall for a limited term, it seems unlikely that he would have invested in a large building programme. Therefore it is more probable that he built the

northern cross wing of excavated period (2.5) after he had acquired perpetual control of the property in 1550.

Members of the Argall family continued to own Low Hall throughout the remainder of the 16th century, and all of the 17th century. There was a crown grant of Low Hall to William Tipper and Robert Dawe in 1592, but this probably never took effect; Tipper and Dawe were “concealers”, who sought out and acquired titles to former crown properties whose owners had concealed the rents or dues they owed. The Argalls had property elsewhere in Walthamstow, Barking and other parts of Essex. Their fortunes declined in the Commonwealth period of the 1650s, when some of them were heavily fined for their support of the Royalists in the Civil War. Dr Samuel Argall of St. Martin-in-the-Fields bequeathed the manor in 1684 to his wife Elizabeth, who was still living in 1699. She was succeeded by her daughter Elizabeth, the wife of Nathaniel Green (Lysons 1796, 208; Bosworth 1920, 10; *VCHE* vi, 256; PRO PROB11/377 quire 109; VHM Acc 8289/T10). The earliest surviving court book of the manor began in Elizabeth Argall’s time in 1693 (VHM Acc 927).

By the early 17th century the Argalls were probably not living at Low Hall, but let it out to tenants. They probably rebuilt the house in brick at this time, as represented by excavated period (3.2). In 1611 the Assize records noted that there was a hole in the highway near Low Hall, which was the house of Richard Garnett, a moneyer. The parishioners were responsible for its repair (Cockburn 1982, 106 no. 683). In 1625 the manor house and its lands were leased to John Benfield (VHM Acc 8289/T10). The Royal Commission survey identified elements of the house as dating to c.1700, and a granary to the north-east of the house as late 17th or early 18th century (RCHME 1921, 248).

In the early 17th century there was still some doubt as to which lands belonged to the manor. A case was fought in the Court of Requests about copyhold land in Stonyfield and Nursefield, which may have belonged to either Low Hall or High Hall. Nursefield had been changed from open arable land to four or five pasture enclosures (PRO REQ2/300/1). John Argall sold five enclosures called Ashney Fields in the Marsh Street area in 1631. Some of the manor fields were still choked with bushes at this time (VHM Acc 8289/S3). In the 17th century cottages and orchards were established on portions of the manorial waste land along Markhouse Lane, and leased to tenants on nominal terms (ERO D/DZg 24). In the 1630s the boundary between Walthamstow Walk and Leyton Walk in Epping Forest still ran along the parish boundary between Walthamstow and Leyton. Mark House, to

the south-east of Low Hall, was so called because it stood on this boundary (PRO MPE1/130).

The manor of Low Hall descended from Nathaniel and Elizabeth Green to their daughter Lucy and her husband Raphael Courteville in the early 18th century. In 1741 it was purchased from the Courteilles and the Greens by Samuel Bosanquet, a banker from a French family. The following year he had a survey and map made of the manor lands. The manor continued to descend in the Bosanquet family, a series of Samuels, until the late 19th century. The main family residence was nearby at Forest House in Leyton, purchased in 1743 (Lysons 1796, iv 208; Bosworth 1920, 10, 11; Lee 1966, 53; *VCHE* vi, 257). Manorial courts continued to be held in the names of the Bosanquets, their records surviving as an almost complete series from 1742 to 1883 (VHM Acc 928–930).

The parish of Walthamstow remained rural in character and well-wooded until the mid 19th century, when suburbs of brick houses began to spread across its fields (*VCHE* vi 240, 244). Markhouse Common (the former Broom Field) was enclosed and cottages were built on it in 1848. Six acres of allotment gardens were established here in c.1851 (Clarke 1861, 13, 14).

In the 18th and early 19th century the landscape of Low Hall manor retained the three-fold division between arable fields to the east of the manor house and along Markhouse Lane; pasture enclosures to the west of the manor house along both sides of Low Hall Lane; and small pieces of meadowland in the common marshland beyond Low Hall Gate along the River Lea. In a survey of the manor in 1742 there were 219 acres of demesne land, 63 acres of copyhold land, and about half an acre of cottage leaseholds (Bosworth 1920, 7, 8; ERO D/DBq/M1; VHM Acc 8289/S4 and S6). The copyhold tenancies consisted of some of the arable pieces, such as the strips in Nursefield, on the west corner of Markhouse Lane and Coppermill Lane, in 1776 and 1811 (Barns 1923, 38 no 5069). The demesne lands were the arable fields and pastures to the east and west of the manor house. The parish gravel pit lay beside Markhouse Lane in Parish Field to the north-east of the manor house (ERO D/DQs31).

In the 18th and 19th centuries the demesne lands and manor house were called Low Hall Farm and were leased out by the Greens, Courteilles and Bosanquets (Lee 1966, 53). In 1728 they consisted of 220 acres and were leased for eleven years to John Woodfield (VHM Acc 8289/T17). In 1836–41 and 1843 they comprised a 220 or 225-acre farm let to Charles Burrell on a seven-year lease (Law 1966; ERO D/CT382; D/DOp/B26). In 1863 the farm covered an area of 210 acres, and was let to Henry Boston on a 21-year lease (Bosworth 1920, 11).

A MOATED MANOR AT LOW HALL, WALTHAMSTOW

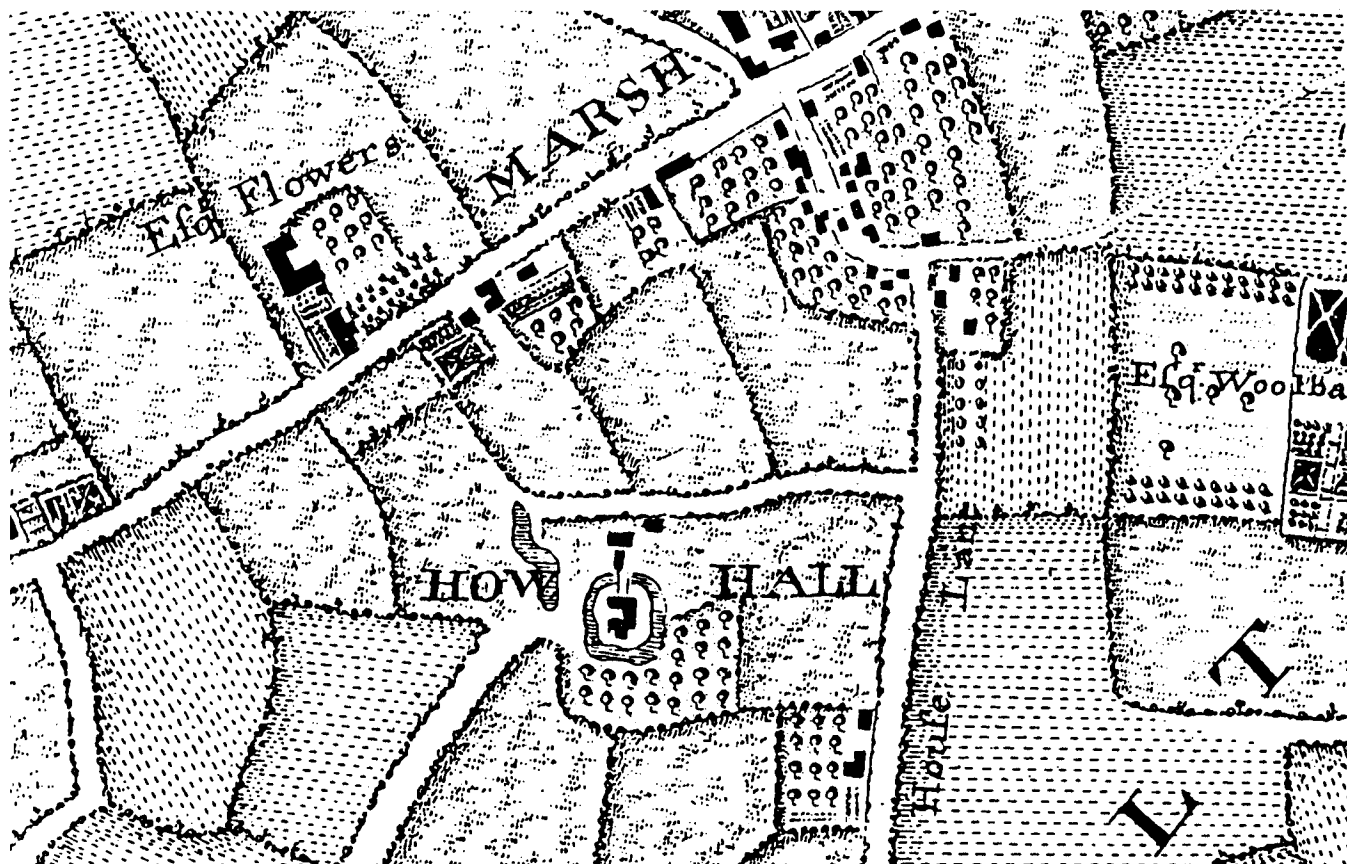


Fig. 8 Low hall from John Rocque's map of 1746.

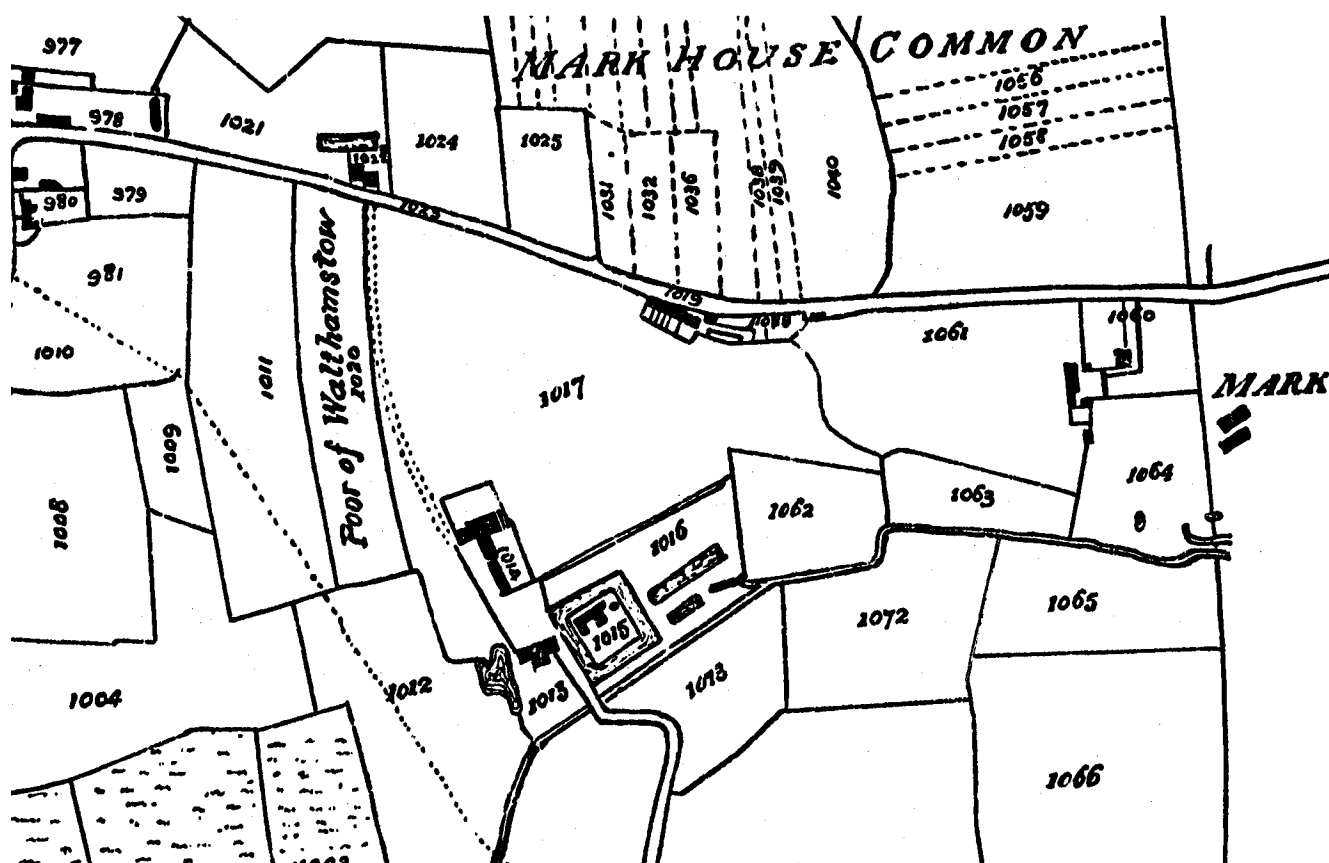


Fig. 9 John Coe's map of Walthamstow, 1822.

The manor house area is first shown on the manorial survey map of 1742-3 as *Low hill*, but no details of the buildings can be discerned. Rocque's map of 1746 calls the house *How Hall* and shows it as moated, but the form of the plan is rather indistinct (Fig. 8). The site of the manor house appears in a similar form on Chapman and André's map of 1777, John Coe's map of 1822 (numbered as 1015) (Fig. 9) and the Tithe map of 1843. On these maps the house corresponds in form to the excavated period (3.3). It is still surrounded by the rectangular moat, and flanked by drainage ditches to the east and west, with two large rectangular ponds lying to the south.

In 1836-41 the farm house was described as part brick-built and part plaster and tiled, with two parlours, a 'good kitchen', a dairy, a brewhouse and a cellar, and five chambers upstairs. There were pleasure and kitchen gardens, divided by a brick wall, 'altogether forming a respectable residence'. The agricultural buildings to the north and north-east of the house comprised a large brick barn, a brick-built bullock house for 36 head, and several timber-built cattle sheds, stables, a poultry house and a wagon shed grouped around three cattle yards and a large manorial pound used to house stray animals (ERO D/DOP/B26). Sheep pens were in the field to the north of the moat (Law 1966, no 1013).

By the 1860s the main building had been reduced in form to correspond to the excavated period (3.4), but was still surrounded by the moat (ERO D/DBQ/P2). In 1884 a sale catalogue described the rooms of the house and their contents: a dining room, a drawing room, a kitchen, a large back bedroom containing a five-foot four-poster bed, a small back bedroom, back bedroom no 2, and a servant's bedroom. The garden contained a 'quantity of Echeverias'. The farm tools, harness and stock were also for sale, including the two farm dogs and their kennels (VHM Buildings File: Low Hall).

The farm had been sold to the Walthamstow Local Board in 1877 for £25,300, although the Bosanquets retained the title of lord of the manor. It apparently continued to operate as a farm for a few years (probably until the sale of 1884), being made profitable for the Board under the management of John Hitchman, who was well-known for his herd of Friesian cows (Bosworth 1920, 11; Hatley 1953, 14; Lee 1966, 53; *VCHE* vi, 257). A sewage outfall works was subsequently built on part of the estate to the north-west of the farmhouse. By the end of the century the moat and the ponds had been infilled (ERO T/P 75/1; OS maps 1898, 1915, 1939).

By the end of the 19th century housing had spread up to the north-east side of the former moat, the layout of the streets reflecting the earlier field divisions. This is particularly marked to the

north of the site, where the curved streets continue the lines of the ploughed field strips. The former Parish Field was left open as allotment gardens, and two of the pasture enclosures became St. James's Park. By 1936 a smallpox hospital and more housing had been built to the south (OS maps 1898, 1915, 1939). In July 1944 a V1 flying bomb destroyed the old farmhouse and left a crater in the courtyard (*VCHE* vi, 257).

The excavation

Period 3.1

Disuse and robbing of medieval structure

The systematic dismantling and robbing of the medieval manor house, probably during the early 17th century, was indicated by a series of mixed destruction and levelling deposits. These were found principally across the hall and solar, sealing the structural additions described in (2.5) and (2.6). It would appear that the robbing of stone from the ruinous foundations was carried out in a somewhat random and piecemeal fashion, although the back wall of the house and the majority of the side wall to the service wing appear to have been completely removed in a single action.

Several pits of varying sizes, mostly concentrated in an area over the old kitchen range, contained animal skeletal remains. The animals included two dogs, two cattle and a pig, the latter being in a small cut within the area of the hall. Given that the overlying external deposits were machine excavated, it is likely that the cuts containing these animal remains are not of a single phase, and that the edges of the pits were only seen where they cut into cleaner brickearth, at a lower level.

The majority of the pottery from this period, the first to produce a sizeable assemblage of pottery (105 sherds), is of a transitional late medieval – early post-medieval date. Because these contexts are primarily from disuse and robbing they contain a small amount of residual and intrusive material but overall the assemblages date from 1480 to 1600. Many of the contexts contain typical assemblages of this early Tudor period comprising Surrey-Hampshire Borderware and Early Borderware, and red earthenware fabrics: post-medieval bichrome redware, post-medieval fine redware, post-medieval slip-painted ware, early post-medieval redware and post-medieval slip-coated redware.

This period also contained later contexts, dating from 1580-1700, and the first occurrences of coarse post-medieval redware and Surrey-Hampshire Red Borderware. The later assemblage in the fill of a robber cut suggests that the early manor house buildings had been dismantled and abandoned by c.1580.

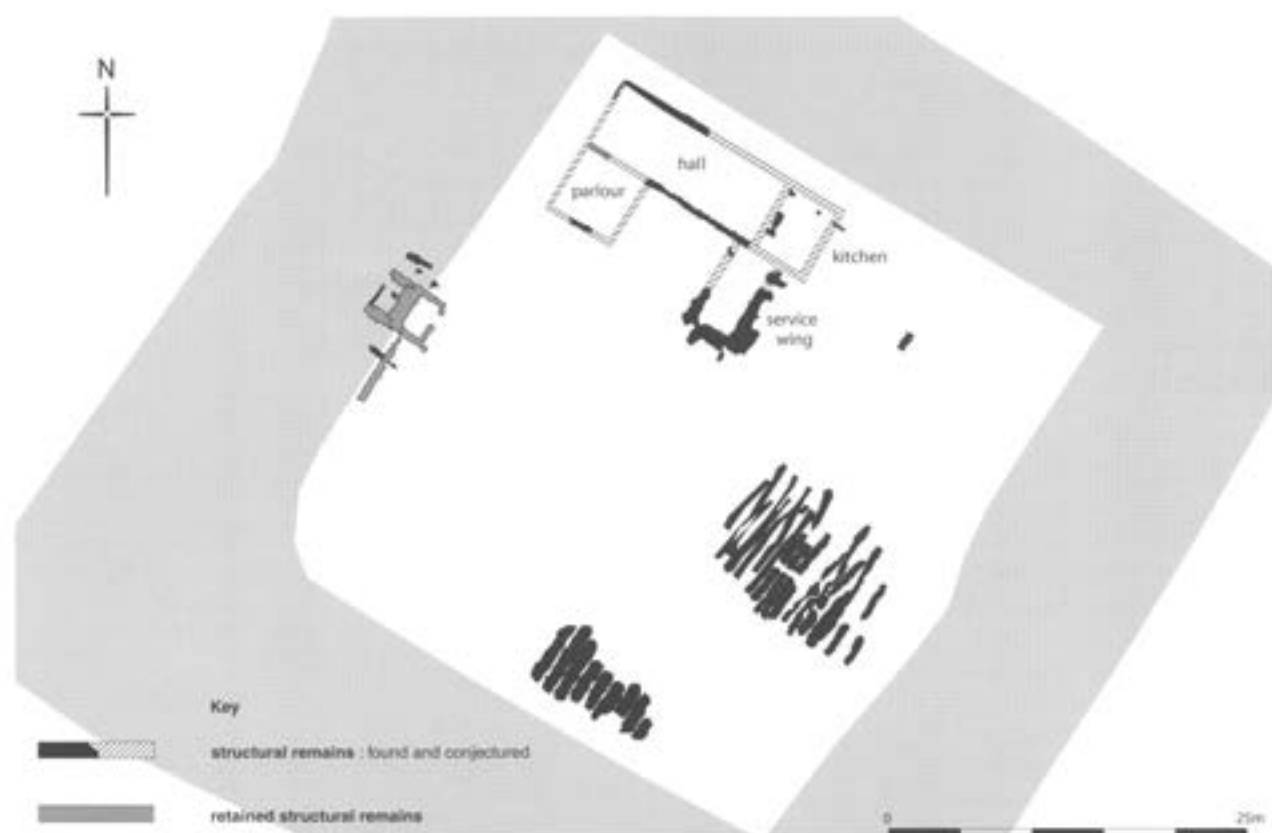


Fig. 10 New brick manor house (period 3.2).

A moulded stem of a crystal drinking glass apparently dating before 1600 is an indicator of affluence, since this prestigious material was still at a premium at that date.

Period 3.2

New house set around small courtyard.

The new manor house was much smaller than its predecessor and underwent a succession of changes and modifications during its history. There was some continuity with the earlier medieval plan since the new structure was set over its later (2.5) wing, utilising and rebuilding most of its front wall. With the demise of the hall, the front of the new house no longer faced onto the bridge, and was turned through 90 degrees to face south.

The house was U-shaped, with two small wings projecting from the main rectangular body of the structure. Together these enclosed three sides of a small courtyard that opened out onto the main courtyard beyond. Its original ground plan appears to comprise a hall and adjoining kitchen and service wing, with a parlour occupying the principal wing at the end of the hall (Fig. 10).

The remains of the early house were very fragmentary, due to a succession of rebuilds and repairs to its structure, and a reasonable amount of

conjecture is therefore necessary to understand its plan, although its form is mirrored, and becomes clearer in (3.3). The walls and their foundations were mainly of brick, although the front aspect and east wing had masonry footings. The neatly built mortared chalk and flint foundation to the inner front wall contrasted sharply with the footings for the adjoining east wing, which were composed almost entirely of unmortared ragstone. Some medieval Greensand architectural fragments were also present, which was presumably reused from the earlier manor house. Although the foundations of the service wing appeared to be very rough, it is deceptive since their inner edges were extremely regular and square and the more ragged outer edges look to have spread following the dismantling of its superstructure.

The kitchen was located in a small room behind the service wing at the lower end of the house, and incorporated a heavily scorched brick hearth for a fireplace. The only traces of the west wing were confined to a thin linear spread of mortar from the foundation of its front wall that immediately underlay the brick rebuild in (3.3).

The rear wall of the house was made entirely of brick and was best preserved at its west end where it was cut down the external face of the chalk wall of the medieval wing. To the east, on a similar but oddly skewed alignment, were three small sections

of brickwork that were heavily disturbed by a series of later foundations. Although faced on its north side, it is hard to believe in its surviving form that these footings alone would have formed the continuation of one of the principal walls to the house. The siting of the house too close to the edge of the moat appears to have been a costly mistake, which necessitated numerous rebuilds and repairs to its back wall, due to settlement, throughout the life of the building.

Externally, the area previously occupied by the hall and kitchens of the medieval manor house were given over to gardens. The homogeneous composition of the garden soil is suggestive of deposits scoured-out from the moat during one of its periodic cleanings. At least two phases of linear, inter-cutting bedding trenches were defined within this area, with some suggestion that some of the ruinous footings of the earlier buildings were still visible, and therefore avoided.

The medieval bridge abutment appears to have remained in use with the new house, and incorporated a modified section of an earlier timber structure, which was placed in a forward position, between the projecting ashlar bridge walls. The morticed oak base-plate held a post at one end, which was dated by dendrochronology to between 1552–3. Combined they appear to be a rather basic repair, probably necessitated by problems with the integrity of the overlying wooden bridge structure. As well as being in a secondary position, the base-plate had been shortened and the post re-set, at the opposite end of the mortice from where it was originally housed. These timbers were clearly always associated, and it is likely that they were originally part of the base-frame of a mid 16th-century timber bridge, which was dismantled and its timbers reused.

From the machine excavated moat fills in front of this structure, a group of discarded lengths of morticed base-plates, of differing dimensions, were recovered. Although none proved viable for dating, one of them was identical to the articulated base-plate and had come from the same parent tree.

Found on either side of the abutment were the fragmentary remains of a brick and stone drain and the base of a brick garderobe or cesspit, which was constructed against the moat side wall of the gatehouse. The cesspit projected over the edge of the moat and would probably have supported a jettied first-floor privy. The addition of this feature implies that the original stone garderobe to the south was no longer in use and that the gatehouse structure would have been modified to reflect this, although no physical evidence survived to indicate its final form.

Period (3.2) produced the largest assemblages of finds from the site, with the largest groups of

material being found in the moat fills in the area of the bridge and the garden soil horizons which covered the robbed remains of the medieval house. The individual finds categories are discussed in detail below.

The majority of the 1198 sherds date from 1480–1600 and were found associated with moat fills around the abutment and timber bridge structure. Smaller assemblages of similar date were found in make-up layers across the solar extension, and contexts relating to the garden bedding trenches.

The most common element of all the assemblages of this date are large quantities of coarse red earthenware, such as early post-medieval redware (bung-hole cisterns, carinated bowls, pipkins, jugs and a water sprinkler) and post-medieval slip-coated redware (large carinated bowls, dishes, pipkins and jugs with either a yellow or green glaze). In addition there were smaller quantities of post-medieval slip-trailed redware jugs and dishes, and post-medieval slip-painted ware jugs or pitchers. The presence of a calcareous tempered ware jug is unusual in some of these assemblages. All of the vessel forms are of a standard domestic range, with the exception of the sprinkler.

A smaller but common element of these assemblages are products of the Surrey-Hampshire Border ware industry. A number of Early Border ware drinking jugs occur, though the standard green or yellow glazed Border ware pipkins, jugs, cups, bowls and stool pans predominate.

Some assemblages of late 16th-century to early 17th-century date (1550/1580–1650) were also present. These finds were recovered from a number of deposits directly associated with the 17th century manor house, including internal floor levels and external courtyard metallings to the front of the post-medieval house. Contexts within the moat fills, garden soils and garden bedding trenches, contain some of the largest of these late assemblages (up to 167 sherds).

These assemblages, like those of late 15th to early 16th-century date, contain high proportions of early post-medieval redware and post-medieval slip-coated redware collar-rimmed bowls, but with additional products in post-medieval black glazed earthenware, post-medieval redware, fine post-medieval redwares, Metropolitan type slipwares and Cistercian Ware mugs. In addition to standard domestic vessel forms are garden products such as a sprinkler watering pot.

Surrey-Hampshire border ware products are still an important element of these later assemblages. Products include Early Border ware bowls and jugs and a large range of standard vessels with yellow and green glaze in which pipkins and bowls

predominate. The substantial remains of a two-handled deep bowl, which may be a stool pan, is a late 16th-century form. More unusual products in Red Border ware are a dish with slipped decoration and two chicken feeders found associated with the garden bedding trenches.

Continental imports are a more regular feature of assemblages dating from the late 16th century onwards. The most common imported wares are Raeren stoneware drinking jugs, though these ought to be associated with assemblages dating from before 1580 and may therefore be residual in (3.2). Of these a face jug with applied face and nose is of particular note as one of the rarer products of either Raeren or Aachen between 1475 and 1525 (Hurst 1986). Frechen jugs and *bartmanner*, which ought to be the more popular product at this date, occur only in small quantities. Other wares which are indicative of a higher standard of table setting are fragments of Siegburg stoneware, a 17th-century Martincamp red earthenware flask, tin-glazed earthenware in the form of a dish and several pieces of flower vases with blue and yellow medallion type decoration. These have provisionally been identified as being made in the South Netherlands, but it may be that their provenance is actually Italian (Goffin 1998). Spanish wares are represented by a fragment of micaceous redware and a piece of starred costrel with blue decoration.

The greater proportion of the bones in period (3.2) were recovered from the external courtyard and garden levels. Cattle, sheep and pig bones dominated these assemblages with a bias towards the first two species. All three domesticates were mainly represented by adult animals, the data perhaps pointing to a predominance of young adults amongst the cattle assemblage. This would suggest the availability of, or preference for, prime beef. Of interest, from one of the courtyard levels, was the presence of a very young calf, probably no more than one month old. The age of this animal suggests an infant mortality rather than a calf kept for its veal. While this may not therefore be an indication of high status, there is a small but noticeable presence of game species, including rabbit and teal.

The moat fills provided a small collection of interesting items. These included the butchered radius of a very young calf, a clear indication of high status, as well as a butchered horse metatarsus. The butchery to the latter bone may be the result of skinning, which in turn could be related to a meat use of this animal. Certainly there are numerous cases of butchered horse bones at similarly dated country houses, the horses in these cases possibly being used to feed their dogs. Finally there are a few instances of deer bones, including a clear example of high status food waste, a fallow deer scapula, a relatively complete dropped red deer antler and



Plate 5 Late medieval mermaid brooch found in the moat.

another dropped example, which has been fashioned into a large coat hook. Of all the finds from the site, this item is perhaps most redolent of manorial living. Whether it was intended as an aspirant trophy, or simply used to hang clothes on, it seems a particularly apt fixture with large game presumably available to hunt in nearby Epping Forest if not even closer.

Most of the metalwork from the site was found in period (3.2) deposits, is of 15th- and 16th-century date, and was recovered using a metal detector. By far the largest and most diverse assemblage of material was found in the moat fills in the area of the bridge. Smaller numbers of metal finds were found scattered in the garden soil, which had been deposited over the footings of the robbed medieval house.

The finds included a variety of buckles (two of lead or tin are standard versions for shoes), strap ends, and a couple of mounts which were all made of base metals, while a fragment of a silver-gilt finger ring from this period imitates entirely precious versions. There are tens of the universal, plain lace chapes and a large number of pins used to secure women's head dresses, but only one or two of these have even simply decorated heads. By contrast there is only one button of comparable date.

The upper half of a late medieval, rather rough lead or tin brooch depicting what is almost certainly a mermaid was perhaps a slightly risqué motif (cf. Hopstaken 1987, 54 no. 286, found in the Netherlands) (Plate 5). Marginally later is a copper-alloy hooked clasp that is almost a type fossil of the early 16th century, of a form known from Norwich,



Plate 6 A 16th-century pipeclay tondo, probably depicting the Flight into Egypt.

the West Country and the Isle of Man as well as the City of London.

A sword-belt hook with a foliate motif lifts the assemblage onto a higher social level, and a second hooked strap end, of stamped, tooled and white-metal coated copper alloy, is arguably the most elaborate and individual of all these items, decoration otherwise being largely restricted to very common motifs. It is notable that even from this manorial site, retrieved precious metal in dress is limited to the coating on a single object, and most of the accessories are of types regularly encountered.

There are clear hints of affluence in part of a Purbeck-type marble mortar and a couple of rims and two fragments broken-off feet from cast copper-alloy cooking vessels. An animal-headed copper-alloy terminal probably came from a large, late medieval sheet bowl (cf. Egan 1998, 175 no. 487).

A late 15th- or early 16th-century cloth seal is stamped with what seems likely to be a weaver's or clothier's privy mark – on one face blackletter **nt** to the sides of a bell on a beam, and on the other a conventional mark with a lombardic-style **G**. Parallels have been recorded in London and

Salisbury (Egan forthcoming), but at present it is impossible to say whether these seals would have gone on Wiltshire cloths or ones woven elsewhere.

Spinning as a routine pastime for at least one of the women at the manor is attested by an imported German spindle whorl of drab stoneware, probably from the early 16th century (cf. Gaimster 1997, 248-9 no. 104), though it was found in a later deposit. This everyday object contrasts markedly with another ceramic import – a fragment of a small decorative pipe-clay tondo or plaque moulded with a highly accomplished scene, probably the Flight into Egypt – a suitable subject in the 16th century for a well-to-do, pious household to display prominently within their home (Plate 6). The full diameter of the plaque would have been c.50mm and there may have been a wooden frame. This kind of pipe-clay roundel was being produced in Cologne – (cf. Neu Kok 1993, 23 fig. 9 & 69 nos. 182-3). A book clasp of copper alloy could perhaps be from a household bible or prayer book.

Sixteen sub-cylindrical lead weights from fishing nets were found in several contexts from the late medieval period to the 17th century. Together with a copper-alloy wire fishhook these finds suggest continuity in the rearing of fish in the moat or special ponds to supplement diet – fish being particularly important prior to the Reformation for Fridays and Lent. Five lead shot balls may have been from trying to take birds for similar culinary motives, or they may reflect target practice in the grounds for the larger game suggested by the antler hook. A spade shoe, a robust pruning hook and a sickle with a prominent maker's stamp (from a 16th-century context) reflect horticultural or agricultural aspects of the estate.

Looking beyond the manor to the wider estate and further, several finds relate to horses. A series of 31 horseshoes date from the 16th and mainly 17th centuries; these are mostly of a post-medieval, heavy-duty working type, perhaps more suitable for agricultural animals on the later farm than for long-distance travel. Two of the three rowel spurs recovered are assignable to the 17th century, the other perhaps being from the 18th century, though found in a later deposit. Part of a similarly late, elaborate iron bridle bit with advanced corrosion is an unusual find.

The range of coins found contrasts markedly with those from most urban sites in comprising a relatively high face value, with seven pieces of silver, from the late medieval/16th-century period (denominations go up to a sixpence from towards the end of Elizabeth I's reign). The nine later jettons include three French/Low-Countries issues probably from the 15th century, while six from Nuremberg – all found in the moat, some of them in

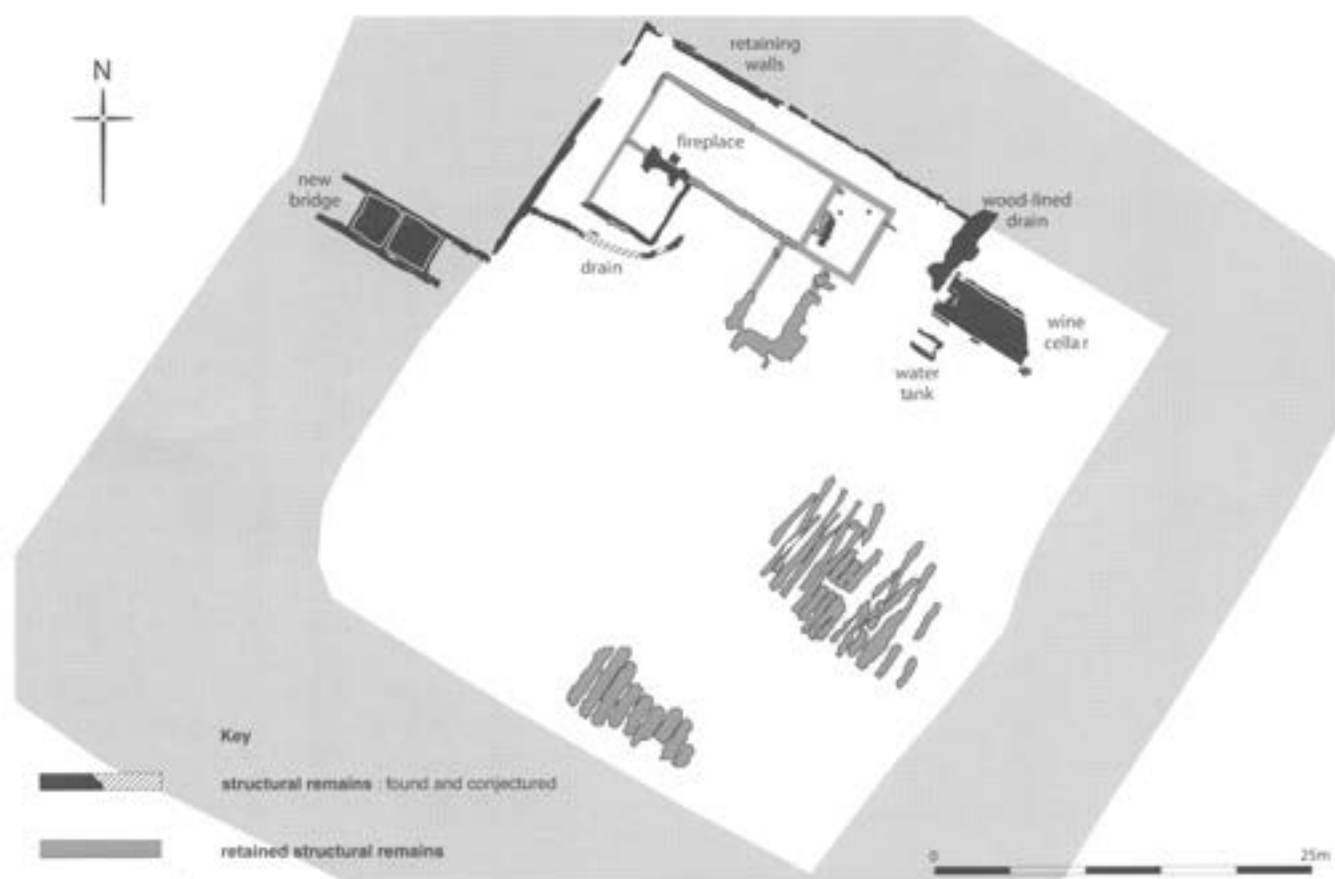


Fig. 11 Remodelling of house and construction of new bridge (period 3.3).

very poor condition - may well go into the 16th century.

From the early 17th century a folded sheet copper-alloy box, which might have held tobacco or tinder, is a very unusual find. The stem of a brass spoon is a more standard item. A complete cast copper-alloy candlestick is one of the few excavated ones found complete - perhaps a phenomenon associated with affluence. More telling of the high status of the building itself is a fragment of window lead with the makers' initials and a date along the inside of the web - *EW*169..*RA* - as a quality-control mark. Lead extruded too much in an attempt to scrimp on the metal used could be so thin that the stability of a window in high winds was impaired, in extreme cases leading to collapse (Egan, Hanna and Knight 1986). A cloth seal with a double-headed eagle is probably from a Continental textile, perhaps an import from one of the Low Countries manufacturing centres like Bruges or Leiden.

Children's diversions are arguably indicated by parts of what may have been an ornate rattle of stamped sheet copper alloy and what could perhaps have been a lead or tin plaything in the form of a miniature amphora. This was not a common vessel

form outside southern Europe at this date, and it seems a strange choice for the suggested purpose.

A square weight of copper alloy for silver-sixpence coins seems an odd find from a non-commercial site (cf. Biggs 1992, 21), although this item could be attributable to Richard Garnett, a moneyer, who was a tenant at Low Hall in 1611.

Period 3.3

Remodelling of house in brick (external wine cellar/brew house, new brick bridge and moat walls)

The basic external plan of the house described in (3.2) appears to have remained unchanged into (3.3); however its west wing was rebuilt in brick and several internal modifications took place (Fig. 11). These alterations included the construction of a twin, back-to-back, fireplace between the parlour and hall and the enlargement of the hearth in the kitchen. The presence of bricks covered in soot, in the footings of the west wing fireplaces, suggests that an earlier fireplace had been dismantled.

Set centrally in the hearth of the hall fireplace was a sub-surface brick lined firebox to collect ash. The absence of a similar feature in the adjoining

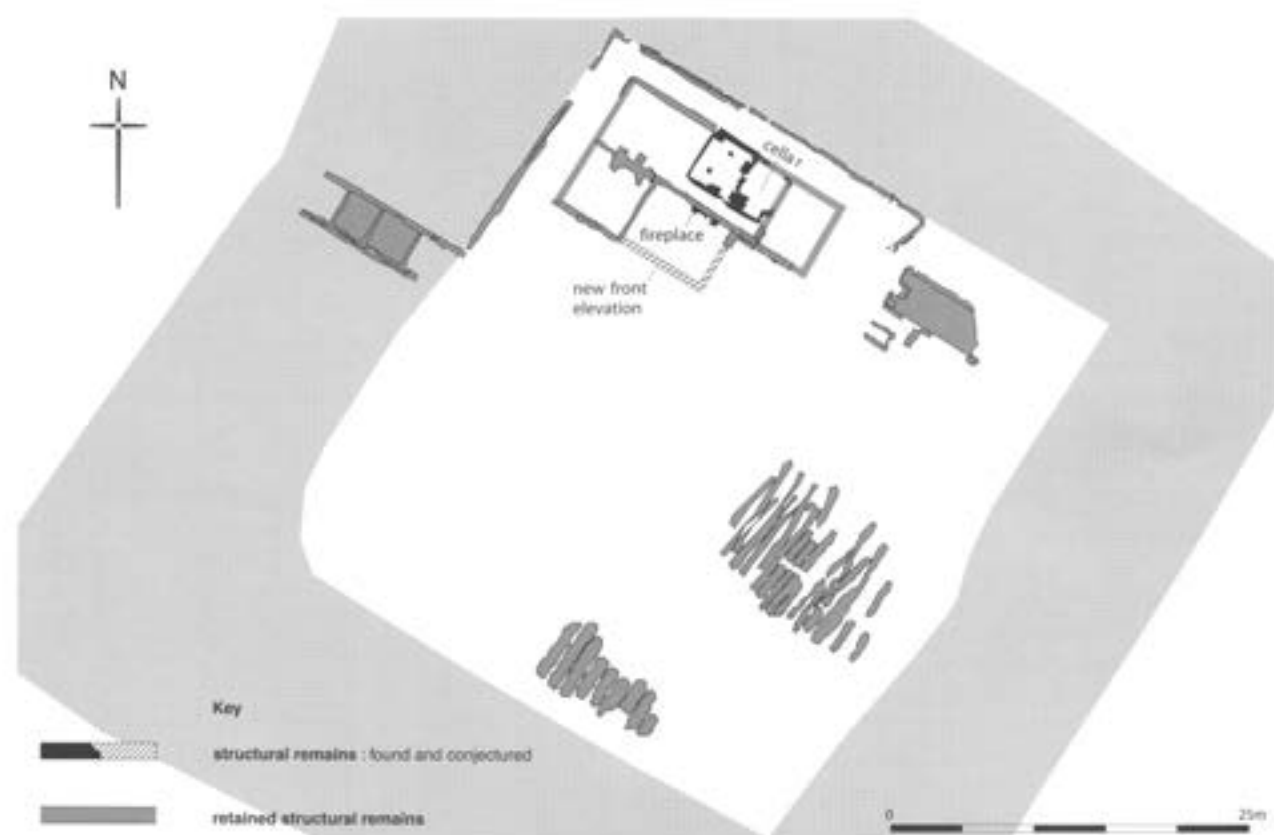


Fig. 12 Rebuild of front of the house over the inner courtyard (period 3.4).

hearth in the parlour is probably indicative of the fireplace being used less often, and therefore cleaned out less frequently.

Most of the building work carried out during this period was external to the main house and was concentrated close to the moat edges. These works included laying a curving brick drain from the inner courtyard of the house to the moat, and the replacement of the stone abutment and timber bridge with a new brick bridge (Plate 2). The bridge was divided into at least four regular square bays, which were filled with brickearth and gravel to form a solid causeway over its central arch. Although the landward side of the bridge was not seen, it is unlikely that it extended more than an extra bay. The exposed length of the bridge was 11m and its walls survived to a height of 2.15m at 6.05m OD.

To the east of the house, a shallow cellared building with two rooms was constructed with its principal doorway facing the kitchen wing of the main building. The cellar had a brick floor that incorporated shallow integral drains, and partially sealed a small, sub-surface, brick sump in one corner. The length of the second room is unknown, as it extended beyond the edge of excavation, but given the projected line of the moat it is likely to have been shorter than its western counterpart. This out-building was probably used as a wine cellar or brew house, and a copper spigot for a barrel was



Plate 7 Early post-medieval redware jardinière decorated with applied face mask.

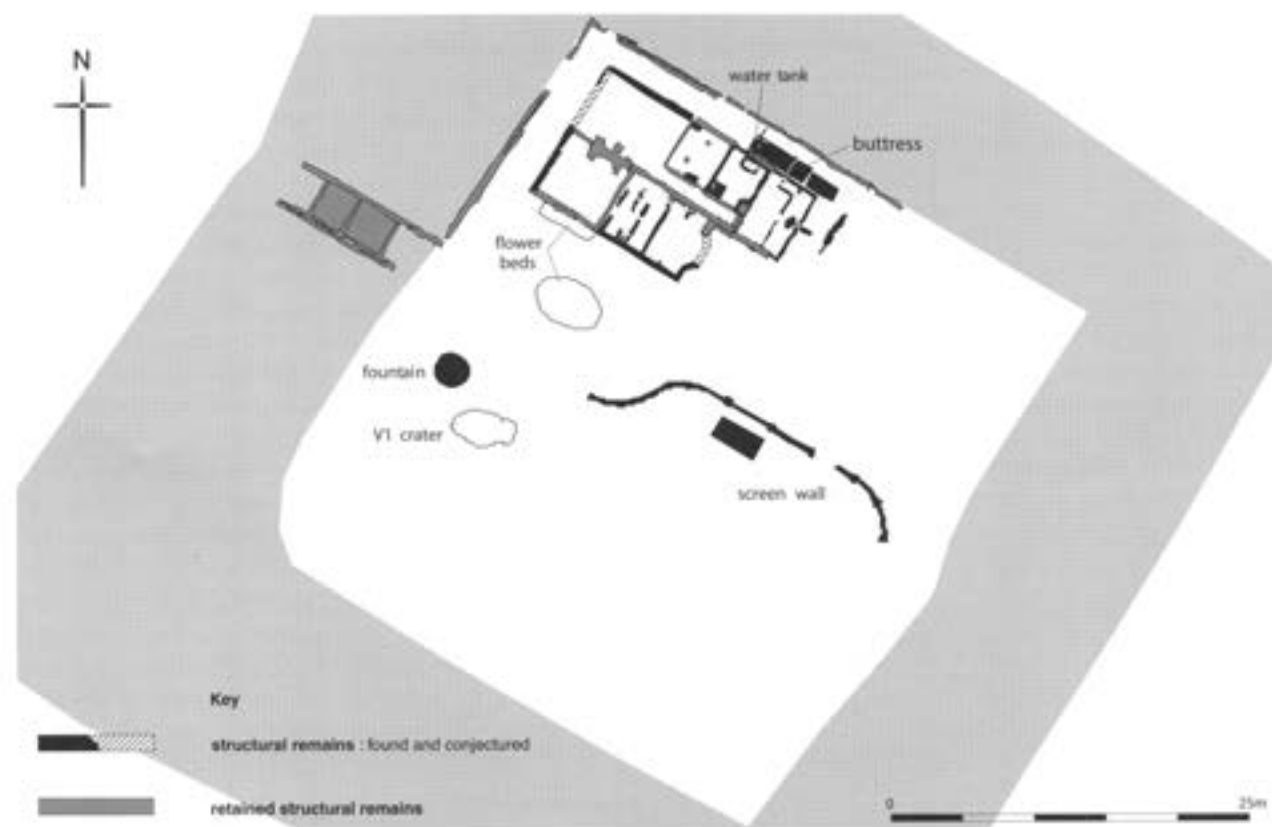


Fig. 13 Later additions to the house and garden (periods 3.5–4.1).

found in one of its internal drains. At the front of the cellar a rectangular, part brick-lined feature was probably an external water tank or sump. At its west end, a large linear cut contained the decayed remains of a wooden box-drain, which originally emptied into the north side of the moat.

Two brick retaining walls were built along the inner edges of the moat adjacent to the west and north sides of the house, although these walls could be moved into periods (3.4) or (3.5). The construction of these walls appears to have been necessitated because of the risk of the house foundations being undermined by the gradual erosion of the sides of the moat. Although the walls appear to cut the ends of both of the moat side drains, it is possible that they remained in use by being channelled through gaps left in the brickwork.

A vessel of intrinsic interest from this period is a rare example of a garden jardinière in early post-medieval redware with traces of splashed lead glaze on the exterior (Plate 7). The form is similar to a large globular jar with squared rim and has an external flange around the shoulder of the body. The vessel is decorated with at least one large applied face mask of neo-classical style and applied strips with impressed decoration representing garlands of foliage.

There is little evidence from the 18th-century metal finds assemblage to suggest a continuation of

the comfortable affluence of the earlier 15th and 16th century period. The one exception to this is a very fine, gilt copper-alloy openwork watch key in rococo style. The key must have been for an impressive and sizeable timepiece.

Period 3.4

Rebuild of front of house over inner courtyard and construction of internal cellar

At some point, possibly as late as the end of the 18th or early 19th century, the existing plan of the house, which had evolved in periods (3.1)–(3.3) underwent significant alteration. The inner courtyard, between the two projecting wings, was closed by a new front wall and in the extra room that this created, a new fireplace with a flagstone base was added. Only the west wing was incorporated into the new building, with the poorly founded east wing being dismantled, its footprint avoided, and the new walls deliberately built to skirt around its remains (Fig. 12).

At the back of the house, a cellar with a tile and flagstone floor was inserted, with steps in a corner angle leading to the kitchen and a rear door giving access to a narrow path along the side of the moat.

The more common of the 18th-century ceramics in periods (3.3) and (3.4) are Staffordshire white salt-glazed stoneware bowls, tea bowls and chamber pots, dishes and mugs, a Chinese porcelain tea cup

and saucer, and plain white or pale blue tin-glazed earthenware chamber pots and ointment pots. The presence of English porcelain, dating from 1745, and transfer-printed ware in period (3.4), marks the introduction of late 18th-century ceramics into the assemblage.

Period 3.5

19th- and 20th-century modifications

Later modifications to the cellar saw the addition of a neatly constructed brick-lined water tank against the back wall of the house (Fig. 13). It was rendered internally with cement to make it water tight and was 0.80m deep. This tank was filled by rainwater channelled in from the outside, presumably from a downpipe on the east gable wall.

The main body of the cellar was divided in two by a brick partition wall, from a point immediately west of the back door. The new wall was set on a timber base-plate, which had largely decayed, and had a square dogleg at its south end to accommodate a small cupboard. To access the newly enclosed west room a new doorway was added through its south wall and a step built internally.

At the back of the house the rear and gable walls appear to have undergone a sustained programme of repair or complete rebuild on several occasions. These works were clearly necessitated because of continuing problems with the stability of the edge of the central platform. In an area adjacent to the north-east corner of the house, part of the period (3.3) retaining wall had partially collapsed, and in order to further strengthen the back wall, a large external buttress was added. The integrity of the side of the moat in this area would not have been helped by there being a succession of drains, which discharged at the same point for at least a hundred years. Two rectangular brick-lined pits on either side of the buttress were of contemporary build and were used for storing coal, and ultimately the disposal of rubbish.

This late period also saw a variety of garden features being added within the main courtyard, including a curving screen wall, a small fountain near the bridge, and the introduction of decorative flowerbeds at the front of the house. The 1865 Ordnance Survey map of the area shows the larger of these features, and also indicates that the additions to the back wall of the house were in place by this time.

The pottery assemblage from period 3.5 contained a number of late 18th-century and early 19th-century wares, including another example of a vessel associated with horticulture, a large handmade flowerpot in post-medieval earthenware decorated in a crude fashion with heavily scored lines on the body replicating tree bark.

Period 3.6

Late 19th-century infilling of moat

Only a small section of the later moat fills, along the south side of the brick bridge, were excavated but nonetheless these produced a large assemblage of ceramic finds. The wares included a mix of ordinary utilitarian ceramic vessels together with forms which are more unusual and suggest a more expensive and refined taste. Much of the group consists of quantities of English stoneware bottles, marmalade and Vaseline jars, ointment pots, tooth powder dishes, and transfer-printed ware teapots, mugs and a complete plate. The better quality table and display wares included vessels of continental porcelain and plates from a tea service of superior quality.

Period 3.7

Final internal modifications to farmhouse

The latest internal modifications to the farmhouse saw the raising of the floor and back door threshold of the rear cellar. The original tile and flagstone floor was largely robbed before this took place, except in inaccessible areas that were sealed beneath the secondary steps and partition of period (3.5). The new surface was poorly made and was composed of roughly levelled concrete laid over a substantial layer of loosely compacted domestic waste material. This make-up contained large amounts of highly fired clinker, broken glass, ceramic bottles, china and clay tobacco pipes of late Victorian date. This material completely filled and covered the internal water tank to the rear of the cellar. The disuse backfill within the external brick-lined coal pit was of an almost identical composition to that of the cellar floor make-up, and it is likely that both were derived from the same source, and were deposited at the same time.

In the adjoining kitchen a flagstone surface, possibly reusing slabs from the original cellar floor, was laid over the robbed remains of the pipe trench that supplied water from a downpipe on the gable wall to the tank.

Summary of period 3

One of the main difficulties in determining the changing form of the post-medieval house was the sheer quantity of repairs and rebuilds that were in part necessitated by a continued failure of the structural integrity of the walls adjoining the moat. Also, unlike the medieval manor house, which conformed to a reasonably standard plan, the more utilitarian nature of the later house, which saw its gradual drop in status from manor house to farmhouse, meant that its form was more fluid and was constantly evolving.

The early plan is in essence that of a small hall-house with two forward wings projecting from the

A MOATED MANOR AT LOW HALL, WALTHAMSTOW

main rectangular body of the structure. These enclosed three sides of a small inner courtyard, which opened out onto the main courtyard beyond. Its original ground plan appears to comprise a hall and adjoining kitchen and service wing, with a parlour occupying the ground floor of the principal wing at the end of the hall.

With the demise of the great hall based plan of the medieval house, there was a shift in emphasis, since there was no longer a need to keep the frontage facing towards the bridge. The realignment of the house is likely to have been simply because a sunnier, south-facing aspect was by this period considered more desirable than one aligned on the crossing point.

Externally a new bridge was built, and at the lower end of the house a separate wine cellar, or brew-house was added. Further modifications to the house included the demolition of its east wing, possibly due to it being structurally unsound, and the squaring off of the front wall of the house to enclose the courtyard. These major re-building works gave the house a basic rectangular plan, which remained largely unchanged for the rest of its life.

Internally a shallow cellar was inserted at the rear of the house adjoining the kitchen. This was

subsequently sub-divided into two rooms and a second doorway and steps added. The addition of localised retaining walls to the edges of the moat adjacent to the house, clearly failed to correct a persistent problem with the settlement of the east end of the back wall. Further remedial work meant that it, and the adjoining gable wall, were either repaired, or completely rebuilt, and a large external buttress was added to further brace the rear elevation.

The very modest size of the 16th/17th-century house is unusual for manor houses of this period and it is conceivable that in its earliest form it would have incorporated more of the medieval structure, possibly extending across the rooms of the solar extension. There was however no conclusive archaeological evidence to support this theory which therefore remains a matter of conjecture.

The post-medieval horticultural vessels at Low Hall are some of the most significant of the ceramic finds. Whilst sprinkler watering pots are quite well recognised and their function understood, ornamental garden pots found in excavated assemblages are not so common, possibly because they are not so easily identified. Ornamental plant holders in a variety of fabrics have been identified at



Plate 8 The last house at Low Hall c.1920.

various sites such as Hull, Beverley, York, Cowick near Doncaster, Basing House and Lesnes Abbey in Hampshire in late medieval, 16th- and 17th-century deposits (Moorhouse 1984 and 1991). More recently several red earthenware vessels associated with horticulture have been found in the 16th-century deposits at Lloyds Registry (Goffin 1997, archive assessment). The example at Low Hall is from a deposit which contains pottery ranging from 16th to early 18th century date and is therefore of a similar date to other examples discussed by Moorhouse. The similarity in theme of applied decoration is also quite striking, though this particular example is more sophisticated with the applied head being more in the style of a cherub or neo-classical figure. In Moorhouse's discussion of ornamental plant holders (1991) he cites a documentary reference in the 1550 Ingatestone Hall accounts to 'the potters of Stock' supplying four pots for flowers costing 2*d*. Cunningham (1985, 83) observes that in these accounts 'John Prentice, the potter of Stock' also supplies glassware and is therefore more likely to be a trader than actual craftsman potter. However the proximity of the 15th- to 17th-century red earthenware pottery industry at Ingatestone/Stock means that it might have supplied such vessels to Low Hall.

The provenance of the various red earthenware industries in the London region is the subject of a major piece of current research. Until the results of

the chemical analysis are published we cannot be sure if we can identify various products as belonging to specific industries. However, the majority of the early post-medieval red earthenware vessels at Low Hall seem to fit into a pattern typical of the Essex red earthenware industry. Two production centres in Essex are the possible source of the domestic and garden vessels at Low Hall. Harlow, which is situated on the Hammingfield Till, a red-firing drift clay, became one of the most important production centres for the London area and beyond. In the 17th century it specialised in the manufacture of slipped redwares or Metropolitan slipwares. In addition such slipwares were also produced in Loughton in Essex (Ashdown 1970). The second major production centre was based around the Ingatestone/Stock area and supplied most of central Essex with domestic unglazed earthenware throughout the 16th to early 18th centuries (Cunningham 1985).

The majority of 16th- to 17th-century vessels in this assemblage are of a standard domestic nature. The exceptions are the functional and decorative horticultural jardinière and sprinkler watering pots and the Red Border ware chicken feeders. These reflect both the interests of a leisured class and the practical concerns of a larger manorial household. Similarly the 18th- and 19th-century wares are a mix of practical utilitarian wares and fine quality table wares and decorative figurines.



Plate 9 Aerial view of the medieval house.

It is likely that most of the animal bones found in (3.1)-(3.2) date to the occupation period of the 17th- and 18th-century house. The evidence clearly shows that animals were being reared and kept nearby. This is based on the presence of very young individuals as well as the burial or disposal of unwanted carcasses. It can be suggested that such carcasses are more likely to be found within or close to a production site. Cattle and sheep formed the major part of the diet, these perhaps taken from local herds. There is the possibility that the cattle skeletons represent the remains of oxen, these perhaps castrated and reared for their meat within the manorial estate. The evidence for high status is clearly shown by the presence of certain food waste, including the veal and the game animals, in particular the fallow deer.

Wild game appears to have provided for a relatively small part of the diet. This perhaps reflects the gradual dietary shift during this period amongst the wealthier classes towards farm rather than game animals. There are, however, a number of high status accoutrements, including red deer antlers and, possibly, hunting dogs. The dog skeletons can be compared to a recent survey of medieval and early post-medieval dog skulls from various London sites (Foulsham 2001) and also to a large number of dog bones recovered from Tudor deposits at Benbow House in Southwark (Liddle

2000, 53). These large dogs were undoubtedly associated with the nearby bear-baiting arenas, and it can be seen that the dogs from this site are very similar, which suggests that they could be mastiffs. As well as bear-baiting, this type of dog was used for boar hunting and protecting animals.

Period 4.1

Destruction of house by V1 flying bomb

Few archaeological sites can have had such a sudden and dramatic conclusion as that which befell the last house (Plate 8) to stand at Low Hall in 1944. Early on the morning of the 18th July, at 2.07 am, a V1 flying bomb exploded 16m away from its front door, completely reducing the house to rubble. The twisted remains of the bomb were found in a shallow crater in the courtyard close to the bridge.

Conclusion

Before the start of the excavation at Low Hall, local folklore had it that the V1 rocket that destroyed the farmhouse had actually landed in the fountain basin, which was located close to the bridge. Despite a natural scepticism on behalf of the archaeological team, it proved to have been a very near thing having exploded only a few metres away. The juxtaposition of the historical crossing point and the V1 crater conveniently encapsulate the history of



Plate 10 Aerial view of the post-medieval house.

the manor house, from its likely foundation, dated by the earliest bridge structure to the summer of 1344, to its demise exactly 600 years later in the summer of 1944 towards the end of the Second World War.

The excavation at Low Hall provided a rare opportunity to evaluate the entire inner platform and crossing point of an important moated site and revealed the complete plan of the medieval manor house and its various extensions. Similarly, a full plan of the small post-medieval house that superseded it was also uncovered. The plans of the medieval and post-medieval houses are compared in Plates 9 and 10.

In the expectation that the new housing development would have a low impact on the remains of the medieval manor house, all of the associated walls, primary surfaces and hearths were left *in situ* at the end of the excavation. The preservation of these remains means that it is not possible to preclude the existence of earlier buildings in their footprint, although no trace of such structures were found elsewhere on the central platform in areas where natural was reached. Unfortunately, the medieval bridge abutment lay within the footprint of high-density mini-piles for one of the house platforms, and consequently the entire structure was removed by machine at the end of the watching brief following the main excavation.

Documentary research suggests that the manor house at Low Hall was probably first built by the Bedyk family towards the end of the 13th century. It is possible to associate periods of investment with its acquisition by new owners, particularly Simon Fraunceys in the 1350s, Ralph Sadler in the 1550s and the Argalls in the early 17th century. By this time the house, its outbuildings and lands were leased out as a working farm, and a residence of correspondingly more modest proportions was required.

Acknowledgements

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Abbreviations

BL	British Library
CAD	<i>Calendar of Ancient Deeds</i>
CCR	<i>Calendar of Close Rolls</i>
CFR	<i>Calendar of Fine Rolls</i>
CIPM	<i>Calendar of Inquisitions Post Mortem</i>
CPR	<i>Calendar of Patent Rolls</i>
ERO	Essex Record Office
PRO	Public Record Office
VHM	Waltham Forest Archives, Vestry House Museum
WAS	Walthamstow Antiquarian Society

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Saffron Walden: the topography of the southern half of the town and the marketplace.

Excavations and watching briefs 1984-87

by David Andrews and Charles Mundy
with a pottery report by Helen Walker

Introduction

If archaeological techniques are to make a contribution to the understanding of the history and development of a town, it is necessary to monitor all new building work for discoveries that might be made either below ground level or else in the course of the alteration of standing buildings. Rarely is it possible to achieve this and instead it is usually only the larger developments that attract attention. At Saffron Walden, two exceptionally large sites, the old Pig Market and adjoining land (8800m²), and a block of properties between Hill Street and Market Row (1000m²), were developed in 1984-85. Archaeological excavations were carried out on both beforehand, prompted by both the scale of the developments and the importance of Saffron Walden as a larger than average market town which has one of the best preserved historic centres in the county. The results of these excavations are presented here, together with summaries of smaller excavations and watching briefs carried out over the period 1984-90.

In the County Council's first survey of historic towns in Essex, Saffron Walden was ranked 2 in archaeological importance (Eddy and Petchey 1983, 98). As will be seen, this assessment is somewhat misleading, as archaeological importance is not the same as archaeological potential. Saffron Walden is also one of the towns in the county where there has been an above average level of archaeological activity, the results being presented in a monograph by Bassett (1982). In brief, the history of settlement in the area of the town is currently understood as follows (Fig. 2). Substantial evidence (that is, other than stray finds) of prehistoric occupation is wanting, though Iron Age settlement is postulated on the south side of the town in the light of discoveries made on the Elm Grove site (located on the north side of Audley Road). For the Roman and Saxon periods, a cemetery of at least 200 burials was found in 1830 and 1876 on the south side of Abbey Lane, with finds dating to the late Roman and mid to late Saxon periods, predominantly the latter. Bassett speculates that a Roman fort may have preceded the cemetery, and that there was a Roman village at Walden to the west of the present town. The Saxon settlement was probably in much the same location. By the 12th century, however, the focus of settlement had shifted to Bury Hill, the spur formed at the confluence of the Madgate and Kings Slades, where there stand the parish church and the ruined castle, neither of which are recorded before this time. The castle earthworks would have enclosed the hilltop, and within them there was a market which was transferred from Newport to Walden in 1141. The settlement was subsequently enlarged through the construction probably in the first half of the 13th century of the so-called Battle or Repell Ditches taking in not just Bury Hill but an extensive area to west and south of it. Within this large rectangular enclosure, there was apparently a gridded street system, with a marketplace on the valley side between Bury Hill and the Kings Slade, in the same location as, but much larger than, the existing marketplace.

The chronology of this model of development may need modification, inasmuch as the later part of it hinged on a presumed connection between the

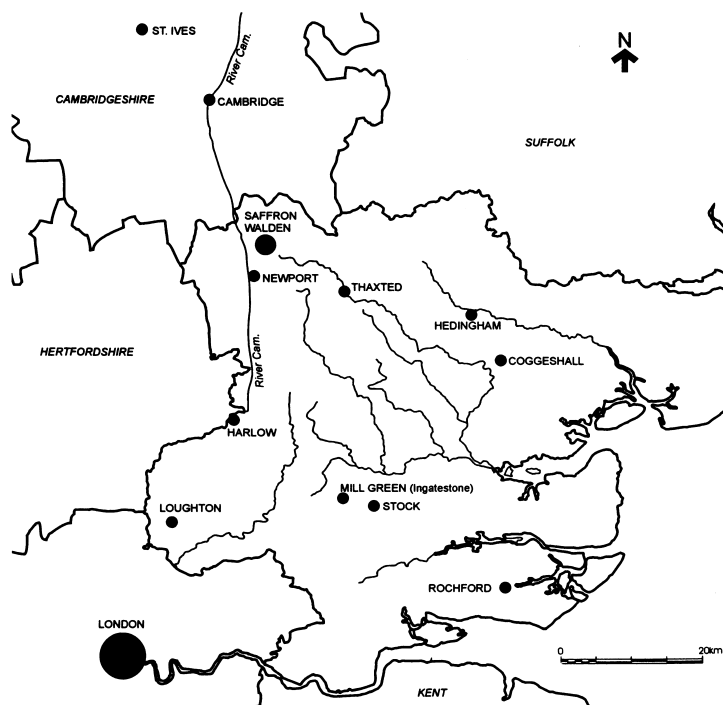


Fig. 1 Map to indicate places mentioned in the text.

earliest known charter of the town, which was formerly dated to 1236, and the excavation of the Battle Ditches and the laying out of the area within them on a grid plan with a new marketplace. However, the charter has now been shown conclusively to date from the time of Humphrey de Bohun III, earl of Hereford and Essex (1299-1322), and probably from 1300 (Ward 1986). The charter, which makes no mention of the market, seems to be a confirmation of an earlier grant of burgage tenure and other privileges. In other words, it would be simplistic to revise the dating of these events, which it is very reasonable to link though there is no evidence to do so, to 1300. There had presumably been some form of burgage tenure since 1141 when, in the anarchy of Stephen's reign, Geoffrey II de Mandeville secured the transfer of the market from Newport. In these circumstances, the best evidence for the dating of the Battle Ditches, and the gridded street lay-out which may go with it, is the pottery from an excavation across the ditch in 1959 (Ravetz and Spencer 1961) which, when last reassessed (Bassett 1982, 78), was thought to date from not later than the early 13th century.

Whilst not making any very remarkable discoveries, the 1984 excavations did produce some good stratified sequences on the Market Row site (SW4), unfortunately only seen in very small trenches. These sequences, and the general pattern of occupation and the distribution of medieval

pottery on the sites, have prompted a reassessment of aspects of Bassett's model of the town's development (see final Discussion). More detailed reports on the individual sites and the finds, and the original records, can be found in the archives deposited in Saffron Walden Museum.

The Pig Market development

The Pig Market site (SW3)

This market was a rectangular plot of ground behind the Hill Street frontages, approached through a neo-classical arch retained as a feature of the new development (Fig. 3, Plate 1). The arch bears the date 1831, which was when the Corporation bought the Eight Bells so that the site could be used as a cattle market, thereby relieving congestion in the market place to the north and also the inconvenience suffered by those who lived nearby (Rowntree 1951, 34). From about 1855, another cattle market was opened on the site of the former Bell Inn on the east side of Market Street (Rowntree 1951, 142), now occupied by the premises of the Saffron Walden Building Society.

The Pig Market had most recently been used as a car park. Its surface sloped down from north to south (54.21-52.19m OD). Initially, three small test holes were dug by hand, revealing post-medieval dumps and pits of limited archaeological interest. Trenches excavated by machine north-south and

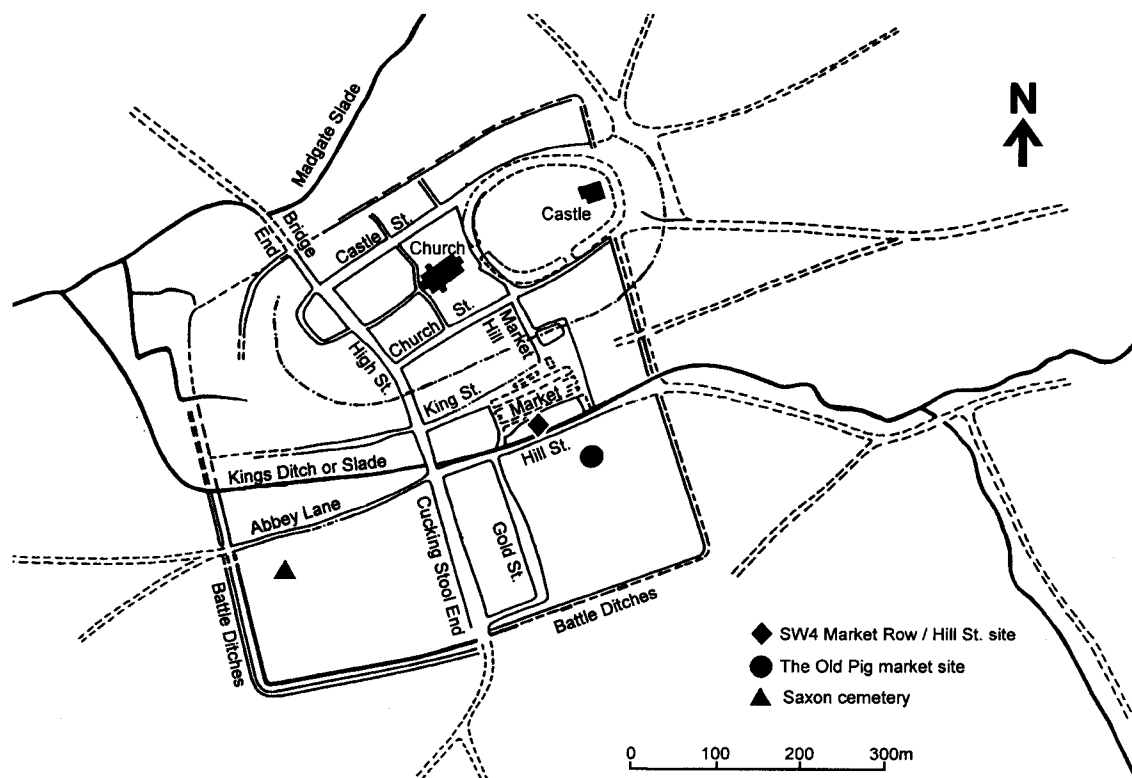


Fig. 2 Map of Saffron Walden illustrating the principal elements in its historical development, and showing the location of the excavations.



Plate 1 The Pig Market, showing the trial trenches and the back of the arch (looking north).

east-west across the former market showed these deposits and features to be very extensive, except at its eastern end where the sequence was different and a small area excavation was carried out. Otherwise the investigation was restricted to recording the sections in the machine trenches.

In general, excavation ceased at the level of the chalk bedrock, at a depth of about 1m. The chalk had an uneven surface, and was overlain mainly by layers of brown to yellow sands containing small angular and sub-angular gravel and grit. At the southern end of the site, there were instead sandy and silty clays, whilst at the northern end, not far from the Pig Market arch, a reddish-brown silt or brickearth was found filling what seemed to be a bowl-shaped depression in the chalk. This contained a flint flake of possible Neolithic date. Although no expert geological advice was available, it seems probable that these deposits had been laid down by a larger predecessor of the Slade in relatively recent geological time.

Apart from a few layers of uncertain status, the earliest evidence of human activity above these natural deposits were cut features. Some were probably post settings, some were pits of uncertain function, and two were almost certainly quarries. These were very large, one of them measuring about 9m by 9m. Since they had not been dug below the level of the chalk bedrock, they were presumably intended for the extraction of sand and gravel. Both they and the other features had been deliberately filled within a short period of time. The earliest pottery recovered from the site was a late medieval sandy orange ware base (fabric 21). The earliest datable pit identified was of the late 15th to mid 16th century. It contained a rim from a Raeren stoneware squat bulbous drinking jug. The quarries, and most of the other features all seemed to be post-medieval, mostly late 18th to 19th

century and probably dug and filled not long before the establishment of the Cattle Market.

The market grew in size. On the Ordnance Survey 1877 1:500 survey, it is only about two-thirds its later extent. The 1896 survey shows that between these dates it had assumed its final form, having expanded to the east of a north-south wall which was on an alignment slightly oblique to the rest of the property boundaries in the area. The foundations of this wall were found in the main east-west trench. A small area excavation was carried out to the east of the wall. It was noted that the quarries were absent in this area which had been later incorporated into the market. Two east-west walls were found, separated by a distance of only 1.2m, though no stratigraphic relationship was established between them. These coincide approximately with the position of the boundary of a garden shown on the 1877 map. To the north of these walls, a buried soil was discovered overlying layers which seemed to be the fills of pits or quarries. Because elsewhere natural deposits surviving between the cut features were found immediately below the modern ground surface, it is evident that this garden must have been sunken, doubtless to bring it down to the level of the houses fronting on to Hill Street; and that the profile of the valley side was modified when the market was laid out, the slope being replaced by a gentler gradient. In the process, any pre-existing stratigraphy was truncated. This explains why even during the construction of the new buildings virtually no traces were found of the Eight Bells, apart from an unlined well located to the rear of it which was 0.90m wide and at least 10m deep and had been capped in brick.

Other features contemporary with the use of the market were several pits and possible post settings, and four substantial postholes with the remains of posts in them, which must have been for pens of the sort depicted on early maps of the market. A layer of rammed chalk present in the western part of the site probably represents one of the earlier market surfaces. The latest was in asphalt and covered most of the area of the market.

The Choppens site (SW5)

This site lay on the southern slope of the Slade valley in the south-west corner of the Pig Market development, 30m to the south of Jubilee Gardens, and up slope and to the south-west of the site described above. The ground surface rose gently from 56.30m OD in the north-west to 56.98m OD in the south-east. On the first edition OS map of 1877, this area was continuous with what is now Jubilee Gardens to the north, and seems to have belonged to the gardens of Elm Grove to the south. Prior to the excavation and subsequent development (as what is now part of the Waitrose supermarket site), it was

SAFFRON WALDEN: THE TOPOGRAPHY OF THE TOWN AND MARKETPLACE

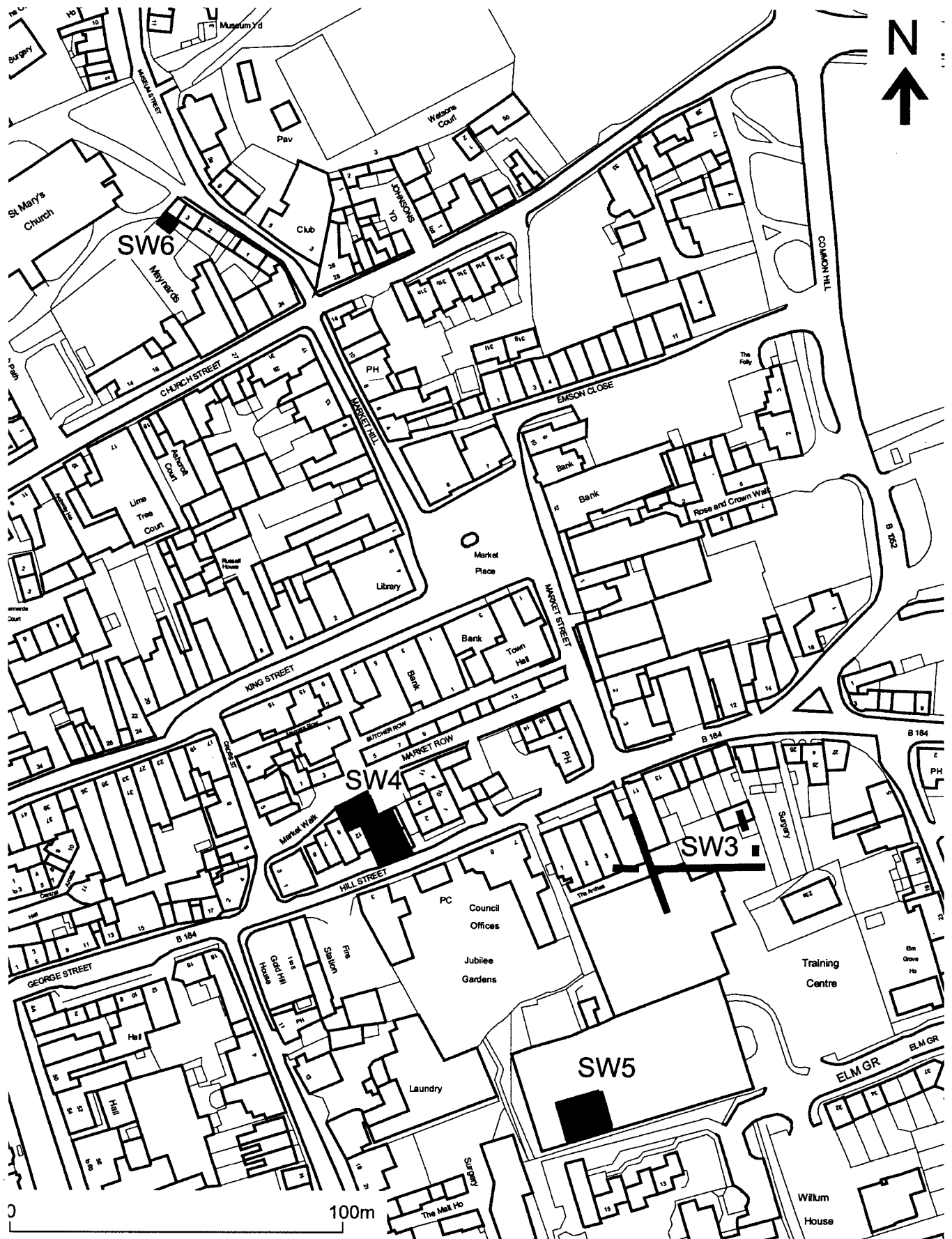


Fig. 3 Saffron Walden town centre showing the Pig Market, Market Row and Museum Street excavations. (© Ordnance Survey. Licence no. MC1000014800).

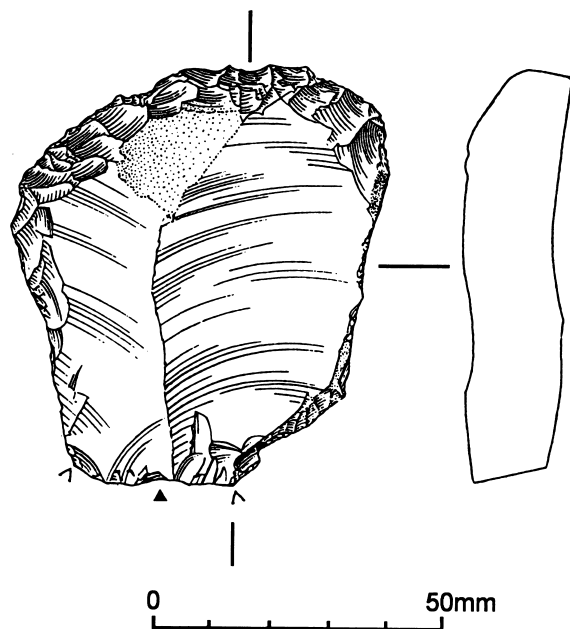


Fig. 4 Choppens Site, Pig Market development (SW5), Neolithic scraper from topsoil.

used as a temporary car park and office site by Choppens Ltd., a circumstance which restricted the area available for excavation, an area measuring 12m square being investigated.

Prior to stripping the topsoil, three test pits were dug by hand diagonally, across the site from north-east to south-west. The sections in these holes revealed similar soil profiles, a dark humic topsoil overlying sandy silts, above a degraded chalk or coombe horizon. Since the dark topsoil contained 20th-century finds and had evidently been recently disturbed, it was removed by machining down to the surface of the sandy silt horizon. This level produced five features and a small collection of finds, but once these were recorded, no further sign of activity was apparent. To confirm this impression, two trenches 1m wide and 9m long were excavated down to the coombe horizon and the sections drawn.

The coombe or degraded chalk horizon followed the slope of the topsoil rising gently from north-west to south-east. It appeared 0.6-0.8m below ground level in the north, and 0.8-0.9m below ground level in the south, and consisted of light buff to off-white silty chalk with occasional areas containing a small clay and/or sand component with occasional small flint fragments throughout. This material also formed the substratum of the soil profile on the Elm Grove excavation (Limbrey 1982). The surface of this deposit was very irregular with numerous hollows, gulleys and pipes, the effect of periglacial weathering and water and root action. In particular, two distinct types of linear feature were observed. The first was represented by two small shallow (up to at least 400mm deep) north-south gulleys. The westernmost of these was at least 2.2m wide, while

the other, 3.4m to the east, was 3.0m wide. Both had irregular and pitted sides and bottom. The other type of feature comprised shallower and smaller (200-300mm wide and 100-200mm deep) gulleys. These were more numerous, and seemed to have a shared east-west orientation. This patterning is comparable to that found on the Elm Grove site which was explained by cryoturbation and solifluction downslope (Limbrey 1982).

The easternmost of the two north-south gulleys was filled by an orangey brown sandy silt with a small percentage of clay and with occasional chalk and small flint fragments, while the western one was filled by a similar deposit overlain by a 50-500mm thick layer of dark yellowy-brown sand with occasional small flint fragments. In the extreme east of the site, the same material as filled the bottoms of the gulleys also lay 100-900mm thick directly above the coombe.

Overlying this layer, as well as the gully fills and the rest of the exposed coombe, and extending across the whole of the excavated area, was a 50-500mm thick layer of greyish orangey medium brown slightly humic sandy silt with frequent worm and root holes. The first evidence of human activity on the site was represented by a very small quantity of randomly distributed finds within the top 100mm of this naturally formed soil profile and a few cut features of uncertain function. The earliest cut features were datable to the 16th century. Medieval pottery, including early medieval ware, medieval coarse ware (fabric 20), sandy orange ware (fabric 21) and Mill Green-type ware, with a date range from the 11th to 14th centuries, was residual in the cut features. A striking but enigmatic feature was a circular hole 4.8m in diameter and 0.15-0.80m deep which looked as if it may have had an industrial use or been an ornamental garden feature. Its fill was datable from the pottery to the 18th-century.

Covering the whole site, and sealing the cut features, was a 100-500mm thick layer of sandy loam constituting the present topsoil. The large organic component in the topsoil indicated that it had begun forming when the area became a garden in the 19th century.

The investigation of this site failed to produce any evidence for human habitation at any period. The presence of residual pottery in later contexts indicates a degree of disturbance, and therefore the possibility that the remains of timber structures have been removed by gardening or agriculture cannot be excluded. However, the small quantity of both finds and cut features indicates a low intensity of human activity on this side of the valley, and in this part of the town, until the late 20th century. The prehistoric occupation observed on the Elm Grove site seems not to have extended further to the north to the area of this excavation. It may be, too,

that some of the features on the Elm Grove site considered to be man-made were in fact of periglacial origin. Unfortunately, it was not possible to excavate further west within the development site to check for the existence of one of the postulated north-south ditches of Bassett's grid-plan street system. If such a grid was laid out in this area, this part of the town was never built up in the Middle Ages. The medieval pottery, although not abundant, was as numerous as the post-medieval (excluding red earthenware, fabric 40). The surprisingly early date of some of it (i.e., early medieval ware, Hedingham wares, greywares) suggests activity within the area of the Battle Ditches from the 12th century, though this may have been no more than cultivation and manuring.

The worked flint from the Choppens site
Hazel Martingell

46 pieces of worked flint were recovered from the excavation. It was all residual material, present in the

topsoil and features associated with garden activity. The raw material varies considerably from dark grey flint from the chalk to grey flint with inclusions and some heavily patinated pieces. One third of the collection consists of retouched pieces. The large scraper (Fig. 4; length 75mm) is Neolithic. The remainder are very similar to other groups of worked flint found in earlier excavations in the town (Healey 1982) and are generally Neolithic to Late Bronze Age in date.

The Market Row site (SW4)

Introduction (Fig. 5)

This site comprised three properties between Hill Street and Market Row: to the west, a plot which had been vacant since the demolition of a pumping station in 1934; a shop formerly belonging to Choppens Ltd with a double-fronted Georgian neo-classical facade facing on to Market Row and a courtyard and outbuildings on Hill Street; and the swimming pool and adjoining public lavatories. The entire area was to be redeveloped, the only building being preserved being the front part of the shop

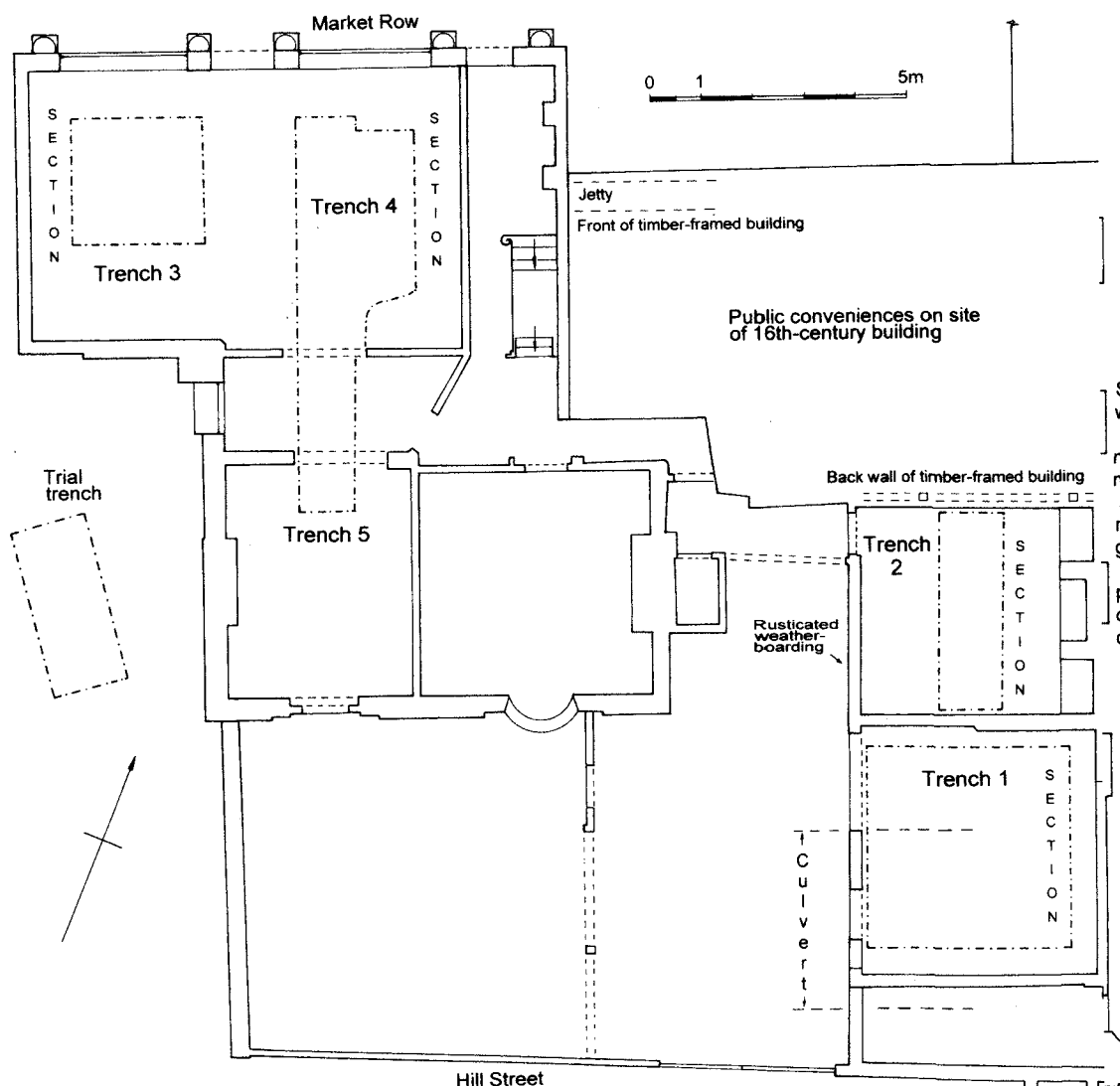


Fig. 5 The Market Row site showing the location of the trenches within the buildings.

which was listed. Market Row is the southernmost of the long narrow 'rows' of buildings which represent the building up of the former open space of the marketplace. Its present name is relatively modern: on the 1758 town map by E.J. Eyre, the western end of it, including the frontage of the listed building, was the Butter Market, whilst the eastern end of it was Pig Street (ERO T/M 90; Fig. 24).

Only a small part of the large development area was likely to have undisturbed archaeological deposits. The Slade runs in a brick culvert beneath the Hill Street frontage. The swimming pool, which at the shallow (southern) end cleared the vault of the culvert by inches, had obviously disrupted any pre-existing stratigraphy. The same was true of the potentially inviting car park site, for the pumping station with its borehole and heavy plant had caused considerable disturbance. Here two trial holes were excavated by machine to test for the survival of archaeological deposits in places that might have escaped disturbance. One dug on the west side of the site revealed the brick walls and arches of what was apparently a 19th-century cellar. The other, located to the east, close to the shop, uncovered more cellar walls but also an intact stratigraphic sequence. Above the layers of natural formation, there was a deep (0.9m) reddish to yellowish brown predominantly sandy clay in which three poorly differentiated levels could be discerned. The top of this deposit was 0.9m below ground level, and from it were recovered three medieval sherds, two of which were probably Hedingham products and therefore no later in date than c.1350. It would seem



Plate 2 The listed shop on Market Row after the demolition of the back half of the double-pile building and the swimming pool and toilets, showing the impression of the end truss of the 16th century timber building in its side (looking west).

to represent the infilling and levelling up of the Slade valley prior to occupation. The layers above this were post-medieval or modern.

It was clear that the site had archaeological potential and that the only promising area was that occupied by the shop which had suspended floors in the front and only a small cellar located beneath the public lavatories to the east. To fit in with the developer's timetable, the work had to be done prior to demolition, which was anyway to be restricted to the southern part of the premises as the frontage building on Market Row was listed and was therefore to be incorporated into the new development. The practical problems of working amongst dilapidated standing buildings left only small areas available for excavation. Five trenches were dug, two in the outbuildings on the east side of the yard and two in the shopfront. The fifth was an extension to the easternmost of the shopfront trenches made subsequent to demolition to try and clarify the situation at the southern end of that trench.

The standing buildings (Figs. 5, 6 and 7)

The buildings discussed here comprise the double pile house and shop fronting on Market Row (Plate 2), an outbuilding on the east side of the yard behind this (Plate 3), and a timber-framed building which had formerly stood on Market Row on the site occupied by the toilets and swimming pool.

The shop facade is built of white brick and has fluted doric columns supporting a simple frieze with dentils. At the first floor, a parapet with a cornice fronts a hipped roof. These neo-classical features, suggestive of a date in the first half of the 19th century, had made it eligible for listing and saved it from demolition.¹ The sides of the building are in red brick, and the internal partition walls timber-framed.

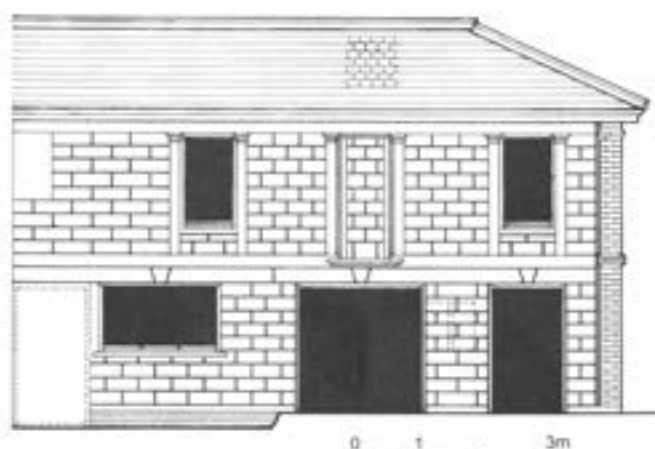


Fig. 6 Market Row: elevation of the west wall of the outbuilding with rusticated weatherboarding and a fish-scale slate roof (survey by D. Stenning and P. Skeet, ECC).



Plate 3 The outbuilding with rusticated weatherboarding to the rear of the listed shop on Market Row, with work in progress on trench 1.

A corridor separated the shop from the back half of the building, which was residential. It was built in red brick casing an earlier timber frame which had primary bracing and may be dated to the 17th or 18th century. The OS 1:500 survey of 1877 shows the rear of this building as having two bow windows (only one of which survived) facing on to a small formal garden on Hill Street.

The outbuilding was remarkable for a facade made of white-painted pine weatherboarding carved in imitation of rusticated masonry. The boards were nailed to the timber frame through the V-shaped grooves. It was roofed with fish scale slates. Such weatherboarding is unusual, false rustication being more commonly achieved in plastered or pargeted finishes, though at least one other example of it is to be found at Saffron Walden, in a yard off Abbey Lane.⁷ Its neo-classical character suggests it belongs to a major phase of rebuilding that accompanied the erection of the shop. The weatherboarding was itself the latest phase of an earlier building. Since the south wall and the southern part of the east wall of this had been rebuilt in brick at the same time that it acquired the weatherboarding, all that remained of its original structure was the north half of the east wall and elements of the north wall. To judge from the indifferent quality of the frame and the use of re-used timber, it dated from the 17th-18th centuries. Weatherboarding, probably original, was visible in the north half of the east wall where brick nogging had fallen out. The north part of the building was an office, whilst the south part was a

stable but had most recently served as a workshop. The first floor, which had been used for storage, originally no doubt as a hay loft, was undivided. There had been three sash windows in the brick south wall at the first floor, but these had been blocked when the swimming pool office was built on to this end of the range, pushing the frontage out further into Hill Street.

In the north wall of the outbuilding at first floor level, there was evidence of a very much earlier timber building, comprising a wall plate and two storey posts. The outline of the truss at the west end of this building was found preserved in the side of the shop when the toilets were demolished. Clearly this building was still standing when the shop was built, but had been removed to make way for the toilets, parts of its frame becoming fossilised in the outbuilding and the passageway between this and the shop. The building was traced for a distance of about 10m east-west, and it can be reconstructed as at least five bays (or about 12.5m) long. It was about 5.5m wide, with a jetty on its north side, and would seem to have been a long-wall jetty house. The fossilised gable has a pair of tension braces, and the studs were set close together at centres of about 430mm. These features suggest a date in the 16th century. The south-west corner of this house was cut into by the rear portion of the double pile building, the first floor joists being underbuilt where a passage was inserted. Re-used timbers, presumably from the framed building, were found in the fabric of the passage. They included a girt with holes for a

diamond mullion window, and a door jamb with an ogee moulding and a long mortice for a door head.

Geology

On the car park immediately to the west of the listed building, the natural chalk was found at 2.8m below ground level. Nowhere else was excavation carried out to this depth, though apparently in the area of the building the chalk occurred at about 2.3m.³ Indeed, what were definitely natural deposits were only reached in the two shopfront trenches (3 and 4) where the lowest levels comprised a degraded chalky deposit or head, probably formed by downslope movement in periglacial conditions (332, 614).⁴ This deposit began at a depth of about 1.4m below the internal floor level (50.60-70m OD), and had an undulating surface which began to drop away at the southern limit of excavation (most abruptly in trench 3, from a maximum height of 50.1m OD down to 49.4m OD). This break in slope doubtless represents erosion caused by the Slade or its predecessors.

Above the chalky deposits, there was a loamy sand containing poorly sorted flint nodules and flint gravel, a hillwash or colluvium formed by mass movement downslope, up to 300-400mm deep (331, 613).⁵ The situation was not analogous in trench 5 where the hillwash is thought to have dipped below the excavated level.

The excavated sequences

The sequences in each trench were mostly unconnected by any layers or features that linked through from one to the other. The interpretation presented here has nevertheless been divided into a series of periods established across the site. Within these periods, it has not often been possible to do more than recognise groups of earlier and later activity, though in some cases discrete phases have been identified. In giving the same period or phase number to parts of the sequence in different trenches, contemporaneity is not necessarily implied. The description of the sequences in the trenches is arranged so that it forms a commentary upon the sections and phase plans.

Period I. 12th-13th centuries

Trench 3 (Figs. 8 & 10)

The hillwash was covered by a reddish brown loamy sand interpreted as a steady accumulation of soil washed down from upslope (330).⁶ Interleaved with and also sealing this, there were three stony spreads (at 50.50m, 50.66m and 50.73m OD), consisting mainly of flint and sloping down slightly in the direction of the Slade. Although only two (323, 314) were evident in section, they were well defined and were indubitably metallised surfaces. At the south-west corner of the trench, the lowest surface was overlain by a deposit of dark brown sandy silt with black

and orange staining containing charcoal (327), perhaps evidence of a hearth and clearly indicative of occupation nearby.

A north-south ditch (320) extending beyond the limits of excavation was cut through the upper of these surfaces. It was 1.0-1.3m wide, and 0.4m deep, with sloping, apparently weathered sides, and a relatively flat bottom with a southern fall. The ditch had a lower fill containing abundant flints, and an upper one of rusty brown sandy silt. Covering the ditch fill in the southern half of the trench were two layers of moderately stony brown sandy silt, which may have represented worn surfaces or dumps to level up the slope.

Three flint flakes of probable Neolithic date were found in one of the soil deposits sealed by the stone spreads. Three worked flints were also present in the bottom fill of ditch 320. A sherd of early medieval chalky ware was found in one of the stone spreads, whilst two sherds of this ware, and two of ordinary early medieval ware, were recovered from the lower fill of ditch 320. In the absence of any rim sherds, this pottery can only be given a date range from the 11th to the 13th century.

Trench 4, phase 1 (Figs. 9 & 10)

A reddish to grey brownish sandy silt (607), probably equivalent to the washed down soil in trench 3, formed, or had been formed into, an east-west bank, the south side sloping down to the Slade. The north side of the bank was well defined, although little more than 100mm high, with the ground surface to the north being relatively flat. Cut into the south side of the bank were two postholes about 300mm wide and almost 300mm deep (610, 612) and two stakeholes (604, 605). Sealing these features (apart from the stakeholes) and redefining the bank was an 80mm thick deposit of grey-brown clayey sandy silt (499), overlain to the north by a layer 50-70mm deep of compacted chalk (495). To the south of the bank, there was a laminated deposit of brownish grey sandy silt covered by a yellowish silty fine sand (602 and 497). These could have been deposited in slow moving water, or else have been run-off from the area to the north.⁷

Datable pottery from this phase comprised Hedingham ware strip jugs produced from c.1225-c.1325, and late 13th- to 14th-century-type cooking pot rims in sandy orange ware variant 1.

Trench 5, phase 1 (Fig. 9)

Deposits comparable to those in trench 4 were not recognised further south in trench 5 where the lowest layers were an orangey to mid-brown silt with occasional pieces of flint and chalk (768), below an orangey to dark brown clayey silt with frequent pieces of flint and some charcoal and chalk (767), covered by a dark greyish brown silty clay with lumps of chalk and some flint (766). Four potsherds were recovered from 768, comprising Hedingham coarse and fine wares, and a sherd of fine sandy orange ware, broadly indicative of a 13th- to 14th-century date. These deposits probably belong to the process of valley infill testified to by the deep dumps with medieval pottery in the trial trench outside the building to the west. 768 may have been subject to soil formation, whilst 766 showed signs of having been used as a surface.

Trenches 4 & 5, phase 2 (Fig. 9)

The bank in trench 4 was raised with the deposition of a layer up to 340mm thick of stony grey-brown sandy silt (491), which to the south thinned out to almost nothing and then increased in thickness to form what seemed to be a second bank (though this was not observed to run east-west across the full width of the excavated area). The southern face of this feature was identified in trench 5 (765) where it had a gently sloping profile. Between the two banks, apparently filling the area defined by them, there was a layer of grey-brown silty sand (490) up to 220mm thick, which could have been waterlain.

Along the north side of the original north bank, there was a deposit of compact yellowish silty sand (488). Running northwards from the foot of the bank, there were layers of orangey brown coarse sand with gravel (494) and slightly silty sand (493). 488 could be interpreted as either a rebuild of the top of the bank, giving it a squarer profile, or else a formerly more extensive layer which had been cut through. Since it exhibited a degree of lamination, and was not dissimilar to 493 and 494 in texture, it is possible that this area had been covered with sandy deposits which had been cleaned out leaving these layers *in situ*. Overlying 488, and extending south from it, there was a layer of mid to light brown silty sand with chalk flecks, flint and gravel (486). In trench 5, a layer of orangey buff silty sand (763) at the tail of the more southerly bank may have been comparable to 486 or else 490. The pottery in this phase comprised Hedingham coarse and fine wares, and sandy orange ware.

Trench 2 (Fig. 9)

Here the earliest excavated deposit consisted of mixed chalk and brown silt (182) which, being higher than the natural chalk deposits upslope in trenches 3 and 4, is most likely to be redeposited natural dumped as part of an initial phase of infilling the Slade valley and terracing up its side. Above this, and apparently extending the terrace further south, there was a layer (180) of yellowish brown silty clay containing numerous pieces of chalk. No finds were recovered from either layer.

Discussion

In the most southerly areas to be investigated (trenches 2, 5 and the sondage in the car park), the earliest layers observed represented dumping to infill and level up this side of the Slade valley, a process which was taking place in the 13th century. The profile of the Slade valley at this time cannot be reconstructed, but there seem to have been terraces or breaks in slope at about the south end of trench 4 and the north end of trench 2. It should also be remembered that whereas today the Slade runs directly east-west in its culvert, in the Middle Ages it would have meandered through the valley bottom.

To the north in trenches 3 and 4, where this period is defined as being later than the underlying hillwash and earlier than a phase of dumping which marks the beginning of period II, there were surfaces, a ditch, and a low bank possibly related to the control of water movement.

Trench 3 presented a relatively straightforward sequence, with material washed down from higher up the valley side (or else dumped) being consolidated by three phases of flint metalling, the last of which was cut by a north-south ditch which doubtless continued as far as the Slade. This was filled and then partially sealed by somewhat stony layers which could have been surfaces or levelling dumps.

The sequence in trench 4 was quite different, implying that the ditch in trench 3 was a boundary. A low east-west bank (607) ran the full width of trench 4, apparently turning or terminating in the space between trenches 3 and 4. To judge from the section, the line of the bank corresponds to the former edge of the lower terrace of the Slade, separating the area to the north from the reclaimed and levelled-up land to the south. Two postholes and two stakeholes corroborate its significance as a landscape feature without being reconstructable in any particular way. The existence of layers of possibly waterlain sandy silt and silty sand (602, 497) to the south of the bank indicate that it may have served as a defence against the Slade in times of flood, or have been associated with some process involving water. The evidence tends to favour the latter interpretation, for the bank was subsequently covered by a deposit (491) which enhanced it and seemed to form a second bank about 1.4m to the south. Between these banks, there were more possibly waterlain sediments (490, 486); whilst to the north of the main bank, there were sandy layers which could have been waterlain sediments, but which could be interpreted as having been partially cut away and removed during the cleaning out of a pond or basin about 400mm deep. These deposits could have been related to industrial or building activity.

The chronology of the sequences in trenches 3 and 4, and the reclamation of the valley side evidenced in trenches 2 and 5, cannot be directly related. For the convenience of dividing the site into periods, they have been treated as approximately contemporary, which is probably true with the exception that the five sherds of early medieval ware in trench 3 raise the possibility that the surfaces and ditch in this area were appreciably earlier than the sequences in the other trenches. The pottery otherwise mainly comprised Hedingham coarse and fine wares including fragments from strip jugs datable to the early 13th to early 14th centuries. The sherd which is potentially latest in date is a cooking pot rim in sandy orange ware variant 1 of a type normally datable to the late 13th or 14th century.

Thus this period sees the first signs of occupation in this part of the town on the south side of the market-place. There was no evidence of buildings,

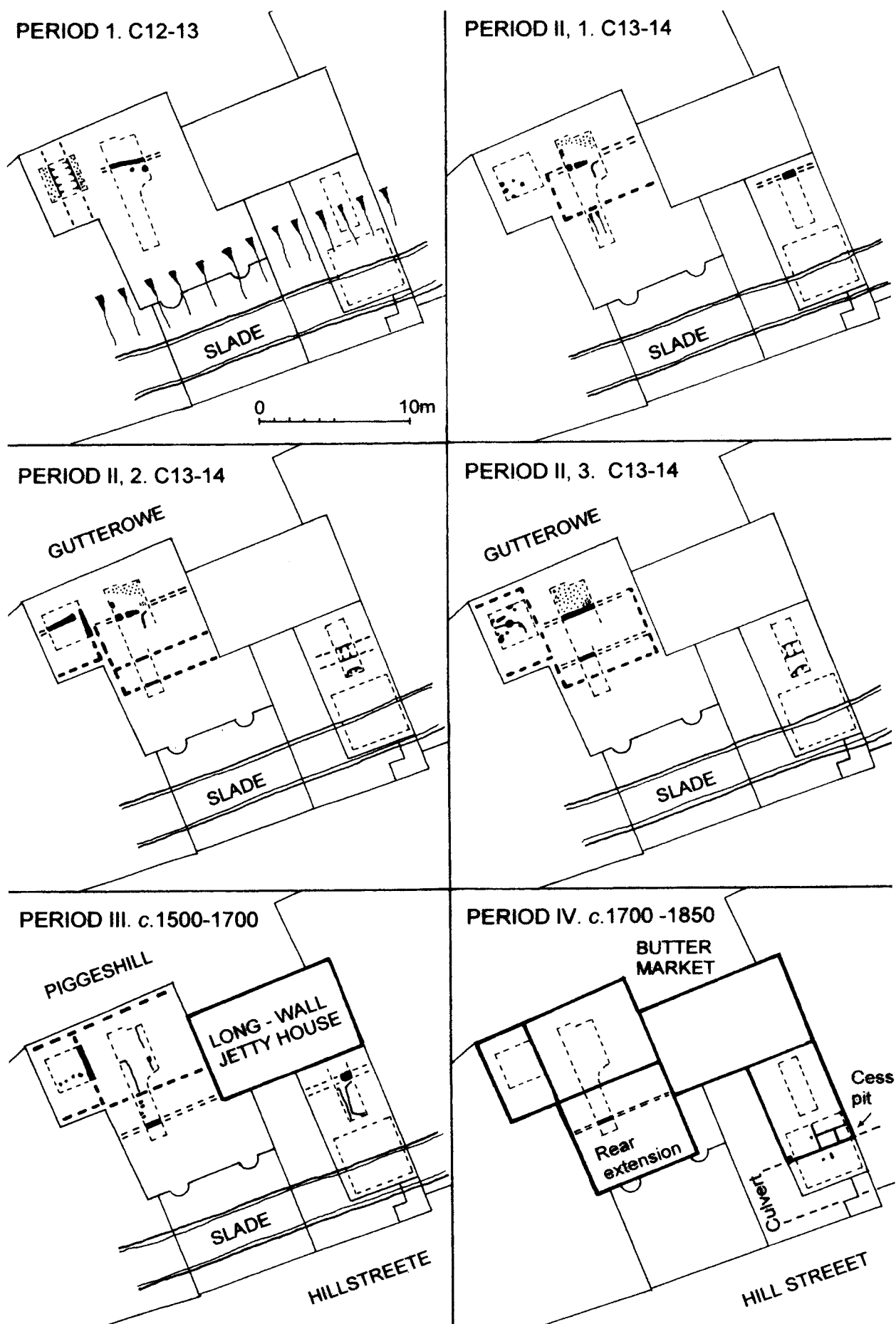


Fig. 7 Plans to illustrate the development of the area investigated on Market Row from the 12th to the 19th century.

SAFFRON WALDEN: THE TOPOGRAPHY OF THE TOWN AND MARKETPLACE

Table 1. Outline phasing scheme for the Market Row excavations.

PERIOD I	12th-13th centuries
Trench 3	Accumulated soil. Three stony spreads/surfaces. N-S ditch, later filled. Early medieval ware, early medieval chalky ware. 12th-13th centuries.
Trench 4, Phase 1	Low E-W bank. Chalk surface to N, water-deposited layers to the S. Early medieval ware. Hedingham wares, coarse and fine. ?late 13th/early 14th-century cooking pot rim.
Trench 5, phase 1	Further dumping and infill in Slade valley. Hedingham wares, coarse fine. Fabric 21, sandy orange ware.
Trenches 4 and 5, phase 2	E-W bank redefined; another bank to S of it, possibly waterlain deposits between them. Sandy and gravelly deposits to N of N bank. Space between banks subsequently covered with silty sand with stones. ?industrial activity on periphery of marketplace. Hedingham wares, sandy orange ware.
Trench 2	Dumping in Slade valley. No finds.
PERIOD II	13th-14th centuries
	Dumping and levelling layers in trenches 3, 4, and 5. Line of low bank in 4 preserved, preliminary to the erection of structures in 3 and 4.
Trench 3, Phase 1	Postholes, representing lightly built structures. No pottery.
Trench 3, Phase 2	Building defined by surfaces and slots. Hedingham coarse ware.
Trench 3, Phase 3	Rebuilding represented by new surfaces. Encroachment to N. No pottery
Trenches 4 and 5, phase 1	Building defined by low bank with slots and probable seating for cill beam. Metalling to N of building; to S, open space sloping down to Slade. Hedingham wares, London-type ware, sandy orange ware
Trenches 4 and 5, phase 2	Alterations to phase 1 building. An outshot constructed on its S side. Hedingham wares, Suffolk buff ware, Harlow ware, sgraffito
Trenches 4 and 5, phase 3	Structure with outshot rebuilt. Resurfacing to N, further levelling dumps to S. Hedingham wares, Mill Green-type jug.
Trench 2, phase 1	Dumping and levelling, possibly overlain by a structure. Building represented by clay cill, possibly the rear wall of an outshot. Hedingham and orange sandy wares.
Trench 2, phase 2	Level raised, sealing clay wall, which was succeeded by a flint wall, to the S of which were a series of cut features. Hedingham and sandy orange wares.
PERIOD III	c.1500-1700
Trench 3	E-W row of postholes. N-S flint wall. 15th/16th-century pottery, including Frechen stoneware.
Trench 4, phase 1	Building about 5m x 7m encroaching N on to street/market. 16th-century pottery, but black-glazed wares from ?robbing of chimney.
Trench 5	Outshot to rear of trench 4 building. Single sherd of sandy orange ware, 15th/16th centuries.
Trench 2	Chalk surfaces and cut features, probably inside 16th-century building located mainly to the N. 17th century (black-glazed wares, Westerwald stoneware).
PERIOD IV	c.1700-1850
Trenches 3 and 4	No evidence – truncation.
Trench 1, phase 1	Final phase of dumping to level up Slade valley, construction of culvert, covered by floors for building associated with, or forming part of, the outbuilding to the N. Dumps/culvert datable by white salt-glazed stoneware and Eyre's map to c.1720-58. Latest floor produced printed pearlware.
Trench 2	Renewed flooring within outbuilding to rear of frontage house. Creamware of c.1765-75
Trench 1, phase 2	New chalk floor and renewal of postholes and alignments, though layout remains similar. Brick cess pit. Early 19th century on evidence of t.p.q from phase 1.
Trench 5	Layers with building debris, two brick-lined pits. Southern wall line rebuilt in brick, probably indicating the construction of the back half of the double pile building. Notts/Derby stoneware, late 18th-century creamware, blue-painted pearlware of c.1800
PERIOD V	c.1850-1984
Trench 3	Construction of existing building and its suspended floors. Late 18th/19th-century pottery.
Trenches 4 and 5	Remodelling of outshot/corridor area.
Trenches 1 and 2	Construction of office/stable building.

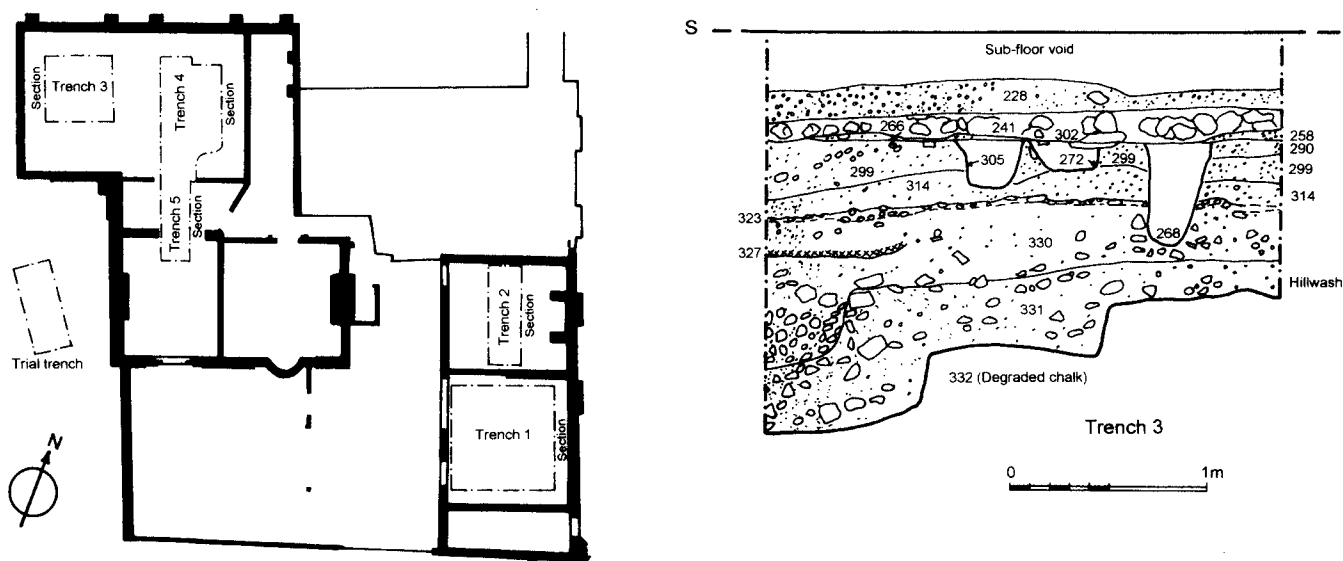


Fig. 8 Market Row: plan to show the location of the sections, and the section in trench 3.

but there was evidence of plot division, inasmuch as the sequences in trenches 3 and 4 were different. The north-south ditch (320) must be related to some early phase of the laying out of the town or marketplace. Its line corresponds approximately to the west side of the rear pile behind the shop building in Market Row. It is also notable that the second more southerly bank in trench 4 is on the line of the back wall of the shop and is on an alignment that early became fossilised in the town plan. The metallised surfaces in trench 3 can reasonably be seen in the context of the medieval marketplace. The sequence in trench 4 is difficult to interpret: it may represent some form of industrial activity. It certainly involved continual renewal or remaking of the features on the site, and would be consistent with the sort of continuous repetitive activity that might be expected in a marketplace.

Period II. 13th-14th centuries

A layer (468, 762) of mid-orangy brown silt and sand with abundant gravel, chalk pebbles and flint 100-400mm deep was dumped to create a relatively flat surface extending from the north end of trench 4 about 0.5m into trench 5, where there occurred a fairly abrupt break in slope. Above it, there was a layer (461, 749) of mid-orangy brown sandy silt which re-instated the earlier bank running east-west across trench 4, and respected the break of slope at the north end of trench 5. A layer (299) similar to 461 and 749 was present in trench 3 sealing nearly all the period II layers and features.

The presence of such extensive dumps and levelling layers clearly marks the beginning of a new period in trenches 3, 4 and 5. The fact that the

north-south division between trenches 3 and 4 was not respected suggests that this was a major transformation of the area, not restricted to individual property units. Nevertheless, these units survived the levelling operation for in the construction phase to which it was preliminary, there were two separate buildings (or units within the same building) with the boundary between them lying in the space between trenches 3 and 4. To the north of the buildings, there were metallised surfaces. In trench 5, the sequence was also different, but associated with a structure either adjacent to or part of that in trench 4. Two main phases have been identified in trenches 3, 4, and 5, with a subsidiary third phase present in 4 and 5.

In trench 2, the beginning of this period is also marked by levelling dumps and the first clear evidence of buildings. Further south, in trench 1, no layers or features as early as period II were identified.

The levelling layers (468, 762) in trenches 4 and 5 produced three sherds of Heddingham coarse ware, and one of an unusual type of glazed and slipped sandy orange ware.

Trench 3, phase 1 (Figs. 8 & 11)

Four postholes and four stakeholes were found cut into the levelling layer of sandy silt (299). They were possibly associated with lightweight and temporary structures rather than marking the position of a relatively substantial building, though some of them did seem to respect a line corresponding to the frontage in trench 4 and just south of that later established in trench 3. Furthermore, three discoloured bands aligned east-west noted in the surface of 299 possibly had some structural

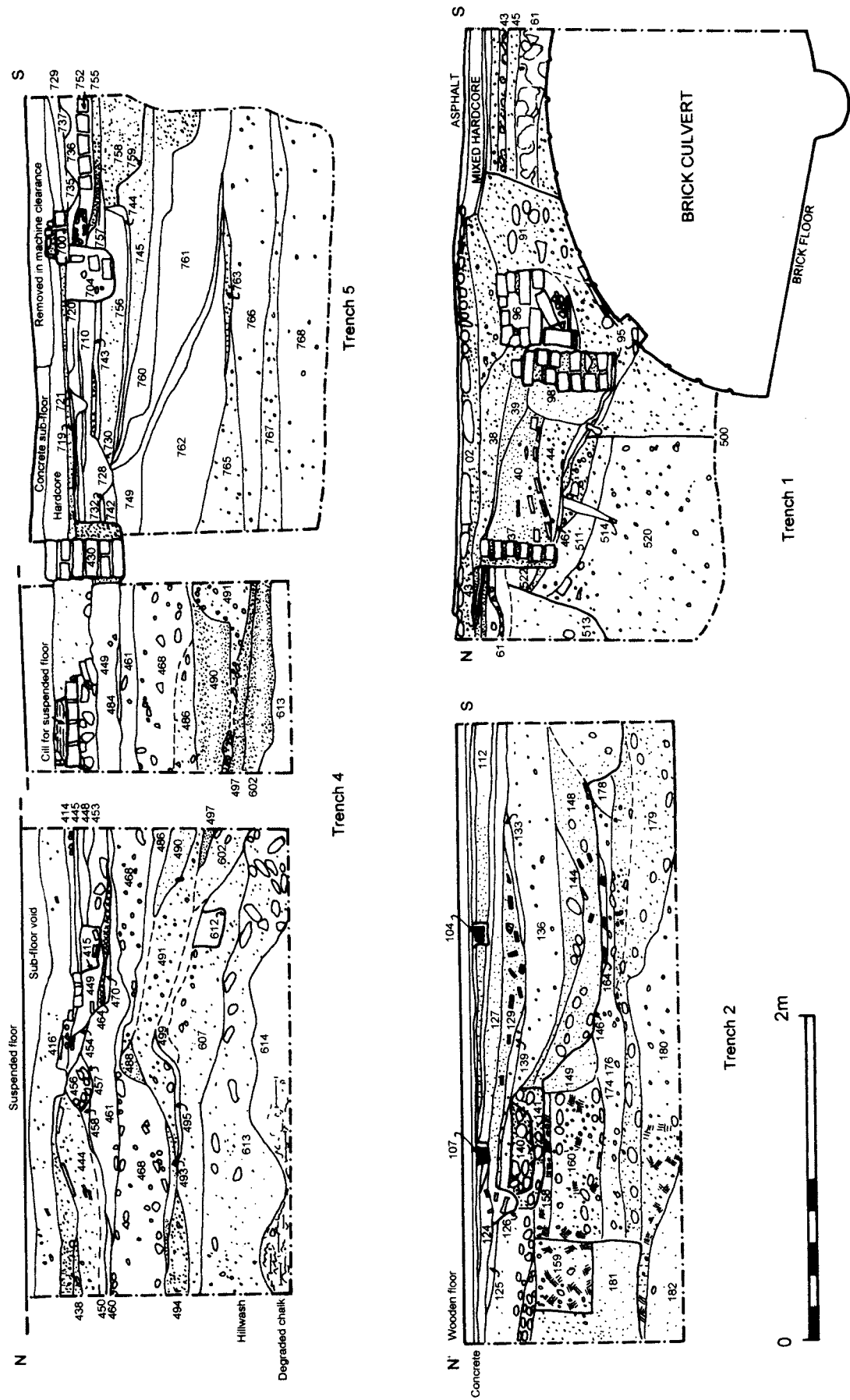


Fig. 9 Market Row: sections in trenches 1, 2, 4 and 5.

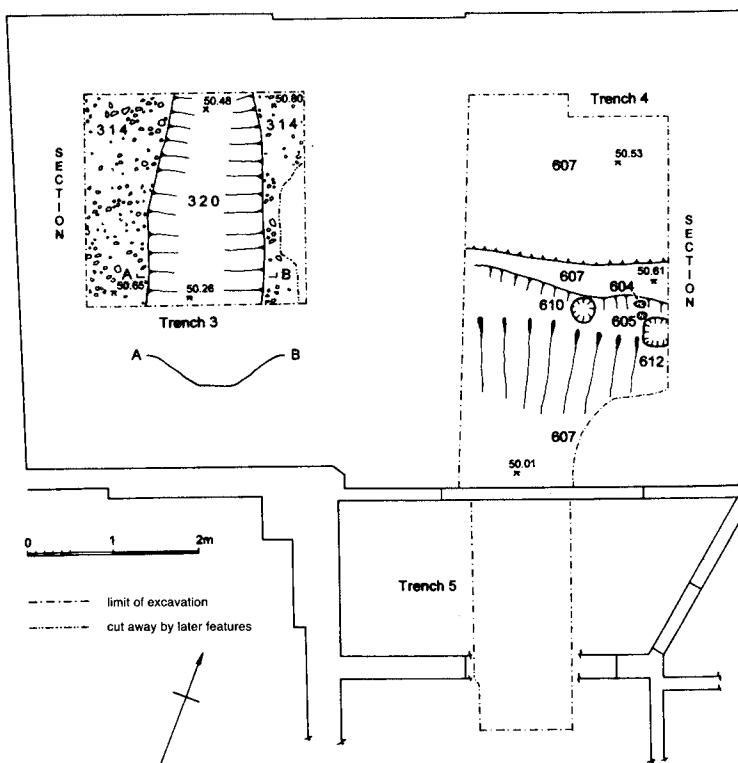


Fig. 10 Market Row: period I, trench 3, and trench 4, phase 1.

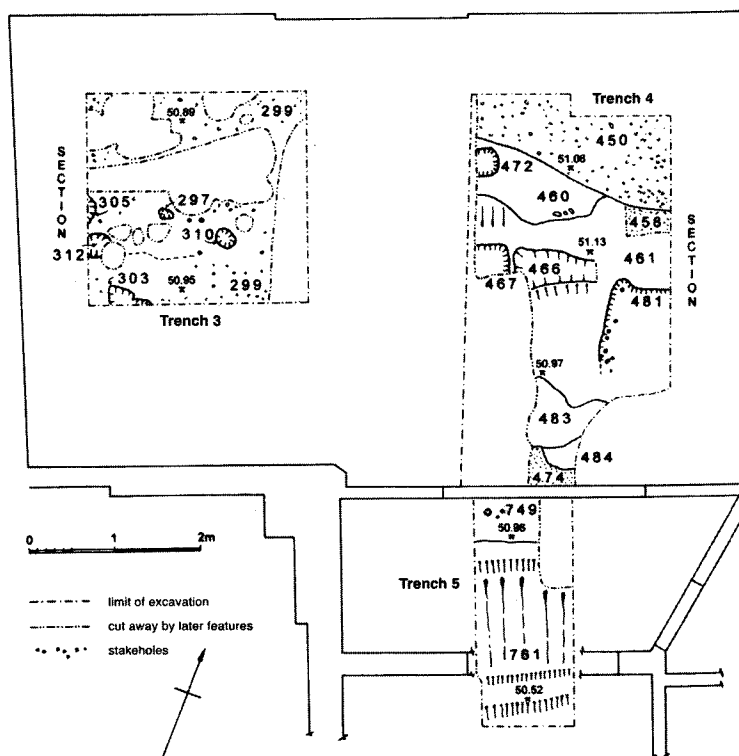


Fig. 11 Market Row: period II, trenches 3, 4 and 5, phase 1.

significance. No pottery was found in any of these features.

Trench 3, phase 2 (Figs. 8 and 12, Plate 5)

A building was subsequently erected in the area, its position being defined by metalling in the north, separated by an east-west slot from an internal floor which was bounded to the east by a north-south linear feature. If it is assumed that its west side coincides with the modern property boundary, and the southern one with the back of the structure in trench 4, then the building would have measured about 3.0m by 3.5m.

The external metalling was a 30mm thick stony spread (292, 296, 306) comprising small flints and pebbles embedded in 299. The internal floor consisted of a compact brown sandy silt (288) with moderate quantities of flint and chalk. The east-west slot (272, 286) and the north-south feature (300) were somewhat different in character and unconnected. 300, which cut the external metalling and was 340mm deep and at least 480mm wide, had the appearance of a boundary ditch rather than a structural feature. But since it was respected by the floor 288 and the east-west slot, it is reasonable to conclude that it delineated a building, even if this was not its principal or only function. It is also anomalous in being filled relatively early in the sequence, its fill overlapping the floor and being cut by the east-west slot. The latter was in fact two features, an apparently short slot 286 being cut by a later one 272. Both were 70-90mm deep, a dimension that would be consistent with their having been beam slots. Such an interpretation is supported by the rectilinear profile of 272 at its western end. To the east, the edges of 272 were broken down (as were those of 286) which no doubt, explains why its sides were not parallel. The only pottery recovered was a sherd of Hedingham coarse ware in feature 300, and two sherds of post-medieval red earthenware in the fill of 272 which must be intrusive.

Trench 3, phase 3 (Figs. 8 & 13)

Layers of brown sandy silt (289, 290, 266, 281) were deposited across much of the trench except to the south where there was a localised patch of grey to whitish sandy silty chalk with small pieces of flint (276). These seem to represent internal surfaces which extended across the entire area of the trench. If so, then the difference which had previously existed between the north and south halves of the trench was eliminated, and there must have been a building, with a frontage pushed northwards into the area of the street or marketplace, presumably in much the same position as the existing shopfront. Whether this was a new building, or simply a refurbishment and extension of the previous one, is not certain. The latter is quite possible, as the layers of sandy silt for the most part respected the line of slot 272 (though partially overlying the edges of its west end) and feature 300. The picture is not made any clearer by the assortment of postholes and other features which cut these layers. No pottery was found in this phase.

Trenches 4 & 5, phase 1 (Figs. 9 & 11)

An east-west bank towards the northern end of layer 461, up to 100mm high, with a somewhat rounded profile, marked the northern edge of a building unit which

extended south to the break in slope in trench 5, a distance of about 3m. Cut into the bank were two almost continuous slots, 467 extending westwards beyond the limit of excavation, and 466 which was interrupted by a later feature but which nevertheless did not run the full length of the bank. The slots had a fairly vertical edge on their north sides, were flat-bottomed and 50-80mm deep. 466 must have been about 1.2m long. They must have held cill beams. To the south, there was no such well defined wall line, merely a level area where a cill beam may have rested, and three stakeholes on or near where the wall alignment must have been. Since there was a different property in the area of trench 3, and by inference from later alignments (i.e. the timber-framed building occupying the site of the lavatories) another just to the east, the building must have measured about 5-6m east-west.

In the earliest phase of occupation, there was no evidence for a floor within the building other than 461, except to the south where three thin layers (yellow gravelly sand 474, over brown-grey silty chalk 483, over grey silty ash 484) could represent the remains of surfaces. Within a small L-shaped depression (481) in the eastern part of the building, there was a north-south row of stakeholes. That these were aligned on where the end of slot 466 must have been points to this being a different area of use, and raises the possibility that there was a doorway here, with a passageway flanked by a partition formed by the stakeholes. This interpretation is reinforced by continued differences in this area later in the sequence.

To the south of the building, a layer (761) of grey-brown clayey silt may have been contemporary with the initial phases of its use. This descended towards the valley

of the Slade in a series of shallow steps which could have been caused by deliberate terracing or by people walking down the valley side. Worm holes showed that the layer had been subject to soil formation, indicative of an open area at the back of the building.

North of the building, sealing a thin layer of silty sand (460) which ran up to the base of the east-west bank, there was a well defined area of metalling consisting of flint fragments in an orange-brown sandy silt matrix (450). Just outside the presumed doorway, the surface was made rather differently of flints and crushed chalk (458) as if it had been patched. Earlier than this metalling was a substantial posthole 300mm across and 500mm deep which may have been associated with the construction of the building or its initial occupation. Another posthole (472) of comparable size but shallower remained open longer and could have been for some external fixture.

From surfaces 483 and 484 inside the building were recovered a few sherds of Hedingham coarse and fine wares, together with single sherds of 'fine' coarse ware, fabric 20w, and late Hedingham ware which may date to the 14th century. Layer 761 to the south of the building produced a relatively large group of pottery comprising Hedingham wares, London-type ware, sandy orange wares, and 'fine' coarse ware fabric 20b. This layer may also date to the 14th century, although in this case the sherd of London-type ware would be residual.

Trenches 4 & 5, phase 2 (Figs. 9 & 12)

The building in trench 4 underwent several modifications. Inside, there were two unconnected sequences of surfaces. One filled and levelled up the L-shaped depression (481). It comprised a layer of grey-green silty clay with chalk fragments (470) overlain by 464, a red burnt silty clay

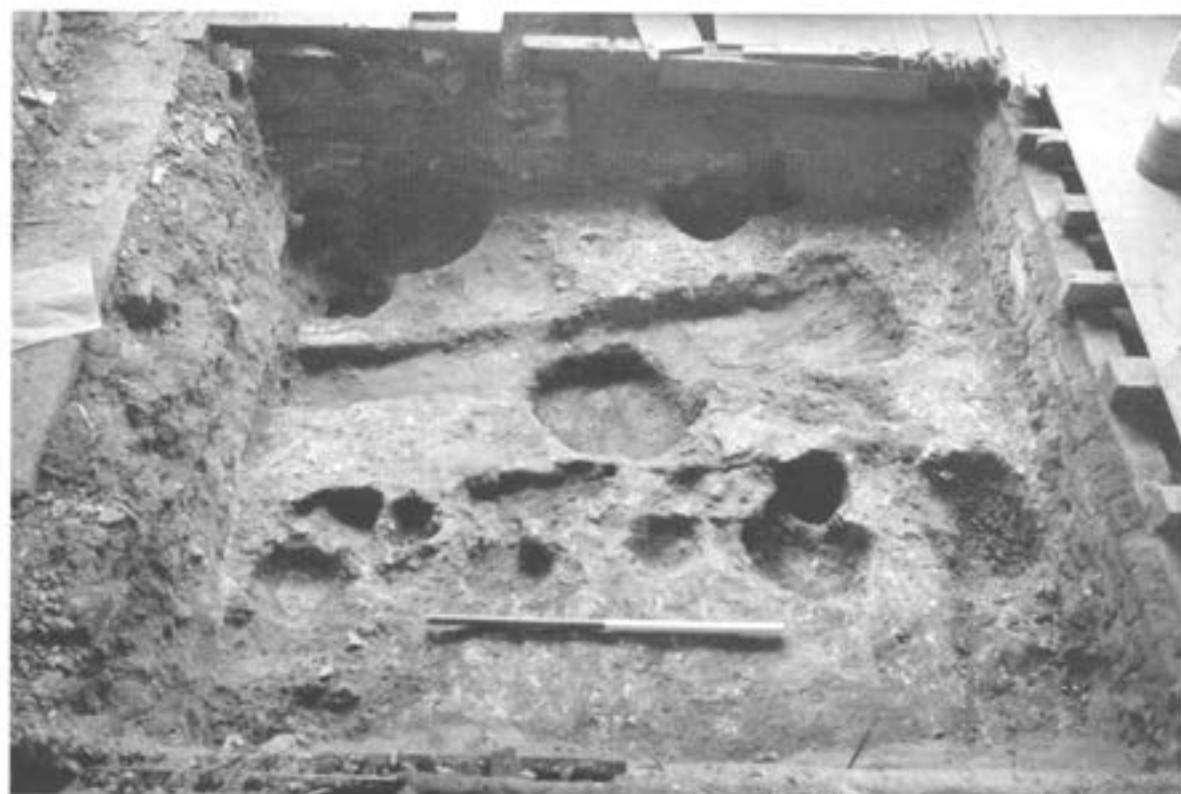


Plate 5 Market Row, trench 3. The period II, phase 2 building, with later cut features (looking north). cf. Fig. 12.

with a black charcoaly surface in which there was a shallow (40mm) east-west impression (465). To the west, there were two layers of sandy silt (441, 469), in which two sub-square impressions (439, 440) might mark the position of fixtures. The different nature of the surfaces approximately either side of the former north-south alignment represented by the stakeholes and depression suggests that there continued to be an entrance or partition in this area. All these surfaces petered out about 300mm from the southern limit of the trench, indicative perhaps of different or more intensive use in this area. Just to the north of the slots (466, 467) representing the north wall of the building, there was a small east-west trench filled with flints (456) in a silty clay matrix which in view of its proximity to the presumed entrance could represent a threshold or step. To the west, there was a posthole (459) with a post pipe measuring 110-160mm across and 250mm deep immediately adjacent to the north wall of the building.

There was evidence in the section on the east side of trench 5 (Fig. 9) for an extension or outshot on the south side of the main building. Layers of stony sand (760) and dark brown clayey silt (745) were deposited to level up the slope down to the Slade. The line of the south wall of this extension was marked by a cill about 150mm wide formed in 745 and located about 1.8m from the back of the main building. A thin patchy layer of chalky clay (744) represented the remains of an internal surface which at its southern end had clearly butted up against a wall.

Whereas the interior of the building in this phase only produced a single sherd of Hedingham coarse ware, a large assemblage was present in the levelling layers to the

south. In addition to the usual Hedingham wares, this includes 'Suffolk' buff ware, medieval Harlow ware, and Cambridgeshire sgraffito ware, which cannot be earlier than the 14th century. The cooking pot rims are datable to the late 13th or 14th centuries.

Trenches 4 & 5, phase 3 (Figs. 9 & 13)

The building in trench 4 subsequently underwent a total reconstruction. The slots representing its north wall were filled and superseded by a yellowy grey clay cill (410/454) 400mm wide. The back wall was represented by a slot (730) with the impression of a timber about 160mm wide in the bottom of it where a cill beam had evidently been removed. Two clayey layers (742, 732) just to the north of it also looked like a wall line; possibly there had been a phase of repair or reconstruction. Inside, new floors were formed with the deposition of predominantly buff clayey silt (411, 433, 449) with moderate quantities of chalk and some flint up to 100mm thick. A small burnt patch (453) was noted in the south-east corner of the trench. The area outside the building to the north was resurfaced either at this time or else very likely in the succeeding period with flint and chalk in a matrix of silty sand (443, 444, 438), covering over the possible threshold or step foundation (456). A localised patch of mortar (442) and a possible repair to the surfacing (435) may point to the continued existence of an entrance here.

The outshot to the rear of the main building was reconstructed. The level was raised by about 140mm through the dumping of layers of stony light brown silty sand (756, 758) consolidated by a layer of light brown chalky clayey silt (743) which extended beyond the southern limit of trench 5 and might therefore indicate a significant terracing up of the valley side. Whilst its north wall corresponded to the slot (730) mentioned above, the south one is problematic but may have been represented by a deposit of clay (757) forming a low cill wall. A thin silty layer (731) was all that remained of internal surfaces. To the south there was an external surface consisting of a somewhat stony brown sandy loam (755).

Only a small amount of pottery was present in this phase: it included the usual Hedingham and sandy orange wares, including a jug in sandy orange ware variant 2, and sherds of 'Suffolk' buff ware.

Trench 2, phase 1 (Figs. 9 & 14)

The period I terracing was covered by a dump of silty gravel (179, 177), raising the level by about 120-340mm. This was covered by a layer of yellowish brown stony silt (174/176) which formed a relatively flat surface and butted and partly overlay a block of light brown silt (178) running east-west which had been cut away to the south. These deposits may represent the remains of a structure, with 178 marking the position of a wall. If so, it would have been located right at the edge of the Slade valley and was no doubt short-lived, as the stratigraphy in trench 1 to the south suggests that, below the partition wall which formed the southern limit of trench 2, there was a break in slope which constituted the stream bank at this time.

Dug through 174/176, close to the northern edge of the excavation, was a trench (173) filled with gravelly silt (181). This seems to have formed a foundation for a very hard rectangular-section lump of chalky silty clay (159)

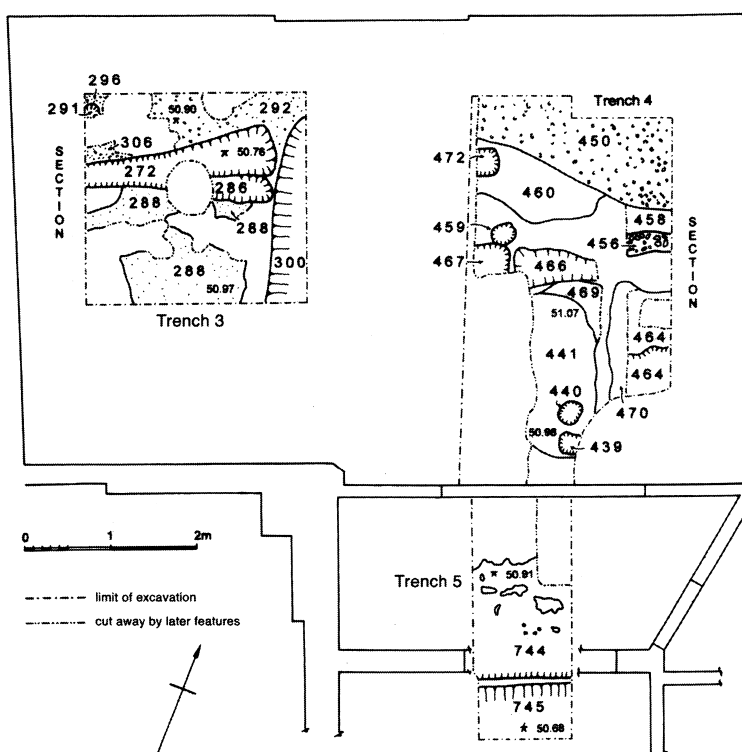


Fig. 12 Market Row: period II, trenches 3, 4 and 5, phase 2.

containing occasional pieces of flint which formed an east-west clay wall 550mm wide and surviving to a height of 400mm (Plate 6). To the south of this wall, there was a posthole (161) 200mm wide and 150mm deep, and a layer of yellow-brown silt (163) which could have been the remains of a surface.

Since in subsequent periods there were buildings with their rear wall in much the same position as 159, it is reasonable to suppose that this too formed the back wall of a building. If this building had its frontage in the same position as those in trenches 3 and 4, then it would have been wider north-south than them, something which suggests that 159 could have belonged to an extension or outshot like that for which evidence was found in trench 5.

There was only a little pottery from trench 2 in this phase. It comprised Hedingham and sandy orange wares, and one sherd of 'fine' coarse ware, fabric 20w.

Trench 2, phase 2 (Figs. 9 & 14)

The west part of the clay wall was removed by a cut which lay mostly beyond the limits of excavation. There followed a complex sequence of events which cannot be satisfactorily interpreted because of the small size of the area investigated. A silty layer containing loose gravel and flint (160) was deposited against the south side of wall 159, raising the level by 300mm. A layer of hard chalky clay with stones, broken peg tile, and relatively large quantities of pottery (158) overlay 160, the clay wall and the fill of the cut through it.

To the south, 160 and 158 butted layers of compact brown silt and sand (147, 149) which had originally extended to the southern limit of the trench, but which had been almost totally eliminated by four cut features. The section suggests 147 and 149 were themselves filling a cut in 160 etc, but this was not apparent at the time of excavation. Of the cuts in 147 and 149, the earliest were 168 and 171. Only a tiny portion of the former survived: it had the appearance of an east-west aligned feature 700mm wide and 60mm deep. Possibly associated with it was a rectangular patch of chalky clay (164) preserved in the eastern half of the excavation and sharing its alignment. 171 was over 200mm deep and apparently aligned east-west; to the south it extended beyond the limit of excavation.

The layer of stony chalky clay (158) is more consistent with external than internal surfaces. It may be that there were no buildings on the site and it reverted to open space. Cut 171, which to judge from the stratigraphy further south in trench 1 was located at the edge of the gully cut by the Slade, was in the right position for a boundary fence or wall. Cut 168 might also have represented a wall alignment, as may the patch of chalky clay 164. Although the interpretation of these layers and features can be no more than speculative, it is clear that the narrow strip of land between the presumed buildings in Market Row and the Slade was being intensively used. A large group of well broken down potsherds comprising Hedingham and sandy orange wares was found in 158 which sealed the clay wall of the earlier phase.

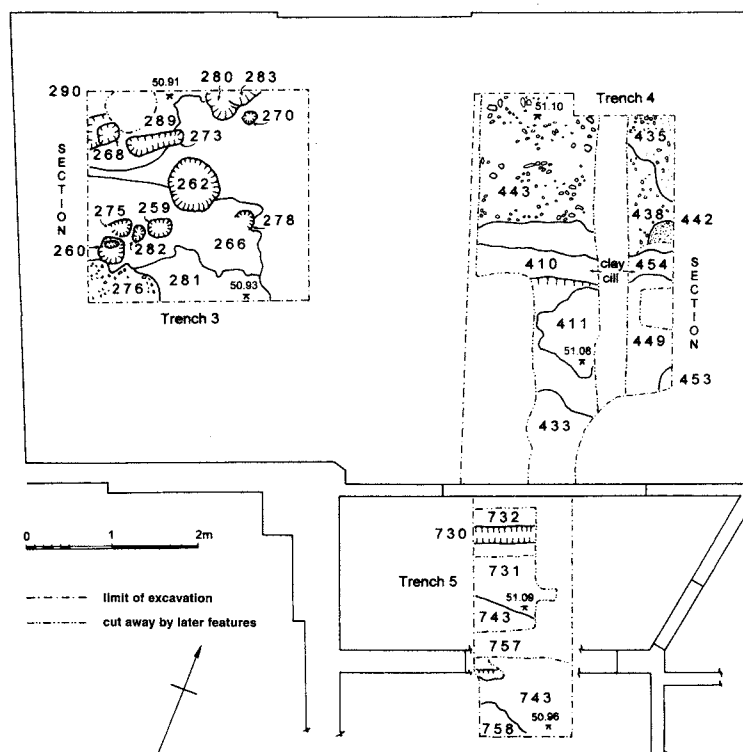


Fig. 13 Market Row: period II, trenches 3, 4, and 5, phase 3.

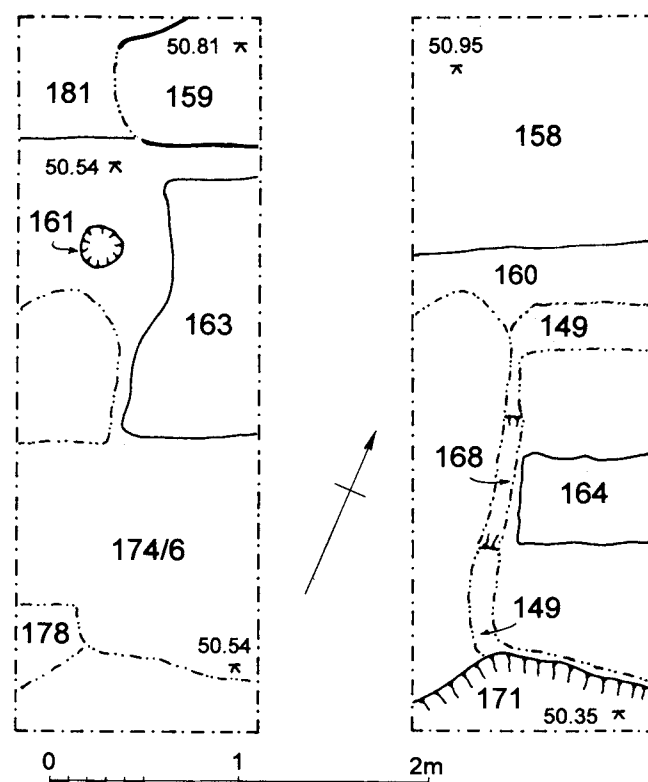


Fig. 14 Market Row: period II, trench 2, phases 1 (left) and 2 (right).

Discussion

In this period, the area under investigation began to be actively built up. In all the excavations except for trench 1, there was evidence of at least two or three successive structures, preceded by preliminary phases of dumping and levelling. On the marketplace frontage, there were two small structures. That in trench 3 was possibly about 3m wide, and of uncertain depth. By the end of the period, it projected north beyond that in trench 4, indicating encroachment on the marketplace. That in trench 4 was about 6-7m east-west (assuming it extended as far east as the boundary represented by the side of the long-wall jetty house), and about 2.5-3.0m north-south, with a later outshot or pentice 1.5-2.0m deep. If correctly reconstructed, the existence of the outshot implies a one-and-a-half or two-storey building, and shows that this unit was parallel to the street. The probable door would have been almost in the middle of its frontage. A clay wall in trench 2 might have belonged to a similar extension or outshot for a third building which would have been a precursor of that which later came to occupy the site of the public lavatories to the east. If so, then there was a row of three units sharing a common if somewhat ragged frontage, to the north of which there were metalled surfaces. To the south, the ground was terraced up to form what seems to have been an open space - presumably backyards - extending 3-4m to the edge of the Slade.

Thus the bottom of the Slade valley was clearly being reclaimed and colonised, something which suggests that its course and flow were well regulated and that there was little risk of flooding. At the same time, what had probably been an open area at the edge of the marketplace was being encroached upon and infilled with the construction of narrow rows of buildings which have survived fossilised in the existing ground plan of the town. In phase 3 of trench 3, there seems to be evidence for continuing encroachment northwards into the marketplace.

The stony and chalky layer in phase 2 of trench 2 may represent open space, in which case this may be evidence for the halting of the market infill process in the 14th century, a problem considered in more detail in the final discussion.

Whereas only tiny amounts of pottery were recovered for this period from trenches 3 and 4, relatively large groups were found in the levelling and dumped layers in trenches 2 and 5. The composition of the assemblages is consistent, comprising mainly Hedingham and sandy orange wares, with sherds of 'Suffolk' buff ware, medieval Harlow ware, the 'fine' coarse wares possibly originating in Cambridgeshire, Cambridgeshire sgraffito ware, and cooking pot rims datable to the late 13th to 14th centuries. The pottery broadly indicates a 14th-century date, although some of it, such as a sherd of London-type ware, could be



Plate 6 Market Row, trench 2, period II, phase 1, clay wall 159. Note later mortared flint wall 140/141 in section (looking east). cf. Figs. 9 and 14.

earlier. The time scale implied by the pottery seems to be about 50-75 years, which indicates that the buildings were short-lived.

Period III (c.1500-1700)

The finds evidence indicates a gap of about 200 years between periods II and III. This period saw encroachment northwards upon the street or marketplace, and the construction of a long-wall jetty house to the east of trench 4 (not observed in the excavations but fragmentarily preserved amongst the standing buildings as noted above).

Trench 3 (Figs. 8 & 15)

A dump of grey-brown silty sand (258) 40-150mm thick mixed with building debris, including tile, pieces of ironwork, and possible fragments of daub and chalk flooring, covered the entire trench and represents a new building phase. The layer served as a preparation for a chalk floor (241) 20-140mm thick. In the north-west corner of the trench, there was a very thin smear of burnt material. A row of postholes (250, 246, 244, 242) formed a very clear east-west alignment, presumably for an internal partition with uprights at about 18 inch (450mm) centres. Of these, 246 and 244 had postpipes measuring about 100mm across. Seven sherds were present in 258, all post-medieval red earthenware (fabric 40) except for one piece of earlier type Frechen stoneware which suggests a date in the second half of the 16th century or

slightly later. A fragment of window glass from 258 could be 17th century in date, but may be intrusive.

Above 241 and similarly extending across the entire trench, there was a layer of brown silty chalk (216) 1-5mm thick, probably formed through the wear and use of the underlying chalk floor rather than being a discrete surface in its own right. The partition seems to have remained in use, though undergoing modifications. Posthole 250 was replaced by another (235), whilst 246 was sealed by 216.

The sleeper wall for the suspended floor at the east side of the trench was discovered to have a foundation (221) made of mainly flint rubble bedded in sandy silt loam. The other sleeper walls were differently constructed being laid on bases of brickbats. 221 had the appearance of being an earlier structure re-used, and also contained two sherds of late medieval sandy orange ware probably 15th-16th century in date. It must have been the foundation of a wall dividing the structures in trenches 3 and 4. Some such division undoubtedly existed in this period, and it is worth noting that this alignment ties in with the west side of the back half of the double pile building. Assuming that there was a boundary coincident with the west wall of the listed building, then the unit formed between that and wall 221 measured about 3m east-west.

Trench 4 (Figs. 9 & 15)

In this period, the stratigraphy in trench 4 breaks down into fragmented groups, probably as a result of truncation at the time of the construction of the standing building. In the north half of the trench, there were patches of worn chalk flooring (423-27). On the east side of the trench, a post setting (415) was constructed in orange-red bricks measuring 230 x 105 x 60mm. It was about 210mm across, and similarly deep. Close to it, there was to the north a patch of orangey-brown mortar (416) which looked like the remains of a pad or foundation; whilst to the south, there was a shallow (50mm) cut (452) which extended beyond the limits of excavation, and was filled with silty chalk (448) covered with a skim of brick dust, as if there had been a brick cill or floor here. The posthole and 448 were subsequently covered by a mortar layer (445) overlain by a strip of chalk flooring (414) similar to that to the north. Pottery found in these layers and features comprised sandy orange ware and post-medieval red earthenware datable to the 16th century.

To the west, there was a rectilinear cut feature (412). This extended beyond the western limit of excavation, and must have terminated at the southern one as it was not observed in trench 5. It thus measured about 2.5m north-south, and was 0.6m deep. It had a flat base and vertical sides, but there was no evidence as to its function apart from a shallow sub-circular impression in the bottom of it. Its fill contained pottery similar to that from the other deposits associated with this phase, with the addition of black-glazed ware were datable to the 17th century.

These elements must indicate a major reconstruction of the building on the site. Certainly the chalk flooring is evidence that it now extended further north into the area that had been marketplace or street. The brick post setting and feature 412 respect the line of the clay cill that formed the frontage in the previous period; this may be fortuitous, or more likely, there was a partition in this position. The post setting, the mortar layer to the north of

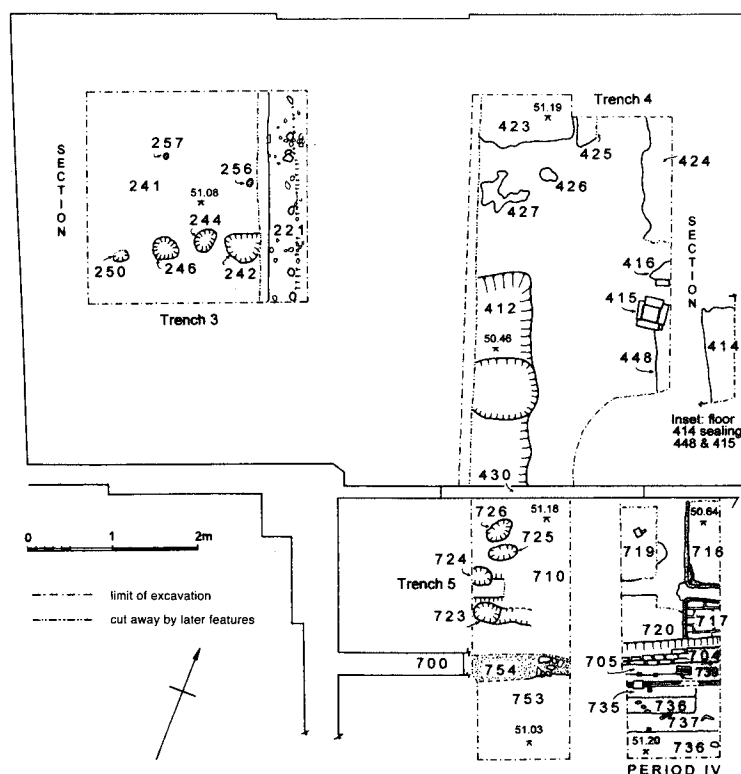


Fig. 15 Market Row: period III, trenches 3, 4 and 5, with, inset, period IV, trench 5.

it, the slot to the south of it, and the chalk surface which superseded it, formed a north-south alignment which may also have represented a partition and which coincided with the possible threshold of the previous period, whilst 412 might possibly mark the position of a chimney stack which had later been dismantled.

If wall 221 formed the west side of this building, and its east side lay at the junction of the listed building and the former lavatories, then the structure measured about 7m east-west, whilst its north-south dimension was about 5m, representing an encroachment on to the marketplace of 2-3m.

Trench 5 (Figs. 9 & 15)

A yellow-brown silty and chalky clay (728) sealed slot 730 which marked the rear wall of the period II phase 2 frontage building, behind or to the south of which there lay an outshot. There was no evidence for a new wall on the line of 730; probably it had shifted slightly northward to the position of 430, the wall forming the back of the main frontage building at the time of the excavation. The south wall of the outshot remained in the same position as in the previous phase, its position represented by an 80mm deep band of cobbles at least 300mm wide bonded with yellowish light brown mortar (754). Possible surfaces above 728 were represented by a thin skim of dark grey silt (727) covered by a more substantial layer 10-70mm thick of light brown chalky clay (710), in which was formed a slight east-west bank as if for a fixture or partition. Cut into 710 were three small shallow holes (724-726) and a narrow slot (723).

A sherd of sandy orange ware from an external gravelly clay layer (753), which partially underlay the south side of wall line 754, was datable to the 15th or 16th centuries. Fragments of late 18th-century wine bottle recorded as associated with 754 are in fact probably to be linked to the construction of the overlying period IV wall 704. A course of bricks (752) above 753 observed only in section may indicate the existence of an area of brick paving located to the south of 754.

Wall line 754 on the south side of the outshot was similar to 221 running north-south at the edge of trench 3. Both were of flint and probably intended for timber-framed structures. Possibly they were part of the same building. The internal dimension of the outshot measured north-south was 1.8m.

Trench 2, phase 1 (Figs. 9 & 16)

In the northern part of the trench, there was a chalky clay surface (155) with many stones and pieces of peg tile. It resembled the underlying layer 158, but contained a few sherds of post-medieval red earthenware. It is therefore later in date than 158, but if these were external metallage, the pottery may represent the latest phase of use and renewal. Surface 155 was cut by a posthole (156) 110mm deep.

Resting on 155 was a wall consisting of a lower course (141) of flints in a soft yellowish sandy mortar, on which was set an upper course of slightly smaller flints and some tile fragments bonded in a very hard whitish mortar (140). Its width was 710mm, and it survived to a height of 100-120mm. It was assumed to have been truncated to the west, though no cut was identified here. This wall was

in the right position to represent a rebuild of the outshot represented by the clay wall of the previous phase, but it was unusually wide for a wall beneath a timber cill. It is possible that it was built of stone for its full height; it may have been a boundary wall. It is also noteworthy that the point where it terminated corresponded approximately with that at which cob wall 159 had been cut through, and also the later division between cut features 146 and 150 in phase 2. It may be that there was a north-south alignment here.

Two features (146, 150), apparently rectilinear in shape and 100mm and 170mm deep respectively, were excavated to the south of wall 140, separated by a baulk only 100mm wide. The fill of 150 produced a sherd of Frechen stoneware and another of post-medieval red earthenware. If the construction of the long-wall jetty house has been correctly assigned to phase 2 (below), then this phase must date from about the middle or second half of the 16th century.

Trench 2, phase 2 (Figs. 9 & 16)

The layers and features of the previous period were infilled or covered by deposits which were predominantly loose, sandy, and somewhat rubbly, some at least of them being derived from demolition debris (148, 144, 136, 143). These were then sealed by chalk surfaces (125, 133, 139) which were very worn and had subsided in the area of the earlier cut features. Cut into the chalk surfaces were two linear features (126, 135/137) 30-130mm deep aligned east-west and north-south, and a posthole (132) with a postpipe. These features were intercut, but since they seemed to have been filled at the same time were probably contemporary. Finds from these deposits included black-glazed wares and clay pipes, indicating a 17th-century date. Chalk surface 139 contained a fragment of Westerwald stoneware datable to the later 17th to 18th centuries.

By the 17th century, the long-wall jetty house, for which there was evidence in the fabric of the listed building, had been already built. The deposits considered here lay immediately to the rear of this building. Slot 126 was in much the same position as the outshot walls of the previous period. However, on the assumption that the chalk surfaces were more likely to have been internal than external, it seems more probable that there was no longer an outshot but instead a range about 4m long at right angles to the house on the frontage, in which case the slot was related to internal features or fittings. This range would have occupied an area equivalent to the room in which trench 2 was located, and represented an initial phase of the weatherboarded outbuilding.

Discussion

The gap of about 200 years in the sequence indicated by the pottery can be explained either by the truncation of the archaeological deposits, or the absence of buildings on the site. Against truncation can be argued the lack of cut features or residual pottery assignable to the missing centuries. Against abandonment can be argued the apparent continuity of boundaries. Only in trench 2 did there seem to be relatively clear evidence for buildings being removed, the structure with a clay cill being

succeeded by external surfaces. There is no clear solution to this problem, which is considered more fully in the final discussion.

Period III saw improvements in building construction, a well built timber-framed house erected to the east which survived until the 20th century when it was pulled down to build the public lavatories. Stone-built plinth walls for sole plates now appear for the first time in trenches 3 and 5.

In this period, the deposits in trenches 4 and 5 are now similar, comprising chalk floors into which were cut postholes and other features. These floor layers extending north to the limit of excavation show that the building in trench 4 had encroached on the marketplace in this direction, its frontage presumably being in line with that in trench 3. The structures in the two trenches still constituted separate units, being divided by a north-south wall foundation. A rental of c.1620 implies that the properties in the two trenches were in different ownership (below, final discussion).

The posthole partition in the trench 3 building, which is not what would be expected in a timber-framed building of the period, could indicate that it was a quite separate structure of a relatively light

and impermanent type. The c.1620 rental, already referred to, can be interpreted to indicate that it was a shop. If the posthole partition were located at an approximate mid point in the building, then its north-south dimension (of about 4m) would have been greater than its east-west one (3m), and it would have had the appearance of a small cross-wing at right angles to the street.

Since the building in trench 4 is reconstructed as measuring 7m east-west by 5m north-south, it cannot have been a cross-wing. Its long axis must have been parallel to the street, and its width may have been as much as a pole (5.5m), about the same as front room of the listed building. This argument is important, as it shows that the well preserved east-west wall 754 in trench 5 was the south side of an outshot. It was too far (7.5m) from the frontage to be the rear wall of a building with an east-west axis. This outshot was to be fossilised as a passage between the two piles of the listed building. Wall 754 resembled the north-south wall 221 in trench 3 inasmuch as both were made of flint.

The evidence in trench 2 is too fragmentary to interpret satisfactorily. A stone wall in the same position as the earlier wall interpreted as defining an outshot seemed to be too wide to be a cill for a timber-framed building. Two large shallow cut features apparently rectilinear in shape might have been associated with processes carried out under cover in a building. By phase 2, the long-wall jetty house had been built on the frontage and the deposits in trench 2 are interpreted as lying within a range at the rear of the house.

Period IV c.1700-1850

The southern half, or rear pile, of the listed building was constructed, and the Slade was channelled into a culvert allowing further southward expansion of the backlands buildings to the rear of the properties fronting Market Row. No evidence for occupation in this period was found in trenches 3 and 4 because of truncation when the existing building was erected.

Trench 1, phase 1, c.1720-1800 (Figs. 9 & 17)

Layers of predominantly light grey-brown poorly mixed clay, silt and sand with varying amounts of rubble and debris (520, 511, 510, 522) at least 1.4m deep were dumped at the edge of the Slade valley. A stakehole (514) was found in these dumps. The construction of the culvert followed soon after, for the pottery from the dumps, and from the cut made through them for the culvert, was broadly similar. Of this pottery, the most closely datable is a distinctive type of white salt-glazed stoneware made from the 1720s. The clay pipes from the dumps also indicated an early 18th-century date. The Slade is not shown as an open stream on Eyre's 1758 map of Saffron Walden (Fig. 24; ERO T/M 90), which thus provides a *terminus ante quem* for its construction. The culvert was robustly built of red bricks bonded with a hard light greyish buff mortar, with a low four-centred vault made of

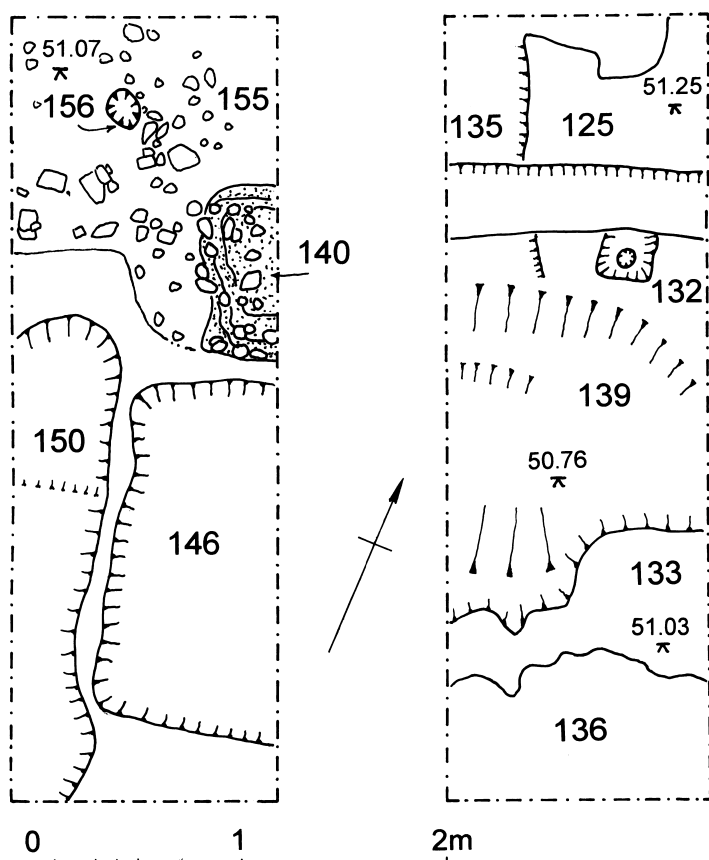


Fig. 16 Market Row: period III, trench 2, phases 1 (left) and 2 (right).

two courses of brick laid on edge. At this point, it measured about 1.62m high and 3.5m wide internally.⁸

The vault was directly sealed by chalk metalling (61) and trample (45) which extended across the entire trench. Cut into the chalk were two postholes. One (85) had been dug down as far as the vault of the culvert and had contained a post measuring 140mm by 70mm. The other (69) was in two parts, the western being slightly lower and the eastern containing the remains of a post pad.

In the northern half of the trench, there was a deposit of crumbly chalk (75) which, in the east, was overlain by a grey clay forming the make-up for another surface of sandy chalk with gravel (74). The latter produced a fragment of transfer-printed Pearlware datable to the end of the 18th century. These differences in flooring materials seem to reflect an internal subdivision within a building which had been erected at the edge of the culvert. In the south-east corner of the trench, a sub-circular feature (72) had been cut down to the level of the culvert vault.

The 1758 map (Fig. 24) indicates that the culvert created extra space on the Hill Street frontage which was used as yards, there being a yard where trench 1 was located. However, the archaeological evidence shows that by the end of the 18th century this area was being built up. The north side of the phase 2 cess pit corresponded with a change in the construction of the east wall of the outbuilding: to the north of this point, it was timber-framed whereas to the south it was of brick, indicating that the cesspit or privy at one time formed the end of the outbuilding, before it was lengthened in brick in period V. It seems therefore that the outbuilding, for which there was evidence in trench 2 in period III, was enlarged, or

rebuilt, so that it extended as far as the southern edge of layers 74 and 75, or approximately the edge of the culvert. At this end of it, there was a privy which housed a cess pit, either that which was excavated (see phase 2), or more probably a precursor of it, possibly in timber. The postholes suggest that to the south of the privy there may have been an open-sided roofed area or a lightly built shed.

Trench 2 (Fig. 9)

Dark grey layers of silty sand with stones, tile and some mortar (129, 127) were dumped filling the earlier features and raising the level for a new surface (114) made of chalk mixed with grey-brown clay, which covered all except the north part of the site where it had been removed or eroded. Since the dumps contained white salt-glazed stoneware, and a Creamware plate rim datable to c.1765-75, this must have taken place after the construction of the culvert. If the interpretation postulated for the sequence in trench 1 is accepted, then these deposits in trench 2 probably relate to the extension or reconstruction of the outbuilding or range behind the long-wall jetty house on the street frontage.

Trench 1, phase 2, c.1800-1850 (Figs. 9 & 18)

A new chalk floor (43) in the area over the culvert indicates some degree of rebuilding though the internal disposition remained substantially the same. The posthole (85) and post pad (69) were renewed (84 & 30), whilst the existence of an east-west partition was much better defined, there being a shallow (40mm) slot (64) to the east, and to the west a thin (10mm) band of yellowy grey sandy mortar (54) terminating at a brick and chalk built post setting (55). Similarly, the north-south division in the north half of the trench was clearer, being marked by a flat-bottomed cut 400mm wide and 30-50mm deep (67), at the south end of which were two small postholes (26, 28). To the west of 67, a smooth grey clay surface (50) overlay the chalk, cut by a hole (51) for a post 160mm square. To the east of 67, there was a shallow tapering slot (66), and a shallow (30mm) cut (65) which had been filled with silty sand and covered by broken slates.

The lightly built structures seemed to represent a rebuild of the phase 1 structure. Within this, at the eastern edge of the excavation, there was a brick cess pit (37). This was recorded as cutting all the surrounding chalk layers; however, these relationships were not entirely clear, and (as suggested above) this pit, or an earlier version of it, was probably an original feature of the building. The pit had brick sides and a slate-lined bottom forming a chute into the culvert (Plate 7). Its south wall (98) was thicker and deeper than the others, and seemed to have been rebuilt. It rested on a foundation of timbers (95) set on the vault of the culvert, effectively sealing off the chute into it. This blocking was probably caused by the subsidence of the deposits in this area. The greater thickness of the south wall may be explained by its having formed part of the foundation of the south wall of the building in which the pit was located.

The only dating evidence from this phase was a piece of Nottingham/Derby-type stoneware from the chalk floor. The fill of posthole 51 contained a sherd of Staffordshire slipware, and another of porcelain in very poor condition but possibly English. A *terminus post quem* is provided by

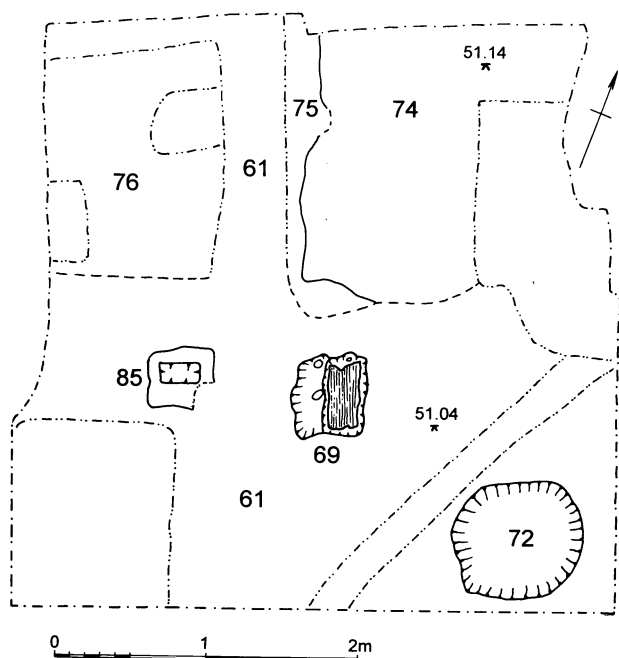


Fig. 17 Market Row: period IV, trench 1, phase 1. The northern edge of the culvert lies below the southern edge of 76 and 74.

the transfer-printed pearlware recovered from the latest surfacing (74) in phase 1, which suggests a date c.1800 for the start of phase 2.

Trench 5 (Fig. 9 & 15)

To the north of the south wall of the outshot, thin layers (718, 720, 721) of light brown chalky clayey silt containing a certain amount of building debris and pieces of pottery and wine bottle, partially overlain by a light orange-brown sandy silt (719), seem to represent site clearance and levelling, as well as having formed trampled surfaces.

Cut into these layers were two pits (716, 717), apparently rectangular in shape though lying partially outside the excavated area. 717 measured 620mm by at least 450mm, and was 320mm deep. Its almost vertical sides were plastered, and it was floored with orangey red bricks measuring 220 by 110 by 70mm. The dimensions of 716 were at least 900mm by 360mm, and it was 530mm deep. It too had plastered sides, but no brick base. Curiously, however, brick impressions as if for a floor were noted in its sides at a depth of only 230mm. There was also a vertical joint in the plaster lining as if for an internal division or a repair. Approximately contemporary features similar to the pits, but with brick sides and bottoms, and deeper, have been found at the site known as Horners Corner at Rochford, where their function is also uncertain.⁹

The fill of the more southerly pit was cut by a foundation built of three courses of fragmentary brick (704) with a top course of bricks, or possibly paving bricks, laid on edge. This foundation was on the line of the south side of the former outshot and belonged to the wall forming the north side of the back half of the double pile building. Levelling layers or surfaces to the south of the foundation were represented by layers of chalky clay (705, 736). Cut into these were a number of features which may have been connected with flooring, fixtures, or building

works in this or the following period. Close to the wall there were the remains of a rectangular post measuring 180 by 100mm and two stakes (739). In the fill (735) of an east-west slot, there was a wooden beam or joist 50mm wide, and also a stake. Further south, and joining with this slot, there was a shallow L-shaped cut, the fill (737) of which contained rotten wood and the remains of a stake (740).

Layers 720 and 721, which were cut by pits 716 and 717, contained Nottinghamshire or Derbyshire stoneware dating from the 18th century, and a Creamware plate rim datable 1785-95. The upper fill (707) of pit 716 produced 18th-century Nottinghamshire stoneware and Creamware datable to c.1780-1800. The fill (712) of pit 717 was of a similar date, but from it was also recovered a Pearlware tea bowl with Chinese style blue-painted decoration of c.1800.

Discussion

The final stage in the encroachment on to the valley of the Slade, a process which had begun by c.1200, took place in the second quarter of the 18th century, the stream being enclosed in a brick culvert with a low vault between the western edge of the Common and the High Street. The motives for the construction of the culvert may have been to conceal what functioned effectively as an open drain, or it may have been in response to pressure on land as the urban population grew or demanded more space. This pressure is reflected in the progressive building up of the backlands. Extensions were made to the south of the buildings on the frontage in trenches 3 and 4. The 1758 map (Fig. 24) shows that this had already happened by that date. The archaeological evidence shows that the outshot behind the frontage buildings became fossilised in these extensions, forming a corridor between the front and back of a double pile building. In view of its date of c.1800, the brick foundation 704 in trench 5, on the line of what had been the south wall of the outshot, was probably associated with the construction of the timber-framed back half of the double pile building. This building (which was demolished in 1984) must have provided residential accommodation behind the shops on Market Row.

Behind the 16th-century long-wall jetty house, a range was added corresponding to the north half of the weatherboarded outbuilding (that part in which trench 2 was situated). After the Slade was culverted, this range was extended and possibly rebuilt, its south side being at the north edge of the newly built culvert. This contained a cess pit which may initially have been built of timber but which certainly came to be brick-built, and which emptied into the culvert.

Period V c.1850-1984

In this period, the buildings existing on the site at the time of the excavation were erected.

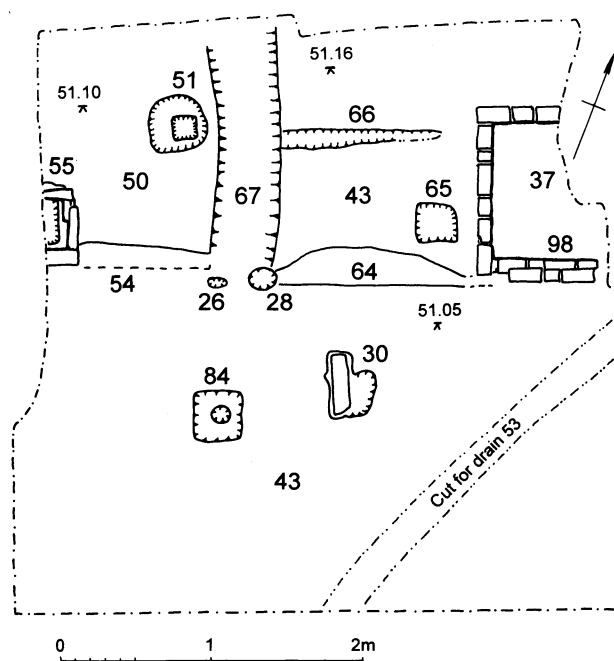


Fig. 18 Market Row: period IV, trench 1, phase 2.

Trench 3 (Fig. 8)

A scatter of holes, some of them very small and probably of little significance, in a layer of brown silty chalk (216) which sealed the trench at the end of period III, have been interpreted as associated with the construction of the listed building, partly because of their random distribution and partly because their fills resembled (and were probably the same as) 201, a loose deposit formed mainly by dust percolating through the floorboards. Confined to the western side of the trench was a layer of light brown to pinkish sandy silt (228) which, because of the brick dust in it, was probably formed during the construction of the building. This was cut by two postholes and a brick sleeper wall for the suspended floor. To the east there was another sleeper wall which was built over an earlier foundation (221, see period III). The timbers of the floor were not original and must have been renewed at least once. Finds from the deposit beneath the floorboards comprised single sherds of post-medieval red earthenware, modern stoneware, and Yellow Ware with mocha decoration datable to the late 18th or 19th centuries.

Trenches 4 and 5 (Fig. 9)

A course of bricks (700) added to the top of foundation 704 may have been associated with alterations carried out when the frontage building containing the shop was erected on Market Row and integrated with the structure which formed the rear of the double pile building standing at the time of the excavation. Between the two parts of the building ran a corridor located on the site of the medieval outshot. In the north and south sides of this corridor were wide low Regency-style arches to provide communication

between the front and back of the building. A very mixed sandy layer (729) with chalk, burnt material and brick fragments, which butted 700 sealing all the layers and features to the south of it, probably dated from the time of the construction of the southern building.

The south wall of the shop forming the north half of the double pile building had a foundation (430) one brick wide and four courses deep. Brick sleeper walls for suspended floors were found running north-south in both trenches 4 and 5.

Trenches 1 and 2 (Fig. 9)

The cess pit was filled with deposits of sandy silty material mixed with building and demolition debris, coal and rubble (97, 46, 44, 40). On the south side of the cess pit, a drain was inserted. Where it adjoined the pit, it was brick built (96). From this point, it ran to the south-west through terracotta pipes 660mm long with a diameter of 100mm. The room in which the trench was located was then refloored with flints and cobbles bedded in silty sand. In the southern part of the trench, this floor had been robbed. Three postholes in the cobbles indicated the position of an east-west partition.

Everything points to these features being associated with the outbuilding in its final refurbished form with the rusticated weatherboarding. The postholes for the partition were opposite the right hand jamb of the north door. The rather wide doorways suggest the building was used as a stables, with which the cobble floor would be consistent. The only dating evidence found came from the cess pit fill, which contained much transfer printed china, including a jug with a registration mark of 1844.



Plate 7 Market Row, trench 1. Chalk floor 61, with the cobble floor surviving at the edge of the trench. Visible in the section are cess pit 37, drain 96, and the culvert vault (looking east). cf. Fig. 9.

The stables later became a workshop. In the north-east corner of trench 1, a concrete block had been inserted into the cobble floor. This was a support for an engine linked to an overhead drive, which in part survived. Set in a hole, in front of the southern door in the area where the cobbles had been removed, there was a circular iron dish 530mm in diameter with four heating elements attached to its base. This contraption, and the whole of the interior of this part of the building, was subsequently covered with an asphalt floor.

In trench 2 in the north part of the building, which had been used as an office, a new chalk surface (113) was put down over a layer of sandy gravel make-up (112). This was cut by brick cills (107, 104) for a suspended floor, which in recent times had been replaced with the existing wooden floor on a concrete foundation.

Discussion

The best dated event in this period is the filling and abandonment of the cess pit, which the pottery shows to have occurred c.1850. This seems to have been occasioned by the reconstruction of the outbuilding, with its rusticated timber facade and its division into two parts at the ground floor, an office to the north and a stable with a cobble floor to the south.

Were the outbuilding to have been assigned a date on architectural grounds alone, it is probable that it would have been put earlier than 1850. The same is true of the neo-classical shop front, which is dated c.1825 in the current list description. However, a detailed map of the town, which is endorsed 'S.J. King's Town Plan' and which is believed to be of c.1850, indicates that there were three units on the frontage in the area of trenches 3 and 4, and that these had yet to be amalgamated into a single shop front (ERO D/DQy 25; cf. Fig. 25). This map is valuable because although in poor condition it seems to show the outline of individual properties and to distinguish built-up land from open space. It implies that the long-wall jetty house, the outbuilding behind it, the back of the double-pile building, and part of the street frontage, were all in one ownership, belonging to a member of the Spicer family. Pigot's Directory for 1832 lists Richard Spicer, whitesmith and blacksmith, as having premises in Hill Street, and Waite Spicer, grocer, tea dealer and draper, as being in the Buttermarket. By 1839, Waite Spicer had moved to Shire Hill Farm, and Matthew Spicer, ironmonger, whitesmith and brazier, was established in the Buttermarket. Matthew Spicer is listed in Kelly's Directories as exercising his trade in the Buttermarket until 1850.

It is probable that the double-fronted shop with its neo-classical decoration was the work of Matthew Spicer and dated from the 1840s. It is also reasonable to conclude that the remodelling of the outbuilding as an office and stables with rusticated weatherboarding on its facade accompanied the

construction of the new shopfront. This would have made the backyard and garden into a pleasant space. A bow window inserted into the back of the double-pile building implies that there was an attractive view into the garden from the house.

By 1895, the house and shop were owned by Thomas Charles Nunn, ironmonger and china dealer, who is recorded there in rate books (ERO T/A 866/2/16) and directories between that date and 1914. By 1922, the owners were A.J. Choppens and Sons, engineers, who also had premises in the High Street, and who were to remain in Market Row until 1984 when they moved to an out-of-town site. It was Choppens who converted the stables into a workshop. It was said locally that the workshop had been used since the end of the First World War for sharpening and servicing agricultural tools.

The medieval and later pottery from the Market Row site

by Helen Walker

Introduction

Pottery found at the Pig Market site (SW3) and nearby Choppens (SW5) excavations has been mentioned briefly in the excavation reports on those sites. Presented here is an analysis of the pottery from the Market Row site (SW4), which produced good sequences of late and post-medieval pottery. A total of 1019 sherds weighing over 11kg were excavated. A few early medieval and 13th century sherds were found, but most of the medieval activity appears to date from the late 13th to 14th centuries. Hedingham ware fabrics are present, including a 'fine' version of the coarse ware. A number of sandy orange wares were also found including very small amounts of sgraffito ware and medieval Harlow ware. Small quantities of Suffolk pottery are present, and there are two unattributed fabrics that may have a Cambridgeshire origin. Little pottery belongs to the 15th, 16th or 17th centuries, but there is a relatively large group of early 18th century pottery, including several slipwares from the dumps contemporary with the construction of the culvert for the Slade. The cesspit filled in Period V produced a group of mid 19th-century pottery.

Method

The pottery has been recorded using Cunningham's typology (Cunningham 1985a, 1-16) and her fabric numbers and rim codes are quoted in this report. The cooking pot rim codes are defined by Drury who has developed a dating framework for the evolution of cooking pots rims found at Rivenhall in central Essex (Drury 1993, 81-4). The cooking pots found here at Market Row have been compared to those from Rivenhall to give some idea of the date and

distribution of these rim types. The dating evidence from the pottery has been inserted into the main text, and therefore this report only summarises the pottery from each phase and period, although larger groups of pottery are described in more detail. The fabrics in each period are summarised by means of tables giving sherd count and the total weight of pottery within each context (Tables 2-6). There is also a full catalogue of illustrated pottery.

The fabrics

The percentages quoted are calculated by sherd count.

Fabric 13 Early Medieval ware (<0.5% of total) Described by Drury (1993, 78). This is a coarse sand-tempered ware, typically red-brown in colour with a grey core. It is coil-built and has the extreme date range of 10th to earlier 13th century, although in practice sherds belonging to the beginning of this date range are rare. A few body sherds were found in Period I, trenches 3 and 4, with one other sherd residual in Period II.

Fabric 13ck Early Medieval ware – chalky (<0.5% of total) This is a variant of Early Medieval ware containing sparse to moderate inclusions of chalk as well as coarse sand. Chalky fabrics are rare in Essex and this probably reflects a change in geology in the north-west of the county, from the tertiary clay and sand deposits found in most of Essex to more chalky Cretaceous deposits. An early medieval chalky fabric also occurs in London dating from the late 11th to mid-12th century (Vince and Jenner 1991, 70-2). Here, this ware is only found in phase 1 of Period I. Forms: none.

Fabric 13t Early Medieval ware – transitional (<0.25% of the total) This has a buff-brown to red fabric sometimes with a grey core and darker surfaces. Vessels are often thick-walled. The matrix is fine and there is a tempering of predominately grey, white and colourless sands. Only two body sherds of this ware were found, both residual in phase 2 of Period II.

Fabric 20D Hedingham coarse ware (22.5% of the total) This is typically grey, although buff and sometimes reddish examples also occur. It is tempered with moderate white, grey and colourless sub-angular quartz sand, and sparse rust coloured oxides within a fine, micaceous matrix. Hedingham coarse ware forms the largest proportion of the pottery found at Market Row. It is present from Period I, phase 1 and is common throughout Period II. Forms comprise cooking pot rims with squared, flat tops above short upright necks, Cunningham's sub-form H1 (Nos 7 & 8); cooking pots with blocked neckless rims, Cunningham's sub-form H3 (No. 19); and cooking pots with horizontal flanged rims, Cunningham's form E5A (No. 13). Bowls with horizontal flanged rims were also found (No. 4) along with small fragments of jugs, one with a thickened rim and one with an inturned rim decorated with incised horizontal lines.

Fabric 20Df Hedingham coarse ware – fine version (7.5% of total). This is the same as the coarse ware in colour and general appearance, but with little or no sand-tempering. Vessels tend to be thin-walled and texture varies from quite smooth to slightly pimply. This is not the

first time a fine version of the coarse ware has been seen. At Pentlow Hall on the Essex/Suffolk border, a number of very fine Hedingham-like grey ware sherds were found (Walker 1991a, 178-9) and were classified as Fabric 9/20D as the fabric resembled Thetford-type ware (Cunningham's Fabric 9). However, on further examination, the forms were not Saxo-Norman but had more in common with early medieval and medieval wares. A very fine Hedingham-like grey ware was also found at Maplecroft, Castle Hedingham (Walker 1991b, 175-6). Evidence that Fabric 20Df is indeed a Hedingham product comes from the Hedingham kilns, as a small cooking pot in this fabric was found by the author amongst kiln material from Southey Green, one of the unpublished Hedingham ware production sites. At SW4 two sherds of this ware were found in phase 1 of Period I, but it is most abundant in trenches 2 and 5 of Period II. Forms comprise sherds from cooking pots with horizontal-flanged rims (Nos 14, 20) and sherds from jugs with inturned rims (Nos 15, 17).

Fabric 20w Medieval coarse ware – fine white version (4.5% of total) This is as fine as Fabric 20Df, but sherds are off-white in colour and are either a very pale buff or a very pale grey. Some of the pale grey sherds have a much darker 'skin' on both surfaces. Sherds are thin-walled and feel smooth to the touch especially on external surfaces. This ware has a fairly limited distribution in Period II, with concentrations in levelling 745 in phase 2 of trench 5 and ?external surface 158 in phase 2 of trench 2. Forms: inturned jug rims very similar to Fabric 20b jug rim No. 21.

Fabric 20b Medieval coarse ware – fine buff version (9% of total) This is only found in phase 2 of Period II in trench 2. The fabric is the same as that of Fabric 20w but the sherds are a pinky-buff or creamy-orange colour sometimes with buff-grey surfaces. Forms comprise jugs with inturned rims (No. 21), a cooking pot with an unusual angular everted rim (No. 6) and cooking pots with horizontal-flanged rims (No. 22). Fabrics 20w and 20b may well be products of the same industry given their similarity and that the same jug rim-form occurs in both types. These wares have been classified as medieval coarse ware in spite of their fineness, because none of the sherds are glazed or decorated and because cooking pots occur in these fabrics, which are normally a coarse ware form. The origin of fabrics 20w and 20b are unknown and it is possible that they are another variant of Hedingham ware, or that they come from outside the county. A source in Suffolk is unlikely (Sue Anderson pers. comm.), but vessels with angular rims in a fine light grey ware, similar to No. 6, have been found in Cambridge (Edwards and Hall 1997, f12, fig. 2. 32), so a Cambridgeshire origin for these wares is a possibility.

Fabric 21 Sandy orange ware (5% of total) Described by Cunningham (1982a, 359), sandy orange ware includes any locally made sand-tempered oxidised fabric with a date range of 13th to 16th century. Both medieval and late medieval examples are present. For a discussion of late medieval sandy orange ware see Cunningham (1985a, 1). Different sandy orange ware fabrics could be distinguished (see below) but have only been sub-divided where rims or other featured sherds are present and where the differences in fabric are obvious in hand

specimen, as many sandy orange wares appear similar under the microscope. Sandy orange ware first appears in phase 2 of Period I, and is current in Period II contexts, and in trenches 3 and 4 of Period III. No forms were found, but sherds showing a cream slip-coating under a mottled green glaze, or slip-painting under a partial plain lead glaze are present, and are most probably from jugs. Also present is a jug base thumbled in groups of two.

Fabric 21C Cambridgeshire Sgraffito ware (<0.25% of total) A sandy orange ware characterised by incised decoration through a coating of thick cream slip to reveal the colour of the pot body beneath. It is thought to have been made in Cambridgeshire, (although it may also have been made in other areas) and dates to the 14th and early 15th centuries (Bushnell and Hurst 1952, 21-6). Only one sherd was found, in layer 745 of Period II, showing a single line of sgraffito decoration under a clear glaze speckled with green, and is most likely from a jug.

Fabric 21D Medieval Harlow ware (<0.25% of total) This is a type of sandy orange ware made at, or near, Harlow. It is micaceous with abundant inclusions of well-sorted sub-rounded sands with a size range of 0.25-0.5mm. Sands can be colourless or grey, but grains with a red or amber sheen predominate. Other inclusions comprise sparse red oxides and occasional chalk flecks. It has a pimply texture, and colour is typically dull orange brown, sometimes with a pale creamy orange core or margins. No production site has been found, but there is documentary evidence of potters there from the mid-13th century (Newton *et al.* 1960, 360). At Market Street, Harlow (Walker 1991c, 107-112), it was associated with London-type wares of the late 12th to mid 13th century and at Stansted it was associated with fine wares dating to the mid-13th century (Walker forthcoming a). It therefore seems likely that production was underway by the 13th century, and may have continued throughout the Middle Ages eventually evolving into the better known post-medieval industry. Both slip decorated jugs and kitchen wares were made in the same sandy fabric. Only two sherds were identified as medieval Harlow ware, the rim and base from a jug (No. 9).

Fabric 21(1) Sandy orange ware – variant 1 (0.5% of total) This ware has a reddish-buff surface and a reddish interior without a grey core. The fabric is similar to that of oxidised Hedingham coarse ware. Sherds are chunky, thick-walled, unglazed and quite hard, but feel smooth to the touch. Present only in Period I, forms comprise a cooking pot or jar rim of rim-form H3 (No. 1) and a bowl rim (No. 2).

Fabric 21(2) Sandy orange ware – variant 2 (4% of total) Some of the sandy orange wares are fine, thin-walled, and although they have a sandy matrix, there is little or no added sand-tempering. One sherd of this ware occurs in phase 1 of Period I, the rest belongs to Period II, where it occurs only in trench 5 except for two sherds in trench 2. Forms comprise a jug handle (No. 3) and a slip-painted jug rim (No. 18).

Fabric 21(3) Sandy orange ware – variant 3 (4% of total) Sherds vary from orange to brick-red and do not have a grey core. It is tempered with abundant white or off-white sub-rounded sands giving a pimply surface texture. This ware occurs in Period II, mostly from phase 2 of trench 5, and is residual in Period III. Forms comprise

cooking pot rims of Cunningham's sub-form H3 (No. 11) and a thickened rim (No. 12). A fragment of handle, and slip-painted sherds with a rather decomposed plain lead glaze, were also found.

Fabric 22 Hedingham fine ware (1.5% of total) This is described by Drury (1993, 86-9): it has a fine micaceous fabric, usually creamy orange or buff in colour and normally without a reduced core. The main vessel produced is the jug, usually highly decorated and with a mottled green glaze or sometimes a plain lead glaze. It was made at several production sites centred around Sible Hedingham in north Essex and has a wide distribution. In Essex it seems to be commonest from the late 12th to 13th centuries but excavations at Denny Abbey in Cambridgeshire show Hedingham fine ware present in securely stratified groups dating from the second half of the 12th century to the first half of the 14th (Coppack 1980, 223-247). Here, it is found in Periods I and II, but is relatively more common in Period I. Forms: none except for sherds from a sagging jug base in Period II layer 761, which has slightly out flaring sides above the basal angle, a typical feature of Hedingham jug bases (cf. Rackham 1972, pl. 33). Sherds with applied strips under a mottled green glaze were found in Period I.

Fabric 22l Late Hedingham ware (<0.5% of total) The fabric is the same as that of Hedingham fine ware, but the colour is a brighter orange than the more typical creamy orange of Hedingham fine ware, and sherds are thinner-walled and harder. Surface treatment is typically slip-painting under a glossy plain lead glaze. This ware has been classified as a Hedingham type because of the extreme similarity of fabrics, but it has to be said that Fabric 22l does not occur in excavated assemblages from the Hedingham production sites examined by the author. However, pottery from a kiln at Blackmore End, near Sible Hedingham examined by John Cotter included slip-painted sherds with a Hedingham-like fabric (Cotter 2000, 90), and Cotter has suggested a date, based on typological grounds, of perhaps after 1350. Fabric 22l also occurred at Haverhill Bypass (Walker 1994). Three sherds of this ware occur in phase 1 of Period II, where forms comprise a fragment from a jug (No. 5).

Fabric 34 Unclassified buff ware (1% of total) All sherds categorised as Fabric 34 come from the same unidentified late medieval vessel (No. 16).

Fabric 34S Suffolk buff ware (2% of total) This has a hard thin-walled buff coloured sand-tempered fabric in which glazed and sometimes decorated jugs were made. The fabric is not particularly distinctive apart from occasional lens-shaped inclusions of buttery coloured clay. The only evidence that this ware has a Suffolk origin is from its find spots in Suffolk and north Essex. In Suffolk, it has been found at Haverhill bypass (Walker forthcoming b) and from other sites in south Suffolk. It has also been found in the area of Stowmarket and occasionally in Ipswich (Sue Anderson pers comm.). In addition, the bottom half of a buff ware jug with incised wavy line decoration was found at Harwich in north-east Essex, close to the Suffolk border (Walker 1990, fig.15.47). Sue Anderson considers this ware is likely to be a Suffolk product, but not necessarily from the Waveney valley, an area on the Suffolk/Norfolk border where a large and important late medieval pottery industry was centred

(Anderson *et al.* 1996). At SW4, Suffolk buff ware occurs only in Period II, from phases 2 and 3 of trench 5, where the pottery comprises a slip-painted jug rim (No. 10), slip-painted and partially glazed body sherds, and body sherds showing cream slip-coating under a mottled green glaze, probably all from jugs. One example shows a horizontal slip-painted band with the odd splash of clear glaze, and a second shows just a dash of slip-painting.

Fabric 36 London-type ware (<0.25% of total) Described by Pearce *et al.* (1985), this ware spans the early/mid 12th century to early 14th centuries, and was of major importance from the mid 12th to mid 13th century, when it was widely traded. Decorated jugs were the main product. Only one sherd is present, in layer 761 of Period II, and shows a pitted, decomposed partial plain lead glaze.

Fabric 40 Post-medieval red earthenware (9.5% of total) This is described by Cunningham (1985a, 1-2). It first appears in the late 15th century and is usually the dominant fabric in post-medieval groups dating from the 16th to earlier 18th centuries. It persisted into the 19th century. This ware is not as dominant here as it is in most post-medieval sites. Forms comprise the usual utilitarian bowl and jar forms, although types characteristic of the 16th century such as large slip-painted jugs and cisterns are absent. A decorated bowl rim is illustrated (No. 23). The only large concentration of post-medieval red earthenware was in dump layers 520-522 in Period IV. The more interesting material has been illustrated, comprising storage jar rim (No. 32), a hollow ware with a solid pedestal base (No. 33) and a drug jar rim (No. 34). A glazed sherd intrusive in Period II slot 272, exhibits flecks of chalk in the fabric.

Fabric 40bl Black-glazed ware (2.5% of total) This is a type of post-medieval red earthenware covered with a black iron-reduced glaze. Known local production centres were at Harlow and Stock. It was also made in the north of England and the Midlands, where it superseded Cistercian ware. Black wares date from the very beginning of the 17th century (or possibly the end of the 16th) and are current into the 18th century (Cunningham 1985b, 71). In Staffordshire they were most popular within the period 1650-1720, declining in the mid 18th century (Barker 1986, 59). Forms comprise fragments from cups or tygs in Period III and IV of trenches 1, 2 and 4. Thicker walled sherds from jugs or jars were also found in trench 1.

Fabric 40A Metropolitan slipware (1% of total) This is a type of post-medieval red earthenware decorated with white slip-trailed patterns under a gingery glaze. It was made at Harlow and other local production centres at Stock and Loughton from the early 17th and into the 18th centuries (Cunningham 1985b, 64). Most of this type of pottery occurred in Period IV of trench 1, with a single sherd from levelling layer 127 in trench 2 of this period. Forms comprise a small dish (No. 24); a flanged dish rim; a one-handed jar rim (No. 25); and a somewhat untypical dish rim (No. 26).

Fabric 45D Frechen stoneware (1% of total) A German stoneware described by Hurst (*et al.* 1986, 214-221), and Gaimster (1997, 92-4, 208-223) and imported from the mid 16th to late 17th centuries. Small amounts of this ware occurred in Period III. No forms are present except for a handle and base sherd in trench 1.

Fabric 45F Westerwald stoneware (<0.5% of total) Described by Hurst (*et al.* 1986, 221-225) and Gaimster (1997, 94-5, 251-71), this is a distinctive grey German stoneware decorated with cobalt-blue and sometimes manganese-purple, which was imported in quantity from the mid 17th to third quarter of the 18th centuries. This is found in Period III, trenches 1 and 2. One rim sherd is present and is described in the text.

Fabric 45G Nottingham/Derby stoneware (1% of total) Stoneware was manufactured in this area from the 18th century onwards and is distinguishable from other English stonewares by its lustrous glaze and use of lathe turning. It is present in Period IV, trenches 1 and 5, where forms comprise sherds from jugs and bowls, sometimes showing rouletted decoration. The examples from Period IV show a thin white line separating the glaze from the body, characteristic of Nottingham products (Noël Hume 1970, 114). Nottingham stoneware was not as long-lived as the Derbyshire industry. It was in decline by the second half of the 18th century and was no longer produced after 1800 (Hildyard 1985, 12).

Fabric 45M English stoneware (2% of total) English stoneware was made from the later 17th century onwards. Here, it was found in Periods IV and V. Most of the English stoneware in Period IV came from dump layers 520-522 in trench 1, where sherds from 18th century tankards were found. Period V produced two cylindrical 19th century bottles including a complete blacking bottle.

Fabric 46A English tin-glazed earthenware (2.5% of total) Tin-glazed earthenware has a buff or pinkish earthenware body, covered with a tin-opacified glaze, which is normally off-white or pale blue. Designs can then be painted on the glaze while it is still wet. English tin-glazed earthenware normally has a buff body with a thick all over tin-glaze of egg-shell thickness and was manufactured principally in the 17th and 18th centuries. This was found in dump layers 520-522 in Period IV, phase 1, trench 1, and is residual in Period V. Forms comprise a plate rim, a bowl rim and a blue-painted sherd possibly from a cup (No. 30).

Fabric 47 White salt-glazed stoneware (2% of total) This was made in Staffordshire and other centres from the 1720s to 1770s (Draper 1984, 36-40) and can be distinguished from other 18th-century wares by its orange-peel texture produced by the salt glaze. The base of a plate was found in levelling layer 127 in Period IV, trench 1, and sherds of early dipped white stoneware were found in dump layers 520-522, including a bowl rim (No. 31).

Fabric 48B English porcelain (1.5% of total) English porcelain was manufactured from the mid 18th century onwards. Two rather decomposed sherds were found in Period IV, while finds from Period V include a bone china cup with sprigged mauve flowers.

Fabric 48C Creamware (1% of total) This is a lead-glazed cream-coloured earthenware, manufactured from the mid 18th century by Wedgwood and others. Creamware was found in Period IV, trench 5, with one sherd from the same phase in trench 2. Forms comprise plates with moulded rims, a moulded flower, and a hollow ware sherd showing lathe-turned grooves.

Fabric 48D **Ironstone** (8.5% of total) This is a robust, chunky fabric first manufactured in 1805 and patented by C.J. Mason in 1813. This occurs only in Period V where forms comprise mainly transfer-printed table wares belonging to the mid 19th century.

Fabric 48E **Yellow ware** (<0.25% of total) This is a thick-walled, drab yellow ware decorated with bands of light blue and raised ridges in white (Noël Hume 1970, 131). Only one sherd of this, showing mocha decoration, was found, in context 201 in Period V. Mocha is a dendritic pattern created from a mixture of tobacco juice and urine made during the late 18th until the second half of the 19th century.

Fabric 48L **Lustre ware** (<0.25% of total) This was popular during the first half of the 19th century and its lustrous sheen was achieved by applying a thin film of metallic oxide to the glazed surface (Gibson 1993). One sherd of this was present in Period V and is described in the text.

Fabric 48P **Pearlware** (<0.25% of total) Pearlware is similar to creamware but made whiter by the addition of cobalt to the glaze. It was manufactured from 1779 to around 1830. Two sherds were found in Period IV, the rim of a blue-painted tea-bowl and a body sherd with transfer-printed decoration.

Fabric 48X **Miscellaneous post 1800** (<0.25% of total) One unidentified black-glazed sherd found in Period V has been given this classification.

Fabric 50 **Staffordshire-type slipwares** (2.5% of total) These are described by Barker (1993, 14-18) and were produced during the 1640s, with trailed and combed slip decoration becoming increasingly popular from about 1670. Similar wares were also made in Bristol. Flatwares reached their peak of popularity in the early 18th century and lasted well into the second half of that century (Barker 1993, 18). Hollow wares have a similar date range to the dishes, reaching their peak between about 1700 and 1720 (Barker 1993, 14). Slipwares were found in Period IV, trench 1 dump layers, where forms comprise press-moulded dishes including an example with moulded decoration (No. 28) and a slip-trailed cup fragment (No. 29). Vessel No. 27 may also have a Staffordshire or Midlands origin.

Fabric 50A **Staffordshire-type mottled ware** (<0.5% of total) This ware has the same buff-coloured body as the slipwares and is covered with a streaky brown glaze derived from flecks of iron. Like the slipwares, it occurs in the Period IV trench 1 dump layers, where forms comprise the rim of a tankard, probably dating to the first half of the 18th century (Banks *et al.* 1999).

Fabric 51B **Modern flowerpots** (<0.5% of total) Sherds from 19th-century flowerpots occur in Period V.

Fabric U **Unidentified** (<0.5% of total) One unidentified medieval sherd was found in Period I and is described in the text.

The pottery from period 1

A small amount of pottery, 46 sherds, weighing 382g was excavated from Period 1. The pottery comprises a heterogeneous collection with different assemblages in each trench. This is especially true

of trench 3, which produced early medieval wares dating between the 11th to 13th centuries, up to two centuries earlier than the pottery from trenches 4 and 5.

In trenches 4 and 5, Hedingham coarse and fine wares are the most common finds, and are found in both phases 1 and 2. There are also examples of sandy orange ware and sandy orange ware variants, and one residual sherd of early medieval ware (see Table 2). The latest datable pottery in trench 4 comprises late 13th to 14th-century-type cooking pot rims from bank 607 at the bottom of phase 1 (Cunningham's rim-form H3) (No. 1). Other forms (in trench 4, phase 1) comprise a bowl rim (No. 2) in a sandy orange ware fabric identical to that of cooking pot No. 1, and sherds from Hedingham fine ware strip jugs produced from c.1225 to c.1325 (Cotter 2000, fig.52).

Only one context from phase 1 in trench 5 produced pottery, silt layer 768. Finds include a slip-painted sherd of Hedingham fine ware showing a plain lead glaze with occasional green speckles (although this sherd does not qualify as late Hedingham ware). Also from this context is a jug handle (No. 3) in a fine sandy orange ware fabric (Fabric 21(2)): it has an unusual asymmetric shape in section, which may give a clue to its origin.

None of the pottery from phase 2 contexts in trench 4 can be demonstrated to be later than that from phase 1. The only featured sherds in phase 2 come from deposit 491 comprising a Hedingham coarse ware bowl rim (No. 4) and the rilled neck from a jug showing slip-coating under a green glaze in an unidentified grey ware fabric. Unfortunately this context was contaminated and must be treated as unstratified. Bowl No. 4 has a very large diameter and may have been used as a mixing bowl or for dairying.

Catalogue of illustrated pottery from period I (Fig. 19)

1. Cooking pot or jar rim: sandy orange ware-variant 1, Fabric 21(1); buff external surface; thick uniform orange-buff core and paler red-buff internal surface; Cunningham's rim form H3. Bank 607.
2. Bowl rim: sandy orange ware-variant 1, Fabric 21(1); orange-buff surfaces and thick darker red-buff core. Chalk layer 495.
3. Jug handle: sandy orange ware-variant 2, Fabric 21(2); grey core and red-brown surfaces and margins; partial plain lead glaze. Silt layer 768.
4. Bowl rim: Hedingham coarse ware; fine fabric borderline Fabric 20Df; dark grey surfaces and thick uniform brown-buff core. Silt layer 491.

The pottery from period II

This period produced a single residual Saxon sherd datable to the 5th-7th centuries from trench 5, and the largest group of medieval pottery, with a total of

Table 2. Quantification of pottery from period 1 by feature, fabric and sherd count.

Tr.	Phase	Con- text	Description	Relationship	Fabric									Weight
					13	13ck	20D	20Df	21	21(1)	21(2)	22	U	
3	-	324	metalled surface	=323	-	1	-	-	-	-	-	-	-	13g
3	-	319	ditch 320	cuts 324	2	2	-	-	-	-	-	-	-	60g
4	1	607	E-W bank	below 499	-	-	1	1	-	4	-	-	-	54g
4	1	499	silt layer	sealing layer	-	-	1	-	-	-	-	1	-	13g
4	1	495	chalk layer	above 499	-	-	2	1	-	3	-	1	-	67g
4	1	602	silt layer		1	-	1	-	-	-	-	1	-	12g
4	1	497	silt/sand layer	above 602	-	-	2	-	-	-	-	2	-	28g
5	1	768	silt layer		-	-	1	-	-	-	1	2	-	33g
4	2	491	silt layer	above 497	-	-	6	-	1	-	-	-	1	66g
4	2	493	silt/sand layer	above 491	-	-	1	-	1	-	-	-	-	17g
4	2	486	layer	above 491	-	-	3	-	1	-	-	1	-	19g

585 sherds weighing 3kg. Several new fabrics, not present in Period I, appear here for the first time, comprising late Hedingham ware, ‘fine’ coarse wares (Fabrics 20b and 20w), sandy orange ware-variant 3, medieval Harlow ware, Cambridgeshire Sgraffito ware and Suffolk buff ware. There is also a sherd of London-type ware, but this is probably residual in this period. Several sherds of post-medieval red earthenware also occur for the first time in the sequence but can be discounted as intrusive.

The largest assemblage came from the levelling layers to the south of the outshot in trench 5. There are a number of cross-fits between these layers throughout phases 1, 2 and 3 comprising layers 743, 745, 755, 760, 761, and 762. David Andrews writes that they can probably be explained by the excavation of a discrete layer and the upper part of the layer beneath it in an effort to ensure the total removal of the layer, a phenomenon often mistaken for residuality. Very little pottery was excavated from the internal surface layers; this is only to be expected as floors would have been regularly swept out and rubbish deposited outside. The pottery from these trench 5 layers represents a mixture of coarse and fine wares, and so could be from service and living areas. However, there does seem to be a high proportion of jugs.

No cross-fits between the various trenches were noted, although the pottery from trenches 2, 4 and 5, is all very similar, with Hedingham coarse ware-fine version, fine white medieval coarse ware, sandy orange ware-variant 3, and Hedingham fine ware occurring in all three trenches. Similar vessel forms are also present in these trenches, for example Hedingham coarse ware-fine version jug fragments Nos. 15 and 17 from trenches 4 and 5, and cooking pot rims Nos. 14 and 20 from trenches 4 and 2.

Dating of the individual phases is something of a problem due to the over excavation of layers in trench 5, which contained much of the datable pottery. There is no established dating for medieval Harlow ware, Suffolk buff ware or late Hedingham ware, although the latter two are most likely to date from the 14th century (see fabrics section). Other datable pottery comprises the late 13th-to 14th-century H3 and E5A-type coarse cooking pot rims from clay cill 159 and layer 160 in phases 1 and 2 in trench 2, while late Hedingham ware first appears in phase I (in trench 4 surface 484). The most recent pottery is the single sherd of Cambridgeshire sgraffito ware from the trench 5 levelling layers in phase 2, which belongs to the 14th to early 15th centuries (Bushnell and Hurst 1952, 26). There is no discernible time lapse between phases 1, 2 and 3, apart from vessel No. 16, which due to its similarity with Guys-type ware could be as recent as the late 15th to early 17th centuries (see catalogue entry). This sherd was from context (437) at the top of the sequence, and may really belong to a later period represented by deposits which have been truncated. Some of the sherds of sandy orange ware in phase 3 could also be late medieval, but with Hedingham coarse wares making up the bulk of the finds in Period II, a date of the first half to the mid 14th century is perhaps most likely.

Catalogue of pottery from Period II (Fig. 19)

5. Fragment from shoulder of jug: late Hedingham ware (Fabric 221); bright orange fabric; cream slip-painting under a glossy plain lead glaze, showing two vertical lines of slip-painting about to join the neck of the jug. Layer 761 (trench 5, phase 1).
6. Cooking pot rim: medieval coarse ware fine buff version (Fabric 20b); buff-brown surfaces and thick red-buff core; no traces of use. Its rim shape does not fit into Cunningham’s typology but it is

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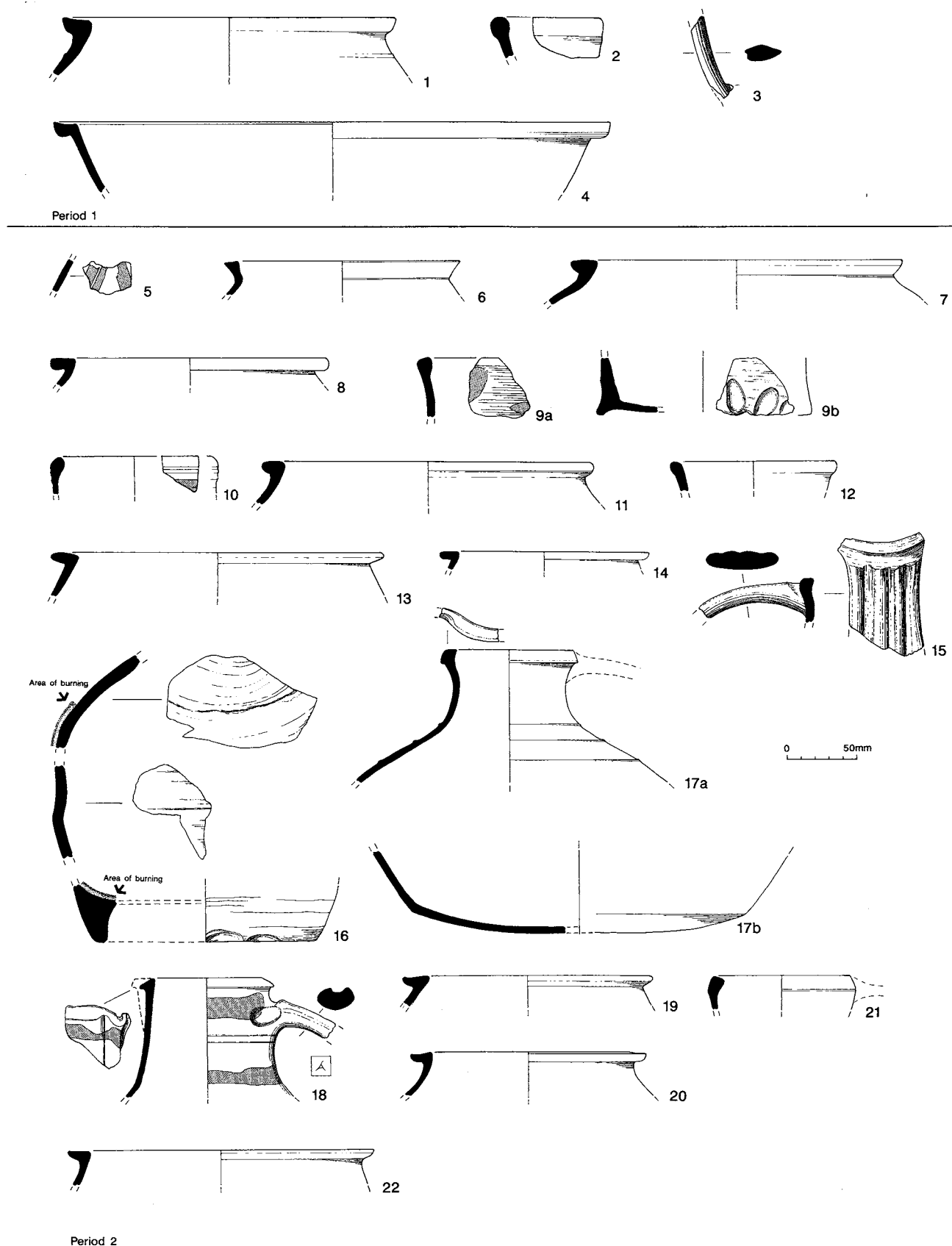


Fig. 19 Market Row excavations, medieval pottery.

Table 3. Quantification of pottery from Period II by feature, fabric and sherd count.

Tr.	Ph.	Con- text	Feature/layer and relationship	13	13t	20D	20Df	20w	20b	Fabric							Wt			
										21	21C	21D	21(2)	21(3)	22	22I	34	34S	36	40
4	1	468	levelling = 762, seals Period I	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	20g
5	1	762	levelling = 468, seals Period I	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	6g
3	2	295	N-S linear feature 300	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	21g
3	2	271	E-W slot 272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24g
4	1	484	?surface within building	-	-	5	-	1	-	-	-	-	-	-	1	1	-	-	-	8g
4	1	483	?surface, within bld, above 484	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	2g
5	1	761	layer, south of building	-	-	37	1	-	2	16	-	-	1	-	6	2	-	-	1	454g
4	2	470	surface within building	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	4g
5	2	760	levelling for extension	-	-	1	-	-	-	-	-	2	1	6	-	-	-	4	-	124g
5	2	745	levelling, above 760 below 758	1	2	104	1	14	-	14	1	-	6	23	1	1	-	-12	-	628g
4	3	449	floor layer	-	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	132g
4	3	437	?=449	-	-	1	-	-	-	-	-	-	-	-	-	-	12	-	-	257g
4	3	435	repair of surfacing	-	-	-	-	-	-	3	-	-	-	1	-	-	-	-	-	15g
5	3	758	levelling layer of outbld.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8g
5	3	743	consolidation layer, above 758	-	-	9	12	-	-	-	-	-	11	2	-	-	-	2	-	167g
5	3	731	internal surface in outbuilding	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	10g
5	3	755	external surface to south	-	-	-	29	-	-	-	-	-	17	-	-	-	-	-	-	424g
2	1	179	levelling layer seals Period I	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	31g
2	1	159	E-W ?cob wall	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	24g
2	1	163	?possible internal surface	-	-	5	10	-	-	1	-	-	-	-	-	-	-	-	-	80g
2	2	160	layer on S. side of wall 159	-	-	-	1	-	2	-	-	-	-	-	1	-	-	-	-	11g
2	2	158	?external surface sealing 160	-	-	35	8	31	89	1	-	-	2	4	-	-	-	-	-	416g

- reminiscent, although by no means an exact parallel, of an example from Maplecroft, Castle Hedingham (Walker 1991b, fig.13.4). Layer 761 (trench 5, phase 1).
7. Cooking pot rim: Hedingham coarse ware (Fabric 20D); grey surfaces, buff margins, reddish core, except for the rim where the core is dark grey; no traces of use; corresponds to Cunningham's rim-form H3 dating from the late 13th to 14th centuries (Drury 1993, 81-2). Layer 761 (trench 5, phase 1).
 8. Cooking pot rim: Hedingham coarse ware (Fabric 20D); uniform grey fabric except for paler internal surface; slight fire-blackening on inner edge of flange; corresponds to Cunningham's rim-form E5A dating from the late 13th to 14th centuries (Drury 1993, 81-2). Layer 761 (trench 5, phase 1).
 - 9a & b. Jug rim and thumb base: medieval Harlow ware (Fabric 21D); coarse fabric; dull orange brown with grey core; traces of slip-coating or slip-painting; partial plain lead glaze; internal limescale deposit in base. Levelling layer 760 (trench 5, phase 2).
 10. Jug rim: Suffolk buff ware (Fabric 34S); buff fabric with pale grey core where the vessel wall is at its thickest; cream slip-painting, partial clear lead glaze. Levelling layer 745 (trench 5, phase 2).
 11. Cooking pot rim: sandy orange ware (Fabric 21(3)); uniform orange fabric but with darker surfaces and grey core only where the vessel wall is at its thickest; splashes of plain lead glaze on the inside edge of the rim; patch of fire-blackening on outer edge of rim, with occasional patches of fire-blackening on the internal surface; Cunningham's rim-form H3. Levelling layer 745 (trench 5, phase 2).
 12. Rim: sandy orange ware (Fabric 21(3)); perhaps from a small bowl or cooking pot; fabric as for No.11; no traces of use. Levelling layer 745 (trench 5, phase 2).
 13. Cooking pot rim: Hedingham coarse ware (Fabric 20D); grey surfaces and darker grey core; no traces of use; corresponds to Cunningham's rim-form E5A belonging to the late 13th to 14th centuries (Drury 1993, 81-2). Levelling layer 745 (trench 5, phase 2).
 14. Rim of small cooking pot: Hedingham coarse ware – fine version (Fabric 20Df); buff-grey surfaces, thick reddish core; fire-blackening under rim; corresponds to Cunningham's rim-form E5A belonging to the late 13th to 14th centuries (Drury 1993, 81-2). Levelling layer 745 (trench 5 phase 2).
 15. Ribbed jug handle: Hedingham coarse ware – fine version (Fabric 20Df); buff-grey surfaces, reddish core with dark grey surfaces and reddish margins where the vessel walls are at their thickest; abraded rim; very similar to jug No. 17 but not from the same vessel. Floor layer 449 (trench 4, phase 3).
 - 16a-c. Unidentified vessel: buff ware (Fabric 34); hard, robust, creamy buff fabric with mottled apple green glaze over a white slip-coating, which is external only on fragments 16a and b, and all over on 16c; fragment 16a may be from a lid and 16c is almost definitely from a base; bands of burning on inside of base and around the edge of fragment 16a; blistered and bubbled glaze with a wide crack on the surface following the zone of burning; small pieces of clay adhering to the glaze indicate the vessel could be a kiln waster or at least a semi-waster (i.e. defective but still saleable) but as the burning is limited to zones, it is more likely to have acquired this damage during use. With its cream slip-coating and green glaze it has similarities with Guys-type ware (now renamed post-medieval slip-coated redware) which was made in South London from the late 15th to early 17th century (Orton 1988, 297). Layer 437 (trench 4, phase 3).
 - 17a & b. Jug rim and base: Hedingham coarse ware – fine version (Fabric 20Df); buff-brown surfaces and thick red-buff cores; smooth but slightly pimply texture; bands of slightly raised ridges on body; remains of pulled spout; base shows horizontal drag marks on external surface and on underside. Inturned rims are not particularly common on Hedingham coarse ware jugs encountered by the author, although one was found at Chelmsford (Walker forthcoming c, MTC80 no. 8), and at Haverhill Bypass, in Suffolk (Walker forthcoming b). Layers 743 and 755 (trench 5, phase 3).
 18. Jug rim: sandy orange ware-variant 2 (Fabric 21(2)); uniform dull red-brown fabric with grey cores where vessel walls are at their thickest; very fine with no added tempering; wheel-thrown; grooves on neck; applied ears at either side of handle; very pronounced pulled spout; cream slip-painting under a partial, decomposed lead glaze; small triangular shaped crack on inside of neck at the point of handle attachment (shown on drawing). In general appearance, this jug is not unlike medieval Harlow ware, but the fabric is rather too fine and the rim-form untypical (Wally Davey Pers. comm.). A sherd with a very similar fabric shown to the author was found in Bury St Edmunds, which suggests, on geographical grounds, this fabric may have its source in north Essex, Cambridgeshire or Suffolk. Layers 743 and 755 (trench 5, phase 3).
 19. Cooking pot rim: Hedingham coarse ware (Fabric 20D); uniform grey; traces of chalk or mortar on surfaces; corresponds to Cunningham's rim-form H3 dating from the late 13th to 14th centuries (Drury 1993, 81-2). Clay wall 159 (trench 2, phase 1).
 20. Cooking pot rim: Hedingham coarse ware - fine version (Fabric 20Df); buff surfaces, thick reddish cores; fire-blackened on sides and under rim; corresponds to Cunningham's rim-form E5B, dating to the late 13th to 14th centuries (Drury 1993, 81-2); similar to, but larger than Fabric 20Df cooking pot No. 14. Possible surface layer 163 (trench 2, phase 1).
 21. Jug rim: medieval coarse ware-fine buff version (Fabric 20b); creamy-orange core, with paler orange-buff surfaces; traces of chalk or mortar. Surface 158 (trench 2, phase 2).

Table 4. Quantification of pottery from period III by feature, fabric and sherd count.

Tr.	Phase	Con-text	Description and relationship	Fabric							Weight
				20Df	21	21(3)	40	40bl	45D	45F	
3	-	258	levelling seals Period II	-	-	-	6	-	1	-	97g
3	-	221	foundation of cill wall	-	2	-	-	-	-	-	30g
4	-	424	worn chalk flooring	-	3	-	5	-	-	-	38g
4	-	427	worn chalk flooring	-	2	-	-	-	-	-	8g
4	-	446	structure 415	-	-	-	3	-	-	-	28g
4	-	417	cut feature 412	-	2	-	1	5	-	-	435g
5		753	external gravelly layer	-	1	-	-	-	-	-	18g
2	1	155	external surface sealing 160	-	-	-	3	-	-	-	28g
2	1	151	top fill of feature 150	-	-	-	1	-	1	-	15g
2	2	148	demolition debris	1	-	-	-	2	-	-	21g
2	2	144	demolition debris	-	-	6	3	1	-	-	79g
2	2	136	demolition debris	-	-	-	6	1	1	-	56g
2	2	139	surface seals 148, 144, 136	-	-	-	1	-	-	1	20g

Table 5. Quantification of pottery from Period IV by feature, fabric and sherd count.

Tr.	Ph.	Con-text	Description/relationship	Fabric																Weight
				20D	21	40	40bl	40A	45D	45F	45G	45M	46A	47	48B	48C	48P	50	50A	
5		720	trampled surface	-	-	-	-	-	-	-	4	-	-	-	-	1	-	-	-	14g
5		721	trampled surface	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	5g
5		719	layer over 720/721	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3g
5		707	pit 716	-	-	1	-	-	-	-	2	-	-	-	-	1	-	-	-	67g
5		712	pit 717	-	-	-	-	-	-	-	2	-	-	-	1	4	1	-	-	66g
5		715	cut for wall 704	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13g
2		124	levelling	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	53g
2		127	levelling	-	-	-	-	-	-	-	-	-	-	3	-	2	-	-	-	97g
1	1	520	dump layer	-	-	8	2	4	2	-	-	2	3	2	-	-	-	1	1	351g
1	1	511/520	dump layers	-	-	9	4	1	-	-	-	-	2	5	-	-	-	9	1	593g
1	1	511	dump layer	-	-	25	9	2	2	-	-	2	4	-	-	-	-	2	1	1529g
1	1	510	dump layer	-	2	5	1	2	-	1	3	2	12	4	-	-	-	12	-	608g
1	1	522	dump layer	-	-	3	-	-	-	1	-	3	1	3	-	-	-	1	-	80g
1	1	521	cut feature 513	-	-	2	-	-	-	-	1	1	1	-	-	-	-	1	-	76g
1	1	90	dump layer	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	38g
1	1	506	cut 500	-	-	2	-	-	1	-	-	1	-	-	-	-	-	-	1	58g
1	1	74	surface	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1g
1	2	62	chalk floor	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	17g
1	2	59	post-hole 51	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	12g

22. Cooking pot rim: medieval coarse ware-fine buff version (Fabric 20b); creamy-orange core with slightly paler orange-buff surfaces; corresponds to Cunningham’s rim-form E5A belonging to the late 13th to 14th centuries (Drury 1993, 81-2). Surface 158 (trench 2, phase 2).

Pottery from period III

Only a small amount of pottery, 59 sherds, weighing 873g, was excavated from period III. A few sherds of sparsely or internally glazed late medieval sandy orange ware datable to the 15th and 16th centuries were recovered from trench 3, the worn chalk

flooring in trench 4, and external layer 753 in trench 5. Many of these contexts, however, also produced glazed post-medieval red earthenware making a 16th-century date most likely. Finds of post-medieval red earthenware include a bowl or dish fragment with an everted flanged rim and an all over honey-coloured glaze from chalk flooring 424. A sherd of Frechen stoneware from levelling layer 258 lacks the mottled 'tiger' ware effect salt glaze, and may be as early as the second half of the 16th century.

17th-century pottery comprises later Frechen stoneware and fragments of black-glazed ware tygs and cups occurring in trench 2 and in cut feature 412 in trench 4. The post-medieval red earthenware present in these contexts is probably also 17th-century, although no closely datable forms were found. Finds in post-medieval red earthenware include a decorated bowl (No. 23). The latest pottery comes from surface 139 in trench 2, comprising the rim of a Westerwald stoneware jug or mug decorated with manganese-purple and dating from the later 17th to 18th centuries. There was not enough pottery from this period to comment on status or function of the site.

Catalogue of pottery from period III (Fig. 20)

23. Bowl rim: post-medieval red earthenware (Fabric 40); decorated with incised horizontal and wavy lines; all over honey coloured glaze; abraded. Such decoration is unusual on post-medieval red earthenware, at least in central Essex, but is not closely datable. Fill 446 (post-setting 415, trench 4)

Pottery from period IV

A total of 205 sherds weighing 3.7kg was excavated from Period IV.

Pottery from trench 1

A relatively large amount of pottery dating mainly to the early 18th century was excavated from a series of dump layers (520, 520/511, 511, 510 and 522) in trench 1 phase 1. Cross-fits between the first three layers indicate that they were deposited at the same time. The most unusual feature of this group is the preponderance of various types of slipware. As this is a fairly large group, the pottery is discussed below by ware type. The remaining layers and features in trench 1 produced smaller quantities of similar fabrics (see Table 5) apart from surface 74, which contained a tiny sherd of transfer-printed pearlware datable to c.1800.

Both black-glazed ware and Metropolitan slipware were found in all layers except 522. As well as black-glazed tygs similar to those found in Period III, black-glazed sherds from larger, wide-bodied vessels are present; these may be from jugs or jars. In addition, there is a broad black-glazed strap handle that joins the vessel at the rim, and may be from a one-handled jar or chamber pot. Forms in Metropolitan slipware comprise a ?one handled jar (No. 25), a flanged dish rim with wavy-line slip trailing on the inside of the flange, and a second dish or bowl rim (No. 26). The latter is not typical of Metropolitan slipware and may be the product of another industry. A flatware sherd in layer 510, shows concentric lines of thick trailed cream slip under a plain lead glaze; it has a red earthenware fabric and could be an example of Low Countries slipware, but the sherd is too small and abraded to

give a positive identification. ?Cup No. 27 is also unidentified but the brown slip-trailed decoration is comparable to that found on Midlands Yellow ware of the 16th to 17th centuries (Banks *et al.* 1999), and this example is comparable to sherds of Midlands Yellow ware from Staffordshire decorated with simple star-like designs (Greaves 1976, fig.10.28).

Staffordshire slipwares are very much in evidence; the most common form are press-moulded dishes with pie-crust edges and combed slip decoration. These were especially popular in the early 18th century, and continued well into the second half of that century (Barker 1993, 18). More unusually, No. 28 shows a press-moulded dish fragment with relief decoration picked out in brown slip. This type of decoration remained popular into the 1820s (Barker 1993, 15-18). A sherd from a slip-trailed Staffordshire cup is also shown (No. 29). These date from about 1670, but like the flatwares, this style predominates in the early 18th century (Barker 1993, 15-16). Also ?originating from Staffordshire are three sherds of mottled ware (Fabric 50A) including a tankard rim with a streaky brown glaze and bands of rilling, which probably dates to the early 18th century.

English tin-glazed earthenware ware forms comprise fragments from a plate showing blue-painted concentric bands, and a bowl rim with blue-painted decoration on the outside, but which is too abraded to make out the pattern. Sherds from the same tin-glazed plate rim occur in context 46 in Period V. Drawing No. 30 shows a hollow-ware sherd the decoration of which resembles a Lambeth cup dating to c.1700 (Garner and Archer 1972, pl.34A).

German stonewares comprise a Frechen stoneware jug handle and a plain jug base probably belonging to the later 17th century. Two sherds of plain Westerwald stoneware are also present. The only English stoneware forms are sherds from 18th century tankards or tavern mugs and examples of Nottingham stoneware. One of the most interesting finds is Staffordshire-type white stoneware bowl No. 31, which is of an early type where the grey stoneware fabric has been dipped into the white clay, and this can be clearly seen in section. Dipped white stoneware was made from the 1720s and persisted until the 1760s, using local clays for the body of the pot which were much cheaper to produce than the solid white stoneware (Draper 1984, 36). A few sherds of solid white stoneware are also present.

The ubiquitous post-medieval red earthenware is the commonest ware to be found in these dump layers. Forms comprise bowls with beaded or flanged rims, bead-rim jars and storage jars. There is a perforated sherd, perhaps from a colander, and a tripod base from a pipkin or cauldron. Only the more interesting sherds have been drawn, comprising the rim of a large storage jar (No. 32), a

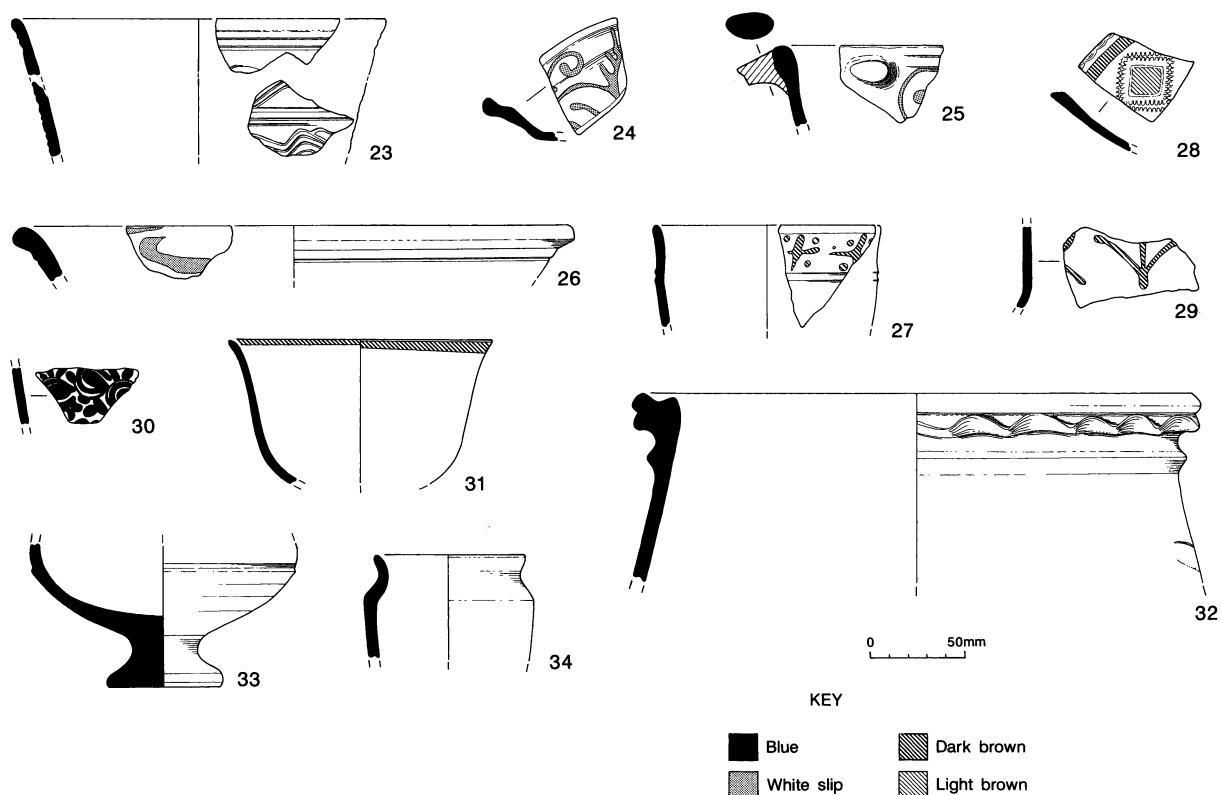


Fig. 20 Market Row excavations, post-medieval pottery.

pedestal based vessel (No. 33), and what appears to be the rim of an albarello or drug jar (No. 34), a form normally associated with tin-glazed earthenware.

The early dipped white stoneware and the preponderance of early 18th century Staffordshire slipwares, in combination with the absence of mid to late 18th century creamware and English porcelain, give a reasonably close date of 1720 to the mid-18th century for the pottery in trench 1, phase 1. Most of the other pottery would have been current at this time, or may have been old when deposited, for example the late 17th-century Frechen stoneware. The only exception to this is the later pearlware sherd from surface 74 at the top of the sequence. The fact that these wares are decorated does not necessarily indicate that the pottery comes from a living area rather than a service area, as some slipwares served quite utilitarian purposes, for example Metropolitan slipware chamber pots. Their presence probably indicates that they were fashionable at this time. Only three sherds were excavated from phase 2 features in this trench (see Table 5), the latest comprising a sherd of rather decomposed ?English porcelain from post-hole 51, dating from the mid-18th century onwards.

Pottery from trenches 2 and 5

A small amount of pottery was excavated from phase 2 in trenches 2 and 5, all contexts producing less

than 100g of pottery. Levelling layer 124 produced a small Metropolitan slipware dish (No. 24) and part of a post-medieval red earthenware ?one-handed jar rim. However, the remaining layers and features produced later pottery, and examples of 18th-century Nottingham stoneware (including a jug rim) and creamware are the commonest finds. There are a number of creamware plate fragments with moulded edges, and a hollow ware sherd showing wide lathe-turned bands, from surface layers 127, 720/721 and intercutting pits 716/717. The latest style of plate is an example of 'Royal pattern' from layer 721 dating to c.1785-95 (Noël Hume 1969, fig.19), while the wide lathe-turned bands are datable to c.1780-1800. The base of a Staffordshire-type white salt-glazed stoneware plate is also present in surface 127. The latest pottery in pit 717 is a pearlware tea-bowl rim showing Chinese-style blue-painted decoration dating to c.1800. Clearance and levelling layer 719, which partially over lay surfaces 720/721 produced part of a 19th century cylindrical stoneware bottle. All the pottery could have been current in the late 18th century. The preponderance of plates and other table-wares indicates the pottery is from a living area. The cylindrical stoneware bottle from layer 719 could well be Victorian and is probably intrusive.

SAFFRON WALDEN: THE TOPOGRAPHY OF THE TOWN AND MARKETPLACE

Table 6. Quantification of pottery from period V by feature, fabric and sherds count.

Trench	Con- text	Description/ Relationship	Fabric										Weight
			40	45M	46A	47	48B	48D	48E	48L	48X	51B	
3	201	loose deposit	1	1	-	-	-	-	1	-	-	-	196g
1	46	cesspit 37	2	2	1	1	14	42	-	1	1	2	1788g
1	40	cesspit 37	3	2	-	-	-	6	-	-	-	-	256g
1	97	cesspit 37	1	1	-	-	-	1	-	-	-	-	113g
1	39	cesspit 37, above 97	-	1	-	-	-	-	-	-	-	-	278g
1	94	drain cut 523	-	-	-	-	1	37	-	-	-	2	635g

Catalogue of pottery from period IV (Fig. 20)

24. Small dish: Metropolitan slipware (Fabric 40A); red-fabric with darker surfaces; a plain internal lead glaze gives yellow slip-trailed decoration over a brown background. Levelling for floor 124 (trench 2, phase 2).
25. Rim of ?one-handed jar: Metropolitan slipware (Fabric 40A); red fabric but with darker surfaces giving yellow slip-trailing beneath an all over greenish glaze. Dump layer 510 (trench 1, phase 1).
26. Dish rim: ?Metropolitan slipware (Fabric 40A); internal honey-coloured glaze over yellow slip decoration; sandy fabric; not typical of Metropolitan slipware. Dump layer 510 (trench 1, phase 1).
27. ?Cup rim: possibly Midlands Yellow ware; fine creamy orange fabric; brown slip-trailed cross-and-dot pattern; all over glossy honey-coloured glaze. Dump layer 510 (trench 1, phase 1).
28. Dish rim: Staffordshire-type slipware (Fabric 50); moulded decoration in relief, filled in with light brown slip; darker brown band of slip around edge of rim; buff fabric; all over internal yellowish glaze. Dump layer 511/510 (trench 1, phase 1).
29. Sherd from cup: Staffordshire-type slipware (Fabric 50); buff fabric, brown slip-trailed decoration; all over crazed yellowish glaze. Dump layer 510 (trench 1, phase 1).
30. Sherd from a hollow ware: English tin-glazed earthenware (Fabric 46A); buff fabric; all over very pale grey tin-glaze of egg-shell thickness; blue-painted decoration on external surface. Dump layer 511/520 (trench 1, phase 1).
31. Bowl rim: Staffordshire-type dipped white stoneware (Fabric 47); band of brown iron slip around rim; all over crazed glaze. Dump layers 510, 511/520 and 520 (trench 1, phase 1).
32. Rim of storage jar or bread crock: post-medieval red earthenware (Fabric 40); thumbled (or fingered) decoration around the rim; mottled brown/purple/green glaze on the outside, mottled pale green glaze on the inside; possible remains of horizontal handle scars on body. Dump layer 511 (trench 1, phase 1).
33. Unidentified form: post-medieval red earthenware (Fabric 40); all over honey-coloured glaze with occasional shiny black speckles; underside of base abraded. Dump layer 511/520 (trench 1, phase 1).

34. Rim of drug jar or albarello: post-medieval red earthenware (Fabric 40); all over honey-coloured glaze showing dark mottles on the external surface. Dump layer. 511 (trench 1, phase 1).

Pottery from period V

A total of 124 sherds weighing over 3kg was excavated from period V. A large group of 19th-century pottery was excavated from cesspit 37 in trench 1. Most of the pottery was found in primary fill 46, but smaller amounts of similar pottery were excavated from the later cesspit fills, 40 and 97, and cross-fits between all three fills indicate they were deposited at the same time. A complete, but unmarked blacking bottle was the only find from cesspit fill 39. Ironstone vessels make up the largest component of this group. None of the pottery is illustrated but sherds of interest from primary fill 46 are described below:

- A small ironstone pudding basin
- A plain ironstone pot lid
- A large undecorated ironstone saucer with a pale blue glaze
- Two ironstone bowl rims and a plate rim showing a transfer-printed willow pattern
- Part of a small cup and a sherd from a plate showing a green floral transfer-print marked 'Auckland Stone....', probably stone china, another name for ironstone
- An almost complete ironstone faceted jug with eight sides about 180mms tall, showing a Chinese-style blue transfer-printed floral design and marked 'Formosa S.B. & Co.', the mark of the Southwick pottery, Sunderland c.1838-54 (Fisher 1970, 79)
- An ironstone footring bowl 160mm in diameter with a rather smudgy blue transfer print showing flowers and butterflies. It has a diamond-shaped registration mark on the base indicating the design was patented in 1844
- The recessed base of a lustre ware vessel showing blue-painting and gold-lustre on a white background
- An unmarked bone china cup showing mauve sprigged flowers, a type of decoration made

from the Victorian period to the 1920s (Banks *et al.* 1999)

- Part of a cylindrical stoneware bottle, unfortunately without a diagnostic rim but probably an ink bottle
- The rim of a flowerpot

Trench 1 drain cut 523, for drain 96, produced another large group of 19th-century pottery (from fill 94) with many of the same vessels as found in the primary fill of cess-pit 37 (fill 46), and indeed there are cross-fits between these fills. Of interest is a cup fragment decorated with blue and brown bands which is an example of industrial slipware dating from the late 18th to mid 19th centuries (Barker 1993, 27-30). A mocha ware jug from context 201 in trench 3 has a similar date of late 18th to second half of the 19th century. The best dating for Period V is provided by the 'Formosa' jug which was manufactured between 1838 and 1854, and the footring bowl with the diamond registration mark which could not have been manufactured before 1844. Thus the pottery would have been new in the mid-19th century, although it may have been considerably older when discarded, and represents a mixture of table and utilitarian wares.

Discussion of the pottery from the Market Row site

Very little pottery of an early date was found. This differs from excavations elsewhere in the town, where pottery belonging to the Mid-Saxon, Late Saxon and early medieval periods was found in abundance (Ravetz and Spencer 1962, and Cunningham 1982b, 80-93). No mention is made in any published pottery report of chalk-tempered fabrics, so the chalk-tempered wares in Period I may be something of an anomaly. The only comparable medieval group from Saffron Walden is from Elm Grove where late 13th to 14th century-type cooking pot rims, and examples of Hedingham ware were excavated (Cunningham 1982b, 85, fig. 44.87,93). Cunningham describes some of the Elm Grove pottery as having hard, pimply orange fabrics typical of the area, which would fit the description of sandy orange ware-variant 3 from this site.

The medieval pottery from this site differs from that found in central Essex or even pottery found as far north as the A120. A major difference is the presence of probable 14th-century Hedingham ware, which does not seem to occur in central Essex. In Chelmsford, this is probably because it was almost entirely superseded by Mill Green ware in the second half of the 13th century (Drury 1993, 89). The presence of a 'fine' Hedingham coarse ware shows that, in contrast to the 13th century, there is less difference between the fine ware and the coarse ware. The 'late' Hedingham fine ware with its slip-

painting is very similar to that seen on sandy orange ware jugs produced throughout the region, and may be part of a move towards greater uniformity of production in the later Middle Ages.

The three sandy orange ware variants (Fabrics 21(1)-(3)) are of unknown origin; they may have been manufactured in north-west Essex, but could have a source in the neighbouring counties of Cambridgeshire, Suffolk or Hertfordshire. The only evidence for an Essex origin for these wares is that the cooking pot rims in Fabrics 21(1) and 21(3) are of a type that also occur in central Essex (rim-form H3). There is some evidence, from its distribution, that Suffolk buff ware was manufactured in south Suffolk. It is also possible that Fabrics 20w and 20b were made in Cambridgeshire, although a more local origin cannot be precluded. Contacts with Cambridgeshire would not be unexpected as the important north-south route way formed by the rivers Lea, Stort and Cam runs through Saffron Walden and into Cambridgeshire. However, more Cambridgeshire sgraffito ware might have been expected. Medieval Harlow ware has been found at Stansted, also in north-west Essex, and may have made its way northwards via the Lea/Stort/Cam route-way. The post-medieval assemblage is fairly typical with the exception of the possible Midlands Yellow Ware cup (No. 27), which may indicate links with the Midlands during the 16th to 17th-centuries.

The absence of 15th-century and early modern pottery, a common phenomenon on urban archaeological sites, could be explained by truncation of the stratigraphic sequence, the stabilisation of ground levels with the construction of long-lived timber-framed buildings, and changing methods of rubbish disposal. In this case, however, an argument has been put forward for the absence of buildings on the site in this period (see below). The only large post-medieval group is the early 18th-century pottery from the dump layers in trench 1 for the construction of the culvert over the River Slade.

There is nothing in the pottery record to indicate high status, such as unusual imports, but this may merely reflect Saffron Walden's inland location, distance from London and the market location of the site. In addition, there was no evidence of specialised activity except for burnt vessel No.16. Worth noting is the absence of sooting or fire-blackening on some of the cooking pots. Such deposits are commonly found, and are consistent with the cooking pot being placed in or at the edge of a wood-burning hearth, showing that it was used for cooking or other domestic purposes requiring heating. As this was a market-place it is possible that these cooking pots were for sale at the market; this would explain the absence of sooting, but as

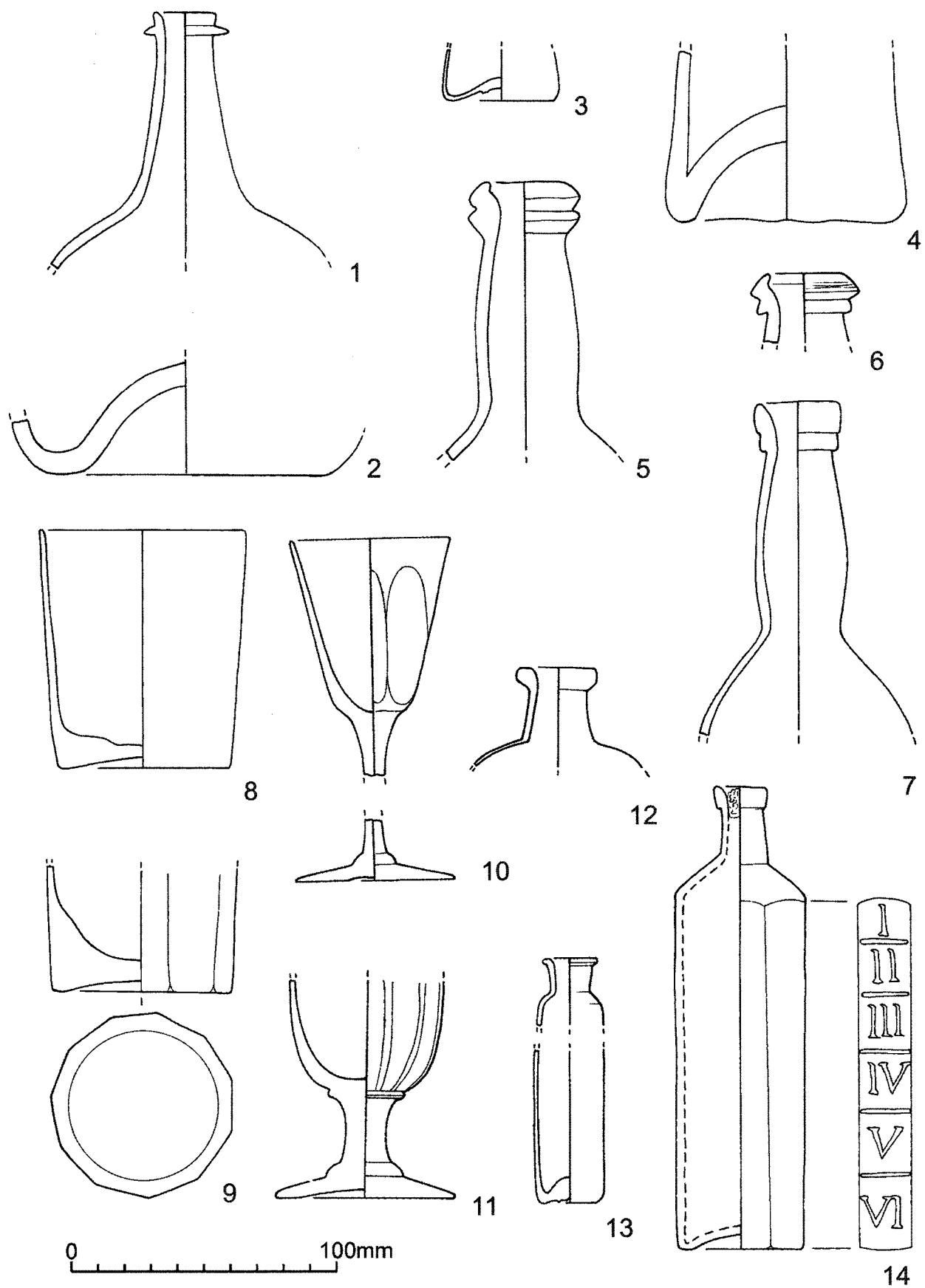


Fig. 21 Glass from the Market Row excavations.

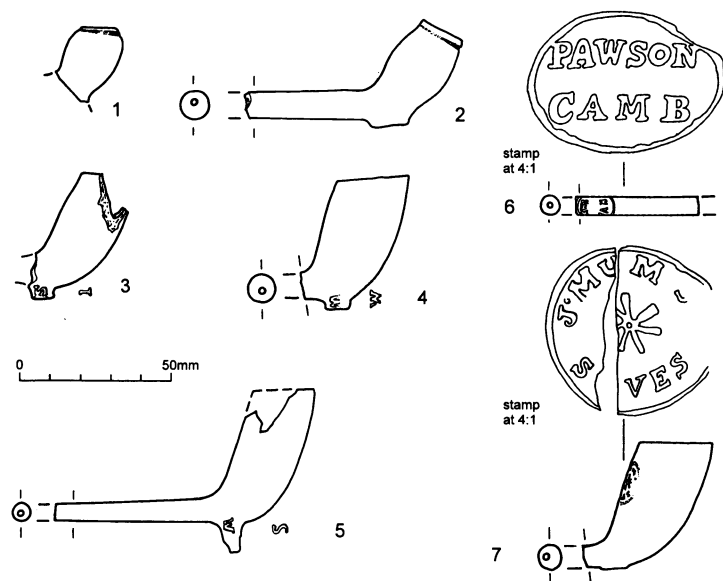


Fig. 22 Clay pipes from the Market Row excavations.

potters sold their own pots, a single kiln source for the pots would be expected. Another explanation is that commodities such as butter were sold at the market-place and the cooking pots were used as containers as porous earthenware could be dampened and used for keeping dairy products cool.

Other artefacts and building material from the Market Row excavations

Finds were not numerous from these excavations: the interiors of the buildings had been kept relatively clean; the dumped deposits, whether those put down as make-up for floors or to raise the level between main building phases, or those used to fill in and level up the river valley, were more productive of finds.

Objects of copper-alloy and iron were few in number, often in poor condition, and did not include any items of intrinsic interest. Building materials too were not very abundant. A few pieces of peg tile were present in period II contexts, indicating the existence of tiled roofs in the 13th and 14th century. A period II context (745, trench 5) also contained four fragments of what might be a rather crudely made floor tile 25mm thick.

As well as a good pot group, the mid 19th-century cess pit fill in trench 1 contained a whetstone, some shoe fragments, a whittle tang bone knife handle, and two bone toothbrushes. One of these was stamped 'WHITAKER WARRANTED' with the figure of a lion. The other, which has a fluted handle,

is inscribed 'S JOHN GOS[]'; this is probably an owner's rather than a manufacturer's name.

Flint

Hazel Martingell

Six pieces of worked flint were residual in period 1 contexts in trench 3. Three, from a naturally derived deposit (321) which overlay one of the market surfaces, were well knapped flakes of good quality dark grey flint. It is likely that they are of Neolithic date. The others, two flakes and a blade, were from the fill of ditch 320.

Glass

Glass was present in periods III-V. That from period III only comprised a single piece of window glass, and some wine bottle fragments from wall 754 which must be regarded as associated with a period IV overlying wall (704). The period IV and V glass is interesting in as much as it includes two well dated groups, from the construction of the culvert, and the abandonment and filling of the cess pit and the drain that led into the culvert.

Of the 47 fragments of glass associated with the construction of the culvert in the second quarter of the 18th century, all but nine were from wine bottles in dark green glass with devitrified surfaces. These were typical onion-shaped bottles, with bases 120-140mm in diameter with domed kicks, short conical necks and single string rims (Fig. 21.1 & 2; 520). The only other vessel present was a small cylindrical bottle 40mm in diameter in very iridescent glass with surface devitrification but probably blue-greenish in colour (21.3; 522).

More than 60 fragments of wine bottle were recovered from the period IV layers in trench 5 datable to the very end of the 18th century. The glass is in good condition, with only slight iridescence and occasional lamination. These were cylindrical bottles, 80-100mm in diameter, with high domed bases rising abruptly from the side wall (Fig. 21.4; 712), the absence of a pontil scar suggesting the use of a mould. Some had double string rims, of which two examples were found (Fig. 21.5 & 6; 402 & 754).

The wine bottles of the first half of the 19th-century from the abandonment of the cess pit are made from green glass which is in excellent condition. They are cylindrical, mould made, with baluster profile necks and applied collared rims (Fig. 21.7; 94). In this mid 19th-century group, however, wine bottles are outnumbered by other forms, notably tumblers, goblets, and small bottles. The tumblers, which numbered at least eight, are wide and low, with heavy bases in colourless lead glass. They have plain or cut faceted sides (Fig. 21.8 & 9; 46). There are two goblets, both with plain bases and stems. One has a flaring bowl with cut faceted sides, whilst the other has a U-shaped mould made bowl with ribs (Fig. 21.10 & 11; 94). The small bottles and phials comprise a squat mould-made bottle in blue-greenish bubbly glass, now strongly iridescent, with a thick applied flanged rim (Fig. 21.12; 46), and two cylindrical phials in colourless glass (Fig. 21.13; 40). Also present, and anticipating the more widespread use of glass for containers and packaging in the second half of the century after the repeal of the tax on glass in 1845, are at least three medicine bottles which would have been used for dispensing. They are in pale

Table 7. Animal bone from the Market Row excavations.

	Bos	Ovis	Sus	Bird	Cervus	Fish	Unidentified
Period V	2	2	2				2
Period IV	87	30	8	7		1	91
Period III	13	8	1				9
Period II	11	2	1	6	2		11
Period I	13	6	1	1			
TOTAL	126	47	13	14	2	1	115

green or pale blue glass, and octagonal with graduations on the side in Roman numerals. One, in pale blue glass, is intact (Fig. 21.14; 46).

Surprisingly little window glass was found, there being only 17 fragments from the entire site. The earliest piece is a piece of thin (1.5mm) devitrified blue greenish glass from the levelling dump which marks the beginning of period III in trench 3. It is probably 17th-century in date. The window glass associated with the construction of the culvert is thin (1mm), pale green and devitrified. The fragments from the period IV deposits in trench 5 are thin (1-1.5mm) and blue-greenish in colour. The mid 19th-century fragments from the cess pit fill fall into two groups: thin (1-1.5mm) almost colourless glass, and thicker (2-3mm) greenish or blue-greenish glass. The latter is probably plate glass.

Clay pipes

122 clay pipe fragments were recovered from the periods III, IV and V contexts in the SW4 trenches (except for trench 3). Most are stems, but some bowls are present and some marked pieces are of note.

The earliest group was from period III in trench 2. A small bowl (136), which probably had a spur, is comparable to Oswald's type G16 (Oswald 1975, fig. 4) datable to the first half of the 17th century (Fig. 22.1). As such, it is residual, as three larger bowls (e.g. Fig. 22.2), present in an overlying layer (139), correspond to Oswald's type G6 and indicate a date rather later in the 17th century, as does a sherd of Westerwald stoneware from the same layer.

The largest group was from the contexts associated with the construction of the culvert in trench 1 in the second quarter of the 18th century (period IV, phase 1), a total of 74 fragments. These were almost all stems, generally with a bore measuring 2-3mm, but they did include two bowl fragments with rouletting; two plain bowls, one with the initials 'IS' (510), and the other with the initials 'WW' (506) (Fig.22.3-4); and a foot with the initials 'IW' (506). These examples correspond to Oswald's types 8-11 (Oswald 1975, fig. 3, G), and may be dated to the end of the 17th century and the opening decades of the 18th.

A foot from period IV in trench 2 (129) bears the initials 'WW'. It is unlikely to be by the same manufacturer as that mentioned above, since other contexts in this phase produced creamwares, suggesting a date perhaps in the last quarter of the 18th century. In trench 5, period IV, also datable by the presence of creamwares, there were two bowls with spurs comparable to Oswald's type G22 (Oswald 1975, fig 4). One (712)

bears the mark 'SW' (Fig. 22.5). Both have a cross left in relief at the base of the inside of the bowl.

Amongst the 19th-century finds from trench 1, there is (from 90) a stem bearing the mark 'PAWSON CAMB'. in an oval surround (Fig. 22.6). James Pawson died in 1813, though his wife continued to make pipes till c.1825, perhaps using the same marks (Sekulla 1980, 20). The mid 19th-century finds from the fill of the cess pit in trench 1 included a bowl (94) which bears an incuse mark (Fig. 22.7) with the lettering 'J. MUM..., S...VES'. J. Mumby was recorded as a pipe maker at St. Ives in a directory of 1847 (Oswald 1975, 74).

Animal bone

P. McMichael

218 pieces of animal bone were examined from 52 contexts, weighing a total of 6,267g. The bone was in fair condition, though some was fragmentary. Both young and old cattle, sheep and pig remains are present. Only about 8% of the bones showed evidence of butchery; however, the wide range of bones present indicates that butchery was being practised nearby. The results are summarised in Table 7.

Oyster shells were also present in small quantities throughout the sequence. A few cockle and mussel shells were also found in period I, II and III contexts.

Small excavations and watching briefs Saffron Walden Museum and its grounds

Excavations in the great hall of the Museum (SW13) (Fig. 23)

Saffron Walden Museum stands in the castle grounds, a little to the north-west of the remains of the keep. A brick building in the Tudor style purpose-built by lord Braybrooke, it dates from 1834 when the Saffron Walden Natural History Society moved its collection there from the house of Jabez Gibson (Saffron Walden Museum 1845). It was almost immediately extended eastwards with the addition of the agricultural hall, now known as the great hall.

The castle ceased to have any military significance after the 12th century. Late medieval documents (Cromarty 1967) reveal its site to have been that of the manor and the home farm. The 1758 map shows the castle enclosure largely free of buildings, though an L-shaped building probably occupied the eastern part of the site of the museum's great hall and flanked what seemed to be the main access up the north side of the hill into the castle and farm enclosure. By the end of the 16th century, the

keep had been extensively quarried for building materials and probably resembled its present sorry condition. In the late 18th century, although adapted as a barn and used for the storage of wagons, the keep was repaired and a turret and flagpole erected on the forebuilding (Bassett 1982, 50).

At the end of 1987, the great hall was remodelled with the construction of new galleries round three sides of it. This involved the construction of foundations for the gallery supports, and also a lift shaft. Because of the location of the museum in the castle bailey and the existence of the manorial buildings, the curator, Len Pole, invited the Essex County Council Archaeology Section to monitor the work. A trial trench 1m square was excavated approximately north-east of the centre of the hall, and a watching brief maintained on the other groundworks.

The trial trench revealed a relatively straightforward archaeological sequence. What was believed to be the natural chalk was found at a depth of about 1.1m below the floorboards. Above this were layers of brown clayey silt with pieces of chalk, flint and a little brick or tile which showed evidence of weathering and soil formation, and apparently represented an open space. Finds were limited to a possible worked flint, and a sherd of romanising greyware, indications that this was probably an old land surface and a reminder of the likely significance of the hilltop for settlement and defence before the Middle Ages. These deposits were sealed by a series of hard chalk surfaces beneath two mortar surfaces at a depth of 850mm below the floor. These thin layers (which produced no finds) represent a succession of floor levels within a building, the walls of which lay outside the trench.

Above these surfaces were further deposits of light to mid brown silts and clayey silts, some of which contained quantities of building debris (including shattered flint, chalk, daub, mortar and clunch or Reigate stone) which must have derived from the clearance of buildings on the site or nearby. Only the uppermost of these deposits produced any finds, a mixture of material ranging from 16th-century Raeren stoneware through post-medieval red earthenware to pearlware and 19th-century ironstone. These layers were cut by the foundation trench for the sleeper wall for the floor of the great hall, and sealed by the trampled surfaces associated with the construction of the same floor. The sleeper wall foundation consisted of reused Tudor bricks and cream paving bricks.

The sections in the lift shaft, which was situated further to the north-east, were similar to those in the trial hole. Glazed post-medieval red earthenware was noted in the layers immediately overlying the natural.

Two foundation holes for the new gallery excavated 3m from the west wall of the great hall uncovered the remains of a complex series of post-medieval brick structures, not readily comprehensible in the small areas visible. In the more southerly, located against the south wall, the chalk was encountered at a depth of 1.1m. Here there seemed to be two main phases: a vaulted cellar had been superseded by the construction of a small deep chamber 0.95 x 1.20m, with a ramp or chute leading into it. North of this chamber, the existence of a further infilled cellar was noted. The brickwork of these structures was datable to

the 18th or 19th centuries. In the northern hole, 0.8m from the north wall of the hall, a well 1.1m in diameter was found cut into the chalk. At the top, it was lined with 11 courses of red bricks (220 x 60mm) laid dry. The fill of the well contained, inter alia, triangular section rubbed bricks which were probably mullions from a Tudor building. An L-shaped brick wall was subsequently built over the north-east part of the well. It was made of 18th century bricks measuring 210 x 105 x 60mm.

The sequence of events evidenced in these trenches can be interpreted as follows:

- open space, possibly late medieval. However, a Roman sherd, and Iron Age and Roman pottery from previous excavations at the castle (Bassett 1982, 52), are indicative of pre-medieval settlement on the hilltop.
- Chalk and mortar surfaces in the trial trench associated with a building which in view of its position may have been part of that shown on the 1758 map. The character of the flooring suggests a late medieval or Tudor date. The flint, brick and stone found in the trial trench may have come from this building or from elsewhere in the manorial complex, of which this building may have formed a part.
- The brick cellars represent a later building phase. They seem to have been located too far to the west to have been part of the building shown on the 1758 map (cf. Fig. 23), unless that map is misleading. Instead, they probably represent a remodelling or extension of that building carried out between 1758 and 1834. There are cellars under the western part of the museum building which, although of more than one phase, seem for the most part to be contemporary with it, not earlier than it. However, a vaulted cellar on the east side of the west part of the museum looks as if it once extended further to east and was part of that found in the excavation on the south side of the great hall.
- A phase of demolition and clearance associated with the removal of buildings and the construction of the museum. The c.1850 map (ERO D/DQy 25) shows that the southern east-west arm of the L-shaped building had been removed by that date, presumably because its site coincided with at least the eastern part of the great hall. If the great hall was indeed on the site of the earlier building, that might explain why the initial phase of the museum was located further west.

The time capsule to the west of the museum (SW7) (Fig. 23) Excavation in 1986 for a time capsule west of the museum revealed the edge of a deep vertical-sided feature (Andrews 1987). The layer above the chalk bedrock which had been cut by this contained five sherds of early medieval ware, including a thumbled and beaded cooking pot dating probably from the 12th century. The feature was therefore contemporary with the castle, datable to the 12th or possibly the 13th century. The fill of this feature was sealed by what were late medieval surfaces, in turn overlain by a thick layer of rammed chalk which contained some building debris, including a block of

Reigate, as well as a sherd of 17th-century post-medieval red earthenware.

At the time that it was found, the cut feature was thought more likely to be a cellar than a defensive ditch, partly because the main ditch round the castle in Bassett's reconstruction (1982, fig. 10) corresponds with the line of Museum Street further west. However, the possibility that it was a ditch should not be discounted as feudal castles located on spurs in France and Italy were sometimes defended by a series of ditches. There were more lines of defence across the width of the spur than Bassett's plan shows. It omits one which is well documented (Cromarty 1967, fig. 1) and which according to Maynard, a former curator of the museum, 'ran in a north and south direction, about 50 yards on the western side from the present ruin [i.e. the castle keep], the Museum now standing on part of the site of this defensive work' (Maynard 1892). If indeed a ditch, its unweathered sides indicate it was soon filled, something which would be consistent with the known history of the castle which was sleighted soon after the middle of the 12th century (Bassett 1982, 16). The feature was succeeded by a structure, represented by its floors, which must have formed part of the late medieval manorial complex. The rammed chalk layer which sealed above this was probably associated with the Tudor and later house which occupied the site.

The hilltop and the castle are clearly crucial areas in the history and development of the town, but ones where small scale archaeological investigation are always likely to produce limited results. Electrical resistivity survey of the area around the keep has not been very successful, the best defined anomaly being a possible wall running south-west from the keep (Geophysical Surveys of Bradford 1997).

Museum Street, Harris' Yard (SW6)

This excavation was located in Museum Street on the site of a former abattoir known as Harris' Yard (Fig. 3). It was not possible to investigate the site of the abattoir buildings on the frontage as their thick concrete floors were left as foundations for the new buildings and the area to the south occupied by the shop had a large deep (approximately 5.5m) cellar. The investigation was consequently confined to an area 3.0 x 2.5m in the garden to the west of the abattoir, just to the south of an east-west wall dividing the churchyard from the gardens and houses to the south.

The natural chalk was about 1.2m below ground level. Cut into it to a depth of 600-700mm was a vertical-sided feature of uncertain dimensions (but at least 3.0 x 1.5m), on the bottom of which were the remains of a brick floor. The bricks, and also the surrounding chalk, had been subjected to a fairly intense heat. This was, therefore, a sunken brick-lined feature, possibly with an industrial function, which must have been located within a building, the walls of which lay outside the excavation. This can be identified with a long building at right angles to Museum Street and adjoining the side of the churchyard which is shown on the 1758 map. The only dating evidence were the bricks in the floor: these were well made and measured 218x105x50mm. They looked late 17th- or early 18th-century in date.

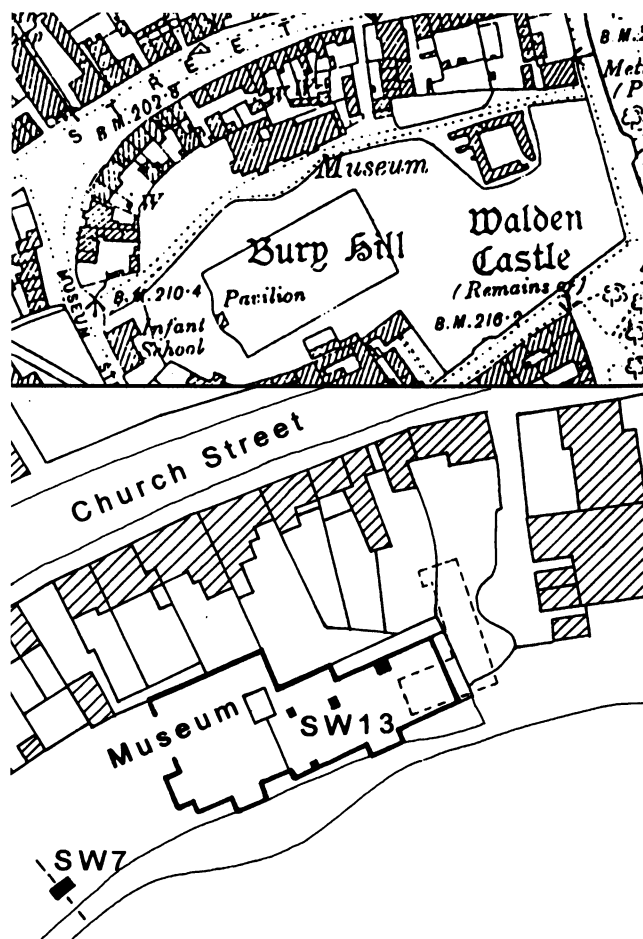


Fig. 23 Bury Hill (from the 2nd ed. OS map) and, enlarged, Saffron Walden Museum. The excavations are shown solid. The north-south alignment of the cut feature in SW7 is shown as a dashed line. The approximate position of the L-shaped building on the 1758 map which seems to underlie the great hall of the museum is indicated in a dashed line.

The cut in the chalk was filled with grey silty loam containing building debris and sealed by a layer of rammed chalk, overlain turn by demolition material in a grey silty matrix consolidated with another rammed chalk layer. The fills of the cut produced no datable finds, but the latter two layers contained, as well as Chinese porcelain and English tin-glazed earthenware, white salt-glazed stoneware made from the 1720s to the 1770s. The building debris included fragments of simply moulded lime plaster or stucco up to 35mm thick, some of it painted yellow ochre, which had clearly come from a relatively high quality interior.

Whether the demolition material came from the building in which the sunken feature was located is uncertain. The well made chalk surface shows that there was still a building on the site. This was covered by a layer of brown grey clayey silt containing daub and mortar, which was cut by a posthole and a rectangular vertical-sided feature 500mm deep and measuring 1.06m by at least 0.35m, with a base made of brick and tile. These features suggest that there was still a building on the site. The rectangular feature may be compared to ones found on the Market Row excavation (trench 5, 716 and 717).

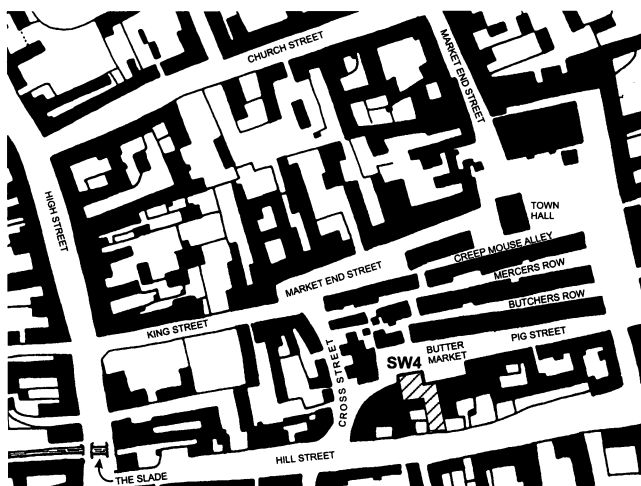


Fig. 24 Market Row and the infilled market area as represented on Eyre's 1758 map of Saffron Walden (ERO T/M 90).

Their function is uncertain. Its lower fills comprised peg tile in a grey silt matrix, and contained creamware indicating a late 18th-century date.

The ground level was raised by 500mm in two stages, first with a light brown clayey silt, in which there were two postholes, and then with an orange-brown mixed clay and silt cut by several sub-rectangular features, which were in turn covered by the existing topsoil. These deposits covered the entire excavation and seem to indicate that there were no buildings on the site. The upper layer contained pearlware datable to c.1800. The most common find in the features cut into it were fragments of flowerpot, consistent with gardening activity; 19th- or 20th-century ironstone was also present. One feature also produced semi-circular coping bricks like those used on the mid 19th-century churchyard wall, which tends to confirm the conclusion that the buildings had been cleared from the site by that time.

Discussion and conclusions

with a contribution by Pat Ryan¹⁰

Urban topography

Worked flints of likely Neolithic date in trench 3 on Market Row, where they were probably derived from eroded soils or hillwash, as well as from some later deposits in the other trenches there, point to prehistoric occupation on Bury Hill. The residual early Saxon sherds from trench 5 on the Market Row site, and two sherds from the west side of the High Street (Clarke 1998, 127), are, it seems, the only known finds of this period from the medieval town centre. This is surprising, as the natural defences of the Bury Hill promontory ought to have attracted settlement in Anglo-Saxon times.

The high degree of disturbance (i.e., pits, quarries and later regrading of the site when the market was laid out) means that the Pig Market site (SW3) was not very informative regarding settlement and occupation in the town. However, it is interesting

that no pottery earlier than the end of the Middle Ages was collected, that the earliest identified dated pit was of the 15th-16th century, and that most of the pits and quarries seemed to be 18th and 19th century. The absence of any trace of occupation was yet more striking on the Choppens site, which lay to the south-west in a backlands situation which until being developed in 1984 was a garden. The pottery finds were, however, somewhat different, with the presence of early medieval and medieval wares with a date range beginning in the 11th and 12th centuries. The combined evidence of these two sites is that this southern half of the town was largely unoccupied until the end of the Middle Ages, or even the 16th and 17th centuries, despite lying within the town enclosure represented by the Battle Ditches. Exceptions to this are Gold Street, documented from 1416 (Cromarty 1967, 130) and no doubt the southern part of the High Street, though in neither of these are there any listed buildings earlier than the 16th century. The pits and quarries on the Pig Market site reflect more intensive occupation in the post-medieval period, and Eyre's map shows that the Hill Street frontage here was almost completely built up by 1758.

Within the Battle Ditch enclosure, Bassett postulated a grid layout, based on an examination of the existing street plan and ditches found on the Elm Grove excavation. If the Battle Ditches represent an act of town planning, then some form of regular layout within them is only to be expected. However, town plan analysis offers ample scope for speculation, and the archaeological evidence for Bassett's gridlines is slight, comprising two north-south ditches on the Elm Grove excavation (Bassett 1982, fig. 8, D and E). The western boundary was shallow (200-300mm) and about 1.5m wide. It produced mainly 13th- and 14th-century pottery, but also a few 11th- and 12th-century sherds and two of St. Neots ware datable to the 10th or 11th centuries. The eastern boundary was of similar dimensions and better preserved, but seems only to have produced a single 12th-century sherd. Neither of the Pig Market sites can contribute to the case for this grid layout. The Choppens site lay just to the east of the line of the western ditch (D) on the Elm Grove excavation. The eastern ditch (E) should have been present in an east-west trench (500) in the Pig Market, but this area was completely disturbed by later features.

The 12th-century (and earlier) pottery from the Choppens site, and also Elm Grove, is potentially significant, as it implies activity, even if no more than manuring or rubbish disposal, by the 12th century within the area enclosed by the Battle Ditches. It has been argued above (see Introduction) that the dating of this enclosure to 1236 as proposed by Bassett needs rethinking. The presence of this

pottery could be taken as indicating that the Battle Ditches were excavated in the 12th century. The early 13th-century date currently attributed to them rests on only two small glazed sherds amongst an assemblage of Saxo-Norman and early medieval wares excavated from beneath the bank preserved on the west side of the town (Ravetz and Spencer 1962, 147). These glazed sherds have been identified as Hedingham ware, which is now believed to have been in use in Colchester by c.1140 (Cotter 2000, 84). This dating would certainly provide a better historical context for the enclosure, as the most likely time for this act of town planning to have occurred is when Geoffrey de Mandeville established the market at Walden in 1141. The anarchy of Stephen's reign created the circumstances which required a defensive enclosure. New towns, or parts of towns, continued to be established throughout the Middle Ages, but in England it was unusual for them to be defended in this way after the 12th century.

Further support for this proposition can be found in the small quantity of early medieval ware recovered from the ditch and metalled surfaces in trench 3 on the Market Row excavations. This not only implies 12th-century activity within the Battle Ditches enclosure, but also the possibility of a marketplace by that time. If this was the site of the 1141 market, then it follows that there was never a market on the top of the spur to the west of the castle as Bassett suggested. The oval-shaped enclosure in that case would have originally been an outer bailey of the castle, providing direct control of the High Street, which was Geoffrey de Mandeville's new road to bring traffic from Newport through Walden, whilst the Battle Ditches represent the town enclosure.

The marketplace

The north-south ditch (320) in trench 3 on the Market Row site, the general layout of the building units found in the excavations, and indeed of the 'rows' that represent infill on marketplace, indicate that the market was laid out on a grid plan. The contemporary gravel layers show that it was also provided with a metalled surface. Projecting ditch 320 northwards, it is about 25m or 5 poles to the east of Cross Street, which seems to represent the only reliable north-south boundary nearby. Butcher Row (i.e., the buildings between Butcher Row and Market Row) are about 1 pole (16 ½ ft) wide. It may be no coincidence that the structures in trenches 4 and 5 were about 1 pole deep, if the outshots are included in their overall dimensions. Thus it may be that the market was laid out on east-west strips 1 pole wide, with north-south divisions also based on a pole, but in the absence of more excavated boundaries, it is impossible to be precise about this.

There seems to be no evidence in the excavations of temporary market stalls, except perhaps the period I, phase 1, postholes in trench 3. The earliest structures instead represent the occupation of this side of the marketplace with permanent structures, a process which was under way by the end of the 13th century. Timber-framed buildings were appearing in Harlow marketplace at about the same date (Andrews 1991). At Chelmsford, the Middle Row, consisting of permanent infill in the High Street, seems not to be recorded until the second half of the 14th century (Grieve 1988, 53).

Saffron Walden market is unusually well documented. It figures in numerous deeds from the 14th century, and is described in surveys of c.1620 (ERO D/Dbv M38) and the early 1630s.¹¹ By 1359, stalls in the Butchery were in the ownership of groups of individuals and appear in deeds. The rent from a stall there was assigned to the maintenance of a light in the church in 1396. Such stalls must have been permanent fixtures. They were also valuable. Two located between the *Bochery* and the *Tannary* were acquired in 1425 for £10 payable over six years. Whereas rows of stalls reflected the original layout and function of the market, at the fringes of the marketplace messuages are recorded by 1419 when they were clearly numerous. These plots had houses on them, usually with shops but also yards, stabling and kitchens. The appearance of dwellings represents infill that not just diluted the market function of the area, but also modified and altered the original plot shape and size. The stalls in the Butchery were presumably less susceptible to this process because dealing in meat tended to be less compatible with a residential use than, say, cloth. Hence the survival of the only well preserved row today, that between Market Row and Butcher Row. In the c.1620 survey, this comprised a single row of 18 shops (though the three at the west end were also described as tenements) and must have been similar in plan to what it is today.

The topography of the marketplace is best preserved in the 1758 map (Fig. 24). It shows three rows of buildings separated by alleys which by association have become known as Rows. The east end of the southernmost row (i.e., that in which the excavations were located) was known as Pig Street. The re-entrant space in front of the long-wall jetty house is the Buttermarket, a name which in 18th-century deeds seems also to have been applied to the whole street. The alley beyond the next row to the north is Butcher Row, a name which remains unchanged. The next two rows to the north have been superseded by the development of the King Street frontage and the building over of the line of the alley between them. This alley was, in 1758, Mercers Row. A further short row of buildings, beyond the quaintly named Creepmouse Alley, was

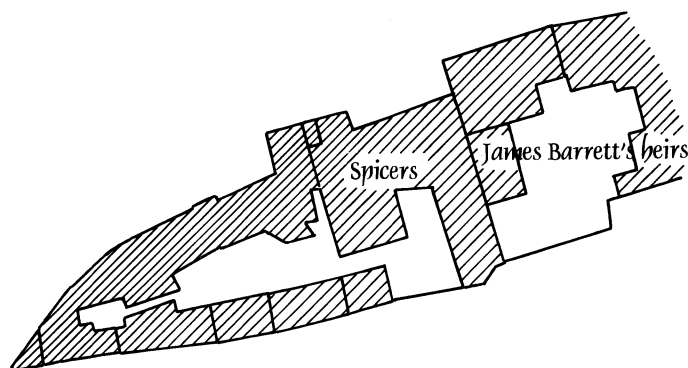


Fig. 25 The Hill Street/Market Row properties redrawn from King's map of Saffron Walden of c.1850 (ERO D/Dqy 25).

demolished in 1761 to widen King Street which was then known as Market End Street.

This map can be compared with the rental of c.1620. The buildings where the excavations were located are identified as *The rowe between Chesehilstrete and Piggeshill north and Hillstreete south*. The buildings between the modern Market Row and Butcher Row are *The farthest row southward by Pigshill*, identified as *Butcher Row* in a different hand. The next row of buildings to the north are those between *Tanner Row on the north and on the streete at Ffishrow south*. This was two buildings deep: on the north side, on Tanner Row, there were shops, stables, messuages and buildings; on the south side, there were shops and a yard. The northernmost row of buildings comprised messuages, tenements, shops and buildings located between Tanner Row to the south and the street or Mercer Row to the north. It seems that the names of the alleys between the rows of buildings could easily be transposed. Thus Mercer Row of c.1620 had become Creepmouse Alley by 1758, the name moving instead to the south side of the row of buildings where it superseded Tanner Row.

The character of the rows of buildings is revealed as variable. Tanner Row was two shops deep, without any evidence for an alley between them. Although mainly shops, there were also two messuages, stables and a yard. Butcher Row comprised 18 properties, all shops except for a tenement at the west end, only one shop deep though all had purprestures which were probably pentices or similar structures. It retained the layout of a row of stalls, though as has been seen these had been permanent or semi-permanent buildings since at least the mid 14th century. The northernmost row, fronting on what is now King Street, and the southernmost, where the excavation was located,

comprised mainly tenements and messuages. In these areas, the infill process seems to have been most highly developed.

This layout can be traced back into the late Middle Ages. 14th- and 15th-century documents give the abutments of stalls and shops in the Butchery as on Cordwainer Row north and on Butcher Row south, and on Butcher Row north and *Gutrowe* or *Gutterowe* south. If Cordwainer Row was the same as Tanner Row, then this was the more northerly row, between Mercer Row and Butcher Row in 1758. The row between Butcher Row and *Gutrowe* would have been that surviving today between Butcher Row and Market Row. If so, this identifies the modern Market Row, the 18th-century Buttermarket and Pigshill, and the 17th-century Chesehilstrete and Pigshill, as *Gutrowe*. This interpretation is supported by a 1419 deed for a messuage in *Gutterowe*, butting north on *Gutterowe* and south on the Waterslade. It is interesting that this was a messuage, and that it butted east and west on messuages, one belonging to a saddler, indicating that this south side of the marketplace had begun to be built up with substantial properties. In what seems to be one of the latest recorded instances of the use of the name, two shops at the east end of Butcher Row were described in 1563 as butting south on a lane called Gutte Row leading towards Powltry Hill.

If the correct form of the name was *Gutterowe*, then it implies that this lane served for the dispersal of effluent from the Butchery, a logical use in view of its proximity to the Slade, though not one for which evidence was found in the excavations. The designation of the lane as a row makes it clear, were the excavated evidence insufficient, that the south side of Market Row originated as market stalls. It is interesting, and curious, that the eastern end of it preserves this appearance on the 1758 map and older OS maps, yet its frontage is in advance of that of the long-wall jetty house, which the excavations showed corresponded to the frontage of the earliest excavated structures in the row.

The layout of the rows reflects the zoning characteristic of medieval markets, with clothing to the north, then the tanners and butchers, with pork butchers and dairy products to the south. Whether this reflected the real 16th- or 17th-century pattern of land use is uncertain. The properties in the rows included not just shops but also houses, yards, 'buildings' and stables. This was particularly true of the peripheral areas. However, the only shops the use of which is identified in the c.1620 survey, are three tanners shops in Tanner Row. The narrowness of Butcher Row, and the fact that it consisted almost entirely of a single row of shops, implies that it had also retained its original function.

The infill process may be seen as having two or three main stages. First, the marketplace became occupied by stalls which remained *in situ* from one market day to the next. This would have been contrary to, for instance, the spirit of a Chelmsford by-law requiring their removal (Grieve 1988, 53). It would have been a simple step for these to become permanent shops, often combined with residential and other accommodation. Finally, these became superseded by houses which may have incorporated shops but also often had other outbuildings with other functions. The periphery of the marketplace seems to have been most susceptible to the early establishment of messuages with a variety of functions. By the 17th century at Saffron Walden, the process was mature: the market origin of the properties was becoming obscured and the zoning of the different trades was becoming blurred.

On the c.1620 rental, the southern side of what is now Market Row comprised six distinct property holdings: two free messuages, four tenements, two shops, and associated yards (four) and purprestures on the King's Ditch (two). One problem in trying to relate the rental to the excavation is that this is fewer than the number of units shown on the south side of Market Row on modern maps. This may be partly because since 1620 there has been further encroachment eastwards on Market Street, i.e., it is not possible to equate the easternmost property in the rental with that on the map. Instead of following the rental as it proceeds from one end of the row to the other, an alternative strategy is to try and identify the most conspicuous property in the area of the excavations, the long-wall jetty house, which should have been built by that date. This was probably a tenement and yard held by widow Rosse, and formerly by Thomas Adams, a smith. Immediately west, in the excavated area, there were two free tenements, in the possession of George Pumfret and John Stokes, 'betwene the lane and the lords shop north, and the said ditch south', the shop being 'built out into the street by Pigshill west and the lords shop east'. The lord's shop had a chamber over and a small yard. This group of properties thus had four main components: two shops and two tenements. Assuming that the shops were not detached in the street to the north, they can only be reconstructed in one way, viz., with the shop to the north on the frontage, the lord's shop and its yard to the east, and the tenements behind. The excavated evidence must reflect a layout of this type, though the individual units cannot readily be identified from it. It is interesting to note that the later plan form of these buildings with residential accommodation in the back of the double pile building, and shops in the front, reflects this arrangement. However, the area beneath the back of the double pile building seems not to have been built upon yet, as in period III (c.1550-1700) there

was a gravel layer at the south end of trench 5 which probably represents an external surface.

The map of c.1850 discussed above shows a small unit on the frontage within a larger one (Fig. 25), in the area of the eastern part of the later shopfront. This could be a survival of the lord's shop or its yard. Such a unit would be typical of the small size of those revealed in the excavations. Medieval documents reveal that tiny pieces of land in markets were highly prized. In Clothrow in the 15th century, two shops were contained in an area 18 ft long by 12 ft wide. A piece of land in Cordweners Row measured 20 ft by 4 ft. In other towns, stalls are recorded as being 8 ft square (at Nottingham) and 8 ft by 6 ft (Clare) (Cromarty 1967, 125).

Urban economy

The general picture presented by the excavated sequence is that of a straightforward trajectory of urban growth over a period of more than 800 years, with land reclamation and the progressive replacement of relatively impermanent by more durable structures, and then in modern times the building up of the empty southern part of the town. Such a view would be simplistic, and would ignore hiccups in the town's economic growth which have not found a clear reflection in the archaeological record, with the exception of the over-confident enclosing of a large area within the Battle Ditches doubtless anticipating growth which did not occur. Another exception is the gap in the sequence between periods II and III. This, as has already been discussed, might be because of truncation or else contraction of occupation within the town, and specifically within the area of the marketplace. Although this question is not really soluble from the archaeological record, the documentary evidence does suggest, as shall be seen, that the process of market infill seen on the excavation may have been arrested in the 14th century and only resumed and completed c.1524-1620.

It also seems too much of a coincidence that this hiatus in the archaeological sequence should coincide with the Black Death and the economic crisis of the 14th century. In other towns, possible evidence has been found of late medieval urban decline. Black earth layers indicative of abandonment have been noted beneath Wealden houses in Maldon (Andrews and Stenning 1996, 224). At Harwich, similar deposits and the absence of 14th- to 15th-century pottery could reflect contraction of settlement (Andrews *et al.* 1990, 90). At Harlow, excavation suggests a permanent stall or similar was dismantled and replaced with gravel metalling in the 14th century, and there seems to be a similar gap in the ceramic sequence (Andrews 1991, 104, 111). The desertion of a plot can readily be recognised if construction levels are sealed by

dark earth or garden soil. In the absence of such deposits, it is a process less easily identified. In a marketplace, it is probable that the process of decline would take a different form, inasmuch as it is unlikely to have provoked total abandonment, dumping and cultivation. However, market infill may well have been sensitive to economic decline and stalls in the process of becoming permanent fixtures may well have been removed. The mechanics of market infill are not fully understood. At Walden, a contributory factor might have been the exclusion of foreigners from the market (Cromarty 1967, 128), but one of the principal motives must have been the desire of the lord for increased income. If no one wanted to pay the rent on a permanent stall, then no doubt it would be dismantled. Cromarty (1967, 126) noted the existence of new rents, and the leasing of waste, in the market in the 15th century. Rather than the expansion of the market, this might indicate the bringing back into use of land that had not been rented out since the Black Death and its aftermath.

This conclusion seems to be supported by an examination of a rental for the king's manor of Walden dating from 1524 (ERO D/DBY M32), in which the rows that are such a conspicuous feature of the c.1620 rental are scarcely recognisable. Only one is mentioned by name, Mercery Row, where John Spelman held a tenement. Its abutments were a tenement and a messuage, the 'way of the market' and half 'an acre of land in Sherehill'. Mercer Row was the most northerly of the rows, fronting on to what later became King Street, an area which probably became infilled early and which in c.1620 comprised messuages and tenements. The rental shows that there must have been buildings here in 1524 which, however, are not included in it, because they were not held of the royal manor for which it was compiled. Nevertheless, even if the picture presented by it is incomplete, it is difficult to believe that the 50 or so property units recorded in the rows in the c.1620 rental, a number of which were held of the royal manor, were in existence at this time. A single messuage is listed in *Chesehill*, and its abutments on two sides were pieces of land, implying that this area was not fully built up. In other words, the process of infill that we see today may date in its final form mainly from the later 16th century, a period when it is generally agreed that towns were flourishing. Possible further evidence that Walden prospered in the 16th century can be found in an analysis of its listed buildings. Of 324, 28 are 15th century, 71 are 16th century, and 29 are 17th century.

No real evidence was found in the excavation for trade or industry, nor were there any artefacts found that reflected marketplace activity. It is known that the dyeworks, which were the town's

principal industry, were concentrated round the edge of Bury Hill, whilst the lord's malt mill was located in the marketplace higher up the hillside (Cromarty 1967). The area of the excavation was a part of the market which in the early modern period seems to have specialised in dairy products, but as Walker (above) notes, that is not evident from the pottery. Little if any of the pottery can be identified as locally made. Instead, the pottery reveals considerable dependence on Hedingham wares made in another lordship about 18 miles away. Manorial towns seem to have developed their own particular industries, and to have been able to rely on trade and the market to satisfy that areas in which they were not self-sufficient, processes which were doubtless encouraged by the lord. Thus Walden specialised in saffron, Thaxted in cutlery, and Hedingham in pottery.

It is striking the way boundaries and wall lines became fossilised at an early stage and endured thereafter for centuries, the outshot of the late medieval houses being preserved as a passageway in the 19th-century house. This is a commonplace of urban morphology and must reflect, as well as the constraints of cramped town centre conditions, an absence of capital investment on a sufficient scale to totally disregard the existing building layout. On this criterion, three moments stand out as times when the site was developed or redeveloped on a major scale: the 13th and early 14th centuries, when the process of market infill began; the early 19th century when the existing shop was built, replacing and remodelling older buildings; and the 1980s, when everything was swept away apart from the lines of the street frontages and the listed building.

Buildings and building techniques

Of the 13th- and 14th-century period II buildings, that in trench 3 was possibly quite small, about 3m wide and of uncertain depth but at least 2-3m, a successor to an earth-fast stall in phase 1. In phase 3, this structure was extended, encroaching northwards on the street. It may have had its long axis at right angles to the street and resembled a cross-wing. The period II phase 2 and 3 buildings in trenches 4 and 5 were 2.5-3.0m deep, with an outshot measuring 1.5-2.0m, and, assuming they were one building, were up to 6.5m wide. A possible threshold, and a north-south internal division in the character of the layers, could indicate a door and passageway. In phase 2, there was a burnt layer which seemed to be derived from a hearth opposite the putative doorway. These narrow buildings could have been small halls, but they might also have comprised a row of shops.

In period III, as before, there seem to have been two buildings on the site. That in trench 3 was possibly up to 5m deep, and at least 3-4m long. If it

was not much longer, it was a squarish building, or else a cross-wing at right angles to the street. Since the east-west row of postholes seems have divided it into two rooms front and back, the latter is quite probable. The building in trenches 4 and 5 was about 5m deep, plus a 2m outshot (or possibly a pentice), and probably 6-7m long. It seems fairly clear that it had its long axis parallel to the street. As has been seen, the c.1620 rental indicates that there were two free tenements on the site, which can be identified with these two structures which can therefore be reconstructed as small houses or cottages. That they were apparently in joint ownership increases the possibility that they comprised a cross-wing (in trench 3) and a hall which become split between different branches of a family. It is also clear from the rental that there were two shops in front of the tenements. It is possible that one was located in the front of the cross-wing unit proposed for trench 3. Stenning (1985) has shown that there could be considerable variety in late medieval shop plans, but he illustrates no example of a shop in front of a building with its long axis parallel to the street. The other shop, significantly that located to the east, was very probably detached and built out in the street, being in a different ownership and two storey with a yard.

The appearance of medieval shops is well known. Typically they had facades with doors with adjacent windows which served as counters and for the display of goods. About eight such shops have been recognised in Walden, of which the Cross Keys in the High Street is a good example. They may not all have been as predictable as this. Two market infill buildings have been identified in Debenham, Suffolk (Alston 1995), both notable for their small size (3.65 x 2.03m, and 4.87 x 2.74m). The larger is of the normal pattern, but the smaller comprised two entirely open units, resembling a market hall. Two shops in what is now The Swan, Braintree, also seem to have consisted of somewhat similar large open-fronted spaces (see *Historic buildings notes and surveys* in this volume).

The sequence on the Market Row site provides an opportunity to examine the development of building techniques and the types of structure that existed in the marketplace. The period II, phase 1 postholes in trench 3 could have been for removable stalls and other temporary fixtures. They do not form any clear pattern, and were relatively small, smaller than the postholes found in Harlow marketplace (Andrews 1991, fig. 2). The shallow east-west slots about 300mm wide in period II, phase 2, in the same trench were probably for sole plates, implying the existence of small timber-framed structures which, being set slightly in the ground, must have been permanent features of the marketplace.

In trenches 4 and 5, the period II, phase 1, building had a north wall founded apparently on lengths of timber. Although these were set in shallow slots about 1 foot wide, the south wall seems to have been laid on the ground surface. In phase 2, the wall line on the south side of the building, interpreted as representing the external wall of an outshot extension, consisted of a low cill 150mm wide built up in a layer of clayey silt. The building was reconstructed in phase 3: its north wall was set on a low clay cill; the south wall was set in a slot, and the south wall of the outshot was probably set on a low clay cill. In trench 2, a possible initial building with a low cill formed of silt, was succeeded by another with a cill or plinth wall 550mm wide and surviving to a height of 400mm, made of hard chalky clay on a gravel foundation. Floors in this period were generally made of sandy silt mixed with chalk, though the phase 3 outshot floor was of chalky clay.

When the building sequence starts some time in the 13th century, timber-framed structures were already in use, though the sole plates were being set just below or at ground level. They could not have been very durable. Although sole plates can be replaced, it has been argued above that the structures themselves did not have a very long life. This is incontestable: in trenches 4 and 5, there was a succession of three buildings over a period that was at most about 150 years, and perhaps significantly less. Another possible explanation for this is the scantling of the timbers used. Although the slots are generally about 300mm wide, they may have become enlarged during the dismantling of the buildings and it may be significant that cill 745 and slot 730 (trenches 4/5, phases 2 and 3) were about 150mm wide. Slot 730 had the impression of a timber in the bottom of it and therefore it must have held a 6 inch timber. It would not be surprising if small section timbers were used for marketplace structures and indeed if they were commonplace in vernacular architecture at that time. If so, it would have contributed to the impermanence of the buildings. The clay or cob cill or plinth in trench 2 seems to represent a significant improvement, being for a substantial sole plate raised above ground level. A similarly feature was found not far away at Tiptofts, Wimbish, where during restoration work the line of the outer aisle wall on the east side of the 14th-century hall was found represented by a clay cill.

In period III, the first well made chalk floor appears, in trench 3, in a late 16th or 17th-century context. However, such floors must have been long in use. There was one in the 14th-century hall at Tiptofts, but this was a high status building. A row of postholes in the chalk floor, presumably, for an internal partition comprising poles about 100mm in diameter at centres of 450mm, is at variance with

what is found today in timber-framed houses where internal walls are all fully framed. Postholes, one of them with a brick surround, were also a feature of the building in trenches 4 and 5, though their function was less clear. Three flint walls were present in this period: one at least 400mm wide between trenches 3 and 4; another at least 300mm wide forming the south wall of the outshot in trench 5; and a third about 700mm in trench 2. It is assumed that these were cills or plinths for timber-framed structures, but the exceptional width of the trench 2 wall raises the possibility that it belonged to a stone structure. Buildings possibly constructed entirely of stone, and dating probably to the 14th and 15th centuries, have been found to the rear of nos. 33-35 High Street (Clarke 1998). The apparent existence of such buildings, and also of earth-fast features in this and indeed later periods, are reminders that buildings of past centuries cannot be reconstructed entirely predictably from those that survive today.

Notes

1. It was subsequently the premises of the Halifax Building Society, now of the Nationwide. The postal address of the building has changed confusingly. In the list description (issued 1994, but compiled earlier), it is no. 8 Market Row. Today it is no. 9 Market Walk, the latter being the name given to the shopping development built in 1984-5.
2. Prior to demolition of the building, this weatherboarding was dismantled and eventually taken to the Wat Tyler Country Park, Pitsea, Basildon, with the intention that it could be re-assembled there. A fine 17th-century example of rusticated plaster is nos. 83-84 at the east end of the High Street in Colchester. Other examples of this weatherboarding cited by Munt (1993, 70) are the Whitechapel Bell Foundry office, Regency House, Framlingham, Suffolk, 8 Market End, Coggeshall, and Crowthorne House, Tower House and The Peppers in Tenterden, Kent.
3. Information from the developers.
4. Observations made by T. J. Wilkinson.
5. Observation by T. J. Wilkinson.
6. Observation by T. J. Wilkinson.
7. Observation by T. J. Wilkinson.
8. Information from a survey kindly supplied by Uttlesford District Council, which has been used for the reconstructed section through the culvert (Fig. 9).
9. Unpublished excavation, but see ECC 1987.
10. I am grateful to Pat Ryan for providing a transcript of the c.1620 rental, for checking through the 1524 rental, and for lengthy discussion of the problems of reconstructing the marketplace and its development.

11. It is not pretended that the following discussion does justice to the potential of the documents for tracing the development of the marketplace. Where no reference is made to particular documents, the discussion is based on the Calendar of deeds relating to Saffron and neighbouring parishes, 13th-18th centuries (ERO T/A 117/5), prepared by K.C. Newton in 1950 from the MS calendar by E. Emson of the deeds in the custody of the Town Clerk.

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Cloth seals and other metal-detecting finds from Saffron Walden

by Tony Carter, Geoff Egan and Maria Medlycott

In the summer of 2000 Tony Carter was invited to metal-detect the site of the football pitch at Saffron Walden, which had been stripped of its turf prior to levelling and relaying. The football pitch is located to the north of the town (Fig. 1), in the valley bottom beside the Slade (or Madgate Slade) river. It is accessible from Caton Lane, which crosses the river at that point and continues northwards to Little Walden as a footpath. A large number of metal finds were recovered. This report discusses a group of cloth seals, jettons, tokens and coin-weights dating from the late 15th to the 17th centuries. Other finds include the blade of a Bronze Age axe-head, a Roman brooch and several Roman coins, a scatter of medieval coins dating from the 12th to the 15th century, and a Tudor jug-spout. Full catalogues of the items recovered have been lodged with Saffron Walden Museum.

Cloth seals, jettons and lead tokens

Geoff Egan

The identified medieval and later finds (largely focused on the 15th/17th centuries) recovered by Mr Carter and submitted for comment are an impressive assemblage that it is currently difficult to parallel in Essex (though in the absence of the Portable Antiquities Recording Scheme from the county, this could simply mean that similar groupings have not been reported). The three categories submitted are ones that tend to come to the fore with detecting – the more intensively this is undertaken, the more examples of tokens and jettons usually accumulate, though this is not always true of cloth seals, which seem to be patchily located in both urban and rural contexts.

Lead cloth seals

(Fig. 2.1-18)

These were used for quality control in the textile industry. In the catalogue descriptions, the following conventions are used:

/ = next line

// = next side

.. one character missing

... more than one character missing

Alnage seals etc.

(i.e. those from the official English textile quality-control and taxation system)

1. D 19mm // 19mm:
(offstruck) shield with double-stranded cross having sword in first quarter // crown over shield with arms of England, fleur de lis to side, ... (CIID) around (lombardic lettering)

The first arms are those of London – the few known parallels with this same arms stamp have too little of the second one's legend surviving to help interpret it. Presumably an alnage seal; (?) late 16th century.

2. D 18mm // (incomplete flan); textile imprint:
three-towered castle (stippled walls) over lion passant, (PG) to sides // rose, (legend around)

The arms on the first disc are those of Norwich; the initials are likely to be those of one of the city's mayors, probably Sir Peter Gleane, who held office in 1615 (Cozens Hardy & Kent 1938, 60-90). His initials appear on several similar seals, which include the date below the lion and the royal initials IR along with the rose on the second stamp (e.g. Museum of London, accession no. 1993.142).

Probably for a worsted textile.

3. D 16 mm // missing (textile imprint):
crown over (?)rose // (missing)

The rose stamp is probably analogous to that on the preceding item. Probably Norfolk/Norwich, for a worsted textile; early 17th century.

4. Missing // d 22mm:
(missing) // (weakly struck) crowned shield with arms of England (this appears to be the complete device)

From a county series which includes issues dated between 1553 and 1601; the stamp on the missing disc would probably have had the appropriate county arms (cf. Egan 2001, nos. 38 & 77).

5. Missing // d 19mm (trimmed down with a blade):
(missing) // large F, sun and rose to sides, trace of surrounding legend (lombardic lettering)

This and the following seal have a prominent F standing for 'faulty', the mark for cloths that were marketable seconds; the use of these special seals is noted in a Statute

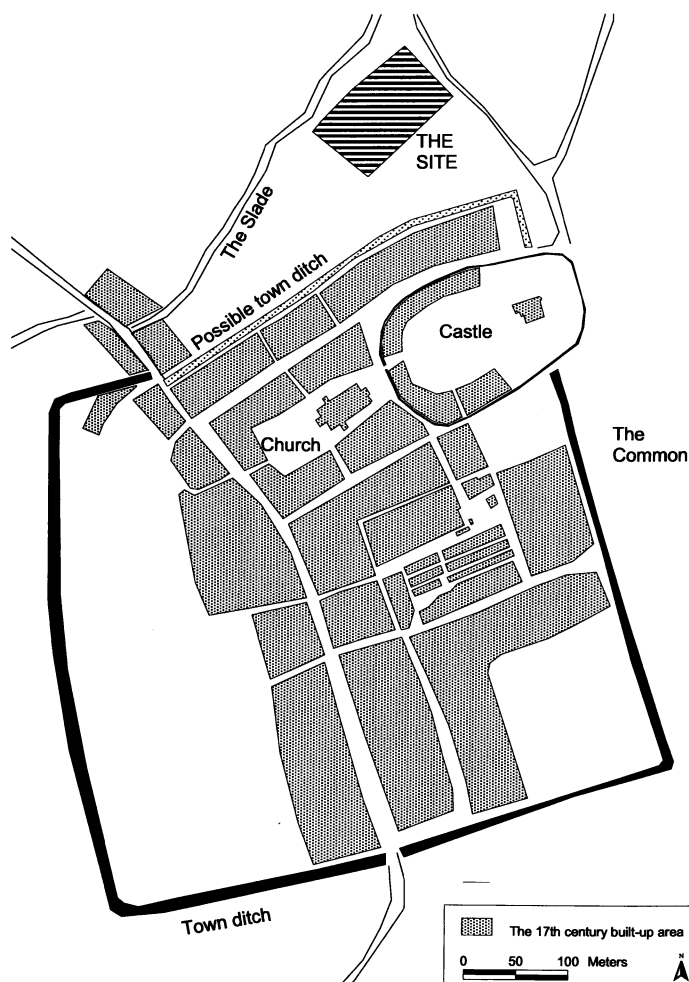


Fig. 1 Map of Saffron Walden showing site location

of 1464 (Egan 1995, 56) and it may have continued through the 16th century – the small rose and sun marks are thought not to have lasted beyond the mid 1500s (cf. *ibid.*, nos. 110-11, & *idem.* 2001, nos. 43ff).

6. Incomplete flan (trimmed as preceding item – essentially just the rivet is present); surviving d 13mm // missing:
part of large F, rose to left, ..(?E)NA ... around // (edge legend) ... VE(A) ... (lombardic lettering)

See preceding item.

Customs seal for an import

7. D 24mm // missing; textile imprint: crown over shield with arms of England in multi-arched border, ... (?I') around // obliterated main device, ... CVSTV ... around (lombardic lettering).

The missing device (an enthroned Henry VII or VIII depicted beardless) is known from several parallels (e.g. Egan 2001, nos. 106-8). This kind of seal seems, from the fabric imprints some have, to have been used on textiles of very high quality, like satin cloths-of-gold – presumably imports. The full legend would probably have read *sigillum custummi* – i.e. seal of customs.

Weavers'/clothiers' seals

These have proved almost impossible as a class to identify with known individuals; the best that seems possible is to assign a likely period for each mark by its style (Egan 1995, 78).

with initials:

8. D 24mm // 25mm; strip missing; threads from original textile survive:
// (crude) M(B)

?16th to 18th century.

9. D 25mm // 25mm:
// I C privy mark

?16th to 17th century.

10. D 20mm (folded) // missing:
- // (on rivet) ..L privy mark

?16th to 17th century

11. D 19mm // missing:
- // (on rivet) part of ..W privy mark

?16th to 17th century

12. D 18mm // missing:
(scratched) (?44)? // (on rivet) part of I ../
(B, Por R) .. privy mark.

?Late 16th to 17th century; 44? was presumably a specification for yards length.

including naturalistic devices:

13. D 21mm // missing:
(incuse) BS, (scratches) H over D O // (on rivet)
?angel facing.

The angel could be a reference to the one on the main series of 17th-century London seals – cf. Egan 1995, 41-2 nos. 64 & 66ff; ?17th century .

14. D 18mm // 19mm
E S to sides of (??crowned, ?horse's) head issuant from a coronet, letter F on its back below // (?) –

The disorientated F is unusual but no explanation has been forthcoming; ?late 16th to 17th century.

Searchers' seals

'Searched' is the usual term for examining a textile and passing it as of adequate quality for the market.

15. D 22mm // missing:
XXVIII/LIX with lines of beading, SEA ... HED
around // (rivet only) ? –

?Late 16th/early 17th century; the cloth seems from the dimensions to have been a heavy one like a traditional broadcloth.

16. D 24mm // missing:
XX(I)/XV(I) // (missing)

? Mid 16th/early 17th-century; 21/16 could be a specification for a kersey cloth.

17. D 15mm // missing:
(obliterating scratches) // ..III

? 16th/early 17th-century; this could be a

weaver's/clothier's seal with a length specification, or possibly an alnage issue with the weight.

Dyers' Company seal

18. D 21mm // d 23mm:

(crude) RB in linear border surrounded by

annulets, scratched device in flat area // WG over madderbag.

The madderbag is a general symbol of the dyers' trade, the actual colouring used on the cloth in question being indicated by the initials W for woad and G (?) for green - ?i.e. a blue base colour with a further colour added to give

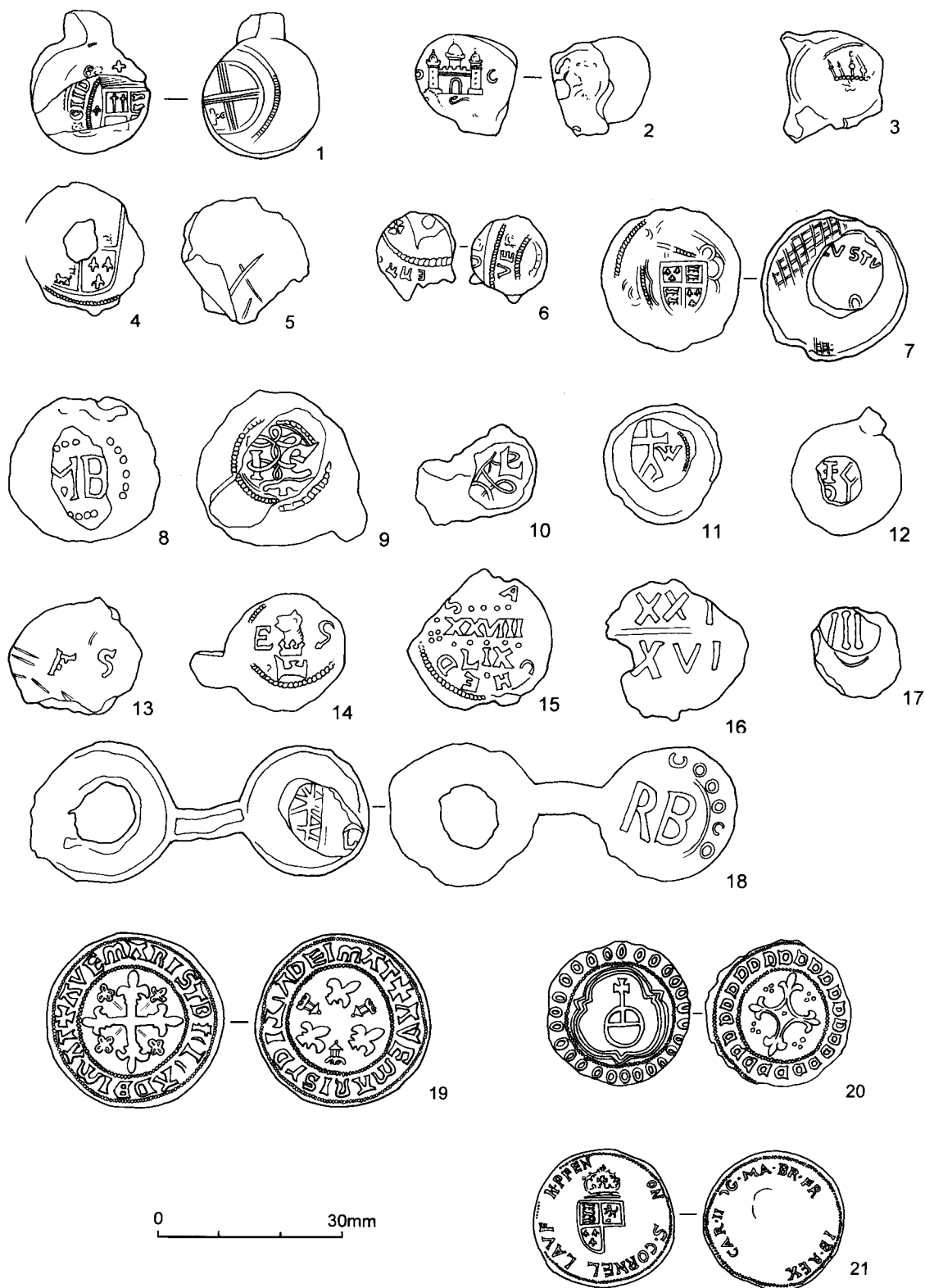


Fig. 2 Cloth seals and jettons.

a green (alternatively the G could stand for the very expensive red dye grain, giving a final purple). RB was presumably one of the officials of the London Dyers' Company who examined the cloth and decided whether the colour was of adequate quality for sale (fast and even throughout the piece; this individual is so far not known among the many seal finds in the Thames-side dyeing area of London – cf. Egan 1991, 16-17). The series of regulatory guild seals to which this one belongs includes examples dated between 1613 and 1654, though their use could extend to either side of this bracket.

Uncertain (unillustrated)

(?all two-disc seals)

19-20. Two first discs, ds 21 & 22mm, no legible devices.

21-22. Two (?)second discs, ds 17 and 18mm, lacking discernible devices

The assemblage of 22 seals, most from the 16th/early 17th centuries, is made up of a London issue, two from Norfolk (probably for worsteds), one unassignable county or town issue, two similarly unassignable seals for sub-standard cloths that are probably from the early 1500s, one from a series of the late 1400s/early 1500s to show the levy of customs tax on a luxury import, three (?)searchers' seals likely to be from half a century or more later, seven with stamps to indicate the identity of the producers, a London Dyers' Company regulatory seal of the early/mid 17th century, and four unidentified fragments.

The seals appear to span at least a century from the second quarter of the 16th century, probably more, but this is somewhat later than Saffron Walden's main significance in textile production (the town was not one of those in Essex selected by a royal commission in 1640 to be an administrative centre for regulation of the county's textile industry – Thirsk & Cooper 1972, 249). The findspot, to the north of the main enclosed area of the town (and some distance from where dyeing is recorded, again at an earlier period), is close to running water, which is doubtless responsible for the good preservation of the group. Mr Carter's suggestion that this was the site of a fair has much to commend it in view of the range and large numbers of other categories of finds.

None of the seals certainly originated either in the town of Saffron Walden or even in the county of Essex, and there is, therefore, no definite indication from the assemblage of local manufacture or finishing. The five that do indicate a provenance are from London, from Norfolk two counties to the north, and the Continent. The two fragments remaining from 'F' seals put on faulty textiles are both carefully pared with a bladed tool around the rivet that had been pushed through the fabric to hold the seal in place (nothing remains legible of

either of their original legends to indicate the provenance). This minutely accurate trimming has not been noted elsewhere – a single cut through the second (holed) disc would have been enough to allow most seals to be prised off the fabric if that was what was wanted (e.g. Egan 2001, no. 121), but the extra effort attested on the present two may have been needed if very tight fixture had been effected in the first place (see below for speculation about how this could perhaps hint at sharp practice).

The closest parallel groups of cloth seals, each of roughly similar size to the present one, are both from the county of Hertford – in the Hitchin area, where the River Hiz may perhaps have been used in textile processing (private collections, e.g. Cussans 1874, 34), and from Baldock in an area known as Clothall End (recovered during the formal archaeological excavation of a primarily Iron Age and Roman site, the earlier finds have been published but not the cloth seals – all the finds, including two Norwich seals, are held at Letchworth Museum; here too a fairground has been suggested). Hertfordshire was not a cloth producer for markets beyond its own borders and no local seals at all have yet been recognised (it is just possible that some of those with poorly registered legends in Lombardic lettering, taken to be 'KENT' may instead read 'HERT..'). Beyond the common lack of recognisable local seal issues, which probably relates to differing factors in each case, the beginnings of a similar pattern to that of the present assemblage may be discerned – popular Norfolk worsteds and a range of weavers'/clothiers' issues. This pattern may be set against that observed in larger, urban assemblages from county towns in areas important in the 16th/17th centuries for textile production, e.g., Salisbury (Egan 2001) and Gloucester (Kingsholm site finds, unpublished). In both these assemblages, there is an emphasis on the immediate county's seals, with a few from the surrounding ones that also produced cloths, and also some from the capital and more remote counties that could furnish textiles of a different character from locally woven ones (e.g. Norfolk worsteds again). Supplementing these, along with a range of manufacturers' and also London Dyers' Company issues, are foreign seals from important Continental centres of production for linens and half linens (e.g. Augsburg in south Germany), which English looms could not at that time supply in sufficient quantity at a cheap price. Putting all this together, the present assemblage begins to point to a profile of textile consumption for Saffron Walden that falls into an expected pattern, but with the notable absence (not completely explained by the limited size of the sample) of Essex seals – which are both common and widespread (perhaps the third most frequently encountered county among cloth-seal finds overall – see e.g. Egan 1995, 25-33 nos. 14-39). A further point of

similarity with these two large, provincial urban assemblages is an emphasis among the earliest official seals on the special letter-F issues for sub-standard cloths. In the Saffron Walden group these could be the elusive local issues – both of them have been tampered with in a way not readily paralleled, that might be indicative of attempts to remove them with minimal damage to the fabric. (It is impossible to know for certain whether this is a manifestation of the illicit practice of substituting ordinary alnage seals for discarded original ones that indicated that the cloths were seconds).

Copper alloy jettons

These were used along with a checked cloth or table for reckoning accounts. Jettons are probably the cinderellas of many detecting assemblages – the majority are initially very similar ('stock Nuremberg designs') – and of the 40 examined, almost three-quarters are of this basic type. Their sheer numbers in many places across the country attest an extraordinary marketing achievement on the part of the producers in the post-medieval period in Nuremberg in southern Germany. The two late medieval issues are arguably the best produced of the Saffron Walden group, but the nadir comes soon afterwards with the nonsense-legend Nuremberg ones. The present assemblage is notable for the range of definable Nuremberg producers represented – ten individuals, spanning the mid 16th to the (?) early 18th centuries. Three of the items have no traced parallel (these have been illustrated, Fig. 2.19-21) – not such an unusual phenomenon in a group of this size, despite the huge variety already in print.

Lead tokens

The use of these sometimes almost unbelievably crude objects has been the source of much speculation. Dean (1977) noted several possibilities, among which local circulation as small change in denominations the official coinage periodically failed to supply in adequate quantity is the single most attractive explanation. There were doubtless several ways in which these items actually were used, but none of the devices or initials etc. recognised has been satisfactorily tied to a particular purpose. (Mitchiner & Skinner 1984 give some which appear plausible for definable series that are not represented here, but the overall impression is that their discussions include much that is speculative).

The assemblage of 45 items comprises more than its share of rough issues, perhaps a pointer that the local population had come through regular familiarity to terms with what must surely have been incomprehensible designs to all but the producers, on a range of sizes of more or less round flans. It is strange that the two largest survive only as cut

segments. One has a possible date – (16) or (17)31, and another may be late medieval, but none of this is certain. Overall, 15th to 18th century seems an appropriate span for the assemblage. Another has what can be taken for a Catherine wheel but any specific significance is lost (with a little imagination the same device can be read into a couple of the other designs, too). Three items are not necessarily tokens – a couple of these could perhaps be rough weights. A similar series could probably be recovered, with sustained effort, in many parts of the country, but this assemblage is of local significance as Saffron Walden's manifestation of a widely familiar if poorly understood phenomenon current from the end of the Middle Ages into the 18th century.

Trade tokens

T. Carter

Five trade tokens were recovered, two for a William Wildman of Saffron Walden, dating to 1656 and 1667, one for Francis Hutchinson of Newport Pond, one for James Story of Ipswich, and one unidentifiable issue. A William Wildman, fishmonger, is recorded as having been active in Saffron Walden in 1669 (ERO D/B 2/2/94), when he sold a shop and penthouses in or near Butcher's Row to a Thomas Patmer. He was Master of the Almshouse in 1670 (Judson 1987). Francis Hutchinson of Newport Pond inherited a house in Saffron Walden and a second house in Newport in 1641 (Judson 1987), and is recorded as a grocer and a Trustee of the Free Grammar School in 1662 (ERO D/P 15/25/51).

Other metal finds

T. Carter

Other finds include three coin weights, one of Charles I for a double crown, one for James I for a half unite 11/- and the third for a ryal. There was also a bullion weight with St. George's Cross representing the Commonwealth. Coins were also recovered covering the period from Elizabeth I to William III. There were in addition two hooked tags or clothing-hooks, 29 thimbles, many buckles and buttons dating to the 17th century, 90 leather studs and 290 lead pistol balls. The presence of the pistol balls is puzzling, these measure less than .560 (too small for muskets), and are therefore unlikely to be associated with the Cromwellian occupation of the town. It is possible that they derive from a practice range for the local militia, or possibly from a marksman booth at the postulated fair.

Discussion

Maria Medlycott

The evidence from the finds as a group suggests the presence of a cloth fair site, dating from the 16th

century until the 17th century, although a documentary search for evidence of such an activity on this site has proved negative. The Guild of the Holy Trinity certainly collected rents from fairs between 1545-1601 (ERO T/A 401/2), but it is not certain whether these were from a cloth-fair or the horse fair that was held on the Common twice yearly since 1549 (Cromarty 1966). The area of the football pitch was known as Home Meadow and Home Pasture in 1841, whilst the Tainter, or Tenter, Fields which are associated with the cloth manufacturing process, were largely located to the south and west of the town. Fairycroft Road is sited in the south-eastern corner of the medieval town. The name may derive from the presence of a fair in the area, but excavation on the site of Fairycroft House revealed no evidence for such activity (Brooks 1991). The cloth industry, which was established in Saffron Walden by the 14th century (Cromarty 1967), and which had in conjunction with the growth of the saffron crocus, led to Saffron Walden's prosperity in the following centuries, went into abeyance in the post-medieval period. Instead the economy of Saffron Walden focused on its role as the main agricultural market town of the area, and a cloth fair, if that is what these finds represent, probably formed part of that role.

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Maidens' garlands. An Essex example of ancient church folklore

by Gereth M. Spriggs, James A. Spriggs and Sarah Spriggs

Introduction

In the years 1789 and 1790 John Byng, later Viscount Torrington, toured Derbyshire and made notes in his diary. Of Tideswell church he remarks: 'They here continue to hang up maiden garlands, which, however laudable as of tendency to virtue, will soon be laugh'd out of practice.' Pessimistically he continues: 'so will my grandchildren ... view the ruins of churches when they and religion altogether shall be o'erthrown'. He would be surprised to find that his gloomy prophecy has not come true, and that 'maiden garlands' continued in use for more than a century. There are twelve churches where they may still be seen; and even more remarkably the parish of Abbots Ann, in Hampshire, has kept up the observance continuously until quite recently (Spriggs 1983; Plate 1).

Funeral garlands were emblems for virgin martyrs in early Christian times, so there may be an unbroken tradition through the ages. The pathetic practice of young girls bearing a garland, or 'virgin's crown', before the bier of a virtuous maiden was widespread in England when so many died young. Wreaths of fresh flowers, leaves and herbs gradually gave way to an artificial 'garland' which could be preserved, and became a strange object, shaped rather like a lampshade, but covered with a number of decorations. Each parish had its own method of making them, but the following description from the *Antiquarian Repertory*, 1784, was in general followed. 'The lower rim, or circlet, was a broad hoop of wood whereunto was fixed at the sides thereof two other hoops, crossing each other at the top ... These hoops were wholly covered with artificial flowers, dyed horn and silk ... In the vacancy inside ... hung white paper cut in the form of gloves, whereon was written deceased's name, age etc., together with long slips of various coloured paper, or ribbons.'

Sometimes favourite hymns or verses of poetry were written on the gloves, or on paper 'kerchiefs'. White gloves symbolise purity. At a time when fresh flowers were used, the gloves were of kid, belonging to the deceased. In *Hamlet*, Act V Scene 1, the churlish priest utters bitter words at the burial of Ophelia:



Plate 1 Abbots Ann, Hampshire: funeral of Florence Jane Wisewell, 1953 (photograph by Jack Garnham).

.....her death was doubtful;...
She should in ground unsanctified have
lodged...
Yet here she is allowed her virgin crants,
Her maiden strewments...

Earlier, when Ophelia has been found drowned, the Queen describes the tragic event:

There with fantastic garlands did she come
Of crow-flowers, nettles, daisies, and long
purples...
There, on the pendent boughs her coronet
weeds
Clambering to hang, an envious sliver broke;

MAIDENS' GARLANDS. AN ESSEX EXAMPLE OF ANCIENT CHURCH FOLKLORE

When down her weedy trophies and herself
Fell in the weeping brook.

Was the crazed Ophelia gathering flowers and herbs
for her own virgin crants?

The word 'crant' is used in Minsterley, Shropshire, and Ashford-in-the-Water, Derbyshire, while at Matlock, also Derbyshire, they are called 'crantses' (German: Kranz, a wreath). A memorial at Walsham-le-Willows, Suffolk, is still called the 'Virgin's crant'. Only the round name-plate remains, suspended from a pillar; it is inscribed to Mary

Boyce, with a skull and a heart pierced by an arrow. On the reverse is '15 November 1685'. She died at the age of 20, it is said of a broken heart.

Yorkshire possesses the oldest known garland still preserved. It is kept with other antiquities in the priest's room of the church of St. Mary, Beverley. It is of particular interest as there is a full painted inscription on the base of the crown: 'Elizabeth Elinor Died 3rd August Aged 21 1680'. Her kid gloves hang from the top circlet of the frame. This seems a rather heavy object to honour a young

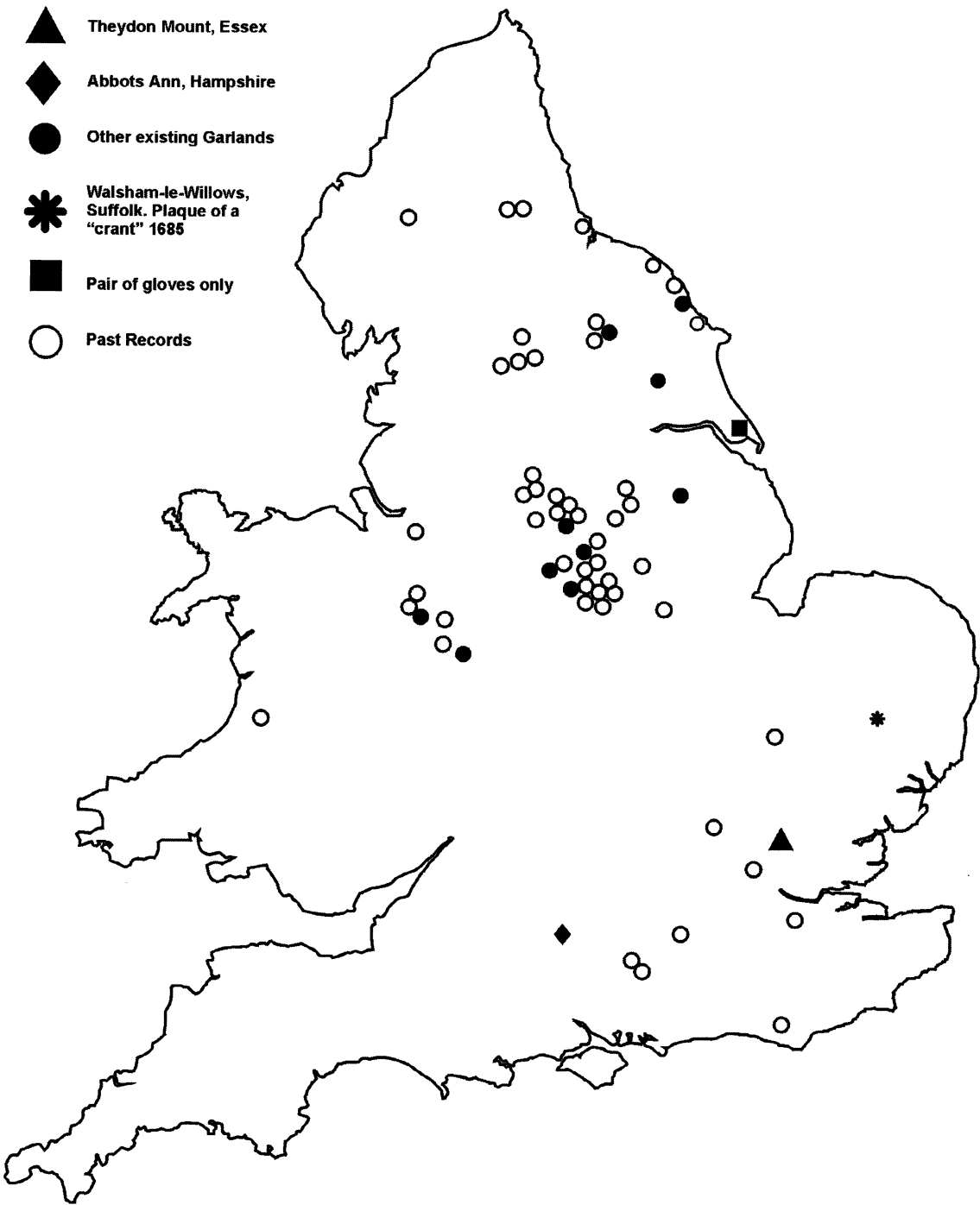


Fig. 1 Map of England indicating 64 churches where maidens' garlands are either recorded or survive.

Table 1. A list of the known surviving maidens' garlands in England (cf. Fig. 1).

COUNTY	PARISH	EXISTING GARLANDS
Yorkshire	Alne	1, in glass case
	Beverley, St Mary	1, 1680, in priest's room, conserved
	Fylingdales Old Church	5, in glass case, conserved
Lincolnshire	Springthorpe	1, in glass case, conserved
Derbyshire	Ashford-in-the-Water	5, earliest 1747, latest 1997, hanging
	Matlock, St. Giles	1 in glass case, 4 in boxes
	Trusley	1, in glass case
Staffordshire	Ilam	2, hanging
Shropshire	Astley Abbots	1, on wall
	Minsterley	1 in glass case, 6 hanging, 1734-1794, conserved
Hampshire	Abbotts Ann	49, earliest legible 1740, latest 1973, hanging
Essex	Theydon Mount	1, conserved
Suffolk	Walsham-le-Willows	1, wooden plaque formerly decorated with wreaths, named & dated 1685

maiden, but at the time it would have been covered with a mass of summer flowers.

The practice of hanging garlands in churches encountered the prejudices of Puritan reformers and the tidy-minded. Thus in 1662 Bishop Matthew Wren of Ely, on diocesan visitation, inquired: 'Are there any mean toys or gewgaws ... suffered to be fastened up in your church to anyone's pleasure? Or any Garlands to hang where they hinder the prospect or until they grow foul and dusty, withered and rotten?'

The church of St. Mary the Virgin, Abbotts Ann, in Hampshire, kept up the custom until 1973. This ceremony honoured an old lady, Lily Myra Annetts, with her virgin's crown (the name used there). The central glove bears her name and dates, with verses of hymns on the other four. In this church, there were always five gloves - usually only a pair elsewhere. The crowns hang on low beams round the church, and where they have decayed there are escutcheons, bearing name and date. Forty-nine are still legible, and unusually thirteen record boys. In fact, the oldest nameplate still legible is dated 1740, for John Morant.

The candidate for a crown must have been born, baptised and confirmed in the parish, and be of unblemished character. The method of construction was kept as an unwritten tradition in the same family over the centuries. Of great importance was the right unblemished 'virgin stick' of pliable hazel, to form the vital lower hoop, on which the frame and embellishments were added. The maker of the latest crown had 'seen five crowns raised.' The plain wand on which the crown is carried by two young girls is jealously preserved by the sexton (Plate 1). This old custom, once so common in the north of England, in general died out there many years ago. It is strange that it survived in one parish in the south. However, at Ashford-in-the-Water, Derbyshire, as

late as 1997, a garland or crant has been raised after many years. This was to honour Joy Price, 72, who was much loved in the parish (Bunting 2001).

Sometimes maidens' garlands represent haunting stories, some still remembered. Springthorpe church, Lincolnshire, was the scene of a tragedy in 1814: it is said that Mary Hill was ringing the bell, when the rope caught round her arm and she was carried upwards. She fell, and was instantly killed. A garland still remains as her memorial.

The garland at St. Michael's Church, Theydon Mount

Since the survey in *Folk Life* (Spriggs 1983), only one more old garland has come to our attention, that at St. Michael's church, Theydon Mount. It is the only one known in Essex. St. Michael's church dates from the late 16th century, allegedly having been rebuilt by Sir William Smyth of Hill Hall after the previous building was struck by lightning. An old photograph dated 1903 (Plate 2), which hangs in the tower, shows the church before the lath and plaster ceiling was removed. Two garlands are suspended from the ceiling. One disintegrated in a cloud of dust some years ago. The surviving one (that on the left) has been sent for research and conservation at the laboratories of York Archaeological Trust, and is the subject of this study.

Description of the garland

On removal from its position in St Michael's, where it had hung for many decades high up amongst the beams, the garland was found to be thickly coated with dust and cobwebs, and was extremely fragile (Plate 3). The materials had weakened and degraded over time and in particular the wooden frame had suffered much damage from woodworm

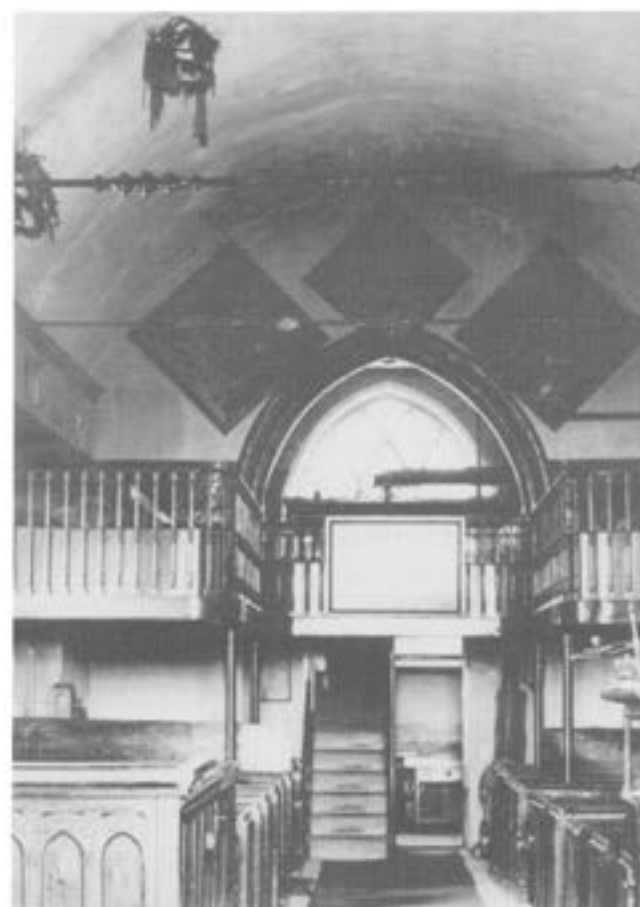


Plate 2 Photograph of the interior of St Michael's church, Theydon Mount, in 1903 before resoration, showing two garlands hanging from the ceiling.

attack. The upper part of the frame had disintegrated and a large part of the crown was lost. There had been at least one repair in the past when wires were used to hold together the disintegrating frame. It appears that several fragments of lath had been moved from their original positions to fill in missing areas of the crown.

In keeping with other known maidens' garlands, this one is dome-shaped, built around a frame of wooden laths, two circlets in the horizontal plane linked by vertical laths, which rise from four points on the lower circlet and curve over at the top. The overall height would have been c.500mm and the diameter of the decorated base ring is c.460mm. Bunches of the shrub box, complete with leaves, feature largely in the embellishment of the frame, tied onto the outer face with string. Also surviving are the fragmentary remains of paper decorations representing ribbons, bows and tassels.

The frame

The wood used for the frame laths has been identified as ash, *Fraxinus excelsior* L.¹ This is a native hardwood with a long history of use for structural purposes and for smaller artefacts. Ash



Plate 3 The garland, before conservation.

coppices will produce long straight withies of the type which, once split, provides the thin laths represented here.

The base ring is relatively intact, with its outer covering of box sprigs and attachments of paper decorations. It comprises two lengths of lath 1020mm and 300mm, joined with overlaps of c.90mm and bent into a circle with an inner diameter of 360mm. The laths are 40mm wide with a thickness of 2mm. The two sections are joined with small iron nails, reinforced with string wrapping diagonally around the overlapping sections (Fig. 2).

The four vertical laths are all fragmented with major losses at the apex, and only one is complete at the lower end. The width of the fragments is c.35mm and the thickness 2mm. They were fixed to the inside surface of the lower ring with two small iron nails and string binding. The upper horizontal ring is disrupted by damage to the top of the garland, but fragments still attached to three of the vertical laths show that it was positioned approximately 300mm above the base ring and passed inside the verticals. The upper ring laths are only c.23mm wide, distinctly narrower than the



Fig. 2 Sketch to show the construction of the Theydon Mount maiden's garland.

base ring. All remaining fragments of the vertical and upper ring laths have bunches of box sprigs tied to the outer surface. Two sections of the upper ring have the remains of paper decorations.

Previous undated repairs have resulted in the top of the garland being rebuilt around a thick wire ring to which are fixed several displaced fragments of lath and bunches of box. Thinner wires descend from the wire ring to link up and support fragments of the vertical laths. It is unlikely that any of the wires formed part of the original construction.

The string

String is an important original component of the garland, used to reinforce joins in the wooden elements of the frame, to bundle together the box sprigs and tie them onto the frame, and to shape the paper decorations and attach them to the frame. The string is visibly intact but it has lost cohesive strength and is discoloured due to accumulations of dust and dirt. It appears to be hand rather than machine produced, having irregular thickness along the length. Samples were taken from several sites on the garland for fibre analysis.² Two distinct types of string have been identified:

1. Type A is a light golden-brown coloured string used throughout the garland tying in the bunches of box and reinforcing the frame. It is

2-ply, S-twist, with a diameter generally between 1 and 1.5mm but increasing to 2mm. The main constituent fibre has been identified as hemp (*Cannabis sativa* L.).

2. Type B is whiter and generally finer, and is mostly found in association with the paper decorations, shaping the bows, joining pieces of paper and stitching paper to the frame. This is also 2-ply with an S-twist and has a diameter varying between <1 and 1.5mm. The fibre is flax (*Linum usitatissimum* L.).

Applied bunches of box

Small, branching sprigs of box (*Buxus sempervirens* L.)³ are tied in bunches to the outside of the frame laths. Each bunch comprises three or four stems of length 90-140mm. The sprigs are in full leaf (there has been some shedding of leaves during the life of the garland but much remains) and there are a few buds and flowers amongst the leaves. The sprigs are bound to the frame with hemp string (type A, above) used in long lengths which wrap diagonally over the stems and around the laths. The bunches are carefully placed to lie in a clockwise direction (stem to leaf tip) on the horizontal rings, pointing upwards on the vertical elements of the frame.

In Europe the evergreen shrub box has traditionally been associated with religious rites, especially burial practices, since at least the Roman period (Allison 1947). To cite two examples, box with the herb hyssop was found in a burial from a medieval priory (13th-15th century) in Kingston upon Hull (Hall *et al.* 2000), and box together with bay laurel and rosemary is recorded from a 15th-century burial in Naples, Italy (Fornaciari 1984). More recent evidence of the use of box at funerals is given by Vickery (1984) describing a funerary practice from the north of England: a tray of box twigs was provided outside the door of the house of the deceased, and each mourner would take a piece as he went out and later drop it into the grave.

As well as the obvious symbolism of an evergreen (eternal life, etc.), box is associated with the Virgin Mary, being recorded in a post-dissolution context at Charlton-on-Otmoor in Oxfordshire. Here a pagan spring celebration came to be replaced, it is claimed, by a Christian festival held in honour of the Virgin Mary. Her place on the rood screen is now taken by a wooden cross covered with box branches (Crusha 1977).

Paper decorations

Paper decorations are found only on horizontal elements of the frame: the base and upper rings. The papers are in an extremely fragile state, very weak and fragmented with major losses, but the surviving fragments point to the ornate design and arrangement of these decorations. Samples of the papers were submitted for fibre identification and



Plate 4 Paper bow attached to base ring.

all were confirmed as mixed rag papers, none containing any wood-pulp.²

On the base ring the remains of paper bows and bunches of ribbons are found just to the left of three of the vertical laths (the base of the fourth vertical is badly damaged and any decoration that might have been placed here is missing). The bows and ribbons are fashioned from strips of thin, white paper, 36-37mm wide (Fig. 2). The bows are gathered in the middle with a white string (flax, type B), the loops extending c.100mm each side of the centre (Plate 4). They are tied to the base ring with type B string (hemp). The bunches of ribbons comprise several strips of paper stitched with white string to the ends of a narrower strip of paper (28-33mm wide) which is looped over the base ring behind the bow. The ribbon ends are now incomplete but the 1903 photograph in the church (Plate 2) shows them long and trailing.

Four white paper tassels hang from the base ring at midpoints between the vertical laths. The tassels are bunches of very narrow strips of paper (c.5mm) tied near the top and suspended from the frame with string (hemp, type A). The maximum length of the tassels now is 95mm, the top of the tassel hanging approximately 100mm below the lower edge of the base ring (Plate 5). The suspension string wraps outside the sprigs of box on the base



Plate 5 Paper tassel suspended from base ring.

ring, showing the order of assembly of the leaf and paper decorations.

The remains of broader rectangles of white paper, c.100mm wide, are held by stitching to the inside face of the base ring, positioned behind the tassels. These papers are folded along the top edge, and aligned with the top of the base ring, to give a double thickness. They are stitched with white string (flax, type B). The lower edges are damaged and incomplete thus it is not known how far they extended downwards. Similar papers are stitched to two fragments of the upper ring. The decorative form or purpose of these papers is unclear but, being flat and plaque-like, is suggestive of bearing written inscriptions or verses. Disappointingly, examination under UV light showed no evidence of writing.

Printed papers

Two fragments of patterned papers have also been found, opposing each other on the base ring, one printed in black on white ground (Plate 6), the other in red on white.

The black on white example is the better preserved. Flattened out it has the shape of a long rectangle 28mm wide by 180mm long, and it actually comprises two lengths of differently patterned papers joined together by stitching. The patterns are similar, and are small stylised floral designs resembling embroidery motifs. This strip

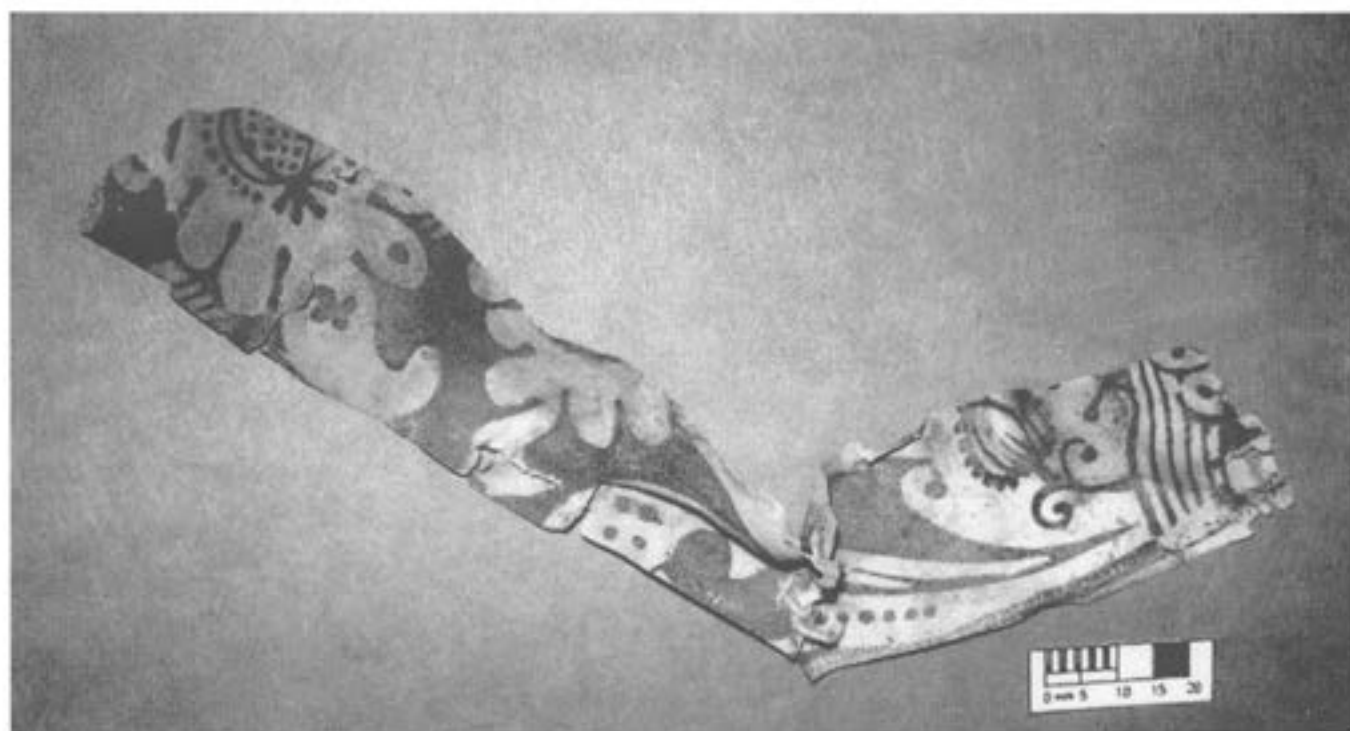


Plate 6 Fragment of printed paper found attached to base ring.

was found folded over the top edge of the base ring just to the right of one of the vertical laths, its ends embedded amongst the sprigs of box.

Only a very small, frail fragment of the red-printed paper survives, a segment of a design employing arcing parallel lines. A length of white string (type B) stitches this fragment to the frame, the stitch also passing through a leaf underlying the paper.

Discussion

None of the elements of which the garland is composed offers direct dating evidence, though a number of features certainly sets this garland apart from others studied in any detail. To begin with, the wood of the frame is ash, whereas others are thought to be made of either willow or hazel (Spriggs 1983, 15). There may be little significance in this, as all three tree species are commonly coppiced, their selection most likely being made on local availability.

The strings are hand-made from flax and hemp and most probably of local origin. This is in contrast to the possible use of cheap, machine wound string of Indian jute, introduced in the early years of the 19th century.

The use of box sprigs is unique amongst surviving garlands and may represent either a local variation in garland construction, or be indicative of an early date. Early literary references to garlands or crants have them decorated with wild flowers (Spriggs 1983, 13), and there are suggestions of evergreens being used at times of year when wild flowers are

unavailable. The survival of leaf buds and flowers on the box sprigs suggest that the garland was made in March or April, when the range of wild flowers available would be very limited. The use of evergreens might also be indicative of a change in practice, from a transient function at the grave-side to more permanent memorial within the church.

The manner of attachment of the patterned paper fragments is confirmation that they were part of the original decorations although their specific function in the overall design is uncertain. They do, however, offer the best evidence there is for the age of the garland. With the proviso that the very fragmentary condition of the pieces makes comparison with known examples of early printed papers difficult, there is every likelihood that they date from the third or fourth quarter of the 17th century, when printing and stencilling in colours other than black was introduced.⁴ By the end of the century polychrome papers (introduced by paper-stainers c.1670) had become so popular that monochrome designs are rarely encountered thereafter. Papers patterned with similar small designs are now most often found surviving as box or drawer linings (Jenkinson 1925). A case can therefore be argued for a date for the garland roughly contemporary with that of the decorated papers.

The only other surviving maidens' garlands that have been examined to a similar degree are a group of seven from Holy Trinity church in Minsterley, Shropshire. These garlands bear numerous paper decorations taking the form of rosettes, cockades and crosses (no plant material is incorporated).

Most significantly one of the paper rosettes was opened out during conservation treatment revealing a paper with a block printed design in black on green ground, which has been matched to a published pattern used on a deed box lining dated to c.1700 (Storey 2001; Jenkinson 1925). This ties in well with further dating evidence for the Minsterley garlands: on the ends of the rods from which the garlands were suspended are escutcheons, and four of these bear dates spanning the period 1734-1751.

A case can therefore be argued for a date for the Theydon Mount garland roughly contemporary with that of the decorated papers attached to it. There is nothing else about the garland that can be dated, apart perhaps from the fact that it is the only one in existence that incorporates plant materials, the sprigs of box, which make it closer in style to garlands referred to in early literary sources. None of the other materials used – the strings and plain papers, and even the sprigs of box – would rule out a late 17th- or early 18th-century date.

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Notes

1. Information from S.J. Allen, York Archaeological Trust.
2. Information from Dr. D. Catling, School of Biological and Biomedical Sciences, University of Durham.
3. Information from A. Hall, Environmental Archaeology Unit, York.
4. Information from A. Wells-Cole, Temple Newsam House, Leeds.

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An 18th-century assemblage from a well in the garden of 4 Falcon Square, Castle Hedingham

by Helen Walker, with contributions by David Andrews, Hilary Major, Phil McMichael and Pat Ryan

A large group of finds comprising mainly pottery, bone, and glass, datable to the mid 18th century were found in a well in the back garden of this property, formerly the Falcon Inn, situated in the historic centre of the village (NGR TL785 356). Shoe leather and clay pipe were also present. These finds may have come from the Falcon Inn, although in the mid 18th-century the garden was part of another property.

The pottery

Helen Walker

Introduction

A total of 990 sherds weighing 54kg were recovered. It is estimated that a minimum of around 160 vessels are represented. At first it was assumed that all the pottery had been dumped in one episode, perhaps after house clearance. However, when the vessels were reconstructed it became apparent that while many complete or largely complete vessels are present, some vessels are represented only by fragments. A possible explanation is that the pottery had first been dumped elsewhere before being deposited in the well, some of the fragments becoming separated during this process. In addition, although nearly all the pottery could have been current in the mid 18th century, with the latest pottery dating from c.1750 to c.1760, there are small amounts of pottery that either pre-date or post-date the main group. This extraneous pottery could have become mixed in with the main group either before or after its final deposition in the well.

The pottery has been recorded using Cunningham's typology for post-Roman pottery in Essex (Cunningham 1985a, 1-16; her fabric numbers are quoted in this report). The pottery has been written up in order of vessel type, possible function, and type of ware. The catalogue starts with the fine wares, i.e. those wares likely to have been used for display, formal dining, entertaining, and beverage drinking, and concludes with kitchen wares used for cooking and for storage etc. However, there is something of a gradation between the two. The catalogue therefore shows the range of pottery in use during the mid-18th century. The

capacities of some of the more complete vessels have been measured or estimated to the nearest pint. Three methods have been used to measure capacity. Virtually complete vessels have been measured simply by filling them with water, and measuring the volume of water in a measuring jug. Vessels with fragments missing have had the gaps taped over and then filled with rice to find the volume. Finally vessels that are complete enough for the profile to be drawn have had their capacities measured by drawing a cylinder on to the profile, and then calculating the volume of the cylinder. As would be expected the latter method only worked well with vessels that are roughly cylindrical in shape, or have a very symmetrical profile, such as the jugs with rounded bodies.

The percentages quoted are calculated from sherd count, rather than weight of pottery, as this gives a better comparison between fine wares and the heavier kitchen wares. The types of ware are summarised in Table 1.

Wares that predate the main group

This pottery is residual, i.e. pottery that has been removed from its original context and redeposited in a much later context. This happens when a site is redeveloped and earlier archaeological features are disturbed. As well as being a lot older than the rest of the pottery in the deposit, residual sherds are usually smaller and more abraded.

Medieval coarse ware Fabric 20 (<1/2% of total) One sherd of this grey, sand-tempered coarse ware dating to the 12th to 14th centuries was found.

Sandy orange ware Fabric 21 (1% of total) This ware comprises any locally made quartz sand-tempered, oxidised ware with a date range of 13th to 16th centuries. Most sherds found here appear to be of late medieval type and are unglazed or have an internal glaze. One jug rim is present.

Raeren stoneware Fabric 45C (<1/2% of total) This is a type of German stoneware. One sherd was recovered, which appears to be from the body of a squat bulbous drinking jug, a type commonly imported during the late 15th to mid 16th centuries (Hurst *et al.* 1986, 64).

Wares current with the main group

This includes vessels that may have been old when discarded, rather than residual pottery. The fabrics are described in approximate chronological order.

Frechen stoneware Fabric 45D (1/2% of total) A brown salt-glazed stoneware made in Germany and imported from the mid 16th century, with trade increasing during the 17th century. It was eventually superseded at the end of the 17th century when stoneware production began in England (Hurst *et al.* 1986, 214 – 221; Gaimster 1997a, 208-23). Vessel forms present within the well comprise part of a storage jar.

Post-medieval red earthenware Fabric 40 (52% of total) This ware was manufactured throughout the post-medieval period. There were many production centres in Essex, but the closest to Castle Hedingham, known to be in operation during the 18th century, was at Gestingthorpe, about 4km to the north-east (Brears 1971, 180-1). However, it is very difficult to determine the source of post-medieval red earthenware merely by looking at the fabric, as one can with medieval pottery. This is because by the post-medieval period the clays were more highly processed and refined, giving a more uniform fabric. In spite of this, it was noted that there are some variations in fabric: a buff sandy variant is present amongst the jugs, and some vessels have pellets of white clay within the fabric. Many of the vessels have a fine red fabric with a deep honey-coloured glaze; this is very similar to an example from Gestingthorpe in the author's reference collection, and indicates that some of the pottery may indeed have been made at Gestingthorpe. By the 18th century mostly utilitarian vessels for use in the kitchen and dairy were produced in post-medieval red earthenware. Vessel-forms from the well include chamber pots/one-handled jars, round-bodied jugs, bowls, dishes and storage jars. It was noted the glazes of some of these vessels show brown mottles or streaks, which can be sparse or quite dense; this may be due to flecks of iron in the glaze.

Black-glazed ware Fabric 40bl (1/2% of total) This is a type of post-medieval red earthenware covered with a glossy black iron-reduced glaze. Known production centres in the county were at Harlow and Stock, to the south of Chelmsford (Newton *et al.* 1960; Cunningham 1985c, 86). Black wares are principally a 17th-century type but were also current into the 18th century. Drinking vessels are the main form produced in this ware and were probably an attempt to copy pewter vessels. This is a very minor component of the assemblage and vessel forms comprise the base of a mug or tyg and the base of a possible jar.

Metropolitan slipware Fabric 40A (10% of total) A type of post-medieval red earthenware decorated

with trailed white pipe clay designs and covered in a clear lead glaze giving a bright honey-coloured or ginger-brown surface and yellow slip decoration. It is thought to have its origins in Low Countries slipwares. Harlow was the most important manufacturing centre (Nenk 1999, 240-2), and there were also related manufacturing centres at Stock, south of Chelmsford (Cunningham 1985c, 83-8), and Loughton (Ashdown 1970, 96-7). Its main period of production were the middle years of the 17th century, when it was a very important industry, supplying the London market and beyond, reaching as far as the American colonies. These decorated wares were used for the table and for display.

Finds here comprise mainly flanged-rim dishes mostly with a fine red fabric, very similar in shape to the 17th century vessels made at Harlow, but with much simpler and more perfunctory slip decoration, consisting mainly of wavy lines and scrolls. Although 17th-century Harlow dishes contained these elements, the designs were more complex, usually based on four-point symmetry. Only one dish (No. 40) has a more complex pattern and is the most similar to 17th-century examples from Harlow. Other Metropolitan slipware forms found in the well comprise bowls and jars. There are some decorative motifs that are unlike those found at Harlow, including a jar with slip polka dots (No. 33) and a dish fragment with sunburst decoration (No. 49). Archaeological evidence from other excavations shows Metropolitan slipware was made for local consumption long after it ceased to be widely traded, and continued into the earlier 18th century (Cunningham 1985b, 64; Ponsford 1991, 130). The industry finally collapsed due to competition from Staffordshire-slipwares and the new more decorative products such as tin-glazed earthenware. Given the similarities with the 17th-century Harlow Metropolitan slipware, it is perhaps most likely that these vessels represent the final expression of Harlow Metropolitan slipware manufacture, in the early 18th century, made on the cheap for local markets. It is also possible that in the later period, Metropolitan slipware was made elsewhere in Essex, (other than at Harlow, Stock and Loughton), but there is as yet no evidence for this.

Westerwald stoneware Fabric 45F(1% of total) A light grey, salt-glazed German stoneware, often highly decorated and coloured with cobalt-blue and sometimes manganese-purple. This was imported in large quantities from the mid 17th centuries to later 18th century (Gaimster 1997a, 251-71, and Hurst *et al.* 1986, 221-225). Forms from the well comprise fragments from a jug, a tavern mug, a chamber pot and a mineral water bottle.

Chinese porcelain Fabric 48A(2% of total) This was imported in quantity from the late 17th until the

end of the 18th century. Vessels from the well comprise plates and tea wares including saucers and a footring bowl.

English tin-glazed earthenware Fabric 46A (61/4% of total) This ware was originally developed in the Middle East in an attempt to copy Chinese porcelain. The technology slowly spread throughout Europe, and large-scale production began in England in the 17th century. Tin is added to the glaze creating an opaque surface, which can then be painted. English tin-glazed earthenware has a buff earthenware fabric with a thickly applied off-white or pale blue tin glaze, which has a tendency to chip. Production ended at the close of the 18th century, when tin-glazed earthenware was finally replaced by more sophisticated and durable fine wares. Vessels from the well comprise plates, bowls, dispensing pots and a vase. Fragments of tiles were also found. All belong to the 18th century apart from the vase, which is a 17th-century type. Many towns and cities had their own tin-glazed earthenware factories: the nearest to Castle Hedingham in the 18th century were in London, at Southwark and Lambeth.

Staffordshire-type slipware Fabric 50 (81/4% of total) This is described by Celoria and Kelly (1973, 6) and Barker (1993, 14-18). Both flatwares and hollow wares were made in a typically buff coloured earthenware fabric sometimes mixed with streaks of red clay. Vessels are decorated with brown slip, used in a variety of ways, although trailed slip is perhaps commonest. A lead glaze gives a bright mustard-yellow colour to the buff fabric. It was first produced in the mid 17th century but was not widely traded until the beginning of the 18th century, reaching a peak of popularity between about 1700 to 1720, with flat wares lasting well into the second half of the 18th century (Gaimster 1997b, 133; Barker 1993, 14).

Staffordshire-type mottled-glazed ware Fabric 50A (<1/2% of total) This has a fine buff earthenware fabric covered with streaked mottled brown lead glaze. Archaeological evidence shows that this ware was manufactured between 1700 to 1720, but it may have been current throughout the 18th century (Banks *et al.* 1999). Vessel forms from the well comprise part of a tavern mug.

English stoneware Fabric 45M (21/2% of total) English brown salt-glazed stoneware was first manufactured in the late 17th century in Fulham and the technique subsequently spread throughout the country (Hildyard 1985, 11). Vessels found in the well comprise the remains of tavern mugs and jugs.

Nottingham stoneware Fabric 45G (1% of total) This is distinguishable from other English stonewares by its lustrous brown glaze, thin-walled vessels, and use of lathe turning. It was manufactured

throughout the 18th century (Noël Hume 1969, 36). Vessels found in the well comprise the base of a tavern mug.

White salt-glazed stoneware Fabric 47(111/4% of total) White salt-glazed stoneware was manufactured in Staffordshire and other centres in the north of England chiefly between the 1720s and 1770s (Draper 1984, 36-9 and Noël Hume 1969, 14-19). It is off-white in colour with a pitted, orange-peel surface produced by the salt glaze. It had the advantage of being very durable, although some of the products, especially the plates, were plain, drab and rather austere, and were not as attractive as the exuberantly painted tin-glazed earthenwares. This was remedied to some extent by the introduction of moulded decoration during the 1740s. Scratch-blue, where incised decoration was infilled with blue, was also employed from the mid 18th century and was popular during the third quarter of the 18th century. This decoration is similar to, but much simpler than, the decoration used on contemporary Westerwald stoneware. In contrast to the plates, many of the hollow wares are quite delicate and are often lathe-turned. White salt-glazed stoneware is by far the most common fine ware from the well, where forms comprise plates, jugs, a footring bowl, tea bowls, saucers, mugs, a small bowl and a jar rim. Many of the examples found here are stained or discoloured, although it is not possible to tell whether this happened during use or after deposition.

Wares that post-date the main group

English porcelain Fabric 48B (1/2% of total) Finds include two bone china cup rims. One is fluted and shows faded painted flowers, and was perhaps manufactured between 1780 and 1795 (Goss 2000, 12).

Modern stoneware (<1/2% of total) The handle from a modern lead-glazed cider jar and a fragment of cylindrical stoneware bottle were found, both dating from the 19th to early 20th centuries.

Yellow ware Fabric 48E (<1/2% of total) A thick-walled drab yellow glazed ware decorated with bands of slip, manufactured from the later 18th to 20th centuries. A bowl rim and a sherd showing a dendritic pattern known as Mocha, were found in the well. Mocha decoration is common during the mid to late 19th century.

Ironstone Fabric 48D (<1/2% of total) This is a robust chunky fabric first manufactured in 1805 and is still in production. Most sherds are from table wares showing transfer-printed decoration. The presence of flow-blue and purple transfer-printing indicates the pottery is Victorian or later.

Slipped kitchen earthenware Fabric 51B (<1/2% of total) This is a thick-walled red fabric usually with an internal white slip-coating and covered in an all

AN 18TH-CENTURY ASSEMBLAGE FROM A WELL IN A GARDEN, CASTLE HEDINGHAM

Table 1. Summary of the types of ware by percentage of the total (calculated from sherd count).

Ware type	% of total	Comprises
Post-medieval red earthenware	52.00%	-
Slipwares	18.25%	Metropolitan slipware; Staffordshire-type slipware
Stonewares	5.00%	Frechen stoneware; Westerwald stoneware; English stoneware; Nottingham stoneware
Dark-glazed earthenwares	1.00%	Black-glazed ware; Staffordshire-type mottled glazed ware
White-bodied fine wares	19.50%	Chinese porcelain; English tin-glazed earthenware; white salt-glazed stoneware
Other	4.25%	Wares that either pre-date or post-date the main group: medieval coarse ware; sandy orange ware; Raeren stoneware; modern stoneware; yellow ware; ironstone, slipped kitchen earthenware

over glossy plain lead glaze. It is thought to have been made in Yorkshire and elsewhere in the north of England during the 19th and early 20th centuries (Cotter 2000, 254-6). One beaded bowl rim was found in this ware.

The English porcelain is late 18th century, but the yellow ware and the ironstone date to the Victorian period or later. It is therefore possible that the well was later reopened, or that there was contamination either during or after excavation.

The catalogue

Plates (Fig. 1)

Plates became common in the 18th century (Archer 1997, 7-8), although shallow dishes were known in the previous century.

1.

English tin-glazed earthenware; buff fabric; crazed duck egg-blue tin glaze; simple blue-painted design showing curvilinear floral motif on inside of flange and remains of single floral/foilage motif in centre of plate Archer's plate shape J; could not be paralleled but a similar pattern in polychrome occurred on a plate made in Bristol dated c.1760 (Archer 1997, B.154 pl. 115).
2.

English tin-glazed earthenware; buff fabric; crazed duck egg-blue tin glaze; light blue and dark blue painted decoration consisting of Chinese style border and repeated concentric floral motif around centre of plate; Archer's plate shape H; could not be paralleled but a similar type of pattern in polychrome occurs on a plate made in Bristol dated c.1735-45 (Archer 1997, B119, pl. 98) and a footring bowl perhaps made in Bristol or Liverpool and dated 1725-35 shows very similar blue-painted flowers (Archer 1997, F.15). It also shows similarities with a plate manufactured at Lambeth inscribed with the date 1737 (Archer 1997, B121).
3.

English tin-glazed earthenware; buff fabric; crazed duck egg-blue tin glaze showing narrow

border around centre with alternating solid green and red-painted motif and remains of floral pattern painted in blue and yellow around flange; recessed base, Archer's shape M; closely paralleled by a plate manufactured in London (probably Lambeth or Southwark) with central basket of flowers motif and dated 1735-45 (Archer 1997, B.116).

4.

Chinese porcelain; blue-painted decoration showing floral border and ?landscape pattern in the centre and ?poorly painted bird or mythological creature in foreground; 'café au lait' rim; 18th century.
- Not
illust.

Fragments from two more Chinese porcelain. plates showing blue-painted floral decoration.
5.

Rim of small plate or dish: Chinese porcelain; showing blue-painted ?peonies.
6.

White salt-glazed stoneware; showing moulded dot, diaper and basket decoration; slightly yellowed; from mid 18th century.
7.

White salt-glazed stoneware; decoration as No. 6, but not as crisp, perhaps made from a worn mould.
8.

White salt-glazed stoneware; undecorated; footring base.
- Not
illust.

Two white salt-glazed stoneware plate rim fragments, one showing bead and reel moulding and the other seed or barley decoration (cf. Jennings 1981, pl. 1b and c).
9.

Staffordshire-type slipware; buff fabric but with reddish surface on underside; internal white slip-coating with simple brown slip-trailed lines; crazed yellow glaze; pie-crust rim; patches of fire-blackening around rim; dating from early 18th century.
10.

Staffordshire-type slipware; similar to No. 9; fire-blackened around the rim; plates are an unusual form in this ware, press-moulded dishes are more common, see No. 38.

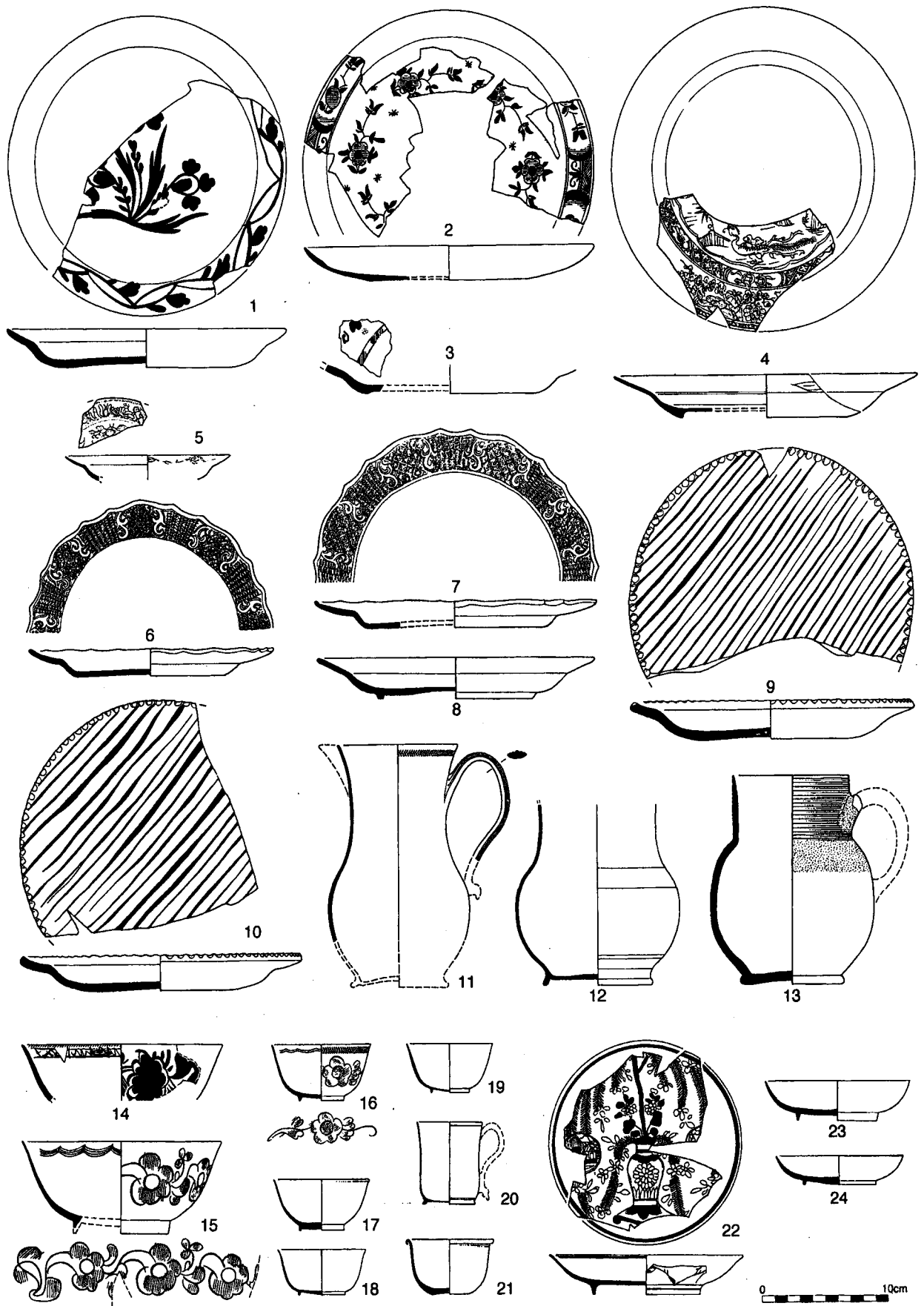


Fig. 1 Plates Nos. 1-10; jugs Nos. 11-13; tea wares etc Nos. 14-24.

Jugs (Fig. 1)

11. White salt-glazed stoneware; scratch-blue chevron decoration around rim, but none on body, although this may be because the front of the jug (i.e. the portion opposite the handle) is missing. Similar jugs were found at Norwich where they are described as milk jugs and dated c.1750 (Jennings 1981, fig. 102, 1628-30). A similar jug with scratch-blue decoration from Staffordshire is dated c.1750-60 (Lockett 1982, pl.15. 15).
12. Body of bulbous jug: white salt-glazed stoneware; lathe-turned base; no decoration.
- Not illust. Sherds from white salt-glazed stoneware jugs showing floral scratch-blue decoration.
13. Rounded jug: English stoneware; ribbed neck; probably made in London; very similar to an inscribed jug dated 1724 (Hildyard 1985, no. 80), although this type of jug was made from the late 17th century.
- Not illust. Base from second English stoneware rounded jug.
- Not illust. Rim of rounded jug: Westerwald stoneware: ribbed neck; handle scar; patch of manganese-purple on neck; incised decoration filled in cobalt-blue on body (cf. Gaimster 1997a, pl. 121 dated c.1690).

Tea wares etc. (Fig. 1)

Vessels associated with drinking tea are a common find in this assemblage. Tea was a very widely consumed beverage and by the end of the 18th century was drunk by all social classes in spite of the expense (Archer 1997, 346-7). Tea drinking was a social pastime particularly favoured by women, who liked to drink tea and converse, as was the fashion of polite society in 18th century England (Vickery 2001, 4-5, 12-14). Chocolate and coffee were also drunk but were not as popular as tea, indeed coffee was thought to be harmful (Vickery 2001, 12-13). Reflecting this, only one coffee (or chocolate) mug was recovered from the well (No. 20). Fig. 2 is drawn



Fig. 2 Drawn from a painting by Richard Collins (d. 1732) entitled 'English Family at Tea'.

from a painting by Richard Collins (ob.1732) entitled 'English Family at Tea', and shows how the tea bowl was held between thumb and finger. Another account describes the tea being poured into the tea bowl, covered with the saucer, and when the tea was ready, poured into the saucer to drink (Goss 2000, 4-5).

14. Rim of hemispherical footring bowl: English tin-glazed earthenware; buff fabric; thick duck egg blue tin glaze; Chinese style blue-painted floral pattern with very poorly executed border pattern around inside; 'café au lait' rim. Comparable bowls with floral decoration and a Chinese-style internal border were made at Lambeth and Liverpool, dated c.1765-75 and 1766 respectively, but are of much better quality (Archer 1997, F6 and F41). A slightly earlier bowl dated c.1710-30, showing much simpler decoration, also has similarities with this bowl (Archer 1997, F6). See No. 15 for discussion of function.
15. Hemispherical footring bowl: white salt-glazed stoneware; scratch-blue decoration very similar to that on tea bowl No. 16 but without the blue chevron. Bowls of this size had several uses: they were used as drinking bowls, or were filled with water and used to cool wine glasses at the dinner table (Archer 1997, figs 39-40). They were also used as slops bowls for tea and formed part of the 18th-century tea service (Archer 1997, 347). Given the resemblance to tea bowl No. 16, the latter would seem its most likely purpose.
16. Tea bowl: white salt-glazed stoneware; scratch-blue decoration consisting of floral motif and chevron below rim; similar to an example found in the American colonies dated 1755-75 (Noël Hume 1969, fig. 16).
17. Tea bowl: white salt-glazed stoneware.
18. Tea bowl: white salt-glazed stoneware; patch of brown-staining.
19. Tea bowl: white salt-glazed stoneware.
20. Small mug: white salt-glazed stoneware; discoloured; lathe-turned base; estimated capacity one sixth of a pint; similar shape to an example found in the American colonies, dated to the mid-18th century (Noël Hume 1969, fig. 13 centre). These more straight-sided forms with handles were intended for drinking coffee or chocolate (Archer 1997, 348-9).
21. Small bowl with rolled over rim: white salt-glazed stoneware; similar to an example found at Norwich dated to c.1745+ (Jennings 1981, 102. 1617). It is similar in size, but a different shape to the tea bowls. It may have served as a sugar bowl, as similarly shaped but somewhat larger sugar bowls are known in tin-glazed earthenware (Archer 1997, H.14-15).
22. Large saucer: Chinese porcelain; showing poor quality blue painting of a willow tree in a pot, over-painted in red and gold; 'café au lait' rim; comparable to saucers found in Norwich (cf. Jennings 1981, fig. 99. 1532, 1534, 1536) dating between 1740 and 1760.

- Not illust. Two rim sherds from Chinese porcelain saucers, one showing rather minimal blue-painted decoration.
- Not illust. Fragment of white salt-glazed stoneware saucer rim showing scratch-blue decoration on the inside, similar to that on bowls Nos 15 and 16.
23. Saucer: white salt-glazed stoneware; some staining around rim.
24. Saucer: white salt-glazed stoneware; with four evenly spaced indentations on the inner surface which could be stacking scars.
- Not illust. Footring bases from at least two more white salt glazed stoneware saucers.

Possets and necked cups (Fig. 3)

25. Posset pot: Staffordshire-type slipware; buff fabric; decorated with chocolate-coloured slip under an all over yellow, somewhat crazed glaze; very chipped rim; handle scars show there were two opposing strap handles; estimated capacity 3 pints; neat slip trailed writing around the neck shows the letters '...MAS : SAN...', the vertical stroke of another letter after the N is also visible. This is most likely to be a name; the first name could be THOMAS, with SANDERS or SANDERSON possibilities for the surname. The name Thomas San occurs on a Staffordshire slipware dish in Dresden Museum, dated c.1670 (Dean 1997, 370). There is also a dish inscribed 'Thomas Sans 1650' published by Hodgkin and Hodgkin (1973, 1650, no.26) and catalogued there as the maker of the vessel. However, neither name is consistent with a vertical stroke after the 'N'.

Posset pots were used to contain a posset, a rich drink based on wine or beer, with spices, cream and eggs, often drunk during celebrations or at social gatherings. The two opposing handles would have enabled the drinker to lift the posset to their mouth, perhaps then passing the posset on to the next drinker. Posset pots were sometimes given as presents, usually to mark an event such as the birth or a marriage (Dean 1997, 38-41). The name could be the recipient of the pot, in which case the vessel was made to order, or could be the name of the potter who made the pot. Staffordshire slipware posset pots were first made during the 1670s (Dean 1997, 36), but the relatively simple decoration on this vessel suggests an 18th century date is most likely. (This would be long after Thomas San(s) was active.)

26. Necked cup: Staffordshire-type slipware; similar in appearance to posset pot No. 25, which suggests the two vessels may have been associated; brown slip pellets very unevenly positioned around the neck; incomplete and would have had a single handle; very similar to a vessel found at Norwich (Jennings 1981, fig. 106. 717); estimated capacity when filled to the base of the neck is $\frac{3}{4}$ pint. This type of cup is datable to the 1720s to 1740s (Banks *et al.* 1999).
- Not The remains of at least one other Staffordshire slipware flared cup similar to No. 26.
27. Necked cup: post-medieval red earthenware; fine orange fabric; all over crazed honey-coloured glaze; similar shape to the Staffordshire-type slipware bowls; estimated capacity when filled to the base of the neck is 1 pint.



Fig. 3 Possets and necked cups Nos. 25-27; mugs Nos. 28-31; small jars Nos. 32-34; vases No. 35; apothecaries wares Nos. 36-37.

Mugs (Fig. 3)

These are more or less cylindrical in form and were common in the 18th century. The salt-glazed stoneware cylindrical mugs are often referred to as tavern mugs, but they are also a common find in domestic contexts.

28. Part of mug: white salt-glazed stoneware; similar in shape but much larger than small mug No. 20.
Not illust. Recessed base ?from cylindrical mug; white salt glazed stoneware (cf. Jennings 1981, fig. 100. 1576)
- Not illust. Sherd of mottled-glazed ware showing incised bands, perhaps from a cylindrical mug, earlier 18th century (cf. Draper 1984, pl. 12).
- Not illust. Fragment from ?tavern mug: Westerwald stoneware; chequer ornament picked out in blue, 18th century (cf. Gaimster 1997a, pl. 126).
29. Tavern mug: English salt-glazed stoneware; obscured WR excise mark with crown and cipher of William III (1689-1702); brown wash; probably made in London; 1 pint capacity.
30. Tavern mug rim: English salt-glazed stoneware; inscribed '...lay', this could be the name of a pub or publican, although there is no existing pub in Castle Hedingham the name of which would fit these letters.
- Not illust. The rims of five other English stoneware cylindrical tavern mugs, all with a brown wash and obscured excise stamps. They have similar diameters to No.29, and are therefore most likely to be pint sized.
- Not illust. The base of a Nottingham stoneware tavern mug.
31. Base and sides of cylindrical vessel; perhaps a large mug; post-medieval red earthenware; red fabric with dark mottled brown glaze, similar to that of the post-medieval red earthenware rounded jugs (Nos. 65-70); very abraded just above basal angle and on underside of base.
- Not illust. Thickened base; black-glazed ware; all over thick glossy black glaze, could be from a small mug or a narrow beaker-shaped drinking vessel sometimes known as a tyg (cf. Brears 1971, 37, nos. 1-3)

Small jars (Fig. 3)

32. White salt-glazed stoneware; lathe-turned bands under rim.
33. Metropolitan slipware; slightly sandy red-buff fabric; all over gingery glaze; slip polka dots on neck and body; abraded around girth and on top of rim. A dish with polka dot decoration was found at Colchester (Cotter 2000, fig. 153. 203).
34. Metropolitan slipware; fine red fabric; not unlike an albarello or drug jar in shape; all over glossy slightly greenish glaze; decoration consists of circles of slip dots.
- Not illust. Thickened outflaring base; Black-glazed ware; all over thick glossy black glaze, perhaps from a jar.

Vases (Fig. 3)

35. Flower vase with nozzles: English tin-glazed earthenware; buff fabric; very pale lilac tin glaze, slightly crazed; 2 nozzles remaining (would have had 3), alternating with twisted spurs; scalloped rim; would have had pedestal base; made in London (perhaps Southwark) c.1650-1680 (Archer 1997, 11-2). Examples of this vessel type have been found at Chelmsford and Colchester (Cunningham 1985a, fig. 11.87 and Cunningham 1985c, 72). In the 17th and 18th centuries cut flowers were commonly used in the decoration of rooms (Archer 1997, 360).

Wall tiles

The function of tin-glazed earthenware wall tiles is discussed by Archer (1997, 45-48). They were used in kitchens, bathrooms, water closets, dairies and cellars. As well as in the home, they were also used on the walls of shops, such as bakers, and butchers, and in coffee houses and pubs. However, by far their most usual setting was on the surrounds of fireplaces. Tiled walls were favoured because they were both decorative and easy to clean.

- Not illust. Fragment of blue-painted English tin-glazed earthenware wall tile: showing a floral pattern in the corner and a fragment of decoration enclosed in a circle, cf. Archer (1997, N36, N55), dating to the early to mid 18th century.
- Not illust. Fragment of blue-painted English tin-glazed earthenware wall tile: showing vertical lines and the remains of landscape decoration; no parallel found.

Apothecaries wares (Fig. 3)

36. Dispensing pot: English tin-glazed earthenware; buff fabric; pale grey-blue tin glaze much of which has flaked away from the outer surface; underside wiped clear of glaze; undecorated; paralleled by Archer 1997, J15-16 dated c.1700-1770. Tin-glazed earthenware was the preferred ware for storing and dispensing medicinal preparations. This type of pot was probably used to dispense ointment to the patient, but may have been used for any sticky or semi-liquid product sold by apothecaries, grocers or perfumeries (Archer 1997, 380).
37. Base and sides of dispensing pot: English tin-glazed earthenware; all over, somewhat crazed duck egg blue tin glaze; underside unglazed; undecorated (cf. Archer 1997, J18 dated c.1725-75); patches of fire-blackening and iron-staining on underside.
- Not illust. The remains of at least two more undecorated English tin-glazed earthenware dispensing pots.
- Not illust. Base of an albarello or storage jar with a blue painted band around the base (cf. Archer 1997 J6 or J9) dating to the first half of the 18th century.

Dishes (Figs. 4, 5 and 7)

The Staffordshire-type slipware and Metropolitan slipware dishes illustrated below are likely to have served here as kitchen wares even though they are decorated, as they show signs of considerable use, including wear marks and fire-blackening. This indicates they are unlikely to have been for best use, at least towards the end of their lives. Some also

show evidence of being burnt after breakage (see catalogue). Eight semi-complete Metropolitan slipware flanged rim dishes are present, all showing simple trailed slip decoration. No two designs are identical although Nos. 44 and 45 may be very similar. There are also variations in diameter, depth and in the shape of the flange. Most have a fine red or red-buff earthenware fabric, although that of No.

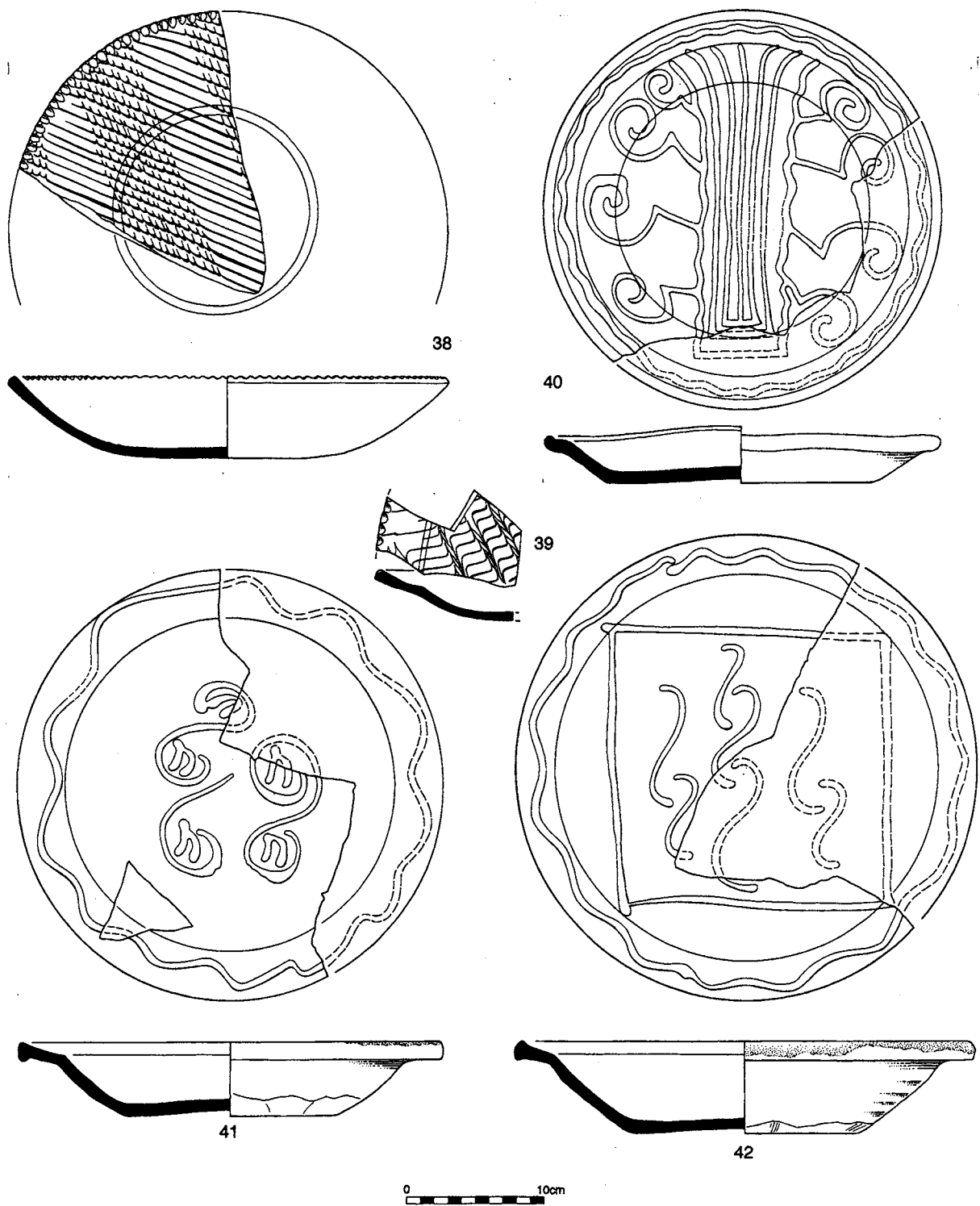


Fig. 4 Dishes Nos. 38-42.

44 is sandier than the rest. The dishes are illustrated in order of decreasing complexity of pattern. Three fragments from Metropolitan slipware dishes are also illustrated showing still more design variations (Nos. 48-50). The Metropolitan slipware dishes are likely to date to the early 18th century, the Staffordshire slipware dishes could be of the same date or slightly later (see under 'The wares'). Plain post-medieval red earthenware dishes are also present.

38. Press-moulded dish: Staffordshire-type slipware; similar to plate Nos. 9 and 10, but with combed slip decoration; heavily fire-blackened on underside of rim.

39. Rim of press-moulded dish: Staffordshire-type slipware; slightly flanged rim; combed slip-trailed decoration; fire-blackened on rim and on underside of rim.

Not illust. The remains of at least three more Staffordshire type slip-trailed dishes.

40. Metropolitan slipware; fine, micaceous buff-red fabric; shallow with narrow flange; fairly complex bilaterally symmetrical centre pattern of lines and scrolls, which has similarities with the sheaf motif found on Metropolitan slipware manufactured at Harlow; wavy line decoration around flange; internal, somewhat patchy honey coloured glaze; slightly distorted rim; very abraded centre and most of slip has flaked off (although the outline of the pattern is still visible); also abraded on top edge of rim and around angle between flange and top of wall; some abrasion on outer edge of rim and on underside especially around basal angle; some fire-blackening on outer surface and on break indicating it was caused by contact with fire after breakage.

41. Metropolitan slipware; fine, micaceous red-brown fabric; centre decoration of U shapes enclosed in scrolls; a sixth scroll may have been present on missing corner of dish, (not shown on drawing); wavy line decoration on flange; internal honey coloured glaze; some abrasion on centre and around angle between the inside of the flange and the wall of the dish; spalling and fire-blackening on several parts of the vessel; some fire-blackening on breaks; abraded on underside around basal angle; knife-trimming above base.

42. Metropolitan slipware; fairly deep dish; fine, micaceous, buff-red fabric; bilaterally symmetrical decoration consisting of simple scrolls enclosed in a square with wavy line decoration around flange; internal ginger-coloured glaze; some abrasion in centre, on underside around basal angle, and on parts of the underside of the rim; patch of sooting on outer surface which also occurs on the break (see No. 40).

43. Metropolitan slipware; fine red earthenware fabric; simple wavy line slip motifs on flange, wall and centre under ginger-coloured glaze; some abrasion in centre of plate; abraded on underside

around basal angle with an area of abrasion around underside of rim.

44. Metropolitan slipware; slightly sandy red-buff fabric; very simple bilaterally symmetrical decoration consisting of four parallel lines of squiggles in centre and wavy line decoration around flange; internal dull, greenish-ochre glaze; centre abraded, some abrasion around flange/wall junction and on underside around basal angle; uneven rim with ?accidental thumb indentation on edge of rim (shown on drawing); fire-blackened under rim, on underside of base and on break (see No. 40).

45. Fragment of flanged rim dish: Metropolitan slipware; fine pale reddish fabric similar to dish No.40, with occasional larger quartz sand and white inclusions; dark honey coloured glaze; abraded in centre and showing remains of simple slip pattern which has flaked away; slip-trailed wavy line around flange; slightly distorted rim; knife-trimming above basal angle; some abrasion around basal angle; patches of fire-blackening especially below rim; fire-blackening also on breaks (see No. 40).

46. Metropolitan slipware; fine red earthenware fabric; very simple wavy line slip decoration; internal lustrous honey coloured glaze with greenish patches; glaze thins at flange; all of underside is fire-blackened with fire-blackening also on breaks (see No. 40).

47. Flanged rim dish: Metropolitan slipware; fairly deep; fine red earthenware fabric; internal honey coloured glaze; wavy line combing around flange; centre of dish is very abraded and almost all slip decoration has flaked off; underside abraded, especially around basal angle; also areas of abrasion on rim edge; patch of fire-blackening on underside of rim; fire-blackening also on breaks (see No. 40).

48. Base of dish: Metropolitan slipware; red fabric; row of Z shapes across centre; glossy honey-coloured glaze; fire-blackened on underside.

49. Fragment of dish: Metropolitan slipware; red fabric; unusual sunburst slip motif, 'stalk' of slip is probably accidental; honey-coloured glaze; very abraded outer surface; heavily fire-blackened with parts of external surface laminated away.

50. Base of dish: Metropolitan slipware; red fabric; smudged apple or strawberry-shaped patch of slip, not obvious whether this was the intended shape or an accidental splat; glossy honey-coloured glaze; no traces of use.

Not illust. Ten rim sherds from Metropolitan slipware flanged rim dishes. All show wavy line slip-painting on the inside of the flange apart from one, which has interrupted wavy lines. Also five flanged rim fragments from plain flanged rim dishes.

51. Rim of shallow dish: Metropolitan slipware; red-buff fabric; scrolled slip decoration, although much of the slip has flaked off; glossy, pale, honey-coloured glaze.

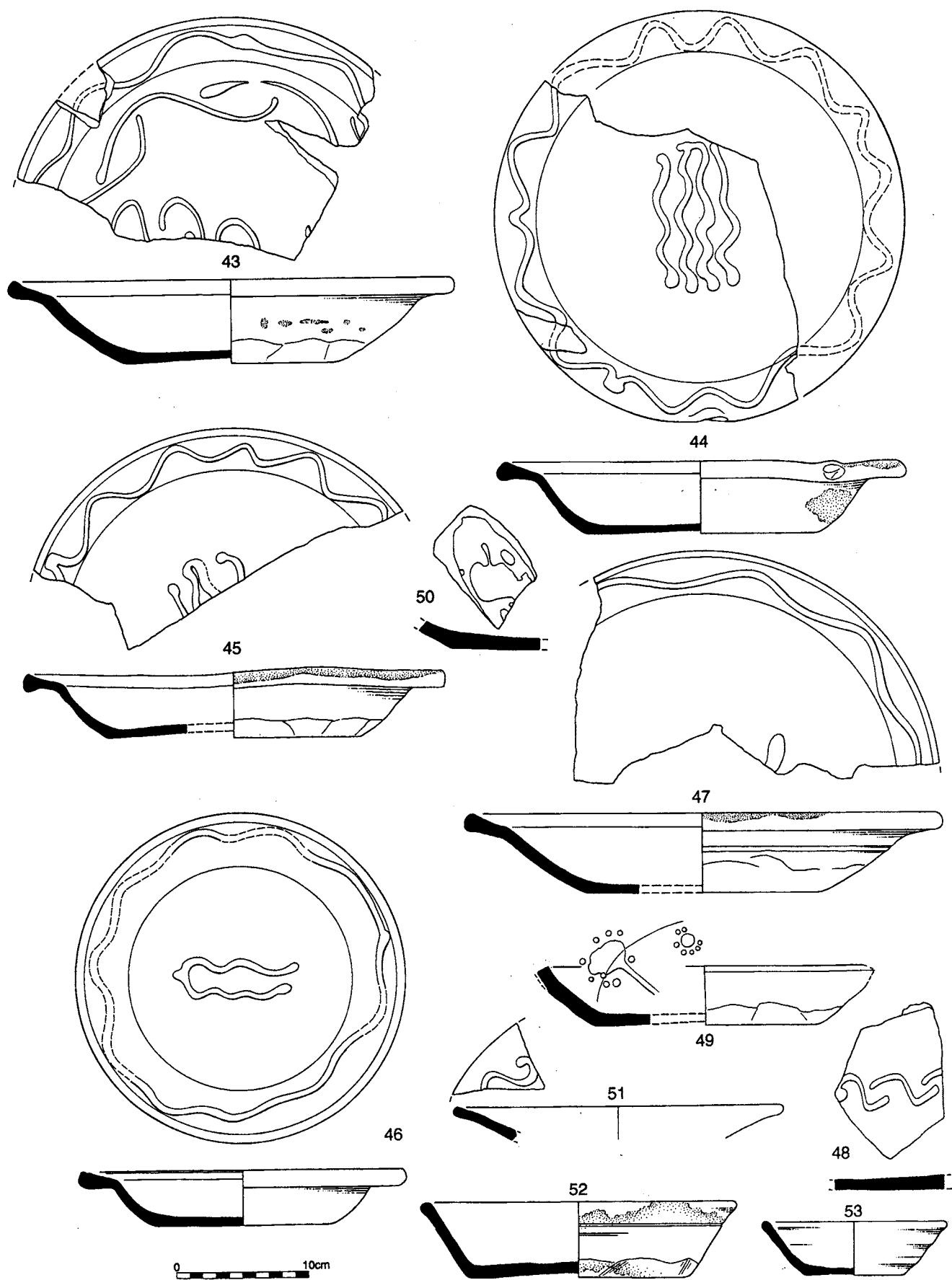


Fig. 5 Dishes Nos. 43-53.

52. Flared dish: post-medieval red earthenware; fine fabric; some glaze on external surface; knife-trimmed above base; some abrasion in centre and around inside edge of rim, also abraded around basal angle; patches of fire-blackening around rim and underside of base.

Not illust. Flared dish: post-medieval red earthenware; very similar to above but with paler reddish-buff fabric and beaded rim; internal glaze which is a pale ochre colour because of the underlying pale coloured fabric; some abrasion in centre of dish and on underside around basal angle; patches of fire-blackening on underside of rim and underside of base.

53. Small flared dish: post-medieval red earthenware; fine red fabric with larger white inclusions; internal brown glaze with glaze also on underside of base; poorly finished with extraneous pieces of clay sticking to the edge of the base; no evidence of use.

54. Very large flared dish; post-medieval red earthenware; lid-seated rim; internal orangey glaze, wear on underside of base; no fire-blackening. Large shallow dishes were used as milk pans in which milk was left to separate in order to make cream and cheese and other dairy products (Cunningham 1985a, 4; Brears 1971, 69, bottom right). However, this example is unusually large for such a purpose. A 17th-century Dutch painting by David Teniers II (Fig. 6) shows a very

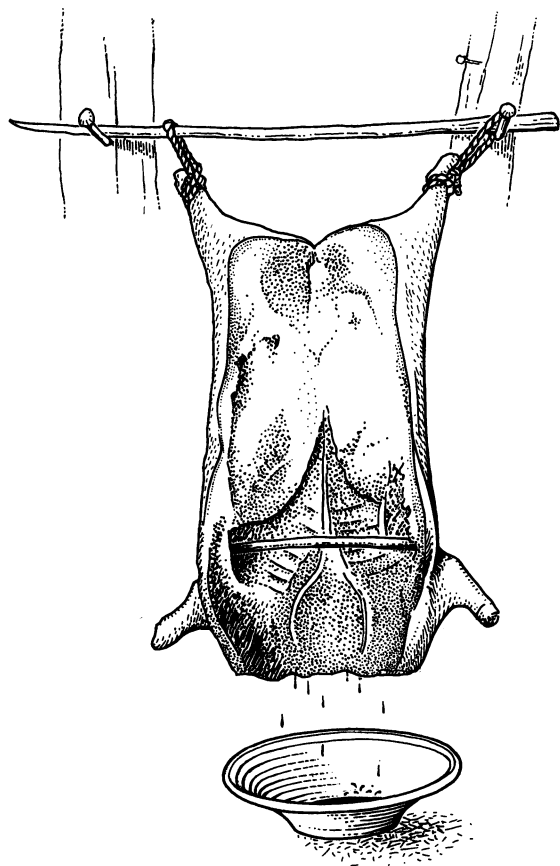


Fig. 6 Detail from a Dutch painting by David Teniers II showing the interior of a peasant's cottage, dated 1646.

similar large dish (albeit with a narrower base) used to catch the drips from a hung pig carcass (Christie's 1989).

Not illust. Rims from three to four more very large flared dishes similar to No. 54 and of the same diameter.

Bowls (Fig. 7)

55. Small flared bowl: Metropolitan slipware; fine reddish fabric similar to that of the Metropolitan slipware dishes; wavy line slip decoration; internal glossy honey coloured glaze.

56. Rounded bowl: post-medieval red earthenware; fine orange-red fabric with some large inclusions; the remains of a pulled spout, the presence of which implies that the contents were liquid; glossy all over brown glaze with darker flecks; internal hole from where large inclusion, probably a pebble has come out of the clay; the hole does not go through to the outside of the bowl, but would have made the vessel rather unhygienic to use; some abrasion on underside of basal angle; estimated capacity 3 pints.

57. Rim of rounded bowl: post-medieval red earthenware; fine brown-red fabric with sparse iron oxide inclusions; internal greeny glaze with brown flecks; patches of fire-blackening externally.

58. Bowl rim: post-medieval red earthenware; sandy fabric with sparse large red iron oxide inclusions; all over honey-coloured glaze, dense brown mottles; pitted surfaces; grooves on rim; pinched horizontal handle.

Not illust. Fragments from five post-medieval red earthenware bowl rims with beaded, thickened or flanged rims; all but one is glazed.

Chamber pots/one handled jars (Fig. 7)

59. Rim of chamber pot: Westerwald stoneware; remains of moulded decoration with cobalt-blue background; flanged, 18th-century rim type (cf. Hurst *et al.* 1986, fig. 108.340, dated 1740-1760).

60. One-handed jar or chamber pot: post-medieval red earthenware; complete, although there are two vertical cracks in the rim, one running from top to bottom; all over honey coloured glaze with brown flecks; capacity 3 pints when measured up to where residue ends at about 2.5cm below rim; abraded on underside. Almost all of the inside is coated with white residue, which does not react with dilute hydrochloric acid, and therefore cannot be limescale. Instead residue could be uric acid (urine), indicating that this vessel was indeed used as a chamber pot (McCarthy and Brooks 1988, 116). Chamber pots had several uses and were also used as paint pots and in the kitchen (Amis 1968, 5).

Not illust. The remains of three more one-handed jars or chamber pots in post-medieval red earthenware, very similar in size, shape and glaze to No. 60, but less complete. As they are incomplete the fabric could be examined, and was found to be buff-coloured, noticeably sandy with large white clay

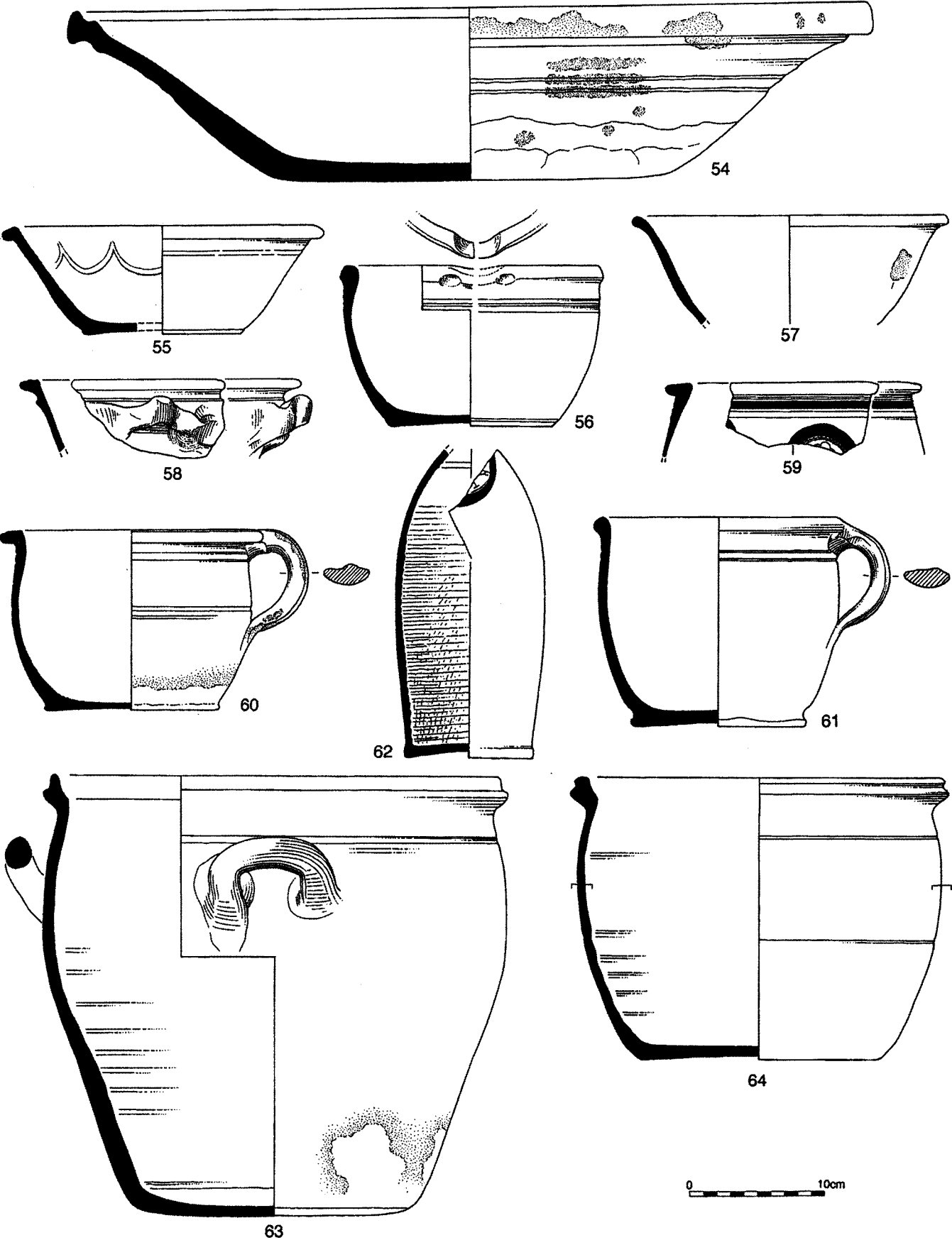


Fig. 7 Dishes No. 54; bowls Nos. 55-58; chamber pots/one handled jars Nos. 59-61; storage jars and bottles Nos. 62-64.

pellets appearing yellow under the glaze. One example has very streaky brown iron flecks, which are orientated diagonally and perhaps caused by the rotation of the potter's wheel.

61. One-handed jar or chamber pot: post-medieval red earthenware; fine orange fabric with some sand inclusions; taller than No. 60 and with a beaded rather than a flanged rim; internal glaze; dull discoloured powdery finish on outer surface; internal white residue which does not react with dilute hydrochloric acid and may be urine residue; estimated capacity 3.5pints; abraded on underside of base.

Not illust. The remains of seven more chamber pots, very similar in size, shape and glaze to No.61 but less complete. Nearly all show traces of white internal residue. Several of the jars are abraded on the underside. In addition, there are eight beaded rim fragments that could also be from one-handed jars/chamber pots.

Storage jars and bottle (Fig. 7)

Not illust. Fragments from a large storage bottle: Frechen stoneware; showing the remains of a bellarmine face mask and a plain poorly finished base; cannot be later than late 17th century, therefore must have been old when discarded.

62. Mineral water bottle: Westerwald stoneware; buff/grey external surface flecked with brown; buff internal surface with very marked throwing lines; incised mark encircled in blue on shoulder, denoting the spa where the bottle was filled (cf. Gaimster 1997a, pl.135) dated c.1750. Mineral water bottles were a speciality of the Westerwald potters, and continental mineral water was consumed in substantial quantities by British wine drinkers during the mid 18th to 19th centuries (Gaimster 1997a, 95, 252).

63. Large storage jar: post-medieval red earthenware; fine, micaceous orange fabric; probably used as a bread crock; slightly distorted, indented sides, perhaps due to such a large vessel deforming under its own weight; lid seated rim (no pottery lids at all were found in the well, but a wooden lid may have been used); horizontal handles; all over orangey glaze; abraded on sides and underside.

Not illust. Rim of storage jar: post-medieval red earthenware; red fabric all over glaze; lid-seated rim; very similar to No. 63, but with slightly smaller diameter of 310mm.

64. Rim and base of storage jar: post-medieval red earthenware; all over glaze with occasional brown flecks; sandy red-buff fabric with darker surfaces and occasional inclusions of white clay pellets,

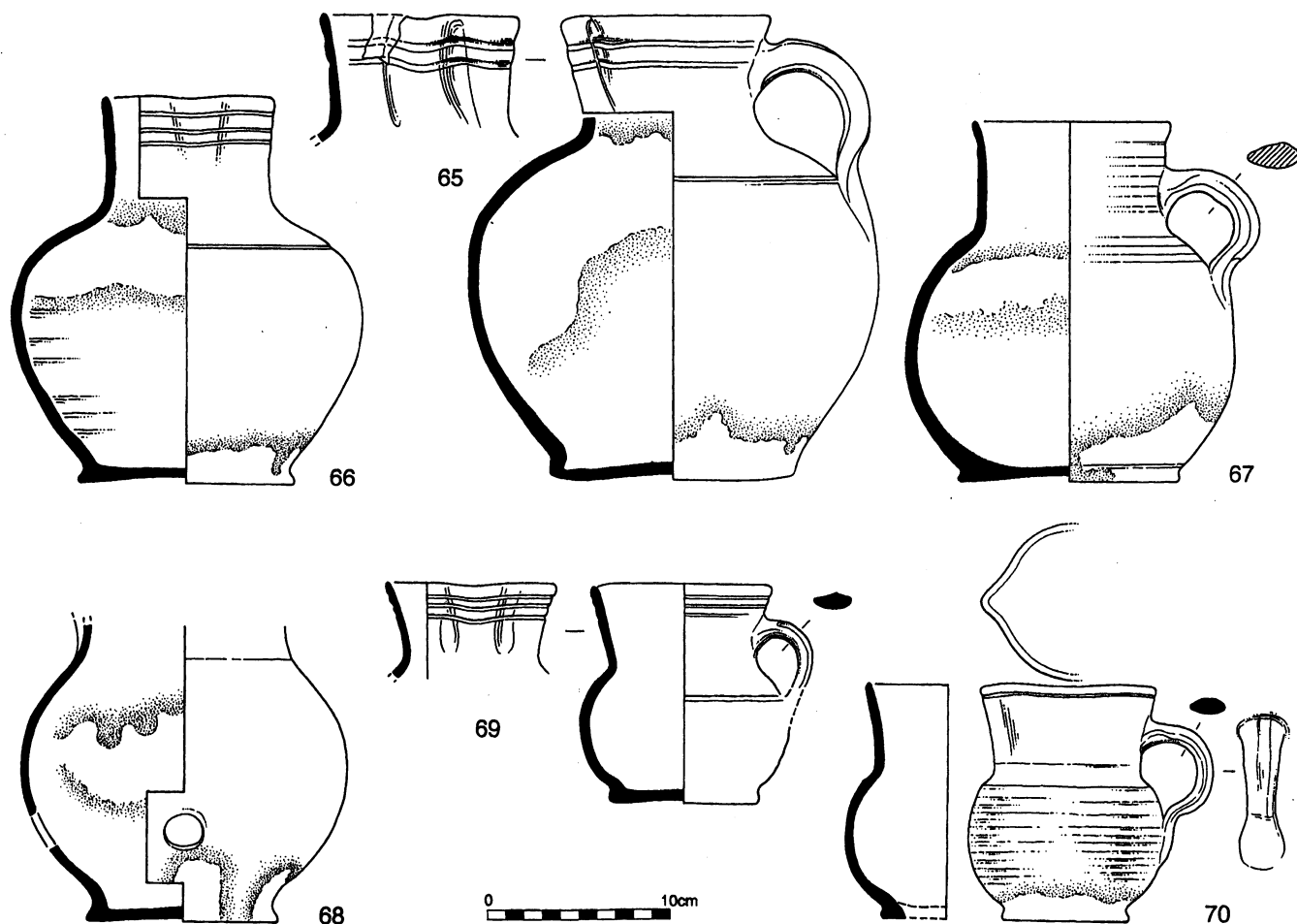


Fig. 8 Post-medieval red earthenware jugs Nos. 65-70.

which can be quite large and are sometimes visible at the surface, appearing yellow under the glaze.

Not Three more post-medieval red earthenware lid
illust. seated rims probably from storage jars, and seven
further rims, including collared rims which may
also be from storage jars or other jar forms.

Post-medieval red earthenware jugs (Fig. 8)

A total of 16 post-medieval red earthenware jugs are represented; all are similar in shape with cylindrical necks, pulled spouts, rounded bodies, ribbed handles with two lines of ribs, and iron streaked glazes. The only form of decoration comprises incised horizontal grooves, which often occur on the neck and shoulder of the jugs. There is some variation between the jugs however, as some have completely rounded profiles (No. 67), while others are more shouldered (No. 65). There is also some variation in the shape of the base. Glaze colour ranges from olive green to dark brown, although glaze colour depends to some extent on the colour of the pot body beneath, which tends to be either buff (and sandy) or the more typical fine orange-red of post-medieval red earthenware. The glaze is also peculiar in that in most cases the jugs appear to have been glazed twice, with a glossy glaze appearing to cover a much sparser coating of glaze that extends further down the jug. The inside of the base and the lower part of the inside walls usually have a sparse glaze, while the thick glossy glaze usually extends into the inside of the neck. The inside of the shoulder is usually unglazed. The glaze is only described in the catalogue entry where the pattern of glaze cover differs from this. Jugs were used for the storage, fetching and serving of liquids, most commonly milk, water and a variety of alcoholic drinks such as beer and cider. It was noted that the jugs from the well may be divided into four size ranges, although there may be some variation within size 3:

- Size 1: ¼ pint (3 examples)
- Size 2: 1 ¾ pints (2 examples)
- Size 3: 3 ½ pints (8-9 examples)
- Size 4: 8 pints or 1 gallon (2 examples)

65. Large jug: red-buff fabric; olive-green streaky glaze; shoulder profile; abraded on and below the spout and on underside of base; capacity measured by covering breaks and filling with rice, is 8.4 pints when filled to the base of the neck, and 9 pints when filled to the brim; perhaps intended as a 1 gallon jug; some fire-blackening on internal surface, although this is probably post-depositional as it occurs on some sherds and not others.

Not Bottom half of jug: sandy red-buff fabric with
illust. sparse red oxides; very similar in size and
appearance to above, and therefore probably also
a 1 gallon jug; rather chipped around basal angle;
traces of white internal residue that does not react

with dilute hydrochloric acid and is therefore not limescale, but could be urine residue (see chamber pot No. 60). Jugs were sometimes used as male urinals in the medieval period (McCarthy and Brooks 1988, 115, fig. 57).

66. Profile of jug: red fabric; glossy iron-streaked brown glaze; pulled spout (unabraded); shouldered profile; slight abrasion on underside of basal angle; part of the edge of the base is also chipped; estimated capacity 3.5-4 pints when filled to base of neck, with a further half a pint to the top of the rim (size 3).

Not Body of jug: similar in all respects to No. 66, but
illust. less complete; therefore probably also size 3.

67. Jug: fine red fabric; complete profile but as front half of jug is missing is not possible to determine whether there was a spout; rounded profile; rilled neck and very glossy streaked brown glaze; estimated capacity of 3.5 pints when filled to base of neck, with a further two-thirds of a pint to the brim; not as tall as No. 66 (size 3).

68. Body of jug: hard buff fabric moderately sandy with sparse red oxides; part of neck remaining, showing beginnings of pulled spout; rounded profile; buff fabric, olive-brown glaze; hole drilled neatly through vessel wall after firing (shown on drawing), with remains of white residue around outer edge of hole, perhaps where a spigot was attached, indicating it was converted into a cistern; estimated capacity up to base of neck is 3.5 pints (size 3); wear on underside of basal angle and around edge of base; unlike the other jugs it is also worn around the girth.

Not Part of jug: very dark brown, almost black
illust. mottled glaze; ribbed handle and pulled spout
which is abraded on top and below the lip; single
horizontal groove below rim, and two horizontal
grooves about 3cm below rim; some wear on
underside of base; (?size 3).

Not Body of jug: rounded profile glossy all over brown
illust. glaze; some wear on body which may be post-
depositional and wear under base; probably size 3;
very similar to No. 67.

Not Body of jug: rounded profile; all over speckled
illust. brown glaze; wear on underside of base; probably
size 3.

Not Part of bottom half of jug: red-buff fabric; olive
illust. brown glaze; shouldered profile; some wear on
underside of base and around edge of base;
probably size 3.

Not Base of ?jug: red-buff fabric; olive-brown glaze;
illust. some abrasion on underside of base; perhaps size
3.

Not The complete body of a jug; fine red fabric, sparse
illust. large white inclusions: rounded profile and
entirely absent neck; all over mottled brown glaze;
little sign of wear; capacity when filled to the base
of the neck with water is exactly 1¾ pints.

Not Part of body of jug; very similar to above and
illust. therefore also size 2, but much less complete;
streaky brown glaze; some wear on underside of
base.

69. Small jug: rounded body and slightly flaring rim unlike larger jugs which have more cylindrical rims; pulled spout; capacity when filled to the base of the neck is $\frac{3}{4}$ pint or 1 pint when filled to the brim; red fabric; glossy all over streaky brown glaze, which is much sparser on the inside of the shoulder; some abrasion on rim and underside of basal angle.
- Not illust. Body of small jug (size 1); similar to above but with a thicker narrower base.
70. Small jug: fine red fabric with sparse large white inclusions and red oxides; rounded profile and slightly flared neck; red fabric; all over olive-brown brown glaze, sparser on inside of shoulder; slight striations on the body (size 1).

Discussion of the pottery

The fine wares, especially the tin-glazed earthenware plates and bowls, and white salt-glazed stoneware vessels, provide the closest dating. Only one tin-glazed earthenware vessel, plate No. 3, is closely paralleled, to a vessel dated c.1735-45. The other tin-glazed earthenware plates show similarities to vessels dating between the 1720s to 1740s, except for plate No. 1 which is comparable to a plate dated c.1760. Tin-glazed earthenware bowl No.14 shows similarities to bowls dating to the earlier 18th century and to bowls dating to the 1760s to 70s (see catalogue entries). The presence of white salt-glazed stoneware with moulded and scratch-blue decoration precludes a date before the mid 18th century. Closely datable vessels in this ware include jug No. 11 dated c.1750, and tea-bowl No. 16 dated 1755-75. In addition, Chinese porcelain saucer No. 22 dates between 1740 and 1760 and the Westerwald mineral water bottle (No. 62) dates to c.1750. This means that the latest vessels in the assemblage would all have been new in the years c.1750 to c.1760, although the pottery could have been deposited some time after this date.

Many vessels such as the Staffordshire-type slipwares and the tavern mugs would have been current in the mid-18th century. Some vessels however, such as vase No. 35, and the Frechen bellarmine, were made in the previous century, but must have been kept for a long time, as can be the case in present-day households. Both tin-glazed earthenware and white salt-glazed stoneware were still in production in the late 18th century, but such a late date for this assemblage can be precluded because of the absence of creamware and pearlware. Creamware was a smooth-bodied fine ware first produced in 1740s and became the dominant fine ware between the 1760s to 1780s, largely ousting white salt-glazed stoneware, and tin-glazed earthenware. Pearlware was a later refinement of creamware, introduced in 1779 (Banks *et al.* 1999). The absence of these wares, therefore means the assemblage almost certainly pre-dates the 1760s.

However, a later date cannot be ruled out entirely, especially because there two sherds of bone china dating to the late 18th century (listed under 'Wares that post-date the main group'). However, these are most likely to be result of later additions to the fill of the well or else of contamination, as are the Victorian to 20th-century sherds.

The 18th century saw great changes within the household; homes became more attractive and comfortable as the range of consumer goods, especially decorative items (such as ceramics) increased dramatically. This change filtered down to all social groups (Vickery 2001, 11-17; Archer 1997, 7-8). The significance of tea drinking has already been discussed (see under tea wares). Dining became more formal and provided more opportunity to display wealth, and entertain at home (Vickery 2001, 14). The plates in tin-glazed earthenware, Chinese porcelain and white salt-glazed stoneware reflect this change. Matching dinner services were not introduced until the late 18th century, which is why there is a mixture of wares. However, there does appear to be a theme, as many vessels are decorated with a blue-floral pattern, which is found on several plates (Nos 1, 2, 5), on the footring bowls (Nos 14-15), on tea bowl (No. 16), and on some of the jug fragments. Items such as the white salt-glazed stoneware jugs were probably also used at the table. The presence of the vase and painted wall tiles also show an interest in making the home more decorative. The possets, cups and tavern mugs may be evidence of less formal consumption, and the mineral water bottle (No. 62) may be associated with wine drinking. The quantity and variety of fine wares indicate a fairly well-off household, but as none of the pieces are of high quality, a middle class rather than upper class status can be assigned.

The coarse wares, that is vessels used in the kitchen and for storage, produced mainly in local post-medieval red earthenware, are not closely datable, and many are little changed from the 17th century. This is one reason why this artefact group is important, because the fine wares present help to date the coarse wares. The large number and variety of coarse ware vessels is not unexpected as households were quite self sufficient even in the town, with dairying, bread making and preservation and storage of food-stuffs important activities, as well as food preparation and cooking. The commonest coarse ware forms are flanged rim dishes, jugs, and chamber pots/one-handed jars.

Nearly all the coarse ware vessels show signs of wear on the underside of the base and may have stood on a hard stone or tile floor. The group of vessels that show the most wear and tear are the Metropolitan and Staffordshire slipware shallow dishes. The significance of this has already been discussed under 'Dishes' and shows that these

decorated wares may have been demoted to kitchen wares after they went out of fashion as table/display wares. It is difficult to guess what function they performed in the kitchen, as they are both worn and fire-blackened. Fire-blackening on the breaks on some of these vessels suggests that they were burnt during or after breakage. Perhaps they were burnt in a fire, or undertook some kind of secondary use after breakage. Also exhibiting secondary use is the jug converted to a ?cistern (No. 68). In the early post-medieval period large cisterns were used for brewing beer, but this jug is too small for such a purpose, with an estimated capacity of only 3.5 pints. The jug also shows wear marks around the girth, reminiscent of the abrasion found on reused pop and beer bottles stored in crates.

The large number of chamber pots is unusual (at least 13 vessels are represented), and the presence of urine residue shows that they were actually used as chamber pots, rather than more general purpose one-handled jars. The only other possible evidence of function is from the large wide dish (No. 54), which could be associated with butchery (see catalogue entry).

The variety of drinking vessels may indicate that the group is from the Falcon Inn as postulated in the 'Documentary Evidence' section. If this is the case the fine wares were probably used by guests staying at the inn. This would also account for the large numbers of chamber pots, and the wear and tear seen on the dishes, and on the jug converted to a cistern. The round-bodied jugs may also have been used in the inn for serving alcohol.

The coarse wares are in some aspects more interesting that the fine wares, as they would have been made locally and may have evolved from medieval potting industries. The possible locations of these industries have already been discussed. The post-medieval red earthenware jugs form a homogeneous group and are almost certainly products of the same industry. The slight variations in shape can be explained if they were made by different potters (exact standardisation as we know it today did not take place until after the Industrial Revolution). There is also some variation in the fabric, which ranges from sandy and buff to fine and red, and it is possible that different clay outcrops occurred in the same area. This is certainly the case in the Hedingham area, which produced a variety of clays and was the home of important pottery industries during the medieval period and in the 19th century (Cotter 2000, 76; Bradley 1968, 17, 20).

The glass

David Andrews

A summary analysis of this large group of 18th-century glass can be found in table 2. The majority of the glass was from wine bottles. Because these are robust objects, made from thick glass, they survive well in the ground and are readily collected in the course of excavation. Although there may be some bias in the sample as a result, it is probably only slight, as many of the body sherds looked as if they were associated with the other forms present in the group. The overwhelming number of wine bottles is but further evidence that the material found in the well is likely to have come from the Falcon Inn.

Table 2. Falcon Square glass, table showing estimated minimum numbers of recognisable forms, and body fragments present divided according to colour.

Form/colour	Est. minimum no.	Fragments
Wine bottles	35	275
Bottles, various	7	
Phials	6	
Window glass		15
Blue-green fragments		55
Colourless fragments		28
Olive green fragments		11
Yellow-green fragments		5

The wine bottles are almost all uniform in shape and must be a contemporary assemblage, with no residual material. They are in mid to dark green glass with advanced devitrification, have domed bases, somewhat squat cylindrical bodies, slightly flaring necks, and single string rims. The bases do not usually have a pontil scar. One bottle is exceptional in being octagonal in shape (Fig. 9.1; cf. Noël Hume 1961, fig. 4.18); this has a low kick and a pontil scar. Of 27 fragments for which diameters can be estimated, 13 measure about 120mm, 7 about 100mm, 5 about 110mm, and 2 about 140mm. The rims are rather variable: in some cases the string forms a blade-like disc, but more often the underside of it has been rubbed down so that the neck is slightly waisted below the rim. The only bottle with an intact profile (Fig. 9.2) is a typical but slightly squat or short example. It has an estimated capacity of about 1 ¼ pints.

A few of the bottles are of a more highly developed cylindrical shape, like no. 3 in Fig. 9. This is of a somewhat better quality glass, being in fair condition. A neck of cylindrical or slightly baluster profile, as distinct from the more typical slightly flaring shape, is in a better quality brown-green glass (Fig. 9.4). Both these pieces are typologically

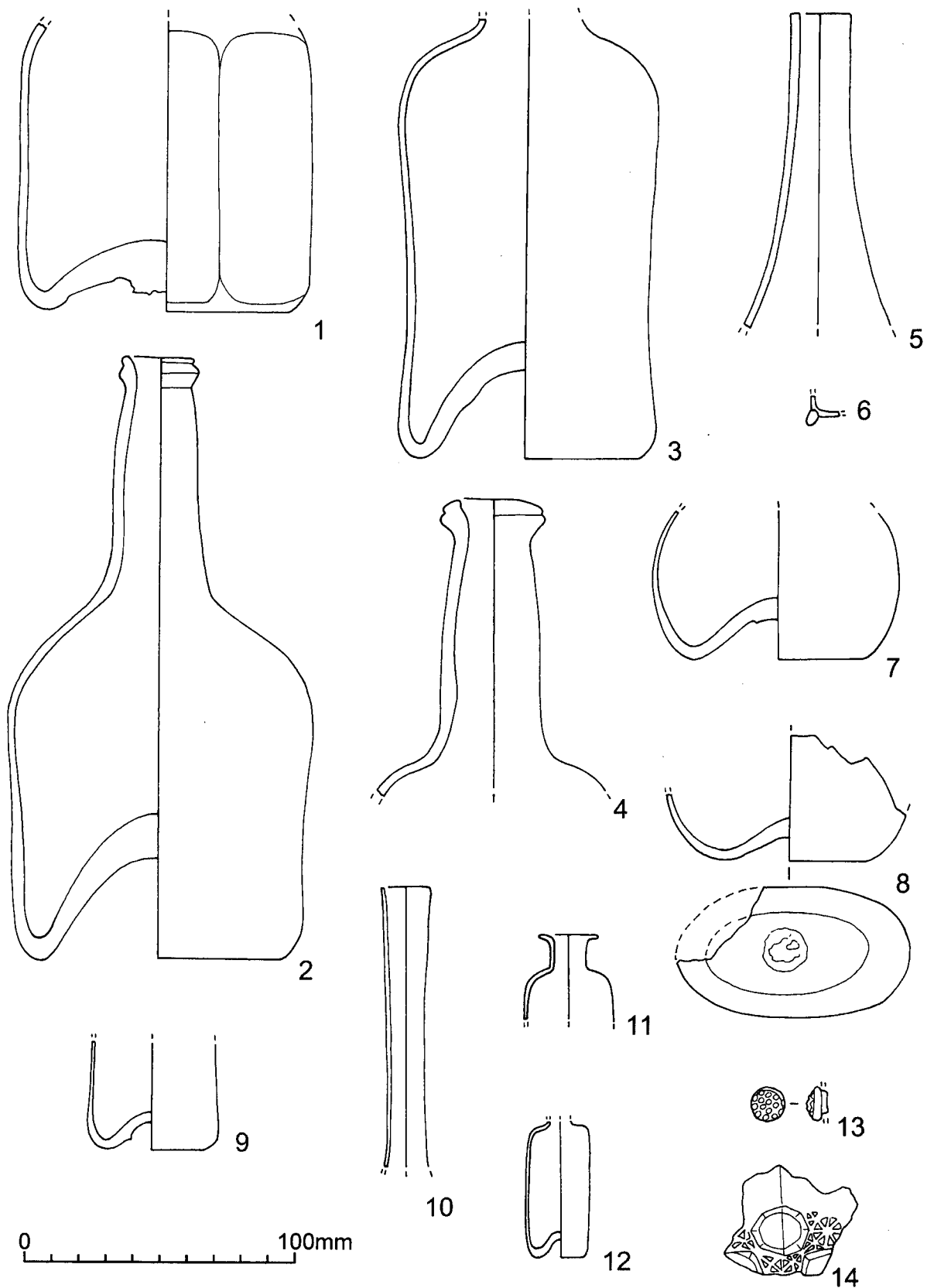


Fig. 9 Glass vessels. 1. Octagonal wine bottle. 2. Wine bottle with intact profile. 3. Cylindrical-shaped wine bottle. 4. 'Baluster' neck from a wine bottle. 5. Rim and neck of probable mineral water bottle. 6. Applied foot ring, possibly from a beaker. 7. Bottle base in colourless glass. 8. Flat-sided bottle in colourless glass. 9. Small cylindrical bottle in pale green glass. 10. Rim and neck in blue-green glass, probably from a bottle. 11. Phial rim in colourless glass. 12. Phial base in green glass. 13. Prunt, possibly from a handle. 14. Scalloped rim in pressed glass.

more advanced than the rest of the assemblage and may be intrusive.

A different type of bottle is represented by a flaring neck with a plain rim broken off from the blow-pipe in olive-green glass in rather poor condition (Fig. 9.5). Associated body sherds indicate that the bottle was spherical or onion-shaped. Noël Hume (1961, fig. 5.25) illustrates a French mineral water bottle of this shape. A similar rim and neck in devitrified olive-green glass was found in the excavations at Southchurch Hall (Southend-on-Sea).

Most of the recognisable vessel glass forms, and many of the body sherds, are in good quality colourless glass which is well preserved, though usually displaying a degree of iridescence. This proportion is rather greater than one might expect, and an interesting reflection on the glass in use in the mid 18th century. The other vessel glass is in various shades of green and is also in good condition, usually iridescent or with no more than the beginnings of lamination.

With the exception of a base in good quality colourless glass with an applied foot ring (Fig. 9.6), probably from a beaker or bowl, the vessel glass comprises bottles of various sorts. A base in colourless glass is probably from a medium-sized onion-shaped bottle (Fig. 9.7). Another, also in colourless glass, is from a flat-sided bottle of oval section, similar to a modern medicine bottle (Fig. 9.8). A small cylindrical bottle in pale green glass is represented by a base (Fig. 9.9), as is a slightly larger base in blue-green glass (unillustrated). All these bases have pontil scars. Body sherds probably associated with a long thin neck with a plain somewhat roughly formed rim (Fig. 9.10) in pale blue-green glass in good condition suggest it belonged to a small spherical or onion-shaped bottle.

Six phials for medicinal or toilet purposes are recognisable, four in colourless glass and two in green glass. The colourless ones comprise two similar rims (Fig. 9.11) and two bases, ranging in diameter from 25-38mm. The bases have low kicks and pontil scars. The two in green glass are represented by identical bases (Fig. 9.12).

Two unusual fragments are a prunt and a piece of pressed glass. The prunt is moulded, with a six-petalled rosette surrounded by pellets (Fig. 9.13). The glass on the back of it suggests it was attached to a handle. It is in colourless glass, now slightly iridescent. The second piece is the scalloped rim of an open form such as a bowl or salt, in colourless glass now with partial gold-coloured surface lamination (Fig. 9.14). It is decorated with polygonal bosses or prunts, between which are smaller rosettes. A raised seam indicates that it is made with a mould. Pressed glass was not made until the 1830s. This, like some of the later pottery types, is

evidence that the initial well fill had objects added later to it.

The window glass was all greenish in colour, and 1-2mm thick. Some fragments were quite badly devitrified, but most were iridescent with only the beginnings of surface lamination. The fragments are all 17th- to 18th-century in date, and are probably crown glass of medium quality.

The clay pipes

Hilary Major

The group comprised 17 fragments of stem, none of which joined, and four pieces of bowl. Two had too little of the bowl present to be datable. One was a complete bulbous bowl with a rouletted rim and a round foot, which would fit into Oswald type 6, dated c. 1660-80 (Oswald 1975, 37). The fourth piece was part of a long, thin-walled bowl with no rim or foot surviving. It is difficult to put a precise date to this fragment, but it is most likely slightly later in date than the complete bowl.

Animal bone

Phil McMichael

260 pieces of animal bone were examined weighing 15.776 kilograms. Most were in very good condition with only a few fragments present. A full catalogue of the bones by species is recorded in the archive.

Six species were positively identified: horse, cattle, red deer, sheep, pig and cat. Bones that could only be classed as large (horse, cattle) or medium (sheep, pig) sized mammals were found, as were large (goose-sized) birds. Out of the 135 pieces representing the four main food species (cattle, sheep, red deer and pig), 18 show signs of butchery in the form of cut or chop marks. Since these are mostly on the main meat-bearing bones, this is evidence of food preparation. The presence of six bones from red deer, of which three had chop marks, indicates venison in the 18th century diet.

The presence of a disproportionately large number of cattle metapodials may suggest a nearby tanner. However, these bones are extremely robust, and tend to survive better than almost any other skeletal element apart from teeth, so linking these apparently high numbers with tanning should be done with caution. Quite a few bones have been gnawed or chewed, which suggests they were either left lying around before disposal or were fed to dogs or cats.

The shoe leather

Fragments of shoe leather were found in the well and it is estimated that four to five pairs of shoes are represented. These have been examined by Sue Constable, the keeper of the Boot and Shoe

Table 3. Quantification of the animal bone assemblage by species and number of pieces.

Horse	Cattle	Large mammal	Red Deer	Sheep	Pig	Cat	Unidentified
13	63	47	6	62	4	51	4

Collection at Northampton Central Museum and Art Gallery. Her observations are summarised below.

The leather fragments are from men’s, women’s and children’s shoes produced in a latchet and bucket style, suggesting a date of between the end of the 17th century and possibly as late as 1750. No shoe buckles were found, but these were ornamental items usually removed from the shoes before they were discarded. The shoes would be typical footwear of, for example, a yeoman farmer and his family. The shoes are well worn, and one has a piece of leather cut out of it probably to be used as patching.

Other finds

A wooden button, two wooden knife handles, eight hazelnuts, and a number of seeds tentatively identified as cherry stones, were found in the well. In addition there are two frost-fractured flints with edge flaking. They belong to the category of ‘convenience artefacts’, natural flints needing minimal modification, and probably belonging to the historic period.

The documentary evidence

Pat Ryan

The well in which a large assemblage of pottery was found has been identified as being in parcel no. 39 on the tithe award of 1846 when William Stammers Braithwaite was the owner of parcels nos. 38, 39 and 40, as well as several other properties in Castle Hedingham (ERO D/CT 173). In 1838, he had inherited the estate of his uncle, Robert Stammers, who had succeeded his father, William Stammers, miller of Castle Hedingham, in 1795. William had purchased most of his property in the middle years of the 18th century (ERO D/DSm M1-4). According to a sales catalogue of 1845 Braithwaite’s land on the west side of Castle Lane was a freehold property. It consisted of ‘a range of substantial seed and hop warehouses ... with two floors of granaries over the same and a small garden at the east end thereof [no. 38]; a brick built two-stalled stable with granary over and a small tenement [no. 39]; and a cottage adjoining [no. 40]’ (ERO D/DMh T10). A sketch map, c.1775, suggests the property had belonged to the Unwin family (ERO D/DMh P4). No additional details were discovered, nor any record of its purchase by the Stammers or Braithwaite.

In the 18th century, the adjacent properties to the south were known as The Falcon Inn and Watsons. The Falcon was owned by John Francis, a clothier of Castle Hedingham. James King was the licensee in 1769. It is not named in the 1772 list of alehouse licences or in any other subsequent, so it is probable that The Falcon ceased to function as an inn from about this date (ERO Q/RLv 24, 25 and 26). When John Francis’ widow sold the property in 1785, it was described as ‘late in the occupation of Robert Eagle, butcher and Joseph Walkies, currier’ (ERO D/DSm M2 p.23). By 1790, when it was purchased by William Woolsey, wheelwright, it had become ‘a messuage lately called The Falcon.’

The adjoining property on the east named Watsons was also owned by John Francis. It had been left to him by Anne Bird in 1771. In the early 19th century, part of it was occupied by a cordwainer (ERO D/DSm M3 p.15).

Thus, it has been possible to find out relatively little about no. 39 and the associated parcels 38 and 40. However the dating and the nature of the finds from the well suggests they may have come from the neighbouring property, the Falcon Inn, which ceased to be an inn about 1770 and was later (before 1785) occupied by the butcher, Robert Eagle and the currier, Joseph Walkies.

Discussion

The pottery, glass, shoe leather and clay pipes all range in date from the mid 17th century to the middle or third quarter of the 18th century. The documentary evidence suggests that the finds in the well may have come from the Falcon Inn, which ceased to be an inn in about 1770. This fits in with the dating of the pottery, the most recent of which dates to c.1750 to c.1760. If the finds derive from the inn, it would explain the large quantities of chamber pots, jugs and wine bottles found, and the variety of drinking vessels including tavern mugs.

The documentary evidence also shows that this property was occupied by a butcher and a currier after c.1770 but before 1785, which could account for the large numbers of butchered animal bones. However, these bones could just easily be associated with food preparation at the inn. The evidence of butchery also fits in with the possible use of the wide dish (No.54), which may have been used to catch drips from a hanging carcass. Both the bone

and pottery assemblage are similar in that while most of the bones and pottery are complete or largely complete there is also some fragmentation. Their similar condition suggests the same depositional history. If the bones do derive from the activities of the butcher and the currier, either the well was open for a long time, or the pottery was not deposited until the late 18th century or beyond. This would explain the two fragments of late 18th-century bone china.

From whatever type of household the pottery and glass came, they show that the consumers of these goods had enough money and leisure time to indulge in many of the good things the mid 18th century had to offer. This includes drinking tea, possets, wine and beer, and the presence of decorative china on the dining table. Even if the assemblage does not come from the inn, these rather social pursuits imply entertaining in the home was important.

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Charity and the economy of the poor in an Essex parish: Canewdon in the early modern period.

by Ken Crowe¹

This survey of charity and its administration in the parish of Canewdon covers the period 1550 – 1750. The first part of the paper examines charitable bequests and the endowed charities of the parish. The second parts looks at the administration and distribution of charitable funds and the relationship between payments from charitable funds and rate relief in the 17th and 18th century, which also throws lights on the economy of the poor at this period.

Introduction

The history of charity, particularly in the post-medieval period has recently begun to receive detailed study following on from the work of W.K. Jordan about 40 years ago.² The more recent studies, notably in France³, Italy⁴ and England⁵ have been surveyed by, among others, Colin Jones.⁶ These have begun to challenge traditional views of the nature of charity in this period which tended to describe the ambivalent relationship between the rich donor and the passive recipient, and which saw levels of charity as a direct response to increasing levels of poverty. Traditionally, also, there has been a tendency to see the extent of private charity declining as a society moved towards a welfare state. Such views, and others, are now frequently called into question by scholars whose detailed studies have led to other interpretations and have opened up other areas of debate. Among the most interesting aspects of these are questions relating to the obligations of charity and charitable giving, and the motivations of, and influences on, donors. To progress the study of charity further, it is important to include other aspects such as the changing nature and administration of charitable bequests and endowments. This can best be achieved by looking closely at both the local and regional level.

Charity is a subject which has a significant bearing on our understanding of early modern society whose language and vocabulary were very different from those of today. This present essay hopes to address some of these issues by looking particularly at charitable bequests and endowed charities and their administration in the parish of Canewdon, during the period 1550 to 1750.

Canewdon is a rural parish, lying between the rivers Crouch and Roach in the south-east of the county. It was a farming community. Of the occupations given in the sample of wills examined for the period 1550 to 1750, 29 testators (or 78%) called themselves either husbandmen or yeoman. The next highest category were ‘mariners’, of whom there were just four. This reflects the proximity of the parish to the rivers Crouch and Roach, and to the River Thames and the North Sea. The parish church of St. Nicholas lies at the western end of the village, with the main street leading eastwards; the land slopes away quite steeply to north and south, and west from the church. In the late 17th century the parish had a population of about 250.⁷ In 1818 a charity board was erected in the church, reciting the many endowed charities of the parish, and no doubt placed there in the hope of moving the parishioners to yet further acts of beneficence.

Canewdon was chosen for this study of charity in the early modern period because of the fortunate survival of a very long series of charity records, churchwardens’ accounts, and other parish records. These made possible a detailed study of the parochial charities and their administration. In this paper we shall be looking at charitable bequests identified from wills, their nature and numbers over time; and at endowed charities and their administration by both feoffees and parish officials, particularly in relation to the poor law and to the economy of the poor.

Among the questions which will not be tackled, through lack of recorded evidence, is the extent of charity *inter vivos*, including begging and collections made door to door, and gifts to the poor made during the life time of those who, perhaps, made no such bequests in their wills. Among the latter may be counted the support given by kin and neighbours, which undoubtedly was very important to the survival of a large proportion of the population in early modern England. We must also remember that the numbers of people actually making wills in the early modern period was quite small.

Charitable bequests

A sample of 57 wills of Canewdon testators proved in the period 1550 to 1750 has been examined. These were taken from a series of decades within this period, as part of an overall survey of south-east Essex.⁸ Of this total, twenty testators made a bequest to charity (about 35%). Looked at decade by decade, there is a marked tailing off in the numbers of charitable bequests towards the later 17th and early 18th century (Table 1). Although these figures are not large enough to produce statistically significant results, they do indicate a general trend that is supported by a more general survey of south-east Essex (Table 2).

All of the charitable bequests in this period were to the poor, and in cash. The money was frequently to be distributed by the executor on the day of the funeral, or within a certain time. Some testators limited their bequest to a given number of poor (suggesting a concern that each would receive not only a fair share but also a given amount of cash) while John Barrett, yeoman, of Canewdon Hall, left ten pounds to be paid to the poor at the rate of 10s. a year.⁹ Bequests of money, rather than the giving of food, is seen as a trend towards impersonal charity in the post Reformation period.¹⁰ Unfortunately it is not recorded who received this money, or how, or by whom, it was distributed.

A particularly interesting aspect of the nature of charity during this period is the changing language used to describe the poor, both in these bequests and, as we shall see later, in other charity documents. In the early part of our period, from the 1550s to the 1570s particularly, the potential recipients of the charitable bequests are described variously as poor householders, poorest inhabitants, poor people and poor folk. In the 1590s in Canewdon some bequests were now to the poor ‘of best name and fame’¹¹ and in the 1620s to those of ‘ye best and sobrest conversation’.¹² In the 1620s also we find that two testators bequeathed sums to poor whom they identify by name – ‘mother Creeke, widow Neale, John Reade, John London and ffather

Kettle...and mother Cheild’¹³ and ‘goodwife witherson, Henry Whitbred, Richard Murcock, Widow Mackling, Thomas Argos, John Howes, Thomas Castlin and Widow Ralin’.¹⁴ It is unfortunate that we do not have poor law records or parish registers from this period, so we are unable to discover any further details about these people and whether they were also receiving help from either endowed charities or from the rates.

This change in what might be called the language of charity is one of the manifestations of the changing attitudes towards the ‘poorer sort’. This is a widespread phenomenon at this time, and is one aspect of what has been termed the ‘reformation of manners’ of the late 16th century.¹⁵ This is a subject to which we shall return.

Chantries, gilds and fraternities

In the medieval period Canewdon was particularly well-endowed with charities in the form of obits (prayers for the dead, from which endowments a proportion of the income went to the poor) and charity lands (‘poors lands’).¹⁶ An examination of the Chantry Certificates reveals that two endowments in Canewdon had been established for the provision of obits.¹⁷ The Chantry Certificates contain the results of the surveys carried out under Chantry Act of 1547 (1 Edw VI, c.14); the Certificates give the names of the chantries, fraternities and gilds, the original intent and purposes of the foundations, and the annual value of the properties and goods. Such endowments yielded considerable amounts of money to the poor. William Totham’s well-endowed obit yielded the large annual sum of 47s. 6d., while that established by Thomas Wryseley – a parcel of land called Whittings – yielded 9s. 2d. to the poor.¹⁸

In the parish church of Canewdon were the chapels of the two medieval gilds of St. Anne and St. Margaret. The properties endowing these gilds descended through the hands of trustees or feoffees, recorded in a very long series of original charity deeds and ‘feoffments’, and also in a ‘Register of

Table 1. Charitable Bequests in Canewdon, 1550-1750.

Date	1560-70s	1590s	1620s	1640s	1660s	1690s	1740s
Total no. of wills	12	9	9	8	4	4	5
Bequests to charity	6	5	5	2	1	0	0
Percentage	50	55	55	25	25	0	0

Table 2. Charitable bequests as a percentage of wills proved in south-east Essex, 1550-1750.

Date	1550s	1570s	1590s	1620s	1640s	1660s	1690s	1720s
%age	40	60	25	32	30	20	5	2

Deeds', containing, for example, transcripts of the deeds themselves, and details of the various enquiries regarding the endowed lands. These enable us to construct a fairly detailed picture of these properties and their administration in the pre- and post-Reformation periods

The endowed charity lands

The principal and oldest of the endowed charities of Canewdon were known as the Canewdon Pools Lands, which originated in a number of separate gifts, the origins of most of which had been lost by the mid 16th century. By about 1550 there were five principal properties involved, although one or two of them comprised many separate pieces of land. Each of the properties was administered by a separate group of Feoffees, but with considerable overlap in personnel.

Edwards

The earliest surviving deeds for this property date from the late 15th century, when it was granted by Thomas Gate to Robert Pakeman of Canewdon, and Agnes his wife, the daughter of Thomas. It was then described as a messuage and 17 acres of land and pasture and half an acre of meadow, all in Canewdon. By 1568 the property, which had been bequeathed to the poor 'since time immemorial',¹⁹ had passed to Thomas Bateman (or Batman) and his fellow feoffees who, in that year, transferred the property to new feoffees, headed by Robert, Lord Rich.

Finches

This property comprised a number of separate pieces of land, comprising a total of 40 acres, and took its name from one Agnes Finch, whose endowment must date to the 15th century at the latest. The original charity deeds²⁰ indicate that the property (or part of it) was originally in the hands of Thomas Werysle, clerk, who passed it to Agnes Godebold in 1434-5.²¹ However, we learn that this property had been in the hands of William Totham in 1423, the same William mentioned in the Chantry Certificate,²² but not to be confused with his endowed obit. By 1568 the property described as Finches comprised one messuage, one kitchen and six parcels of land, then in the occupation of Edward Camber. In that year it had been transferred from Thomas Batman the elder, mariner and surviving feoffee, to the new trustees, including Sir Robert Rich and Sir John Darcy.

Pogdens and Spillfrenches

The deeds for Pogdens and Spillfrenches survive from the beginning of the 15th century. Thomas Werisse of Canewdon (possibly the same person as Thomas Werysle) and others demised the property to Beatrice Andrewe of Canewdon. It consisted of seven acres in total, of which Spillfrenches

accounted for two. By 1493 the property had descended to William Cock, John Bonand and others, who in that year passed it on to John Fuller of Great Stambridge, Robert Bonand and Martyn Castlyn, among the new feoffees. In 1560 Robert Castlyn, the son and heir of Martyn, transferred Pogdens and Spillfrenches to Edward Tyrell, esquire, William Tyrell, esquire, John Barrett of Canewdon, yeoman, John Bonand, Anthony Grantham, Jasper Anderkyn and other feoffees.²³

Cuppolds Croft

This property was associated with Edwards and Finches by 1568, when it was simply described as a piece or parcel of land in the occupation of John Makyn. However, the earlier names of this property were Cuckinstole croft and Lampcroft, and it had been used to endow the supply of a lamp or light in the parish church. This would appear to have been the endowment for St. Anne's Gild in the parish church.

Podds or Capells

This property, situated in Southminster, on the north bank of the River Crouch, apparently derived from the 14th century, when one John Capell transferred to John Pode and Anne his wife, 'all those lands and tenements which did descend unto me as my inheritance.'²⁴ In 1536 Edward Tyrell of Beeches in Rawreth, esquire, and Thomas Stephens of Rochford, the surviving feoffees, transferred Podds, 'and of ancient tyme Capells', to John Peke of Canewdon, yeoman, John Cocke of Lambourne Hall in Canewdon, Thomas Gate, John Barrett, John Mitchell and other feoffees, 'the p[ro]fytts of the said lands to be bestowed in fynding of a ...priest for the Gylde in the churche of Canewdon.'²⁵ The gild in question would appear to have been St. Margaret's, and thus formed part of that gild's endowment.

Inquiries and inquisitions

The original terms of the endowments and, more particularly, the uses to which the endowments had been put, were occasionally made explicit in the original charity deeds. More information, however, is available from the results of various inquiries into First Fruits and Tenths, concealed lands, and charitable uses, the details of which were recorded in the official papers in Chancery and Exchequer, and copies of which were made for the local feoffees.²⁶ The earliest of these concerning Canewdon was that of 'First Fruits and Tenths',²⁷ held in 1544 to discover 'whether there now is or heretofore hath been any priest mayntayned in Canewdon...with or by reasone of any lands and other hereditaments put in feoffment.'²⁸ Evidence was taken from a number of the principal inhabitants in order to ascertain the 'voyce

concerning the same', employing a formalised system of 'interrogatories' and responses. John Cock, one of the witnesses,²⁹ stated that there were lands given by a widow called Agnes Finch, with a yearly value of 33s. 4d., the profits from which had been sometimes used for 'finding' a priest (i.e. a chantry priest), and sometimes in distributing herring and linen cloth to the poor in time of Lent, and also for repairing the parish church and mending the highways. William Kettell added that the profits from the lands were converted to other uses 'in deeds of charity' such as giving cloths for shirts and smocks to the poor, but 'when there came a poor priest they were contented to let him sing there by the space of a quarter of a year or more until such time as he hath otherwise provided for himself.' The churchwardens were discharged from payment, and we hear no more of the case.³⁰

Further insights into the uses to which the endowments had been put comes from evidence presented at the Inquisitions concerning 'concealed lands' held at Chelmsford in 1560, and at Brentwood in 1568.³¹ Following the dissolution of the monasteries and later the suppression of the chantries, their lands had passed into the hands of the Crown. However, some property and, more importantly, its profits, (and other possessions such as, in the case of St. Margaret's Gild, pewter dishes and silver spoons) were said to have been 'concealed' from the Crown, in other words, retained by the feoffees. From Mary's reign determined efforts were made at recovery of these.³² The principal enquiry (regarding Canewdon) was held at Brentwood on 11 November 1568, at which John Birde and others were accused of concealing the lands 'appointed to the Gild or fraternitie of St. Margaret' in Canewdon Church. These lands were described, in the original enquiry, as a toft and croft, and 4 acres of land, in the occupation of John Bird; another property of 20 acres, held by Edward Camber; 28 acres in the occupation of John Caperton, and a property called Lampcroft, in the occupation of John Markam, senior.³³ In his evidence, John Bird stated that these lands were held of a number of feoffees 'to have and hold to them...to this intent and use: the ysewes & p[ro]fytts of the said te[nement]s, tofts, croft [etc.], shall from tyme to tyme be converted and disposed towards the relief and sustenacion of the poor inhabitants being of honest name, fame & conversation.'³⁴ Two of the other tenants also stated that the profits from the lands they occupied (Finches and Edwards) were distributed to the poor of Canewdon 'of good name and fame'. Gilberte Gerard, attorney for the Queen, found that the lands had been concealed from the Crown; however, his decision was overturned the following year; as it was recorded in the Charity Register 'the same was reconed to the use of the pore...'³⁵

It appears from this evidence, that the lands which by the mid 16th century were known as Finches and Edwards, together with Lampcroft, otherwise known as Cuckingstole Croft or Cuppolds Croft, had originally endowed the gilds of St. Anne and St. Margaret in the parish church.³⁶ The close examination of the charity deeds for the 'poors lands' suggests that, in general terms, the administration of the gild properties by the feoffees (with some important changes in personnel to be discussed later) had continued into the post-Reformation period.

A similar situation has been identified at Nayland in Suffolk, except that here the original gild properties were repurchased by the feoffees in 1553.³⁷ At Beccles in Suffolk the feoffees had their origin in the gild feoffees; the transfer of property there is seen as an attempt to preserve the gild property.³⁸ In Canewdon, in defence of the feoffees' rights to retain the property, it was claimed that the Gild of St. Margaret had 'no being' for thirty years before the date of the Inquisition (1568). This may certainly have been the case; many gilds had ceased to function by the time they were dissolved in 1547.³⁹

A Register of Deeds had been compiled in 1571, by John Cocke (or Cock) 'at the special request of John Barrett the elder, one of the Inhabitants of the sayde paryshe for the more spedye and redyer fyndeinge owte of anye thinge conteyned in the same and pacefyinge of contencion variance or dowte wch maye hereafter happen growe or ryse.'⁴⁰ This was produced almost certainly as a result of all the enquiries and inquisitions of the previous decade or so. As we have already seen, in addition to the deeds and the register book, copies of the papers from the various inquisitions were also kept, and added to the Register up to the 18th century. In 1647 one Thomas Flitton delivered all 'writings' (also often called 'evidences') in one 'great black box a great linen bagge a small bagge with two registers concerning the poores lands ... [these] were put in a chest in the church with foure lockes & three keyes (there being one left) the minister taking one keye, the churchwardens one, Goodman Deane another and the other to be kept by the overseers.'⁴¹ However, long before this, the charity deeds had been the subject of another dispute.

The vicar, the deeds and the Statute of Charitable Uses

On 2 September 1601, at the Lion Inn in Kelvedon, an Inquisition was held 'for the Enquiring and reformacion of Decepts and breaches of Trustes touching lande and Tenements given to charitable uses.'⁴² The case being heard concerned the alleged theft of certain Canewdon charity deeds. It was stated that, in 1592, one William King, gent., aided

by Thomas Newman, the vicar of Canewdon, and Robert Parker, a smith, climbed into the church steeple, broke open the deed 'cheste with fyve lockes ...wherein the Evidences' were kept, and made away with the deeds relating to Pogdens and Spillfrenches. 'They have gotten the said Evidences into their own handes...to the great hurt of the poore people.'

The long and involved arguments concerning the true descent of these lands need not trouble us: suffice it to say that both parties – the churchwardens of the parish of Canewdon and Peter King (by this date his father, William King, was dead) and Thomas Newman, the vicar, attempted to prove legal title to the deeds and lands. The outcome seems to have been that King was allowed to retain the property but would have to pay arrears in rents amounting to some £24.⁴³ The claim by King that they did not know that the lands had been endowed for charitable uses was contradicted by the evidence from the Canewdon churchwardens who stated that: 'The messuage and lands called Pogdens and Spillfrenches have been for forty years and upwards commonly reputed and generally accompted to the poores land of Canewdon by the most of the inhabitants in and about Canewdon.'⁴⁴

However, no attempt appears to have been made to recover the lands for the poor, until another inquisition, held at Maldon on 23 February 1630.⁴⁵ The reason for the long delay in bringing any action to recover the lands was that Thomas Newman, against whom judgement must have been found, had persuaded the authorities not to publish the findings of the inquisition until after his death 'by reason of the great swaie that he did then beare in the said parish.'⁴⁶

And now we must return to William Totham's endowed obit. In his last will and testament, William Totham gave certain lands in Canewdon to endow an obit, one of the two recorded in the Chantry Certificates. The residue (which we have already seen amounted to the large sum of 47s. 6d.)



Plate 1 New Hall Farm, Canewdon, c.1909.

was to 'be employed upon ye poor & needy people Dwelling from time to time within ye said parish.'⁴⁷ The lands in question were Inglewoods, Chymers, le Park, Bush Crofte, Edwelcroft and Twelve Acres.⁴⁸ All was well until the suppression of the chantries, (in 1547) 'by reason wherof ye said late King [Edward VI] was Intituled to ye yearly rent of xiiijd. Coming & growing out of ye premises & not to any part or parcel of ye inheritance of ye said Lands & Tenements.'

A dispute thereafter arose between the vicar of Canewdon, John Howseman (vicar from 1554 to 1588) and John Mychell, concerning the title to the lands. John Mychell had purchased the properties in question, believing that all the lands had been taken into the King's hands (in 1547),⁴⁹ thus being private property, and he had expelled the feoffees, including John Bonham the elder and Robert Castlyn, who were bringing the case. The final decision (in Chancery) was that John Mychell was allowed to continue in occupation, but he had to pay annually to John Howseman and his successors as incumbents, the sum of £2.12s. 2d. for the poor. This sum, called the 'decreed money', was paid by the tenant of New Hall Farm, John Mychell's principal holding in Canewdon (Plate 1).⁵⁰ It was distributed to the poor just once a year by the vicar, frequently (but not invariably) to those who received no other form of relief. Although a full set of accounts for the 'decreed money' does not survive, it is apparent that the majority of the recipients for which accounting years do exist, were men, for whom this was their only recorded relief. For these people this payment was to supplement their income during a difficult period, or to help with, for example, a particular expense, such as buying shoes for the children or tools and materials for their trade. For others, the small payment from the 'decreed money' would have served as a welcome top-up or supplement to other sources of income.

Endowed charity funds in general appear to have been employed by parish officials to aid such marginally poor. In Poslingford (Suffolk) the marginally poor turned to endowed charities for the occasional aid, and very few individuals received money from more than one fund in any given year.⁵¹ Money from charitable endowments was used to fund aspects of poor relief not covered by statutory weekly doles.⁵²

Woodes Charity

In his will of 1687, after leaving sums of money to his family - £5 to his son, Stephen, and £10 each to his grandson and niece - Richard Woodes left the 'rest and residue' of his goods to be sold. The money raised was to be used in the purchase of land in Canewdon 'to the onely proper use and behoof of the poor and poorest inhabitants of the parish of

Canewdon for ever the rents from which parcel of land to be distributed every Lordes day yerely for ever in bread in the Chancell of the parish Church ... amongst the poore people parishioners & poore Inhabitants.⁵³ In 1715 we learn that the lands purchased comprised two tenements in Great Stambridge (not Canewdon, but the adjacent parish to the south), called Gloucesters and Crouch Acre, otherwise 'Bread House Land.' The property on this site is still called Bread House (Plate 2). Each year an account was rendered by the Overseer of the Poor.⁵⁴

The surviving accounts are headed 'An Accot of the Money Appropriated for Bread given to the Poor of Canewdon'. In 1730 the property realised a rent of £4.10s. and in the months April to July, 1733, a total of 21 bushels of 'meal at 3s. 6d. per bushell' was sent to Elizabeth Dawkins to 'Bake for the Poor'.⁵⁵ Unfortunately we are not told who received the bread each Sunday, or what criteria were employed for its distribution. Although the documents are silent on this issue, it is likely that Elizabeth Dawkins was one of the marginally poor herself, employed by the parish to provide her with a supplement to her other sources of income.

Administration of the Poores Lands

The endowed charities known as the Poores Lands were, as we have already seen, administered by a

group of trustees, the feoffees. The exact terms of the charitable uses to which the properties were to be put were sometimes made explicit in the deeds of transfer, known as feoffments.⁵⁶ In charity the feoffees, for example, were to 'distribute or suffer to be distributed the yerelie Revenewes & p[ro]fytts of ye p[re]misses among ye poorest & most indigent people of good name and fame that shall all be dwellinge and inhabiting within the said p[ar]ish of Canewdon for their better Reliefe.'⁵⁷ We discover, in addition, that the feoffees were not to let (i.e. lease) the properties for not more than 21 year terms, nor at less than the 'usual' rent, nor to any persons other than to some of the poorest of the inhabitants. A list in the Register of Deeds records the rents payable for the properties comprising the Candewdon Poores Lands, for about 1570:

'The towne of Canindon have these landes to the use of ther poore

A tenement called flinches rented at 8 pound a yeare by the feoffees

A tenement called edwardes at 7li yearly let by the said feoffees

A croft let to John Adams for 4s.6d. yearely

A tenement in Southminster called cupolds croft let for £6 by the yeare.'⁵⁸



Plate 2 Bread House, endowed to provide bread for the poor of Canewdon.

That the feoffees' duty was to ensure that a proper rent was paid is made clear in the records of another inquiry, held under the Court of Requests. Not all details have survived,⁵⁹ but it appears that one of the feoffees, John Lock, had conspired with John Caperton and Henry Sherlock (two of the tenants) to charge far less for Edwards and Finches (£4 and £3 respectively) than they were really worth. We can only guess at the motive behind this action, but presumably it was for financial gain. Lock 'and his confederates have lewdlie broken the inteniton and charitable purpose of the ffirst feoffees and Gyvers of the said lands'. The other principal feoffees asked for a 'reformation of ths error' with the true annual value to be charged in future.

So who were the feoffees of the Canewdon charities? They were usually referred to as (and called themselves) the 'chiefest inhabitants', such as John Barrett, yeoman of Canewdon Hall in the 1560s, who had ordered the compiling of the Register of Deeds. Barrett, with two other feoffees, Robert Caslen (or Castelen) and Thomas Bateman, were witnesses to the will of John Camber; James (probably Jasper) Anderkyn, another feoffee, was appointed one of the governors of Thomas Lees' children in his will of 1560. This practice of naming the chief inhabitants as witnesses, etc., was quite common, reinforcing both the social order and reciprocal nature of the arrangement.

It was the custom that there should be at least twelve feoffees to administer a particular charitable endowment; when all but two or three of them had died, it was the responsibility of the survivors to appoint a new set of feoffees. From the names recorded in the deeds of feoffment it would seem that the position of feoffee was regarded as a family responsibility, with several members of the same family serving together, or inheriting the position. Each of the properties, then, was administered in effect by an oligarchy of twelve men, connected by strong ties of kinship. Before about 1560 the majority of the Canewdon feoffees were drawn from established Canewdon families (or from families living within two or three miles: the Bonands, the Castelens, the Batmans and the Fullers and the Cocks.) The feoffees would have been known to, and recognised by, the parishioners and recipients of charitable funds as neighbours, albeit of the 'better sort'. They would have seen them, if nowhere else at least, taking their prominent places in the parish church on Sundays, where they, the poor, would have received their doles. They were 'neighbours'. These, all of them substantial property owners in the parish, were the same group of men who also served as parish officers. John Barrett's contemporary as churchwarden, for example, was John Harper, gent. At Nayland, in Suffolk, the feoffees were likewise drawn from the same group of people as the

churchwardens, the 'chief inhabitants', as they were also in Hadleigh in Suffolk.⁶⁰

But from the mid 16th century the feoffees included among their ranks several men of a higher social order. They included the lord of the manor of Canewdon, Thomas Armiger, gent., and his predecessor, Thomas Darcy, knight, and Edmund Tyrell, esquire, (feoffees of Finches), together with Edward Tyrell esq., and William Tyrell, esq., (feoffees of Pogdens and Spillfrenches). The most significant name among the new feoffees, however, was Robert, Lord Rich of Leez and Rochford, (feoffee of Edwards and Finches).⁶¹

While it must be accepted that the feoffees had always had the duty to select the strongest and most influential people available to maintain the charitable uses of the endowments in their trust, the appointment of this new rank of feoffees, all at the same time, is more than fortuitous. We must attempt to explain their appearance as feoffees at this particular time.

Following the Dissolution of the Monasteries (1536-9) and the suppression of the chantries and gilds, (1547), the majority of former monastic property in south-east Essex was acquired by Richard Lord Rich (and inherited by his son Robert and his heirs, the earls of Warwick). In this area alone, Rich held the manors of Ashingdon, Eastwood, Hadleigh, Hawkwell, Hockley, Leigh, Paglesham, Prittlewell, Rayleigh, Foulness, Rochford and Southchurch. At the appointment of the new sets of feoffees, we can surely see, on the one hand, the 'better sort' of Canewdon taking the opportunity to make alliances with the new power base in the area, and on the other hand, the likes of Rich and other local gentry forming their own alliances. The question remains why the Darcys had not appeared before as feoffees, since they had been lords of Canewdon since the time of Henry VII. The answer probably lies, again, in the appearance of Rich, just at the time when relationships within local communities were coming under strain and as new attitudes to the poor were taking hold. This trend for appointing feoffees from the highest social orders (in Canewdon) continued far into the 17th century. The position of feoffee could be used as a means by the local hierarchy of a parish to express status and control; it could be used in conflicts between the local gentry.⁶² Thus, to gain a feoffeeship could be seen as important opportunity, particularly for those whose rise to prominence was fairly recent, and who needed to gain a foothold in local networks of power. Only further research will show whether this was a widespread phenomenon. It does not seem to have been the case everywhere; at Nayland, in Suffolk, for example, there does not appear to have been any such change in the nature of the feoffees.⁶³ But, of course, that is not to deny

the importance of the status which feoffeeship endowed in the local community.

The puritan influence? - the language of charity

As we have already noted, in the later 16th century we begin to see a change in the terminology used at Canewdon in bequests to the poor. In mid century first appear bequests to poor neighbours and to the poor men's box (introduced into parish churches in 1536 in an attempt to reduce indiscriminate alms giving).⁶⁴ From the later 16th century distinctions begin to be made more explicit between the 'deserving' and 'undeserving' poor, which as we have seen is expressed both in wills and charity deeds of the time. (It is interesting to note that this use of discriminatory language is more prominent in Canewdon than in five other parishes examined in south-east Essex). Also at this time we find an ominous entry in the accounts of the feoffee, John Barratt, for 1568, reflecting the 'culture of discipline',⁶⁵ 'layed out for part of the charges for making of a kuckingstole'.⁶⁶ The language of neighbourliness was giving way to the language of discipline, and with it, it would seem, status, power and control.

The influence of the noble family of Rich appears to be central here. The fortunes of the family were established by the first lord Rich in the service of Henry VIII. At the dissolution of monasteries Richard Rich (who was Chancellor of the Court of Augmentations during the dissolution) purchased many, previously monastic, estates in south-east Essex. His descendants, with a centre at Rochford, were staunch supporters of the puritan cause, well into the 17th century. His son, the feoffee of Canewdon lands, and grandson Robert, later Earl of Warwick, presented the puritan Edmund Baker to Prittlewell (1569), Arthur Dent to South Shoebury (1580),⁶⁷ and William Negus to Leigh (1585). The influence of the Rich family (all local J.P.s) over the local clergy, or, put another way, the alliance of magistrates and clergy, helps to explain the manifestation of the reformation of manners in south-east Essex at this time, and which we see in the changes of language and attitudes to the poor, particularly in Canewdon, where Rich was closely involved as a feoffee. The widespread appearance of this attempt to impose discipline on local communities has been explained as a reaction to a combination of increasing population, especially among the poor, rising prices and recurrent epidemics.⁶⁸ As a magistrate, Rich would have been at the centre of the campaign against unlawful games, illicit sexual activity and alehouses, (for example the alehouse kept by John Collyn at Barling).⁶⁹ Only further research will illuminate the extent of the reformation of manners campaign in south-east Essex. We can see here also, perhaps, the reason for the naming of particular poor people in

the two wills already described, of the 1620s. Were these, in fact, not lists of poor neighbours, but rather lists of the 'deserving' poor?⁷⁰

Administration of charitable funds

We have seen that the feoffees were responsible for ensuring that the terms of the endowments were carried out, and that fair rents were paid. But to what extent were they involved with the practicalities of distributing rent monies from the charity lands to the poor? This seems to have been the responsibility, during the early modern period, of the Churchwardens and Overseers.⁷¹

A valuable clue regarding the division of responsibilities relating to the funds from the charitable endowments is provided once again in the Register of Deeds. In 1573 the feoffee John Barrett presented accounts of the monies collected in rents from the endowed charitable lands of the parish. The accounts were presented before 'John Harper gent sole churchwarden of the p[ar]lishe church of canewdon ...In the presents of Edward Bode gent, Jahn Hastler, John Castyleninhabitants of the same parish and others'. Some of the funds were used for administrative purposes, in drawing up new deeds of feoffment, copies of verdicts of the courts regarding Concealed Lands, and other legal fees, including 35s. for 'the Juries Dynner'.⁷² This account was followed by one described as 'money geven and distributed Amonge the poore people of the sayde p[ar]lishe Accordinge to the foundation therof.' It is not clear whether Barrett himself paid the monies directly to the poor, since, hidden away among all the figures is an entry stating 'And of iij li xs. Paid to the said John Harper [the churchwarden] to distribute amongst the poore of this p[ar]lishe'. The most likely explanation would appear to be that the feoffees, through John Barrett, dealt with the administration, and administrative costs, of the endowed lands, while the churchwarden distributed the monies to the poor.⁷³

Soon the churchwardens were joined by overseers in the distribution of charitable funds from the Poores Lands (and bequests). In 1623, for example, it was 'agreed that the overseers and churchwardens' shall 'receive the rents of the premises, which they shall yearly or oftener as need require by and with the consent and good liking of the ... feoffees and parishioners ... deliver, distribute and give' the rents to the poor.⁷⁴ To ensure that this was carried out according to the wishes of the original benefactors and the feoffees, the indenture from which these words are taken, was to be publicly read out in church, 'by one that hath the guifte of good and playne reading'. This, again, would have the effect of setting the poor people apart from the rest of the community, and especially from the feoffees and administrators of the charitable funds. It would

also ensure that one of the criteria by which the 'deserving' were judged, was attendance at church.

The interrelationship between the revenues from charitable endowments and that raised from the rates can be illustrated by an analysis of the accounts kept by the overseers of Canewdon. Although on many occasions the Overseers of the Poor did not always distinguish in their accounts between monies expended from rates and from rents of 'Poors Lands', there are enough occasions when they did so to make an examination of the types of relief paid out of the rents, and to whom, worthwhile. This also gives us an insight into the criteria which may have been used to determine which source of revenue should be employed in particular circumstances. It is much more difficult, of course, to gain an insight into the attitudes and expectations of the poor people themselves, but importantly there is some illumination on this aspect in the Canewdon parish records.

Canewdon provides a useful illustration of this interrelationship between informal and formal charity at the local level. This is an area which has been the subject of considerable research in recent years, for example in East Anglia.⁷⁵ As in many other parishes, the overseers of Canewdon were able to employ the funds from the endowed charities to reduce the burden on the rates, and a study of the accounts shows that a little under half of each year's expenditure on the poor was raised from the endowed lands.⁷⁶

The recipients of charity and the economy of the poor

By the end of the 17th century, when the series of overseers accounts for the parish of Canewdon begins, it is clear that the poor are divided for the purposes of relief into the able bodied, partial wage earners, (the marginally poor), and the impotent. It is also apparent that, as a general rule, the criteria employed by the overseers was based on this division when it came to the distribution of the rents from the 'Poors Lands'. Using the range of evidence available to us it is also possible to come to some conclusions relating to what we may call the economy of the poor. The types of payments made from the rents of the poors lands fall into a number of categories. There are payments made to the suppliers of goods and services to the poor; payments related to the administration of the poors lands and payments made directly to the poor themselves.

Payments were made to tradesmen for repairs to the houses of the poor. John Wallman, for example, was paid for repairing the house where Thomas Frog lived, and also for '6 hundred bricks for Crab's Chimbley.'⁷⁷ Among the most common payments were those for doctors' bills and for 'schooling'.

That the Poors Lands were demarcated on the ground is indicated by the 13s. 6d. which was paid to Goodman Packwood in 1712 for '27 Rods of Hedging for the Poors Land'. Other expenditure relating to the administration of the charity lands includes payments to the parish officials for attending various 'sessions', for inspecting the lands and for having new deeds drawn up and for reading the deeds. These latter are the sorts of areas which John Barrett, the feoffee, had accounted for in the 1570s. But there seems to have been a change in administrative procedure, probably brought about as a result of the Poor Law legislation of 1597-1601, with the parish officers, particularly the Overseers of the Poor, now taking over responsibility for these aspects.

Payments made directly to the poor include those for 'nursing' other paupers during sickness and for providing boarding. For example, the overseer John Jennings, in 1698, could use income from both rates and charitable lands for this purpose, when he gave to Mother Wiltshire 6s. for nursing Mother Copping for four weeks (from the rates), and again 2s. 6d. (from the poors lands) for nursing Mother Garwood for one week.⁷⁸ The reason is not hard to find. Mother Copping was a regular 'collectionner', and so received funds from the poor rates, while Mother Garwood was not, and so she received aid from the poors lands. There were many payments for the purchase of clothing such as waistcoats, breeches, aprons and shoes (some in preparation for apprenticeship), and for fuel. Others include cash for the repair of tools and purchase of materials, such as leather, or wool and wool combs (for Goody Butler), to enable the able poor to remain independent and to continue working, at a time when 'retirement' was not an option. We can also find some evidence for suggesting at what stage in the life cycle a recipient might become a 'collectionner'.

Thomas Barren, from 1711 to 1730 received the occasional payments from the Poors Lands in cash and food and to help him buy clothing.⁷⁹ In 1730-31 we find him, for the first time, receiving weekly collections from the rates. Goody Brannard was receiving funding from the Poors Lands from 1710 to 1740. She was paid for nursing two children, and for boarding Goody Stavely, while the latter herself was receiving regular weekly doles in 1710. By 1718 Goody Brannard was boarding Reynold's girl and receiving herself money from the poors lands when she was sick. In 1732 she was being paid by the parish for providing boarding for Elizabeth Brand. From 1740 Goody Brannard was receiving weekly collections together with small amounts from the 'decreed' money.⁸⁰ Unfortunately we cannot say with any confidence the reasons behind these changes, but it is almost certainly connected with advancing

age, and inability to support herself. There is an interesting case which does illustrate one of the many possible circumstances resulting in one of the 'occasional' or marginal poor of the parish becoming a weekly collectionner.

In 1721 Isaac Clackson had received payment out of the Poors Land for making up faggots for the poor and in 1735 he had received from the same source money for a waistcoat, and cash when he was ill; the following year we find him seriously ill with small pox and in St. Bartholomew's Hospital in London. From here he wrote (or someone wrote on his behalf) to the overseer of Canewdon, his home parish:

'I make bold to trouble you with this as being a parishioner to let you know that I am very bad with the small pox in Bartholomews hospitall and your petitioner humbly desires of you and the rest of the parishioners to consider my misfortune hoping that your goodness will be pleased to send me some thing to assist my self in this sad condtion for I have nothing to subsist withall and am very bad pray Sir I hope and the rest of the parishioners will be so kind as to Relieve me as soon as yhou can for I am afraid I shall be Intirely lost for want of som subsistence pray Give my Love to my wife and children from your petitioner.

Isaac Clackson.' ⁸¹

The overseer, Thomas Sly, sent him 2s. 6d. out of the Poors Lands. Isaac obviously recovered sufficiently to return home to Canewdon, and we find him in 1737 receiving payment, out of the Poors Lands rents, for a pair of hedging gloves and for helping to cart wood. Later, he was paid for threshing Widow Garwood's glean corn, but then his health deteriorated again (or he could not find work). In 1742 he received payments throughout the year from the Poors Lands, together with shoes, waistcoat and breeches. From 1736 to 1743 he was also receiving regular payments from the 'decreed' money. Eventually we find an entry in 1746-7 telling us that a coffin had been purchased for Isaac. Isaac seems never to have received monies from the poor rates. However, immediately following his death his widow was paid for providing board for Elizabeth Raymond's child, and had herself received 7s. to buy her daughter a gown. In 1747 she received 29 weeks' collection, all from the rates. ⁸²

This account reinforces our impression of the criteria used by the overseer. Income from the rents of the Poors Lands were used by the parish to support those of the 'poor' who could, with some form of employment - hedging, shoe repairs, spinning, casual labour for other poor, etc. - support themselves for much, or some, of the time. Isaac Clackson was supported in times of sickness, and

when he fell on hard times, by purchasing tools and equipment to keep him in work. He was occasionally employed by the parish to do errands for other parish poor.

On the other hand, income from the rates was expended principally in the form of weekly doles or 'pensions' for the aged and widows (especially with children), and for those, like Isaac's wife, who could no longer support themselves and had no one else to support them (although we must admit the possibility of kin or neighbourly support which went unrecorded), in other words, the 'impotent'. In addition, an analysis of all the expenditures to all the poor during the early modern period in Canewdon reveals that, although overseers administered monies from poor rates, income from poors lands, and decreed money, no one was in receipt of income from more than two of these three sources.

Although it is impossible to calculate the actual value of the relief given from these charitable sources, it is possible to estimate, with some degree of confidence, the stages in the life cycle when such payments were received and, hence, to describe what part they played in the economy of the poor. We have seen that payments were made to tradesmen for tools or equipment; houses were repaired; occasional payments made to the sick, or to individuals for caring for others. Payments were also made from these charitable funds for occasional jobs undertaken for the parish. These people could still work, and at a time when 'retirement' was not an option, men and women worked until they were physically unable any longer so to do. ⁸³ It seems that only when this stage had been reached, when the stage of self-help was passed, did the overseers of Canewdon begin to pay regular sums out of the poor rates. In general charitable sources were used to relieve short-term hardship, as a supplement to other income, and sometimes - and probably quite often - to reduce the burden on the rates, while the poor rates were restricted to those who had ceased to be economically self supporting.

Conclusion

Canewdon's poor seem to have been well provided for in the early modern period. There was a marked reduction in the number of charitable bequests, mainly in the form of doles, in the later 17th and 18th centuries, which has also been noted at, for example, Hadleigh in Suffolk. ⁸⁴ A number of reasons may explain this pattern, principally the move away from indiscriminate almsgiving and the introduction of parish poor rates. This is not to imply that there was a reduction in charitable funds available for the poor, since a large number of endowed (or permanent) charities existed in the

parish. The long history of these endowments has formed a major part of this essay.

Pre-Reformation gild properties and obits in Canewdon continued to be administered by groups of trustees known as feoffees into the post-Reformation period, although not without challenge under the Commissions for First Fruits and Tenths, Charitable Uses and Concealed Lands. However, it appears that in Canewdon the feoffees were largely successful in the defence of their charities, and managed to retain the endowed properties. In Nayland, Suffolk, the gild properties had to be repurchased by the feoffees in 1553 in order to maintain their hold on them.⁸⁵ At Beccles, also in Suffolk, the post-Reformation feoffees also had their origin in the gild feoffees.⁸⁶

The potential confusion and, no doubt, opportunism, which resulted from the suppression of the chantries in the late 1540s, is illustrated by the case of John Mychell and the lands originally endowing the obit of William Totham. The matter was only resolved by a compromise by which originated the 'decreed money' of Canewdon.

From the later 16th century, there was a marked change in the language used to describe the 'deserving' poor in Canewdon, recorded in both wills of the period and in charity documents. This changed attitude towards the poor has been linked to a later 16th century 'reformation of manners' campaign and a puritan influence in the parish.⁸⁷ This influence undoubtedly extended into the groups of feoffees which, as we have seen, changed in composition in the later 16th century. From that time, the close-knit kin groups of yeomen and rural gentry who had comprised the feoffees were superseded by members of noble families with interests in the area, including Robert, Lord Rich, who was of undoubted puritan persuasion. The position of feoffee was being used in the cementing of local political alliances rather than family ones. In Hadleigh, Sue Andrews has identified a similar change in attitude to the poor, which she relates to pressure of circumstances rather than to any puritan influence *per se*, although there was a strong puritan element in the town.⁸⁸

Although it is not possible to identify the recipients of the non-endowed bequests, except in those unusual circumstances where they are actually named by the testator, the accounts of the churchwardens and overseers of Canewdon allow us to investigate the probable criteria employed by those parish officers which governed their payments to the poor. It seems that it was the marginally poor, rather than the impotent, who were helped from the endowed charities, principally the income from the Poors Lands and the decreed money. This help could include direct payments, but often took the form of payments for work undertaken on behalf of the

parish, for nursing, for agricultural work, for providing boarding, as well as in the form of clothing and tools. Relief from the rates was restricted, principally, to the relief of the impotent. A similar situation has been identified at Poslingford by Lyn Botelho, where the marginally poor also turned to the endowed charities for occasional aid. It is also interesting to note that at Poslingford, as in Canewdon, very few individuals received money from more than one fund in any given year.⁸⁹ And as Tim Wales has commented in relation to Norfolk, money from charitable endowments was used to fund aspects of poor relief not covered by statutory weekly doles.⁹⁰

The parish authorities in Canewdon had a number of sources of charitable funds, which they used with considerable skill in the relief of the poor in the early modern period. The parish accounts, in particular, illustrate the vital part that these sources played in the varied economy of the poor in this rural parish.

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Notes

¹This paper is based on research for the author's M.A. degree at the University of Essex, *Aspects of Poverty in South East Essex in the Early Modern Period, 1550-1750*, 1998. I would like to thank Dr Kevin Schurer, of the History Department, University of Essex, for his comments on an earlier draft, and Dr Christopher Thornton for his comments on this article.

²W.K. Jordan, *Philanthropy in England, 1480-1660*, London, 1959.

³For example, O. Hufton, *The Poor of Eighteenth Century France, 1750-1789*, Oxford, 1974.

⁴For example, the work of Sandra Cavallo on Turin. See her 'The motivations of Benefactors – an overview of approaches to the study of charity' in J. Barry and C. Jones, *Medicine and Charity before the Welfare State*, London, 1991. For the later medieval period see J. Henderson, *Piety and Charity in late Medieval Florence*, Oxford, 1994.

⁵See later references in this article.

⁶C. Jones, 'Some recent trends in the history of charity' in Daunt, M. ed. *Charity, Self-interest and Welfare in the English Past*, London, 1996, pp. 51-63.

⁷Based on the Hearth Tax return of 1671, ERO Q/RTh 51.

⁸The decades selected were 1550s/1560s, 1570s, 1590s, 1620s, 1640s, 1660s, 1690s, 1720s, 1740s. The decades were chosen at roughly 20 to 30 year intervals, and with the intention of including some, at least, during which there were 'crisis' years of, for example, dearth.

⁹ERO D/ABW4/336, 1574, will of John Barrett.

¹⁰See, for example, Felicity Heal, *Hospitality in Early Modern England*, Oxford, 1990, pp. 392-3.

¹¹ERO D/AER 17/90, will of William Ware, yeoman, 1592.

¹²ERO D/AEW 17/182, will of Richard Porter, yeoman, 1623.

¹³ERO D/AEW 17/85, will of Robert Stratton, 1622.

¹⁴ERO D/AEW 19/35, will of John Davy, 1628.

¹⁵See K. Wrightson and D. Levine, *Poverty and Piety in an English Village: Terling, 1525-1700*, Oxford, 1995 ed.

¹⁶For a useful summary of charity before the Reformation see G. Jones, *History of the Law of Charity, 1532 – 1827*, Cambridge, 1969, chap 1. For other Essex gilds, see G. Martin, 'Medieval Essex Gilds' in K. Neale (ed.) *Essex Heritage, Essays presented to Sir William Addison*, 1992, pp. 31-46, and R.C. Fowler, 'The religious gilds of Essex' in *Transactions of the Essex Archaeological Society*, N.S. 12, 1913, 280-90.

¹⁷Obits were endowments for the reciting of prayers for the soul of the founder, part of the incomes from which were usually allotted to church repairs or to the poor.

¹⁸PRO E301/30, 1; E301/19, 108.

¹⁹Charity Commissioners' Report, 1837.

²⁰ERO D/P 219/25/1-53.

²¹ERO D/P 219/25/5.

²²Although there does not appear to be any connection between this property and Totham's endowed bequest.

²³ERO D/P 219/25/53, p. 6.

²⁴*ibid.* p. 42, (1366).

²⁵ERO D/P 219/25/53, under 21 Henry VIII.

²⁶Much of the following information is taken from the copies made for the feoffees, and recorded in the Register of Deeds. Attempts have been made to trace the original records in the Public Record Office, with some success, except for the original depositions, or witness statements.

²⁷First Fruits and Tenths, the profits of a benefice during the first year of an incumbent, together with one tenth of the value of the benefice, had been confiscated by Henry VIII in 1523; the court to administer the revenue was established in 1541, and abolished in 1553.

²⁸ERO D/P 219/25/53, Canewdon Register of Deeds. Other information relating to this enquiry comes from ERO D/P 219/25/55. The original accounts in the records of the Exchequer are to be found at PRO E336/4 fol.5.

²⁹And in 1568 one of the Feoffees of Finches.

³⁰This is an example of the distinction established between illegitimate or 'superstitious' practices and the legitimate use of endowments. Charitable support for the poor was legitimate, while the continued use of funds for the 'finding of a priest' was not.

³¹PRO E302/1/27, Enquiry held at Brentwood, 11 November, 10 Elizabeth.

³²For a discussion on this aspect during the reign of Mary, see R.H. Pogson, 'Revival and Reform in Mary Tudor's Church: A Question of Money', in C. Haigh, *op. cit.*, and H.H. Lockwood, 'Those Greedy Hunters after Concealed Lands' in K. Neale, ed. *An Essex Tribute*, London, 1987, pp 153-170.

³³PRO E302/1/27.

³⁴ERO D/P 219/25/53, Register of Charity Deeds. A copy of the original deposition made for the feoffees.

³⁵In 1570: ERO D/P 219/25/51, p. 91.

³⁶Attempts to locate the original depositions in the records of the Exchequer at the Public Record Office have been unsuccessful. Therefore, this information is taken from the copies made for the feoffees of the Canewdon lands, copied into the Register of Deeds, ERO D/P 215/25/53, pp 24 ff.

³⁷Rosemary Knox, 'The Origin and Development of the Nayland Feoffees' in *Proceedings of the Suffolk Institute of Archaeology*, 37, 1991, part 3, pp. 225-237.

³⁸*Ibid.* p. 231.

³⁹Peter Northeast, 'Parish Gilds' in D. Dymond and E. Martin eds., *An Historical Atlas of Suffolk*, Ipswich 1999 (3rd ed.) p. 74.

⁴⁰ERO D/P 219/25/51. Register Booke of all deeds charters copye of Records. This (the original) version was almost entirely in Latin. An English translation was also produced, and is catalogued as ERO D/P 219/25/53.

⁴¹ERO D/P 219/25/21. Although the Register of Deeds was compiled in 1571, there were many additions, up to end of the 17th century.

⁴²PRO C93/1/12, 2 September, 43 Elizabeth. Contemporary copies made for the Canewdon feoffees at ERO D/P 219/25/56, no. 93. This inquisition was held under the statute 39 Elizabeth I c.6. See G. Jones, *The History of the Law of Charity*, esp. pp. 22-4.

⁴³It is not entirely clear from the documentary evidence, but Peter King appears as owner in a rental of the manor of Canewdon Hall of about 1598. ERO D/DBr M27.

⁴⁴ERO D/P 219/25/58.

⁴⁵PRO C93/12/14, 24 February, 6 Charles I.

⁴⁶ERO D/P 219/25/58.

⁴⁷ERO D/P 219/25/53, Register of Charity Deeds.

⁴⁸PRO E301/19 no. 108.

⁴⁹G. Jones, *op. cit.* p. 13

⁵⁰The Rental of 1588 records that William Deathe and his wife, Mary, were then owners of New Hall, Chimneys, Goldwell, le Park, and Inglewoods, late of William Totham. ERO D/DBr M27. The present owner of New Hall, Mr Sam Stacey, tells me that he still pays the equivalent sum to the Charity Commissioners. I am grateful to him for this information, and for allowing me to reproduce an old photograph of New Hall.

⁵¹Botelho, 'Aged and Impotent: parish relief of the aged poor in early modern Suffolk' in M. Daunton (ed) *Charity, self-interest and welfare in the English past*, London, 1996, p. 97.

⁵²See also Tim Wales, 'The Role of Charities in Seventeenth Century Norfolk.' Unpublished paper, 1979, p. 26.

⁵³ERO D/P 219/25/64. Although this is quite late for a 'bread' charity, it is by no means the latest. Summers Charity, for example, in Baintree, is dated 1698. See H. Cunningham, *An Account of the Charities and Charitable Benefactions of Baintree*, 1904, p. 29.

⁵⁴ERO D/P 219/25/37, and TS 141, Charity Commissioners Report.

⁵⁵ERO D/P 219/12/11.

⁵⁶ERO D/P 219/25/53. Quoted from the 1568 feoffment fully recorded in the Register of Deeds.

⁵⁷The terminology used to describe the deserving poor at this time is not unique to Canewdon. It has a very long history, and the reader is directed to general works on the history of Poor Law legislation and social histories of the early modern period. See, for example, Robert Jutte, *Poverty and deviance in Early Modern Europe*, Cambridge, 1994. Of particular interest to us, here, is the use of this terminology in charity deeds, and the influence of the feoffees.

⁵⁸ERO D/P 219/25/58, dated 1630.

⁵⁹In 1591: ERO D/P 219/25/62.

⁶⁰Knox, op cit. pp. 227, 231. See also Keith Wrightson, "‘Sorts of People’ in Tudor and Stuart England" in J. Barry and C. Brooks, (eds) *The Middling Sort of People*, Basingstoke, 1994, pp. 28-51, esp. at p. 40.

⁶¹A century later, in 1688 a descendant of this Sir Robert, another Sir Robert Rich is recorded as a feoffee of the Beccles Town Land. Nesta Evans, 'The Holy Ghost Gild and the Beccles Town Land Feoffees in the Sixteenth and Seventeenth Centuries', in *Proceedings of the Suffolk Institute of Archaeology and History*, 1992, vol XXXVII, pp 31-44, at p. 34.

⁶²See, for example, Tim Wales, 'The Role of Charities in Seventeenth Century Norfolk'. Unpublished paper, 1979, deposited at the Cambridge Group. pp. 38-9.

⁶³Ibid, p. 233.

⁶⁴Paul Slack, *The English Poor Law, 1531-1782*, Cambridge, 1995, p. 9.

⁶⁵A term used by William Hunt, in preference to 'reformation of manners'. W. Hunt, *The Puritan Moment. The Coming of Revolution in an English County*, Harvard, 1983, p. 79.

⁶⁶ERO D/P 215/25/53 Canewdon Register of Deeds.

⁶⁷Author of *A Plain Man's Pathway to Heaven*, London, 1610.

⁶⁸See, for example, Martin Ingram, 'Reformation of Manners in Early Modern England' in P. Griffiths, A. Fox and S. Hindle, (eds) *The Experience of Authority in Early Modern England*, pp. 47-88, esp. p. 56, 65, 74, 77.

⁶⁹Quoted in W. Hunt, op. cit. p. 81.

⁷⁰Tim Wales sees poor relief in the same light; it was 'mediated through social attitudes and relations in the village – attitudes to charity or to behaviour fitting for the poor.' In 'Poverty, Poor Relief and the Life Cycle', in R.M. Smith ed. *Land, Kinship and Life Cycle*, Cambridge, 1984 p. 353.

⁷¹See J. Innes, 'The mixed economy of welfare in early modern England', in M. Dauntton, *Charity, Self-interest and Welfare in the English Past*, London, 1996, in which she suggests that these parish officials might also be *ex officio* trustees of charitable funds.

⁷²ERO D/P 215/25/53, p.57 ff.

⁷³Steve Hindle comes to the same conclusion for Frampton in the 1590s. See Hindle, 'Power, Poor Relief and Social Relations in Holland Fen', in *The Historical Journal*, 41, 1998, pp. 67-96.

⁷⁴ERO D/P 219/25/51.

⁷⁵See, for example, the work of Lyn Botelho in Suffolk and T. Wales in Norfolk. See also Marjorie McIntosh, 'Networks of care in Elizabethan English Towns: The

example of Hadleigh, Suffolk' in P. Horden and R. Smith eds., *The Locus of Care. Families, communities, institutions and the provision of welfare since antiquity*, London 1998, pp. 71-89.

⁷⁶Overseers accounts survive from the late 17th century onwards, and it is possible to say that this rough proportion remained the same throughout the period, although, of course, the actual amounts increased throughout the first half of the 18th century. For a comparison, see Hindle, *op. cit.* p. 83.

⁷⁷ERO D/P 219/12/2.

⁷⁸ERO D/P 219/12/1.

⁷⁹Overseers accounts, ERO D/P 219/12/4.

⁸⁰ERO 219/12/4, 6, 10, 14.

⁸¹ERO D/P 219/12/12.

⁸²ERO D/P 219/12/15.

⁸³Susannah Ottaway, 'Providing for the elderly in eighteenth century England' in *Continuity and Change*, 13 (3) 1998, p. 392.

⁸⁴Sue Andrews, *The charitable response to poverty during the late medieval and early modern period in the local context of Hadleigh, Suffolk*, unpub. MA dissertation, University of Essex, 2000, pp. 31-33, tables 2.4 and 2.5, and p. 46.

⁸⁵Rosemary Knox, 'The origin and development of the Nayland Feoffees' in *Proceedings of the Suffolk Institute of Archaeology* 37,1991, part 3, pp. 225-237.

⁸⁶Ibid. p. 231.

⁸⁷See, for example, the comments by Marjorie McIntosh in 'Local responses to the poor in late medieval and Tudor England', in *Continuity and Change*, 3, 1988, 209-245, at p. 212.

⁸⁸Sue Andrews, *op. cit.* p. 94

⁸⁹Lyn Botelho, 'Aged and Impotent: parish relief of the aged poor in early modern Suffolk' in M. Dauntton ed., *Charity, self-interest and welfare in the English past*, London,1996, p. 97.

⁹⁰Tim Wales, 'The role of charities in seventeenth century Norfolk.' Unpublished paper, 1979, p. 26.

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Combination and control. Cultural politics in the management of friendly societies in 19th-century Essex and Suffolk

by D. J. Appleby

The records concerning 19th-century friendly societies contain such an immense volume of detailed and often intimate information that the unsuspecting researcher could easily be overwhelmed by the sheer weight of historical material. This is particularly true of Essex, where there were at least 353 societies with almost 15,000 members by 1803.¹ These local friendly societies had a far-reaching cultural and social significance in the county and its hinterlands over the course of the following century. The precise nature of the influence exerted by these institutions revolves around the question as to whether they were independent combinations of working men formed for mutual financial security and personal betterment, or whether they were simply vehicles for the clergy and landowners to exercise closer social control over their localities. This article seeks to provide a solution to this historical problem by investigating the identity and motivation of the people who created and managed them.

Friendly societies appear in the index of practically every history of working-class society, but, apart from Gosden's *Friendly Societies in England*, the entries are all too often little more than footnotes to the struggles of more obviously heroic working-class activists.² As a result, the current historiography of friendly societies is rather fragmented. E. P. Thompson has observed that, unlike Radicalism or Chartism, early 19th-century friendly societies had 'almost no middle-class membership'.³ This enables him to credit these societies with fostering the growth of 'independent working-class culture and institutions', and by extension the growth of working-class consciousness.⁴ At first glance, Thompson's findings might seem at odds with Arthur Brown's observations that working men in Essex seem to have been in a minority within friendly societies affiliated to national orders such as the Manchester Unity of Odd Fellows.⁵ Where the social historian might expect improvements in the standard of living to reduce dependency on such bodies, Dr. Brown observes instead that these improvements were 'reflected in the rapid increase in friendly society membership'.⁶ Two points, therefore, require

clarification: firstly, it is necessary to look more closely at the demography of membership and the social status of the individuals involved; secondly, it should be remembered that throughout *The Making of the English Working Class*, Thompson's writing implies that a distinction should be made between 'benefit' and 'friendly' societies. Although in the 19th-century the term 'friendly society' was frequently used as a generic for many types of self-help organisations, it is important to differentiate between 'benefit' societies which, at least ostensibly, existed primarily to protect their members against want and 'friendly' societies (increasingly affiliated to national orders) whose function was manifestly less utilitarian. With due apology to the reader, the conventional term 'friendly society' is nevertheless used in this article, as alternative descriptions such as 'self-help society' do not necessarily succeed in clarifying their role or function. However, as one surveys the course of the 19th century it becomes increasingly evident that 'benefit' societies can usually be defined as bodies of working men managed by middle-class landowners and professionals underwritten by gentrified patrons, whereas genuine 'friendly' societies usually appear to be those run and financed by their own membership.

Published research dealing specifically with local friendly societies has hitherto been infrequent, represented principally by John Appleby's surveys of Odd Fellows in Essex and Suffolk, Pat Lewis' study of a selection of societies in north-east Essex and a Jubilee Souvenir published by the Colchester District of the Ancient Order of Foresters in 1936.⁷ Investigation into the actual machinery of control appears to have been restricted to Laura Swash's passing comments on the relationship between the managers and recipients of relief in *Horrid Lights*.⁸ This exploration of the cultural politics of control in Essex and Suffolk societies, particularly within the affiliated orders, would thus appear to be entering largely uncharted territory. It will be argued that, despite frequent opposition and occasionally vitriolic criticism by gentry and clergy, the political authorities and their allies in the printed media came to accept that the affiliated friendly societies

did not challenge, but rather consolidated the existing social order. The struggle for control of the hearts, minds and bodies of recruits thus tended to be internal, but, nevertheless, the 'argument of images' that this struggle produced throws up its own complex set of historical problems.⁹ In order to resolve these questions it is necessary to begin with the political and cultural environment in which these societies functioned.

During the 18th century there was a sporadic and unregulated growth of 'tavern' clubs, whose ancestors were often 17th-century associations such as those formed by weavers in Colchester and Coggeshall.¹⁰ Some of these organisations retained their 'operative' character, whilst others began to attract 'speculative' members unconnected with the original trades. Many of these latter organisations evolved through ritualistic traditions of mutuality into Masonic or quasi-Masonic lodges. It should be made clear, however, that Freemasonry is an entirely separate issue, and lies outside the remit of this present article.

Rose's Act of 1793, the first serious attempt to regulate the operation of friendly societies, initiated a programme of legislation that would culminate in the Friendly Societies Act of 1875. In the aftermath of the French Revolution, the authorities were suspicious of 'combinations' of working men; friendly societies thus found themselves snared along with trade unions, republicans and nationalists by the provisions of the Combination Acts of 1799-1800.¹¹ After the repeal of these Acts in 1824, succeeding governments sought, in their own words, to encourage and promote self-help. In the course of this legislation, various types of self-help groups were identified, with the majority being rural benefit societies and friendly societies affiliated to national orders. Acceptance by the establishment was, predictably, on the terms and in the interests of the propertied classes, but it cannot be denied there was often a genuine philanthropic motivation behind the politics.

The textile industry of north Essex and south Suffolk had withered during the 18th century, leaving agriculture as the predominant sector of the regional economy. By 1793 rural landowners were the unchallenged rulers of the area, supported by the clergy (to whom they were often related by blood or marriage) and the majority of farmers. The regional establishment was thus 'overwhelmingly Tory and Anglican'.¹² As industrialists and retailers, even in towns as large as Colchester, depended largely upon farmers' patronage, the urban classes were thus almost as subservient to the landed interest as their country cousins.

Agricultural depression after 1815 led to falling wages, widespread unemployment and a steep rise in the poor rate. In addition to the cost of supporting

the destitute, many respectable ratepayers believed that the old system of poor relief encouraged idleness and vice. The Poor Law Amendment Act of 1834 supplemented the insecurity of unemployment and the stigma of charitable relief with the threat of institutionalised servitude in the parish union workhouse. Fear of the workhouse was intensified by the knowledge that inmates' bodies were frequently handed over to medical schools after death.¹³ It is surely significant, therefore, that many early friendly societies emphasised their ability to provide for a decent Christian burial, and some clubs actually existed solely for this purpose. Such societies offered economically vulnerable workers not only a degree of protection against want, but also a measure of control over their own bodies. The idea of self-help was equally attractive to landowners as it promised to reduce the burden of the poor rate whilst helping labourers to attain self-respect and security for their families. Books such as *Advice to Agricultural Labourers and Others on Benefit Societies* propagated this philosophy:

He, who lives by his own industry, and who provides an honest subsistence for himself and family by his own exertions, has a right to consider himself, and really is, as independent as any other person.¹⁴

Whether even the most deferential labourer believed such piety is arguable; 'freedom' as envisaged by the countryside's rulers was usually confined to freedom from claiming poor relief. Far from being considered fellow citizens, most rural labourers were looked upon as semi-educated brutes and treated accordingly. The fraternal message of Isaiah 41: 6, used repeatedly by many autonomous societies, was 'they helped every one his neighbour; and every one said to his brother, be of good courage'.¹⁵ By contrast, the middle-class author of *Advice to Agricultural Labourers* preferred the stark doctrine of II Thessalonians, 'if any man will not work, neither shall he eat'.¹⁶

Up to 1800, friendly societies had been a feature of town rather than country life. As the years of rural depression accumulated, however, more and more village clubs began to emerge.¹⁷ Many of these convivial tavern gatherings had a primitive benevolent system, usually a box into which communal funds were deposited against times of hardship. Such 'box clubs' were open to abuse. Dishonest or incompetent treasurers could often cause considerable financial problems in a community. Such disruptions attracted the attention of the local elite, particularly the clergy. No doubt mindful that several nonconformist benefit societies were now operating successfully in north Essex, and supposing unsupervised labourers inherently prone to debauchery and profligacy, many Anglican parsons made it their business to

involve themselves in the labourers' clubs in their parish.¹⁸ In 1820 some Ashdon labourers approached the newly-installed parson, the Reverend Benjamin Chapman, for a donation to their benefit club. Chapman was interested, but contributed rather more than the members had bargained for:

On subsequently looking at their rules, I found them badly drawn up, and as badly observed. I endeavoured therefore to prevail on them to have them altered, but at that time without any success.¹⁹

Chapman proved subtle and persistent. He offered a further 'handsome donation' and enlisted seven wealthy honorary members. By 1824, when he wrote to the Clerk of the Peace regarding registration of the society, he had acquired sufficient political influence to 'summon' the members to meetings, and planned to abolish what he termed the two yearly 'abuses' - feasts regularly held by the members and financed out of club proceeds.²⁰ Legal difficulties eventually combined with the members' instinctive suspicion of magistrates to loosen Chapman's grip, although he seems to have persevered in his parish politics for some time. Such paternalism became ever more common as the Anglican clergy warmed to their task.

The clergy now took the lead in establishing local benefit societies, such as the Reverend W. G. Burgess who founded the Hundred of Tendring Provident Association. The founders used their contacts among local landowners, farmers and professionals to recruit them as 'honorary members', in the process hoping to create an efficient and closely-knit management structure. Soon after its inception until at least 1877, the Aldham and United Parishes Insurance Society admitted as honorary members those who donated a lump sum of £10, or at least 10s. per year to the Society's management fund.²¹

Labourers were recruited into a contributory financial plan, and listed in the annual reports as 'ordinary members'. Patrons were eagerly sought by benefit societies, particularly local Members of Parliament, and leading Essex politicians such as Charles Grey Round, J. G. Rebow, Sir George Smythe and P. O. Papillion were persuaded to lend their names to several societies. The names of other leading landowners appear at the top of annual reports with monotonous frequency. Apart from donations, the main function of these non-executive honorary members was to encourage the patronage of more of their own kind.²²

Invariably in such societies the executive directors were chosen exclusively from the ranks of the honorary members. Although patrons could exert considerable influence, and ordinary members might occasionally protest, ultimately it was the

board of directors who controlled their benefit society. The list of honorary members in the Aldham & United Parishes Insurance Society (which was the largest and most influential society of its type in rural north Essex) shows a mixture of clergy, farmers and professionals. The clergy, who constituted roughly 25 per cent of the honorary members, consistently provided over 50 per cent of the AUP's directors.²³ Prominent amongst these clerics was the Reverend James Round, who was active in several benefit societies throughout Essex. Among the other directors, financial and medical professionals appear to have been disproportionately over-represented. Farmers appear to have been under-represented on the board, suggesting that the desire to manage society matters was not perhaps their usual motive for participation.²⁴

Every list of honorary members so far studied indicates both Liberal and Conservative participation.²⁵ The fact that Tories were in a clear majority among the honorary members of almost every society is surely a reflection of the local political landscape, rather than an indication of greater party-political commitment to the benefit system. Although separated by issues such as Free Trade and Reform, Liberal and Conservative landowners had much in common. Their published attitudes to working-class activists were often harsh; attempts to establish a trade union in Colchester in 1834 drew equal amounts of abuse and derision from the Conservative *Essex Standard* and the *Liberal Colchester Gazette*.²⁶ The exploitation of societies for political gain may well have occurred; the Conservatives' distribution of blankets and coal to the poor during the 1868 election appears to have been expedited through the auspices of the Colchester Provident Labourers' Society.²⁷ By a quirk of the British electoral system labourers could occasionally be enfranchised, and it was often found efficacious to solicit their votes by a mixture of bribe and coercion.²⁸

If the moral attitudes of the ruling cadre had far-reaching implications in the admittance and supervision of the ordinary labouring members, stark economic considerations also played a part; many of the poorest agricultural families most often in need of financial relief were precluded from joining country benefit societies because of the cost of membership. In the 1839 revision of the AUP's rules, ordinary members who kept their contributions up to date could expect to receive benefits of 7s. per week sick pay (maximum 52 weeks), 5s. per week pension after 65, £2 towards funeral expenses and a £3 lump sum for their spouse and children after their death. For this male members were required to contribute 1s. 9½d. monthly at age 18, rising to 10s. 2½d. at age 50.

Female participants in the scheme were required to pay 2s. 2½d. at age 18, rising to 12s. 7d. at age 50 in order to receive the same level of benefits. There were very strict rules regarding non-payment of contributions, leading to expulsion and loss of all claim on the Society for four consecutive missed payments. Contributions were expected each month regardless of whether the member was working or sick.²⁹ It can be seen from earlier AUP rulebooks, and those of other societies, that the contributions of the ordinary members were by no means inconsequential.

Other labourers could be excluded for moral, cultural or political reasons; the 1854 rule book of the Tendring Hundred Sickness Club reminded members that

Good character, and Moral Conduct, form a material feature in the election of Members into the Club, and of their subsequent continuance in it.³⁰

With only 140 labouring members spread over twenty-three parishes in 1854, such moral or political discrimination by the Tendring Hundred Sickness Club was perhaps of limited significance. The same could not be said of a powerful society such as the Aldham & United Parishes Insurance Society; although it covered approximately the same amount of parishes in the neighbouring Lexden Hundred, the AUP had 1,023 ordinary members by 1843, and 1,274 by 1853. The size and efficiency of such societies offered opportunities for social and economic control that appear to have been underestimated by historians, as have the often considerable amounts of money wielded by their management funds.³¹ By 1849 at least forty-nine farmers were honorary members of the AUP. Each farmer would receive in the annual report a useful list of his peers in the farming community (offering opportunities for networking and cartels) as well as a list of ordinary members that was, quite literally, a register of over 1,000 'approved' labourers. Not only had these workers been vetted for 'moral' reliability, but, because of their often considerable personal financial commitment to the AUP's benefit scheme (which carried with it the constant fear of losing future benefits and their accrued contributions if expelled), they were arguably even more dependent on the goodwill of local honorary members of benefit societies, such as the local farmers, than poorer labourers who had no such investment to protect and only required sufficient goodwill to receive poor relief. Ordinary members of benefit societies such as the AUP may consequently have been far more compliant than most labourers in the introduction and use of new agricultural systems and machinery. In return, as it is logical to suppose that the AUP would always seek to maintain the size of its ordinary membership and to

avoid disruptions to its monthly income from interrupted financial contributions, it is also logical to suppose that AUP ordinary members would receive preferential treatment when work was scarce in their parish, and even be referred to other parishes if no paid employment could be found for them locally. A further advantage of the annual register was that it listed labourers by parish, allowing an AUP farmer to take on AUP labourers from other parishes with reasonable confidence in the demeanour of men that he had never previously met. Such a scenario would explain the growing use of machines and outside labour in the parishes under AUP influence. Anonymous threatening letters from disgruntled individuals such as that received by an Aldham farmer in 1844 might thus be seen from a new perspective:

We hear that you have had other parish men to do your harvest and that there is some wanting for work in your own parish... if you set them into your barn they will thrash but one day [before] you shall have a light.³²

The ability of the country benefit societies to exert social and economic control over so many labouring families, and to discriminate against non-members, can hardly have failed to be exploited by many farmers. It cannot be discounted as a motive for their becoming honorary members of the benefit societies in the first place. Further research might reveal such socio-economic manipulation to be a contributory factor in the rash of incendiarism in Essex and Suffolk in 1843 and 1844. Nevertheless, for the labouring member of a society such as the AUP, lack of independence had to be laid against enhanced security of employment, and even political protection. The AUP-sponsored *Advice to Agricultural Labourers* was less than subtle in implying that ordinary members would be supported in local disputes:

...the Overseers know who are, and who are not, members of a society... if parishes should take an unfair advantage of those persons, who belong to the new societies, if the members apply to the Honorary Subscribers, they are more likely to have their grievances remedied...³³

Proponents of patronised benefit societies were always sensitive to competition from the surviving tavern-based societies, and never passed up a chance to attack them. *Advice to Agricultural Labourers* warned its readers,

...you will not find them quite so ready and willing to relieve your wants, and assist you through your misfortunes, as they are to establish Benefit Societies at Ale-houses...³⁴

Another charge frequently levelled at the independent societies by the land-owning classes was that they were financially unsound. Labourers

were advised by their employers to join patronised societies run by experienced professionals. Certainly, each new Act relating to friendly and benefit societies appeared to favour those who could afford legal and financial advice. The Act of 1819 required contribution tables to be approved by a qualified actuary, and that of 1829 further specified that a barrister should certify the society rules. However, some professionals such as Mr Ambrose in the Tendring Hundred and Issac Diss of Colchester made a good living as freelance consultants to the independent societies.³⁵

According to Pat Lewis, autonomous village societies were populated by independent rural artisans, ‘who tended to be radical and non-conformist’.³⁶ Some patronised benefit societies existed in the region’s towns, with many of the same patrons as the rural organisations. Here, however, situated among heavy concentrations of better-off artisans, such societies enjoyed noticeably less influence. A Suffolk observer reported thirty-five benefit or friendly societies in Ipswich in 1850, most of which appear to have been independent of the patronage of their social superiors.³⁷ Very soon after the beginning of the 19th century, there began to emerge a collection of artisans’ societies with more stylised, quasi-Masonic traits. As these began to unite and affiliate with national orders, the smaller urban societies were swallowed up or squeezed out.

The best known of these new affiliated orders were the Odd Fellows, although several early societies and competing national associations used this generic term. They were from the first very public activists. Richard Barnes of Harwich noted in his diary late in 1809 that he had seen a procession in Colchester:

I saw an Odd Fellows funeral. He was carried to All Saints Church, where there were prayers. I saw him carried there and I went into the church.³⁸

Barnes’ observations of a Masonic funeral two months later indicate that the Odd Fellows already had a distinctive appearance.³⁹ The Odd Fellows of the Victoria lodge, Colchester, affiliated to the London Unity of Odd Fellows in 1840.⁴⁰ In the same year Wisbech District of the much larger Independent Order of Odd Fellows Manchester Unity (founded in 1810) opened No. 2425 *Loyal West Suffolk Social Design* lodge in Bury St. Edmunds. Within three years, the *Social Design* lodge had itself founded Manchester Unity lodges throughout Suffolk and north Essex, while further south Stepney District of the Manchester Unity was busily engaged in similar activity.

The Ancient Order of Foresters, whose national headquarters were in Yorkshire, established Court No.1893 *Pride of the Village* in Wivenhoe in 1845,

Table 1. Essex and Suffolk Odd Fellow lodges (Manchester Unity). ⁴¹

	1835-44	1845-54	1855-64	1865-75	Total
Essex	13	14	2	3	32
Suffolk	20	17	9	6	52

Table 2. Forestric courts in north Essex.

	1835-44	1845-54	1855-64	1865-75	Total
Essex	0	2	7	8	17

followed a year later by Court No.2094 *Ranger’s Home* in Colchester. ⁴²

In Essex Odd Fellow lodges and Forestric courts tended to be urban affairs, whilst several Suffolk lodges were located in villages. Membership soared in both counties. In 1848 the Manchester Unity Bury District of Odd Fellows had 2,587 members.⁴³ John Glyde of Ipswich noted 400 Odd Fellows and 165 Foresters in Ipswich alone just two years later.

Most of the members of these lodges and courts, if the experience of the *Victoria* lodge is typical, were artisans or retailers.⁴⁴At the end of 1844 the *Victoria* lodge had forty members, including eight shoemakers, five mariners, four tailors, three victuallers and one shopkeeper. Only four members were labourers, and they were always to remain a small minority. In the 1840s the majority of *Victoria* lodge members were in their mid to late twenties; the bulk of new members thereafter tended to be slightly younger (18 was the minimum age for admittance). Over 80 per cent of new members admitted from 1850 to 1860 were literate. Retention rates were initially high, and most of the early members appear to have remained in the lodge for life. Membership numbers grew steadily, from 40 in 1844, to 94 in 1854, to 106 in 1864, to 201 in 1874. The *Victoria* lodge did not suffer the level of resignations of the 1860s which Eric Hobsbawm noted for the Order as a whole, and which Clive Bradbury has recently noted in his research on lodges in the Staffordshire pottery towns.⁴⁵

The geographical distribution of *Victoria* lodge members shows a predictable concentration of members in Colchester itself, particularly in Magdalen Street where the lodge meetings took place. However, there were members from outlying parishes as far afield as Aldham and St. Osyth. The cost of travelling and entertainment on lodge nights, when considered along with the basic quarterly premiums (a minimum of 5s. in 1844), indicate that none of these artisans were poor. Most members admitted to the *Victoria* lodge in 1850 declared that they were earning 10s. 6d. per week,⁴⁶

against the local average labourer's pay of 8s.⁴⁷ The evidence of the *Victoria* lodge's accounts supports the view that Odd Fellows and Foresters were indeed overwhelmingly 'influential artisans who could afford to pay the dues'.⁴⁸ Added together, the Odd Fellows and Foresters of Essex and Suffolk were a particular combination of working men who were economically as well as numerically significant.

Baernreither, writing on working class association in 1893, noted that 'the most important point in the whole organisation of these orders is the relation of the various lodges to the central governing body'.⁴⁹ In the early days of the affiliated societies, the power of the centre was hampered by the legal technicality that the Orders themselves were not legal entities, and thus central funds had no protection in law. In addition to this Odd Fellows in particular had many independent associations or 'Unities' competing for their allegiance. Control, therefore, was more often a face-to-face affair between the District and the individual lodge. Strong District officers such as Brother Banyard of Bury St. Edmunds exerted noticeably stricter discipline over the lodges within his jurisdiction than did his colleagues in the neighbouring Maldon District. 'Empire-building' was rife and conflicts were inevitable: disputes between Odd Fellows of Bury St. Edmunds and Maldon Districts (over who had the right to open a lodge in Coggeshall), and Bury St. Edmunds and Cambridge Districts (over a similar situation in Haverhill), were mirrored by what a Forestric author euphemistically calls 'friendly rivalry' between competing Ipswich and London District courts in Colchester.⁵⁰ Unlike the patronised benefit societies, however, there was underlying this rivalry a common sense of purpose; a purpose that drove Brother Samuel Davies of Maldon District to declare passionately, 'we are most emphatically, and in its truest sense, a republic'.⁵¹ Strong words, one might think, given that this sentiment was published in 1858, when memories of Chartism and other radical movements were still fresh, and the monarchy far from secure. But in many respects the affiliated friendly societies did indeed function as a democratic republic: District officers and Conference delegates were placed into office by the votes of individual members, rather by an accident of birth or the patronage of an un-elected executive. The Provincial Grand Master for Davies' Maldon District was an inspector of weights and measures; his principal subordinates were a rope-maker and a seedsman. Many ordinary lodge members had occupations of similar standing, but all could aspire to the highest office. Encouragement to get on in life was common to all the affiliated orders, and society publications regaled members incessantly with anecdotes of successful brethren and their triumphs over adversity.⁵² All was not

entirely equal in this republic, however; self-employed artisans had an advantage over mere employees in that they could organise their time to facilitate their fraternal aspirations. It is also surely relevant that all District officers appear to have been well educated men.

Much importance has been attached to a report of Colchester's politics in 1867, which noted 'a number of Odd Fellows, all of whom were Tories, and Foresters, who are all Liberal'.⁵³ Arthur Brown's comment that 'such a distinction, if it ever existed, had become blurred a decade or so later' is borne out by the available material. Many members of both Orders were enfranchised Freemen, but there is no evidence of an institutional political bias; far from being a Tory, for example, the Maldon District Treasurer, William King Digby, was also Secretary of the Maldon Literary and Mechanics Institution, traditionally a local Liberal bastion. There was in fact a ban on religious or political instruction in lodge, which was always strictly enforced; as Samuel Davies was to write:

The society repudiates with scorn the party watch-words of selfish faction, and utterly disregards the distinctions of class or creed; nay, more, the deep rooted prejudices of national antipathy...⁵⁴

If these are hardly the sentiments of a committed Tory club, neither does it appear that any Radicals or Chartists prospered in local lodges. The common belief that Chartists and early trade unionists learned the art of organisation within the affiliated friendly societies is a notion that has yet to adequately supported by concrete historical evidence.⁵⁵ Such explicit disavowal of political activity (at least *within* the lodge or court) enabled Odd Fellows and Foresters to engage in secret ritual and fraternal combination with relatively little intrusion from political authority. However, the affiliated orders faced constant criticism and hostility from certain elements of the social elite, most particularly the Anglican clergy. Typical was the attitude of a Leeds vicar, who refused to officiate at an Odd Fellow event, saying that 'he did not preach sermons for Oddfellows [sic], or anything of the kind'.⁵⁶ Local clergy frequently spoke out against the ceremonial and oration that attended Odd Fellow funerals, accusing the members of 'Deism'. The large and colourful lodge banners which were paraded at members' funerals fulfilled a public function which has already been discussed above, namely to impress passers-by and potential recruits with the power of the Order and its ability to guarantee a decent Christian funeral for its members. The banners did, however, indeed feature iconography likely to fill a clergyman with foreboding; although many symbols featured impeccable Christian motifs such as the tablets of

the Decalogue, others, such as suns, moons, scythes and skulls (in fact equally Biblical in origin) could easily be misrepresented by unsympathetic critics as circumstantial evidence of more esoteric practices. Odd Fellows in particular tended to be orthodox Anglicans, but they were nevertheless clearly resistant to the religious paternalism that the same Anglican clergy regularly bestowed on agricultural labourers in rural benefit societies. Accusations of financial mismanagement, a familiar propaganda weapon we have already seen used against independent tavern societies, were repeatedly made, without foundation, against Odd Fellows. The cost of their ornate regalia was cited as a particularly heinous example of waste. The Ipswich critic John Glyde sneered,

...we are too utilitarian to appreciate flags, banners, medals, and aprons, or even feasts, when the expenses incurred for them is at all likely to intrench unduly upon the hard earnings of working men...⁵⁷

Odd Fellows, however, felt that they had good reasons for ritual, as Samuel Davies explained:

...it is a case of necessity; being bound to relieve all applicants belonging to the Order, and as it is not difficult to forge a travelling card, the password is our only protection.⁵⁸

The ornate regalia was expensive - the Victoria lodge paid 5s. a piece for one dozen aprons in 1847 - but such accoutrements were used to make the members feel that they were part of a brotherhood. As Davies said:

...if it were simply a £sd society, it would lose a great deal of its interest - I am sure that it is equally advantageous to us, as a social institution, as it is, as a provident one.⁵⁹

Ritual existed to cement fraternity and unity; and unity was strength. After the legal technicalities had been resolved, the affiliated orders began to demonstrate their advantages over local independent societies with national projects to donate lifeboats to the newly formed RNLI.⁶⁰ An early initiative of 1847 was the 'Odd Fellows Relief Fund', set up to send aid to the destitute Irish starving after the failure of the potato crop.⁶¹ This was an organisation with more vision and power than the likes of the Tendring Hundred Sickness Club.

In 1868 the *Essex Standard* announced that 'the First Annual Demonstration of the Odd Fellows and Foresters will take place early in August'.⁶² In the subsequent annual displays, the rival Forestric Courts *Ranger's Home* and *Pride of Essex* marched to Lexden Park in full regalia beside the Victoria lodge of Odd Fellows. In addition to 'Montgomery's Troop of Artistes' and other curiosities marched two military bands. Whereas the troops in former years had been called out to attack trade unionists and

Chartists in the streets, the authorities now ordered their soldiers to play music for the friendly societies.

If members of the affiliated societies could not be thought middle-class, they could certainly be described as the aristocrats of the working class. They were fully aware that they had a certain position in society and were quite explicit about their determination to protect it:

...being members of so mighty an institution, we have a proportionate interest at stake in the well-being of the country. The committal of crime, and conviction for the same in a court of justice, would cause the immediate expulsion of any member from the Order; it is therefore important that we should not infringe the laws of the land, but yield obedience to our sovereign's rule.⁶³

The Essex and Suffolk lodges were committed, as were all their brethren, to protecting the autonomy of their Unity. As this necessitated defending the status quo - 'we repress the slightest approximation to political feeling among our members as such' - it could be argued that the effective result was the political neutering of a large and influential social group.⁶⁴ The voluntary abstinence from politics of so many potential leaders and organisers did indeed prove somewhat of 'a standing bulwark against extreme Socialism', as the *Essex Telegraph* proposed.⁶⁵ But these were never the 'flag-saluting, foreigner-hating, peer-respecting' plebeians that Thompson looked for in his postscript to *The Making of the English Working Class*.⁶⁶ Despite the hostility of the clergy, the affiliated friendly societies were rarely in direct competition with the patronised rural benefit societies. They had little in common with downtrodden agricultural labourers. In all the records of the Aldham & United Parishes Insurance Society, there is only one example of a defection to the Odd Fellows.⁶⁷

The directors of the patronised benefit societies exercised a significant measure of social, cultural and even political control over their rural communities. They had little success in reducing the poor rate, and cannot claim to have improved the lot of the average labourer. They may, indeed, have added materially to the resentment that fuelled the outbreaks of incendiarism in rural areas of Essex and Suffolk in the mid 19th century. The managers of the affiliated friendly societies exercised a significant measure of social, cultural and political influence within their communities. Although this article has implied that they effectively acquiesced to the political establishment, it would be a mistake to think that they ceased to look for improvements in the social order. They believed in gradual and peaceful change. Ironically, the sons and grandsons of the early Odd Fellows and Foresters had just begun to infiltrate the council chamber and the

magistrate's court when they were overtaken and marginalized by other working-class movements.

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¹A. F. J. Brown, *Essex at Work 1700-1815* (Chelmsford, 1969), p. 152.

²P. H. Gosden, *Friendly Societies in England 1815-1875* (Manchester, 1961).

³E.P. Thompson, *The making of the English working class*, revised ed. (London 1980), p. 460.

⁴Thompson, p. 460.

⁵Although the current fashion is to use the term 'Oddfellow', the author, remembering a stern childhood lecture on the subject from his grandfather, prefers to retain the older form 'Odd Fellow'! It is a convention still followed by the *Loyal Castle Lodge*, I.O.O.F. (M.U.), the present-day successor to the *Victoria Lodge* mentioned in this article.

⁶A. F. J. Brown, *Colchester 1815-1914* (Chelmsford, 1980), p. 176.

⁷J. S. Appleby, *Odd Fellows in Essex* (Colchester, 1947); J. S. Appleby, *One Hundred and Fifty Years of Unity in Essex and Suffolk* (Bury St. Edmunds, 1994); P. Lewis, 'Some local friendly societies in north east Essex 1800-1850' (Cert. Thesis, University of Essex, 1995); Ancient Order of Foresters, *Colchester District Jubilee Souvenir* (Colchester, 1936).

⁸S. Hussey & L. Swash, *Horrid Lights* (Chelmsford, Essex Record Office, 1994), p. 19.

⁹The phrase is that of J. Fernandez, quoted by D. Maxwell, 'The Durawall of Faith: Pentecostal Spirituality in Neo-liberal Zimbabwe' (seminar paper, Perth, Australia, 6-8 February, 2002).

¹⁰K. H. Burley, 'The economic development of Essex in the later seventeenth and early eighteenth centuries' (University of London Ph. D. thesis, 1957), p. 130.

¹¹There is some evidence that radicals and former Jacobins had indeed begun 'the systematic penetration of benefit societies' in the late 1790s; Thompson, pp. 182, 199, 3459.

¹²A. F. J. Brown, *Chartism in Essex and Suffolk* (Chelmsford, 1982), p. 11.

¹³Lewis, p. 13.

¹⁴Anon. *Advice to Agricultural Labourers and Others on Benefit Societies* (London, 1828), p.5. The author was probably a director of the Aldham and United Parishes Insurance Society.

¹⁵Thompson, p. 462.

¹⁶II Thess. 3: 10. *Advice to Agricultural labourers*, cover page.

¹⁷Essex Record Office (ERO), Q/RS f10; Q.RS f1-2.

¹⁸Dissenters' benefit societies could be found at Fordham, Little Clacton and Manningtree by 1815; ERO Q/RS f2. The author has, as yet, found no local evidence of Roman Catholic benefit societies in Essex, although Clive Bradbury's on-going research in the Staffordshire pottery towns has done so.

¹⁹ERO Q/RS f6.

²⁰ERO Q/RS f6.

²¹*Rules of the Aldham and United Parishes Insurance Society*, 1826, revised 1877, pp. 2, 3.

²²For example, see the plea for more honorary members made in the *11th report* of the Tendring Hundred Sickness Club (1854).

²³Calculations made from the aggregate of Aldham & United Parishes Insurance Society *Annual reports* of 1843, 1853 and 1859.

²⁴Identification of financial and medical professionals has been made through consulting *White's Directory* (1849).

²⁵See Colchester Borough poll books; A. Phillips, 'Four Colchester elections', in K. Neale (ed.) *An Essex tribute* (Oxford, 1987), pp. 198-218.

²⁶Brown, *Colchester*, p. 108.

²⁷Phillips, p.217.

²⁸80 labourers were enfranchised in Lexden and Mile End on one occasion; Phillips, p. 253.

²⁹*Rules of the Aldham and United Parishes Insurance Society*, 1826, revised 1839, tables I & II, revised 1877, pp. 7, 17. The rates and benefits quoted in 1839 had not changed by 1877. Other rates for alternative financial benefits appear on the succeeding pages.

³⁰Tendring Hundred Sickness Club, *11th Report* (1854).

³¹To take two examples sixty years apart, the 1838 *Report* of the Aldham and United Parishes Society shows that it held almost £3,500 in the Bank of England, while the *61st Report* of the Tendring Hundred Provident Benefit and Sickness Society shows that it held over £49,000 in 1898, most of which was deposited with the National Debt Commissioners.

³²*Ipswich Express*, 13 February 1844, quoted in Hussey and Swash, p. 6.

³³*Advice to Agricultural Labourers*, p. 27.

³⁴*Advice to Agricultural Labourers*, p. 25.

³⁵The names of both men appear several times in ERO Q/RS f1-2.

³⁶Lewis, p. 58.

³⁷J. Glyde, *The social, moral and religious condition of Ipswich* (Ipswich, 1850), p. 76.

³⁸*Diary of Richard Barnes*, 17 December 1809 (private collection). A transcription of this diary is currently being prepared for publication by J. S. Appleby.

³⁹*Diary of Richard Barnes*, 18 December 1809.

⁴⁰Appleby, *One hundred and fifty years of Unity*, p.3. The evidence that the Victoria lodge existed first as an independent society come from the printed heading of the *Declarations Book for 1845-1874* (private collection); the next volume includes London Unity headings, which were

manually altered for entries after January 1883, when the *Victoria* lodge became No. 6533 *Loyal Victoria* lodge in the Independent Order of Odd Fellows Manchester Unity. Publication of the demographic information in these lodge books is scheduled as a future project by the present author and J. S. Appleby.

⁴¹Appleby, *One hundred and fifty years of Unity*, p. 5.

⁴²Ancient Order of Foresters, *Colchester District Jubilee Souvenir*, p. 9.

⁴³Appleby, *One hundred and fifty years of Unity in Essex and Suffolk*, p. 7.

⁴⁴Demographic data drawn from the original *Victoria* lodge admissions and account books (see Bibliography).

⁴⁵E. J. Hobsbawm, *Labouring men* (London, 1964), p. 135. I am grateful to the generosity of Mr. Clive Bradbury for allowing access to his ongoing Ph.D. research on this subject.

⁴⁶*Victoria* lodge, *Admission book for 1850-1874* (see note 38).

⁴⁷M. Blaug, 'The myth of the old Poor Law', in *Essays in social history* (Oxford, 1974), p. 149.

⁴⁸Brown, *Colchester*, p. 134.

⁴⁹J. Baernreither, *English associations of working men* (London, 1893), p. 222.

⁵⁰Appleby, *One hundred and fifty years of Unity*, p.7; Ancient Order of Foresters, *Colchester District Jubilee Souvenir*, p. 13.

⁵¹S. T. Davies, *Odd Fellowship* (Witham, 1858), p. 12.

⁵²T. R. Tholfsen, *Working-class radicalism in mid-Victorian England* (London, 1976), pp. 300-1.

⁵³Brown, *Colchester*, p. 134.

⁵⁴Davies, p. 16.

⁵⁵I am very grateful to Arthur Brown for discussions on this topic, and respectfully note his reservation that I may be underestimating the links between affiliated friendly societies and trade unions.

⁵⁶Gosden, p.168. In Staffordshire, Clive Bradbury has noted similar expressions of clerical hostility, even while presiding over the coffins of deceased friendly society members during their burial!

⁵⁷Glyde, p. 88.

⁵⁸Davies, p. 11.

⁵⁹Davies, p. 15.

⁶⁰The Foresters' first two lifeboats in 1864 and 1867 were followed by the Odd Fellows' donation of the Grimsby lifeboat in 1868; *The Odd Fellow* (November 1968), p. 512.

⁶¹Appleby, *One hundred and fifty years of Unity*, p. 6.

⁶²*Essex Standard*, July 1, 1868.

⁶³Davies, p. 16.

⁶⁴Davies, p. 17.

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⁶⁷The defector was one James Bradbrook; AUP *Annual report*, 1847.

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The Brooks maltings (Dalgety site), Mistley

by Amber Patrick

Introduction

The Brooks Maltings site is a large one, situated at the western end of Mistley, at the eastern edge of the town of Manningtree. Although malting operations ceased in the mid 1960s, the site continued to be used for grain processing and storage until the end of March 1996. In 1993 the owners, Dalgety, put in planning, conservation area, and listed building consent applications for the conversion of some of the buildings and the demolition of the others. An initial visit was made by the author, on behalf of the Ancient Monuments Society, in July 1993, in response to these applications, resulting in a recommendation that the applications be refused. In October 1994 there was a public inquiry. As a result of that inquiry the owner's applications were upheld. Unfortunately no recording recommendation was included. In consequence there was minimal funding for the adequate recording of these important Georgian industrial buildings. This written report is the result of the initial visit in July 1993, two days' work in February 1996, one day's visit in January 1997, and a couple of days additional documentary research. There were seven malthouses to be recorded to a greater or lesser degree, depending upon the extent to which they were already converted. Detailed recording was hampered by a number of factors: externally, modern buildings abutted some of the original malthouses; internally there was no artificial lighting and often limited natural light, unsafe floors, and between the visits of 1996 and 1997, substantial vandalism. This latter meant that some features which existed in 1996 had gone by 1997. Despite these constraints it is hoped that this report will provide some record of these important maltings, four of which have now been demolished.

The towns of Manningtree and Mistley lie on the southern side of the river Stour which here forms the boundary between Essex and Suffolk. The Stour was once navigable as far as Sudbury and in the 19th century coasting vessels came up to Manningtree Docks. The river still is navigable to Mistley, and Mistley Quay is still an active port.

The site which consists of some 9.62 acres (3.8 ha.) is located between The Walls which forms the northern boundary, and New Road which is on its southern boundary (Fig. 1). The western boundary comprises old and new housing developments in Manningtree. The eastern boundary is formed by Mistley Place and its park. There is vehicular access from both roads. There is no railway access, although the railway runs close to the south of the site. All the malthouses on the site were built before the railway age and therefore were designed to take advantage of the navigable river Stour. The ground on which the malthouses were built slopes up approximately some 40 feet (12 metres) from The Walls to the southern side of the site. This has resulted in the south elevations of the malthouses being more deeply set in the ground and therefore giving that side the semi-basement ground floor so often found in maltings.

The malthouses form two ranges: the eastern set which consisted of four malthouses, and the western side of the site which had three malthouses surviving in 1996. For convenience the malthouses are named in the text as follows: Malthouse No. 1, the 1806 building; Malthouse No. 2, the 1807 building; Malthouse No. 3, the 1817 building; Malthouse No. 4, the 1828 building; Malthouse No. 5, the most northerly of the maltings on the western side of the site; Malthouse No. 6 is the middle malthouse on the western side of the site, and Malthouse No. 7 is the most southerly of the malthouses on the western side. Sometimes these are referred to as the Western Maltings. It should be noted that there was a fourth on this western side, at the southern end, Malthouse No. 8, but it had been demolished long before the present recording work was undertaken. Although the site is known as the Brooks Dalgety site, for convenience it is sometimes referred to in the text below as 'The Walls Maltings'. Despite the fact that the whole of the site is within the conservation area, only Malthouses Nos. 3, 4, 6 and 7 were listed, all grade II.

Documentary sources

Edward Norman

The date stone on Malthouse No. 4 (Plate 1) records that Edward Norman built the eight maltings on the site.¹ The evidence on the malthouses themselves is surprisingly thin, although as will be seen there is rather more information available on Edward Norman.



Plate 1 Date stone on Malthouse No. 4.

In *Pigot's Directory* for 1839, Edward Norman is recorded as one of six maltsters in the town of Manningtree. He is also recorded in the section headed 'Nobility, Gentry and Clergy' as living at Mistley. In the *Post Office Directory* of 1855 he is recorded as being a general merchant, but by the 1859 *Directory* more details are supplied on his activities. In the description of the towns of Manningtree and Mistley, there is mention of Norman's National School. It was 'a handsome building of white brick and was erected by Edward Norman Esq in 1856-7, who also endowed it with £50.00 p.a. It will accommodate 150 children.' As on previous occasions, Edward Norman also appears as a maltster, corn, seed, oil cake and coal merchant and ship owner. His domestic residence was given as Mistley Place. By the time the 1862 *Post Office Directory* was produced, Edward Norman had died and the maltings were being operated by his executors.



Fig. 1 Manningtree from the 1st edition OS 25 inch map surveyed 1875, showing the Walls Maltings.

It is also worth noting that in the 1874 *Post Office Directory*, the description of Mistley includes the fact that St. Mary's, Mistley was consecrated in 1870 and had been built on a site given by the Reverend C.F. Norman M.A. of Mistley Place, the son of the late Edward Norman. Also, the font which stood at the west end was the offering of Mrs Norman of Mistley Place, Edward Norman's widow.²

The earliest map evidence available is from the tithe maps for the parishes of Lawford and Mistley, although neither actually show any detail of the maltings. The Tithe Award of 1839 for Lawford shows that Edward Norman owned houses, cottage and gardens, all let, in that parish. Also, he owned the house, foundry and premises let to David Bendall. These subsequently became the Lawford Ironworks. He also owned fields, again let out. The Mistley Tithe Award is for 1841 and shows Edward Norman as the owner of Mistley Place. He also had stables, yards, outbuildings and fields which he himself occupied. This Mistley Tithe Award does show the southern half of the maltings which are referred to as the 'town' with the result that no details are given on them. Only the western ends of three maltings are shown. This may indicate that either Malthouses No. 8 or Malthouse No. 5 had not been built.

There is one other piece of cartographic evidence, and that is a map in the *Report to the General Board of Health, Mistley*, dated 1854.³ Although the publication relates primarily to the problems of domestic drainage and health, the accompanying map shows the maltings. They are not labelled as such but their position, next to the distinctive shape of Mistley Place, and their shape and layout, indicate what they are. Malthouse No. 1 is shown fronting onto The Walls, with Malthouse No. 2 next to it; then, unlike now, there was no gap between Nos. 2 and 3. The third malthouse was close to the second but there was a substantial gap between the third and the fourth which had two kiln wings like the present No. 3 Malthouse. The fifth malthouse is not the present No. 5 Malthouse but one in an identical position to the present Malthouse No. 4. Then there were a further three buildings to the south on this eastern side of the site. To the west of these southern three maltings on the eastern side, are three on the western side similar to those shown on the Mistley Tithe map. They are in more or less in the same position as Malthouses Nos. 6, 7 and 8. The malthouse which appears to be missing is No. 5. This does raise a number of interesting points. It is possible that the buildings shown may be diagrammatic in layout, but it is more likely that they are an accurate representation, and therefore that there were eleven buildings at least eight of which were malthouses on the site in 1854. Which,

then, were the eight malthouses referred to on the 1828 date stone? Certainly the malthouses with date stones: Malthouses Nos. 1, 2, 3, and 4 and then either the three on the western side of the site, Nos. 6, 7, and 8, or the three to the south of Malthouse No. 4 together with the lost building between the 1807 malthouse and the 1817 one. The three on the western side, probably Nos. 6, 7, and 8, were certainly built by the time of the Mistley Tithe award map of 1841. It is probable that Malthouse No. 5 was the last to be built and replaced either the three to the south of Malthouse No. 4 or the one between Nos. 2 and 3.

The above sources indicate that Edward Norman was a man of substance, a well-off merchant and ship owner, as well as a landowner. What is not clear is the part the maltings played in his prosperity, as there is virtually no mention of this part of his activities. Were it not for the date stones on four of the maltings, there would be little to connect him with these malthouses.

William Brooks

William Brooks, his sons, and later the company of Brooks (Mistley) Ltd., and most recently Dalgety plc, owned and operated the maltings until they ceased to be used for the grain industry in 1996. Again, there is surprisingly little information surviving on the Brooks family and more particularly on The Walls Malting site.

The *Post Office Directory* for 1862 records William Brooks as ale and porter merchant and shipowner of Mistley Street, Manningtree. This *Directory* was the last to record Edward Norman, or rather his executors, as maltsters in Mistley. The next directory, only five years later, records William Brooks as merchant, maltster, corn and coal merchant and shipowner. The 1870 *Kelly's Directory*, shows William Brooks senior as maltster, corn, seed, oil cake and coal merchant, wharfinger and shipowner, and William Brooks junior as an ale and porter merchant at Mistley Quay. By the 1878 *Kelly's*, in the list of maltsters there was W. Brooks and Son at Hythe Quay, Colchester and Mistley, and William Brooks, Mistley, Manningtree. W. Brooks and Son continued to be recorded in the directories until 1937 when the only change was that W. Brooks had become a limited company.

There are a number of documents listed in the Essex Record Office as relating to the Brooks family,⁴ but in fact the majority are photographs, many of which are undated. The evidence they supply for this study can most appropriately be included in the section on the buildings. However, there is an album which provides some additional details on the family and firm. It is not dated but as it refers to events in 1950, it was probably produced early in the 1950s. The introduction refers to the

fact that the firm had its own quays at Mistley as well as its own private railway sidings. In consequence they were equipped with all facilities for the cheap and rapid handling of their agricultural produce, of grain, seeds and feeding stuffs. It is interesting to note that malt is not specifically mentioned.

An outline history of the company is given. Members of the Brooks family had first become involved in the business, most probably merchanting and malting, in the 18th century, but it was in 1863 that the ownership of the business had passed to William Brooks from Edward Norman. The main business had then been the merchanting of grain and agricultural produce, malting and farming. Expansion had begun around the turn of the century, and the pace had quickened after the 1914-1918 war with the efforts of Mr Charles Brooks and Mr William Brooks. After the death of William Brooks, the company was formed into a private limited company in 1927. At this time there was also a reduction in the family's farming activities, with their acreage being reduced from about 1000 acres to 200 acres. The latter was mainly an experimental station. The principal activities were feeding stuffs, agricultural seeds, malt and pedigree red poll cattle.

The 1939-1945 war had apparently given greater impetus to the seed department which had been expanded and enlarged and there had been further expansion in 1950 for cleaning and grading. An important achievement for Brooks in 1944 was in the Malting Barley Championships, held in London. It was won by barley grown from Brooks parent stock seed of the Spratt Archer variety.

A letter from Robert Boby of Bury St. Edmunds, dated 3rd June 1935, shows that Brooks were considering purchasing a cleaner for clover or other seeds. There are three illustrations in the accompanying leaflet, at least one of which appears to be the same as that in Malthouse No. 2. Other letters on the same subject and dated 1946-7 were scattered around the office in Malthouse No. 2.

There is one other documentary source which should be mentioned although it does not provide information on the maltings. A series of weather books, 'Meteorological Registers', were found beneath the floorboards of Malthouse No. 1 during its conversion in 1997. There are ten books dating from 1902 to 1944. They are interesting from a meteorological point of view, and they probably relate to Brooks's farm or experimental station. There is no reference to malt in them, and only two references to maltings. For 30 December 1904, there is a reference to No. 9 malthouse being flooded.⁵ The marsh wall at Lawford was broken and the flood had reached as far as the Station Hotel at Manningtree, also 'Free's furnaces put out in M'tree'

(Manningtree).⁶ The lower floor of No. 9 was flooded again on 17 May 1913. The only conclusions which can be drawn are that since there is no mention of flooding at The Walls site, it was in a safer position than No. 9 Malthouse on the Quay.

Despite the limited amount of information on the Brooks enterprise and The Walls Maltings, it is evident that their commercial activities were diverse and that malting was only a part of them. How big a part it was it is not possible to determine from these limited records.

So far only the sources specifically relating to the two families who owned The Walls Maltings for the majority of their working life have been mentioned. There are of course other more general records which mention The Walls Maltings. For example Brooks appears in some of the publications relating to the malting and brewing industry. Interestingly, they do not appear in the list of maltsters in the issues of the *Brewers' Guardian*, but they are listed in the 1964 *Brewery Manual*, in the list of maltsters obtained from the Maltsters Association of Great Britain. They also appear in *The Brewers' Almanack* for 1965/6 in the lists of Sale-Maltsters and the list of Malting Barley merchants. By the time of the 1971 *Almanack* they have disappeared from the list of Sale-Maltsters, although they are still listed as Malting Barley Merchants, so it is likely they were no longer producing malt, but they were still selling malting barley.

There is also a reference to Brooks in some of H.J.H King's catalogues.⁷ For example, according to their 1906 catalogue, Kings had supplied Brooks with patent heat regulators. Their address is given as Mistley, but it is possible they were installed at their Colchester maltings. The 1918 catalogue is more specific and states that Brooks had King's patent heat regulators at both Mistley and Colchester. Brooks is also mentioned in their 1934 catalogue.

A non-malting/brewing source which provides a little additional information is the Essex record of the 1953 flood along the eastern coast of England (Grieve 1959). The road at Mistley Walls became impassable, and Malthouse No. 9 on Mistley Quay was flooded with water coming into the first-floor windows. Although the road at The Walls was flooded there is no mention of any specific inundations or damage to The Walls Maltings. Malthouse No. 1 had been converted to offices by then.

The large scale Ordnance Survey maps have provided additional information. The first edition 25 inch for this area was surveyed in 1875 (Fig. 1). This provides the first detailed plans of eight malthouses on the site. It shows an extension to Malthouse No. 1 at the eastern end, thereby indicating that the present office extension had already been built by 1875. Malthouse No. 2 had two wings, kilns, at its

western end, and the old office which juts out to the north at the eastern end is visible. Although there are some structures between Maltheuses Nos. 2 and 3, the space between the two buildings is nearly the same shape as that on more recent Ordnance Survey maps. Malthouse No. 3 has the same outline in 1875 as it does in 1996, except for the wing kilns at the western end. The other maltheuses, Nos. 5 to 8 appear the same as on later large scale Ordnance Maps. There is one other point of particular note

and that is that the shore line of the river immediately to the north of the maltings is bush covered. This indicates that neither the barley nor the malt were being trans-shipped from immediately in front of the maltings by 1875. Presumably it was taken by wagon to Manningtree Quay or Docks or to Mistley Quay where it could have been loaded into barges and sent round the coast to London.

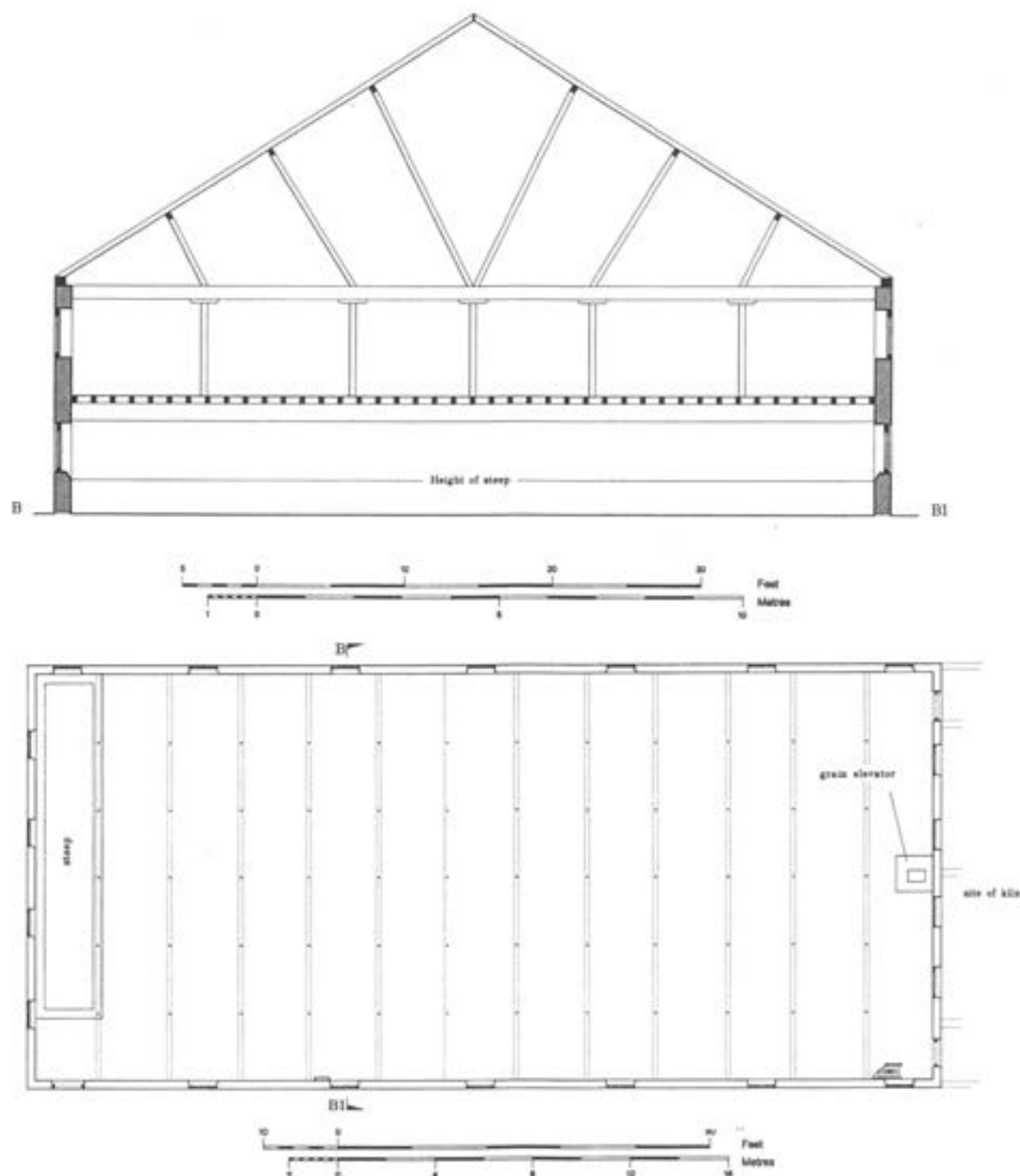


Fig. 2 Malthouse No. 6, ground plan and section (© Crown Copyright. NMR).



Plate 2 Aerial photograph of the Walls Maltings in the 1950s.

Finally mention must be made of an aerial photograph of early 1950s date, a copy of which was submitted by Tendring District Council at the Public Inquiry (Plate 2). It provides valuable details of the malthouses before the most recent alterations had taken place.

The malting process

Malt is artificially germinated grain. Malting was and to some extent still is a seasonal process and historically took place between the months of October and May. Barley is usually the raw ingredient for making malt. The making of malt is a standard process but the exact method of production usually varies from one malthouse to another. The details given below are of the malting process in general and not specific to The Walls Maltings. A number of factors affect the details of the process, including the type of malt to be made, the barleys being malted, and the micro-climate around the buildings and its effect on growing temperatures and ventilation.

Barley has to be stored and often dried prior to use to ensure dormancy is broken. Barley also has to be cleaned of dust, small stones and loose husks. In the 19th century, when the barley was threshed on the farm, it was less common for large quantities to be stored at a malthouse, but in some cases it would be necessary to have large on-site storage facilities.

The first stage in the malting process after any drying and the necessary cleaning was and is the steeping of the barley in the cistern or steep to begin germination. The water in the cistern was ideally about 54°F (12.5°C). Lower than this and growth would be retarded, and higher more water would be

taken up. The steeping period lasted between 60 and 72 hours.

During this time the water was changed several times and the barley was rested for periods varying between eight and twelve hours. The aim of steeping was to give the barley sufficient moisture to ensure perfect and regular germination. The moisture content of the barley after steeping should be 40 to 45 per cent.

The next stage prior to the repeal of the Malt Tax in 1880 was couching. The couch was a rectangular frame in which the soaked barley was put in order that the excise men could measure its volume. The barley stayed in the couch for twenty-four hours. Couching was still practised after the repeal of the Malt Tax but it did not have to be undertaken in a frame, nor did it have to be for a set number of hours.

From the couch or the steep the soaked barley was spread out onto the floor to grow. In the later 19th century the growing of the barley to the point where it was ready to be kilned might take as long as fourteen days. The depth of the grain on the floor would vary from four to eight inches depending upon the weather conditions. The temperature on the floor ranged from 56°F (13°C) to 65°F (15°C) or even 70°F (22°C), with the higher temperature being reached at the end of growing. As growing progressed the rootlets began to grow and it was necessary to turn the growing grain to prevent it from matting together and to ensure the growth was even. Originally this was done by hand using a broad flat bladed shovel. Later, ploughs, which were three pronged, flat bladed 'forks', were used, and more recently, in the 20th century, mechanical shovels were introduced.

When the green malt, as partially germinated barley is called, had reached the required extent of growth, it was ready to go to the kiln. In the kiln the green malt was laid on the floor which was often of perforated ceramic tiles, a foot square. By the end of the 19th century the drying floor was often of wedge wire, although earlier drying floors of woven wire were used. The depth of the green malt on the kiln floor was usually about 8-12in. (20-30 cm). It was turned during kilning, by hand in the early days, or later on by mechanical turners. The malt was on the kiln for three or four days. The temperature varied according to how well the kiln was constructed and the type of malt being made, but could be as high as 220°F (105°C). The fuel used in malt kilns by the 19th century was mainly anthracite or coke and as the combustion products usually passed directly through the malt, a fuel of low arsenic content was essential. An exception was the production of brown malt where wood faggots were always used. The kilning of the malt arrested germination and therefore halted the breakdown of the starch molecules. It also reduced the moisture content to about three per cent which was necessary for safe storage, and produced an ideal grain for grinding to grist in the brewing process. Kilning also gave colour and flavour to the malt.

Finally, the kilned malt was dressed (the rootlets removed and the grain cleaned) and then stored until it was required for brewing. It was usual to store the malt for at least a month before it was used.

The malting process in the Brooks Maltings

The malting process, as outlined above, was carried out in the same way in all the Brooks maltings despite the fact that they were built over a period of 22 years, with the possible exception of Malthouse No. 2. All the buildings are aligned east-west, and in each case the malting process started at the eastern end of the building and ended at the western end. In consequence, in describing in broad terms how the process was carried out in one building, one is in fact describing how it was carried out in all the other buildings. It should also be noted that malt would have been produced by the piece method (see Eric Saxby's comments).⁸

With the exception of Malthouse No. 2, all the malthouses are of two storeys, with sometimes a loft storey, usually only at the eastern end where the barley would have been taken into the building. When these maltings were built, barley would have been stored first in a rick on the farm, then threshed, also on the farm, and sent to the maltings when required. A certain amount would always have been stored on site, ready for immediate use.

The barley would have been taken in through the hoist doors where they exist in the eastern elevations, and where they do not, via the doors on the upper floor towards the eastern end of the buildings in the north or south elevations. The barley would then be stored in the eastern end of the building, towards and over the steep. It was essential that there was a physical divide between the barley and malt storage areas. Certainly in later years the barley would have been screened (cleaned) to get rid of any remaining small stones or other debris before use. None of the screens now surviving in the buildings seems to have been for cleaning the barley prior to steeping.

Next, the barley would be dropped into the steep through the chutes which survive in Malthouses Nos. 3, 4, 6 and 7. In the unconverted buildings, the steeps are located at the eastern ends, or in the case of Malthouse No. 3, in the fifth bay from the eastern end, but the easternmost part of the building devoted to malting. It is reasonable to assume that the steeps in Malthouses Nos. 1 and 5 were also at the eastern ends of the buildings. In Malthouse No. 2 no steep now survives but there is evidence in the southern and eastern walls that there was once a steep against these walls, so it too appears to have a steep located in the same position as the others. During steeping, the water is now changed several times.⁹ The water probably came from the well, although it has been suggested that spring water was used. The steeps which survive all have central drains and stop cocks; overflow tanks survive at the short ends of the steeps in Malthouses Nos. 3 and 6.

The next stage after steeping was couching. The most stringent legislation as far as the construction of the couch frame was concerned was introduced in 1827. Maltings built, and in use prior to then, did not have to comply with the strict new regulations. None of the malthouses inspected retained a couch frame. However Malthouse No. 4, the 1828 malting, which clearly could not have been constructed and in use prior to 1827, did have features which indicated its one time existence. The head height above the couch frame as well as the steep had by law to be 48 inches (1.22m). The actual height in Malthouse No 4. is 46 in. (1.17m) to the main beam which is 2 in. (5cm) short, but there is more than 2in. (5cm) to the joists, so this steep would appear to have complied with the legislation. In the other maltings couching still had to be carried out but the existing frames were not necessarily altered to comply with the new regulations.

After steeping and couching, the wetted barley was spread out to grow. Throwing the soaked barley out of the steep and couch frame was easy in these malthouses since there was only the one growing floor at ground-floor level. These floors were of quarry tiles or bricks.¹⁰ Only later was cement

screed used. During growing adequate ventilation was necessary in hot weather, and in all the malthouses this was provided by windows which all have internal top hinged wooden shutters and external 'louvres' in the form of close set vertical wooden bars set on the diagonal. Once it had grown to the required extent, the green malt had to be kilned.

In all malthouses, except Malthouses Nos. 2 and 3, the kilns were located at the opposite end of the malthouse to the steep, in other words at the western end of the buildings. In Malthouses Nos. 2 and 3 the original kilns were at the western end, but attached to the north and south elevations, forming wings on either side. Despite this, the basic working of the malthouses remained the same. In all cases the green malt had to be moved up from the ground floor growing floor to the kiln drying floor at first floor level. Originally, when the maltings were built, this would have been by hand, but later by mechanical means. When by hand, the green malt would have been shovelled up through hatches, remains of which survive in Malthouses Nos. 2, 3, 6, and 7. The surviving kiln drying floors (Malthouses 3 and 4) have wedge wire floors, but this would not have been the original floor material. The wedge wire floors are supported on iron bearers which are held in tension by ties, the bosses of which are visible on the exterior of the kilns. Remains of perforated ceramic tiles, including some whole ones, were found on the site, indicating that the kilns had had perforated tile floors. The building of the new kilns, and changes to the furnaces, have destroyed any remains of the original support structure for the perforated kiln tile floor; the original kiln floor of Malthouse No. 4, on the southern side, was not accessible, but it too appeared to be of wedge wire.

Finally, the kilned malt would have been removed from the kiln and stored before use, primarily in the brewing industry. Where the kiln drying floor was at the same level as the storage floor, it was easy to shovel the malt out of the kiln. In Malthouses Nos. 3, 5, 6 and 7, the doors from the kiln floor to the storage floor survive. The storage floor is thus the upper floor in all these two storey malthouses. The floors are all of wood. Since there are grooves in only one set of timber posts it is reasonable to assume that most of the malt was stored loose and not in bins. It is not possible to determine the extent of the malt storage as opposed to the barley storage areas.

At some stage the malt, like the barley, would have had to be cleaned of the rootlets, dust, etc. No malt screens survive in the storage areas near the kilns. (The surviving machinery appears to be for the subsequent use of the buildings for grain and seed storage and cleaning). Finally, the malt would have been shipped out via one of the doors on the upper floor at the western end of the maltings.

Only three kiln furnaces survived. None of them were the original early 19th-century furnaces. The original design is not known.¹¹ All the existing furnaces are in brick shafts. All were anthracite/coke fired and the remains of the last firing survived in the old south kiln of Malthouse No. 4. The fuel would have been stored in the area around the kiln furnaces.

Oral history

Two former employees, Eric Saxby and Danny Cook, have provided some information on the Brooks Maltings at The Walls site. Eric Saxby had worked in the maltings, whereas Danny Cook had worked in the transport section. Below is an edited summary of the conversations I had with them in February 1996.

Eric Saxby's recollections

Mr Saxby worked for Brooks from 1944. Brooks was a good family firm to work for, with time off for cricket or for a funeral. Brooks was also famous for its Red Poll herd of cattle. There was not the same family atmosphere when the firm was taken over by Ranks and later by Dalgety. The maltings ceased operating in 1965, when only six of the buildings were in use.

Mr Saxby confirmed that Brooks operated nine malthouses at Mistley. Eight of them were at The Walls site and the ninth was at Mistley Quay. Malthouse No. 1 was partly closed when the top floor was converted to an office, but the bottom did continue to be used as a one-man malting for a while. The little kiln of Malthouse No. 3 was used for drying wheat, beans, and clover. It was demolished in 1978. It had had a wedge wire floor which had rotted, and it had a hair plaster ceiling. The little kiln of Malthouse No. 4 was also used for seed drying: beans, wheat, oats, and clover. The rest of Malthouses Nos. 3 and 4 and their kilns were used for malting. Malthouse Nos. 3 and 4 had kiln turners when Mr Saxby started working at the maltings. Malthouse No. 8 was demolished in the 1970s. The kilns of the other maltings (Nos. 5, 6, and 7) were in bad state of repair, and so they were pulled down. The top floors of the maltings had been re-floored since the Second World War, one malthouse being done every year and one malthouse re-roofed every year. Originally the ceilings had been of hair plaster. After malting ceased it was difficult to use the buildings for other purposes because of the low head height.

In Mr Saxby's time Malthouse No. 1 was worked by one man as were Malthouses Nos. 5 and 7. Malthouse No. 2 did not work as a malthouse. It was used for seed processing. Malthouse No. 3 was a three-man malting, as was Malthouse No. 4. Malthouse No. 6 was a two-man malting. One man

could steep 12½ quarters twice a week. A quarter was the equivalent of two sacks of barley; therefore 25 sacks of barley could be steeped by one man at a time. A three-man malting would be steeping 40 quarters a time.¹² There would also have been a night man to rake over. It was not clear whether each malthouse had a night man or whether one man might work more than one malting during the night. Originally 50 men had been employed on the site.

The malting process was carried out on the piece system. A typical working cycle for a batch of barley would be as follows:

- Friday: steep [tank] wetted [i.e. water put on grain]. Water changed every day.
- Tuesday: steeped barley was shovelled out of the cistern [steep tank] and into Boby barrows to be spread onto the floor. The piece would stay on the floor for about ten days, being turned and moved as necessary, including raking [using a malt plough] the piece; this involved a lot of unnecessary hard work. Men took a pride in laying out a good malting floor (piece) which would be so even one could lay a spirit level on it. No masks were used in the early days, and it was hot work stripping a kiln. Men lived to a good age and might work until they were in their seventies. In the early days there was a beer ration but that was before Mr Saxby's time.
- Friday week approximately: green malt moved to the kiln where it would remain for a maximum of three to four days.

Originally the malt was sent out in sacks but with increasing mechanisation it was conveyed in bulk by lorry. The malt was supplied to Guinness, Courage, Barclay & Simmonds of Reading, and Watney Combe Reid. Locally, Edme¹³ was supplied with Brooks' malt but not in later years, as well as Daniels of West Bergholt, subsequently Trumans.

The barley used in the maltings was locally produced from the Tendring district which was well-known for its malting barley. The varieties used included Spratt Archer, Plumage Archer, Proctor and more recently Maris Otter. Originally the barley had been brought in sacks but with mechanisation it was conveyed in bulk by lorries. Brooks had their own fleet of lorries. Brooks were also barley merchants, and sent barley by rail to Scotland, 23 tons at a time.

Danny Cook's recollections

He worked at the mill on the Quay front in 1955. He came to The Walls site as a lorry driver. There were

80 lorries when Mr Cook started. He said the men were always occupied because they were moved from one area to another, for example working the maltings turning grain or bagging up. In the winter they worked in the maltings. Colonel Brooks was a good man to work for.

When Mr Cook started work for Brooks the head office was in Malthouse No. 1 but the kiln was still used for drying, in particular to dry the barley in sacks. Malthouse No. 2 was the seed department. It had been converted to seed processing well before Mr Cook had joined the firm. There were four to five dressing machines in the seed department, and seeds, including seed barley such as Proctor, were tipped into the hoppers for dressing. Lorries delivered to the front of the seed department which was very busy. Vines used to grow against Malthouse No. 3, and the nails remain. Also, there was a beer shed behind Malthouse No. 3. Mr Cook said that Malthouse No. 5 had been altered before he started work at the firm. Originally it had a roof which came right down to almost ground level. The malthouse had clay floors which were levelled and quarry tiles were then placed on top.

The malting process was labour intensive. All the maltings had hoists. Originally the barley arrived in sacks, each weighing 18 stone. The sacks were emptied and the barley elevated up to the top floor where it was stored. When it was needed for malting it was barrowed to the area above the steep so that it ran through the chutes to the steep. The steeps were filled with spring water. When the barley had been steeped for the appropriate time it was shovelled out and spread onto the growing floor. It was raked and then gradually moved down the floor and elevated up to the kiln. The elevators were at the ends of the maltings. The kilns were coal (anthracite) or peat fired. Peat was used on Malthouses Nos. 3 and 4, and on No. 9 at the Quay. Peat was used according to what type of malt was being produced. After kilning the malt was finished: the rootlets were removed by brushing. The culms¹⁴ were used for a variety of things, including in tobacco! The temperature was controlled by louvres only, opened according to the experience of the man working the malting.

Some of the malt produced at Brooks was pale malt for which the kilns had to be coal fired. However, dark malts were also made. Other malt was used in the production of Ovaltine, at Kings Langley. Malt was also supplied to local breweries such as Cobbolds, and Wards of Foxearth.

The barley malted at Brooks's maltings was local and mainly came from the north-east Essex plain which produced the finest barley available. All the best barley was local, although some came from Suffolk. Some foreign barley was also used. The barley buyer lived at Russell House. Mr Cook

worked on the barley drier: the barley had to be dried down to approximately 18-20% moisture content.¹⁵ By contrast the distillers who liked the Essex barley required the barley to be dried so that it had a moisture content of 12% for storage. Once dried it was bagged and dispatched to the distillers.

A description of the buildings and their development

The seven large 19th-century malhouses on the site are all briefly recorded below.¹⁶ The 20th-century buildings have not been recorded, but most contained machinery and where appropriate this has been noted whether or not it was associated with the production of malt. Over the years all the malhouses on the site had been altered to a greater or lesser degree, and in consequence it is often impossible to state categorically that a particular feature is original. The malhouses which were demolished as part of the development of the site were Nos. 2, 5, 6 and 7.

Malthouse No. 1: the 1806 building

This malthouse was the first to be built and fronts onto The Walls. It is a rectangular building of two storeys, and a loft. It is constructed of red brick and it now has a slate roof (Plate 3). It has been much modified over the years, in particular by the insertion of windows in blank bays in

both the north and south elevations as well as the roof. The main malthouse was three bays in width, and 17 bays in length, with the kiln having a further two bays, giving a total length of 19 bays. Originally the windows were in every other bay.

The date stone, in the shape of a medallion, is in the apex of the east gable. Some of the original windows survive in this elevation. They are round-headed with the arch being formed of alternate header and stretcher bricks. The loft storey window has fourteen or fifteen close-set vertical wooden bars which are set into their frame on the diagonal, thus giving a louvred effect. This was a common feature of the windows in the buildings on this site, and in the following descriptions windows with this feature will be described as louvred.

The windows in the north facade are round-headed ones. A number of tie bars run through the building from north to south. There is no maker's name or date on the bosses. They are a typical construction feature of malhouses, and maybe original features.

The kiln at the western end has been demolished and a modern replacement structure inserted. At the eastern end an office, in gault brick, was added at sometime in the mid 19th century. The interior was not inspected but it is unlikely any original features survived. The roof structure was supported by diagonal struts from the main beams according to the architect's plans.

The development of Malthouse No. 1

Malthouse No. 1 was clearly built as a malthouse, and the building continued in that use until the 1920s or 1930s,



Plate 3 Malthouse No. 1 from the north-east, showing the office building, with Malthouse No. 2 in the background.

but by 1996 it was very obviously a converted building and few features survived to indicate that it was once a malthouse. The majority of information for its change from maltings use to office use comes from the 1950s aerial photograph and oral evidence. This photograph shows the building still retained its kiln and some regularly spaced windows. Even so at that date it is clear that the upper and loft floors were not used for malting as roof lights and additional top floor windows had been inserted in the north elevation. The oral evidence indicates that Malthouse No. 1 was still used as such in the mid 1940s but that a decade later malting had ceased, although the kiln was still used for drying barley. The rest of the building was the company's office.

The delightful office building which has been added to the eastern end of this malthouse is present on the 1875 first edition of the 25 inch Ordnance Survey map. Its gault brick contrasts with the red brick of the rest of the building, but is the same as the fronts of the 1828 Malthouse No. 4 and Malthouses Nos. 6 and 7. Was this office added in about 1828? There was already an existing office, at the 1807 building, but one on the road would have been more convenient for an increasingly successful malting company.

Malthouse No. 2: the 1807 building

This malthouse was built as a maltings, but may have been converted, at a relatively early date, to grain and seed storage and cleaning. At the time of its demolition, it was a four-storey building, but was probably built as a two-storey malthouse with a loft storey in the gable, rather like Malthouse No. 1. On the north-east corner of the building there was what was once an attractive office, probably the original one for the maltings complex.

Exterior

The eastern elevation was constructed of red brick on the bottom two floors. The two storeys and hoist loft above were clad in corrugated iron, except that the east elevation of the office is of brick. In the east elevation of the malthouse, as opposed to the office, there were on the bottom floor two round-headed windows, one centrally located, and one to the north of that. To the north of the last mentioned window there was a door, concealed by three sheets of corrugated iron. Immediately above the door another gave access to the first floor, but as it spoilt the symmetry of the elevation it was probably inserted after 1807. It was boarded and had two chains across it. To the south of it were three round-headed windows, two above those which survived in the floor below and one to the south over a blank space. The central and southern ones were louvred. The medallion shaped date stone was located below the middle window of the first floor.

The upper two floors each had two six-pane windows on either side of the side-hinged wooden double doors. Like the door on the first floor they had chains across them. In the loft was a small square shuttered opening and above what looked like a girder for use as part of a hoist. The office, which had been extended both upwards and to the west on the north elevation, had a very nice large sash window in the east elevation which would have provided plenty of light. Later more modern extensions were clearly visible.

The north elevation was the only other one which could be considered in any detail. Most of it was not particularly noteworthy, being a modern later 20th-century structure. The upper two floors were clad in corrugated iron, and they projected out northwards, beyond the original line of the building. Each floor had regularly spaced small windows located high up in the walls. The north elevation of the office block deserves more detailed comment. This was constructed of brick, original red brick on the lower storeys and paler modern brickwork above. The only original feature was the door which had the same fine moulding as the window in the east elevation. This must have been the original office entrance, an impressive one, with the latest architectural details, since the moulding to both the door frame and the window were in the Egyptian style.¹⁷ Vegetation obscured the bottom part of the office but two tie-bar bosses were visible. Again the modern upwards and westwards extensions were clearly visible.

Insufficient of the other elevations survived for them to be considered in detail. Modern buildings had been added to the south. There was no access to the western elevation because of its close proximity of the property boundary. The kilns were at the western end and formed wings projecting north and south, but nothing remained of them.

Interior

The internal structure is primarily of timber, with squared wooden columns, as opposed to cast iron columns, supporting the main beams. The upper floors have wooden floorboards, except for the modern extension. There is stair access to all floors and the head-room is comfortable. Some fine grain/seed dressing machinery survived. It was not possible to determine the original layout of the building.

The ground floor had a modern cement screed floor. There was no evidence of brick pavers or quarry (floor) tiles. There was however, a sort of rendered skirting around the walls which was 7½ in. (19cm) in height. The main beams were supported on four rows of timber columns which rested on cement bases which were rectangular in shape. The columns were chamfered but there were no chamfer stops. There were metal plates between the columns and the main beams. These plates appear to be rolled channel sections, probably of steel. There were also columns against the south wall with half sized metal plates between the beam and the column. It should also be noted that on the south wall there were horizontal timbers between the vertical ones which resulted in a sort of internal timber framing. Some of this timber framing went across the inside of the original round-headed windows in the south wall. There were twenty rows of these supports along the length (east to west) of this building. Some of the vertical timbers had braces rising from just above the cement base to the underside of the main beam. All the verticals were lime-washed. On some of the joists, which were surprisingly blackened, there were Baltic timber marks.

There was no immediate evidence in this malthouse for a steep or for a couch frame on the bottom floor. However, a close inspection revealed a difference in the finish to the eastern wall and to the south wall at its easternmost end. Here, there appeared to be a semi-waterproof lining. Then in the north wall, to the west of what would have been the

steep, was a raised section of rendering approximately $\frac{1}{2}$ inch (1 cm) thick and about 2 feet (61 cm) in height. This feature was similar to the one found on the inside of the south wall of the 1828 malthouse and may indicate the presence of a couch frame.

At the western end of this floor there were two kilns forming wings on the north and south elevations. On the inside of the north wall it was possible to discern two blocked hatchways which may have provided the original access from the bottom growing floor to the kiln drying floor. They were both $49\frac{1}{2}$ in. (1.26m) above the floor level, and were both $38\frac{1}{2}$ in. (98cm) in height, but the western one was $48\frac{1}{2}$ in. (1.23m) wide and the eastern one was $37\frac{1}{2}$ in. (95cm). There was no similar evidence in the south wall. In the west wall at the northern end there was one round-headed window, similar to those in the eastern elevation.

The first floor was reached by stairs at the north-eastern end of the building by the office. The floor was of timber boards and had the usual timber columns, lime-washed, supporting the main beams. Again there were metal plates between the columns and the main beams; however, they were different from those on the floor below as they appeared to be rolled 'T' sections. A number of the columns had braces rising up to the underside of the beams. These sometimes rose from the base, sometimes from part way up the vertical. The last bay at the eastern end, the one which would have been above the steep, was partitioned off from the rest of the floor by a partition of vertical wooden boards. It appeared fairly modern. No chutes were noted in the floor below and none were

apparent in the floor itself. At the western end, in the north wall where one would expect to find the kiln loading-off doors, there was a modern partition to the corrugated iron clad extension. The fact that the walls of this floor were of brick gave it a dark atmosphere unlike the two floors above. There was a wooden skirting board (an angled wooden plank) round the walls, $2\frac{1}{2}$ in. (6.5cm) in height.

There were some grain/seed cleaning machines on this floor, and the bottom of one of the helter-skelter sack chutes ended over a hatch to the ground floor against the northern side of the building. By this chute was vertical ladder access to the floor above. There were also wooden stairs to the floor above, in the north-east corner. In the modern extension over the northern kiln were two steel hoppers.

The second floor had a floor of timber boards, except for the modern northern part which extended out and had a cement screed floor. The support structure of squared wooden columns and main beams was of the same pattern as the floor below. The timber framing to which the external corrugated iron was fixed consisted of verticals and a minimal number of horizontal timbers between them. Also, there was vertical planking to a height of $30\frac{1}{2}$ in. (77cm) up to the level of the bottom horizontal. The windows in this floor had wooden frames divided into six lights. They were centre-hinged and the frames, although not modern, were not old and were probably of an inter-war date. Again, as on the floor below, there were beautiful grain and seed cleaning machines with wooden cases. The machine numbers are 354 and 355. Some were



Plate 4 Malthouse No. 2, second floor, showing sack chute, other hatches, and screening machinery.

by Robinsons of Rochdale and some by Boby of Bury St Edmunds. Two modern metal sack slides rather like a helter skelter passed through this floor and had safety chains still in place (Plate 4).

The top floor was very similar to the floor below with the usual wooden floor and white painted columns, some braced, supporting the main beams. There was the same timber framing to which the corrugated iron cladding was fixed. There was also a very light-weight timber rail running round the building at the same height as the bottom of the windows which were of the same design as the floor below. The northern side of the building was the modern extension. The external hoist doors in the east elevation were nicely made with robust side hinges.

The roof was a light weight timber structure. It was a simple prop system with the braces rising at an angle from the main beams to the purlins. The present timbers were indicative of the need to support only a light-weight roof. There was no timber lining to the roof as in the other maltheuses.

The development of Malthouse No. 2

Unlike the 1806 malthouse there was little to show that this building was once a malthouse. By 1996 the original building was totally obscured by more modern structures, and almost certainly had been heightened at some period. So far no evidence has come to light to indicate when the building lost its malting function, or when the upper floors were added.

Some idea of its appearance in the mid 20th century can be gained from the 1950s aerial photograph. This shows the existence of the upper floors. Limited earlier evidence is supplied by other photographs and Ordnance Survey maps. An undated photograph, probably taken in the 1920s, shows the office having a hipped roof and a chimney, and therefore lower than it was in 1996.

The ground and first floors of the eastern elevation of this malthouse were relatively unaltered and were probably as built, except for a door inserted at first floor level. It is unlikely that the top two floors were original and certainly the covering of corrugated iron was not original, as such a covering only became commercially available in the late 1830s. The timber-framed structure to which the corrugated iron was attached did not give the appearance of being of an 1807 date, nor was it particularly suitable for weatherboarding, but it was very suitable for the corrugated iron. It suggests this malthouse was extended upwards or rebuilt at a time when corrugated iron was readily available as a building material. However, the possibility that the internal timber frame structure was original cannot be excluded. If it was original then there was the problem of the nature of the original wall covering, and a potential problem of the number of floors. Malthouses of three storeys were known at this date, but none now surviving are as large as this one.

The present roof structure was well suited to the present roofing material, corrugated iron. It would not have been suitable to support a tile or slate roof. Of course the roof structure could have been later than the rest of the timber frame structure. Finally the upper floors of the building were projected northwards post 1950. This most recent change would have provided increased floor area.

Internally there were a number of alterations. On the ground floor the steep and associated couch frame had been removed. The timber upper floors would not have been suitable for the production of malt. Timber floors are usually indicative of storage in a maltings, but it would be a very unusual one to have three storage floors and only one growing floor. The other internal alterations were the installation of the various and splendid screening machines. The documentary evidence indicates that some Boby machines may have been purchased in 1935.

The other features which were altered over time were the kilns. The 1875 Ordnance Survey map shows two wings, presumably both kilns, at the western end of the building, one to the north and one to the south. They were both still there on the 1896 map, but only the northern one still survived in the 1950s. The southern kiln may have been removed with the addition of the upper floors. The northern kiln was probably removed when the upper floors were extended northwards in the most recent alterations.

It would appear that this malthouse had at least three phases: the original, probably two-storey structure; then a four-storey structure, when the upper floors were probably added, and with the north kiln surviving; and finally as it was in 1996, with no kiln and the upper two floors projected out on the north elevation and the old office heightened. Dating these changes is difficult. The addition of the floors may have been a 19th-century alteration, but since both kilns survived until 1896, a 20th-century date is more likely. The oral evidence indicates that the building had ceased to be used as a malting by the mid 1940s and this may be confirmed by the Robert Boby letter of 1935. The building was then used for seed processing.

Malthouse No. 3: the 1817 building

No. 3 malthouse is a rectangular building of two storeys, with a loft at the eastern end. It is five bays wide and twenty-two in length, originally with windows in every other bay. There is a kiln attached to the western end of the southern elevation. This kiln is clearly not original. There is evidence that another kiln was attached to the northern side of this end of the building. In other words, the two kilns formed wings at the western end of the building like Malthouse No. 2.

Exterior

Only three elevations were available for examination. The north one was largely obscured by a modern building which appeared to be a barley storage shed. This malthouse has plain gables at the eastern and western ends.

In the eastern elevation is the medallion shaped date stone recording the building's construction in 1817. The bottom two storeys of this elevation are constructed of red brick. The ground floor has three regularly spaced round-headed windows. The window arches are formed of alternate stretchers and headers. The frames are of wood and have louvres. In the centre of this bottom floor elevation, between the middle and the northernmost windows, is an iron hopper or chute which may have been a tip-up sack chute. It is almost certainly a later insertion. There are three tie-bar bosses at first floor level. None

have a date or maker's name on them. At the north end is a modern door which now provides the main access to the interior of this building.

The exterior of the loft floor is now covered with corrugated iron, which must be a replacement for an original covering which was probably weather-boarding. The corrugated iron and its predecessor were fixed to a timber frame which survives and may be original. In the centre of this floor are double doors, hinged at the sides, for taking in or sending out grain. To the north of, and slightly higher than these doors, is a four-light window, which when inspected on the inside appeared to be part of the original structure. To the south of the door, corrugated iron hides a similar window.

The south elevation is constructed of red brick in Flemish bond. As the land slopes up to the south, the bottom floor windows are at, or just below, ground level. The sills of these windows where visible are of stone or concrete, whereas those of the top floor are of wood. The windows have wooden frames and many are louvred. The tops of the windows are slightly arched and are of alternate headers and stretchers. Several features are worth noting. In the roof towards the eastern end is a very substantial louvred vent. There is a door at first-floor level with a substantial flat canopy. It is a double door, side hinged with the eastern half wider than the western half. There is a cat hole in the eastern half. Another door at top floor level, which does not appear to be original has a band of blue bricks underneath it.

The western elevation is a modern brick rebuild of 1959 according to the date inscribed in the bottom floor door lintel. This door is flanked by two windows. On the top floor there are three windows, but there are none in the loft storey. All the windows in this elevation have the usual louvres. Above and to either side of the centre window are two tie-bar bosses.

Interior

The ground floor is now reached by the door in the eastern elevation. Two steps lead down to the floor which is of concrete here, although to the south there are floor bricks. In the eastern elevation the windows have internal wooden shutters shaped to the window, with a central vertical holding bar. To the south of the door but before the first ground-floor window is a vertical ladder against the wall for access to the top floor. Above the windows is a fairly massive wooden beam supported on wooden brackets.

The beam which forms this easternmost bay is supported by four slender cast iron columns, as are the next two beams. The beams are 12in. (30cm) deep by 11in. (28cm) wide and are now covered in a thick coating of limewash as are the walls. Then comes an internal brick wall which divides off the first four bays from the rest of the bottom floor. This area of four bays is primarily occupied by the chutes and conveyors of the grain cleaning machine by Nalder and Nalder of Wantage; the machine number is 546. Of particular note is a wooden chute 15½in. (38cm) by 8in. (20cm) which goes up to the external louvred vent. There are some graffiti on the hopper part of it:

New Crop 1956
Dressing July 18



Plate 5 Malthouse No. 3, steep.

Girline by Sea
New Crop 1954
Dressing Aug FA Girline

In the fifth bay from the east and thus the other side of the dividing wall, is the brick-built steep (Plate 5). The western steep wall is flat-topped. Four slender cast iron columns rise up to the main beam. The steep has a central drain although no cover now survives. It has a stop cock located at the northern end with a small brick overflow tank. Above the steep there are three chutes for dropping in the barley. There is now no evidence for a couch frame to the west of the steep. The growing floor is of bricks. The sixteen beams west of the steep, unlike those in the first four bays, are supported on four evenly spaced squared timber columns set on pyramidal concrete bases (Plate 6). Many of the columns are chamfered and there is now a metal plate, which appears to be a rolled channel section, probably of steel, between each column and the beam it supports, similar to those in Malthouse No. 2. The plates are not original.

There are several features which should be noted in this bottom growing floor. In the north elevation in bay 20 is an aperture which may have been a bearing box, and in bay 21 is another bearing box hole. Bay twenty-two



Plate 6 Malthouse No. 3, interior, growing floor.

appears to be a re-build. Just to the east of this re-built area are what appear to be two bricked-over hatches. In the westernmost bay of the internal south elevation is a vertical ladder access to the top floor. In the next bay, to the east of the ladder, is a bucket elevator enclosed in wooden housing, the base of which is sunk into the floor. The elevator was to take the green malt to the drying kiln.

The top floor is now reached by a door in the southern elevation at the western end, although originally access could have been by the other doors as well as the vertical ladders. The floor is of timber boards and the whole is open to the roof which is lined with timber boards. The tie-beams are 6in. (16cm) by 11in. (28cm) and like the floor below are supported by four wooden columns with a pillow (pad) between the top of the column and the beam. The six roof struts rise on the diagonal, the central pair forming a 'V', the base of which is located in the centre of the main beam. The two pairs of outer roof supports rise up from the beam to the north and south respectively of the four vertical supports. The rebuilt outside western wall was tied and the ties extend well back inside the building.

The original access from the kiln on the northern side of building is indicated by two blocked brick doorways. Both wooden door frames survive but only the western wooden door remains *in situ* with its hinge on the western side and a latch on the eastern side. The door heights are approximately 53in. (1.34m) and both were approximately 42in. (1.07cm) in width. On the south elevation the bucket elevator housing rises up through the floor. The upper part of the housing which rises above the roof level is clad in slate. For the maltsters there were wooden step and ladder access to the kiln with a wooden platform outside the door to the kiln floor.

A number of features survive on this upper floor, although it seems unlikely that any are original or related to malting. They were probably associated with the building's subsequent use for grain processing. These features include, above the fourteenth beam from the east, a lath and plaster partition, and between the tenth and eleventh beams from the east, is a hopper. Unfortunately there is no maker's plate on it. Then at the fourth beam from the east is the partition which on this floor is of wood. Some of this area was divided up into storage bins by horizontal wooden planks which slotted into grooves on the wooden columns. Also visible is the square boxed chute which above roof level forms the louvred ventilator. The top of the grain screen occupies considerable space. In the north-east corner there are steps up to the next floor, the loft storey. The loft area around the top of the grain screen is floored, but this floor does not extend the whole length of the building. There is just a broad walkway, which extends back as far as the above mentioned partition. It is aligned with the second row of timber columns from the north. It is 48in. (1.22 m) wide with a hand rail on the northern side. On the walkway are metal brackets which may be the remains of conveying machinery. The timber framing to which the corrugated iron is fixed is exposed, and would appear to be original.

The kiln

The kiln block, which is a relatively modern replacement, is at right angles to the malthouse on the southern side at the western end. It joins the kiln of Malthouse No. 4. A carriageway spanned by an RSJ runs between the kilns.



Plate 7 Malthouses Nos. 3, and 4, kilns.

The kilns are constructed of brick and each has a pyramidal slate-covered roof with its own louvred cowl (Plate 7).

The eastern elevation has a door with a blue brick surround giving onto the basement. Above and to either side are windows with concrete lintels which are interesting in that they are formed of a central panel of wood flanked by glazed panels and protected by external vertical metal bars. There are a further two windows under the eaves of the roof giving onto the kiln drying floor, similar except for wider glazed panels. The western elevation is built of fletton bricks and the fenestration is



Plate 8 Malthouse No. 3, kiln furnace.

a mirror image of the eastern elevation. The door now provides the only access to the kiln furnace area.

The kiln furnace is at basement level. The brick shaft of the furnace is positioned more or less centrally against the south wall (Plate 8). It runs straight up to the flat ceiling. The furnace aperture faces north. The upper furnace door still survives. There is no maker's name on it. The door across the bottom part of the furnace has been removed. The upper heat regulator is by H.J.H. King of Nailsworth according to the plate on it. The mechanism for adjusting the two ventilation plates survives in good condition. Ventilation slips survive on the east and west walls.

The kiln drying floor is of wedge wire. A kiln turner ran the full length north to south, and the paddles with some of the mechanism survive. The chutes for loading the green malt onto the kiln also survives. On the kiln drying floor there are two Boby barrows into which the green malt could have been dropped from the chutes, but they would have obstructed the kiln turner. Either they are not in their original location or the turner may not have run across the whole length of the kiln. The inside of the roof is lined with asbestos.

The development of Malthouse No 3

This building was still demonstrably a malthouse in 1996, but like the earlier malthouses it has been altered over time. The loft level doors in the east elevation may have been inserted when this malthouse was re-used for grain cleaning and storage. Other alterations include the rebuilding of the west gable wall in 1959, and the possible insertion of some of the doors at top floor level in the south elevation. Of particular note is a band of blue bricks below the cill of one of the upper level doors in the south elevation. This blue brick band is clearly stronger than the surrounding red bricks. They could have been inserted to provide a more robust surface when heavy lorry transport, as opposed to carts, were backed up to them to load/unload grain. The upper wooden floor and roof were replaced after World War II.

Internally there have been a number of alterations. Most recently the building has been used for general storage and prior to that grain storage. As noted above, the first five bays are occupied by a Nalder's grain screen on both the bottom, top and loft storeys. A wall on the ground floor only separates this area from the main part of the maltings. On the western side of this wall on the ground floor is the steep. What is not certain is whether this malthouse was built with its steep against the eastern wall and whether it was moved at a later date, or whether it was built where it is now located, and the first bays were either unoccupied or occupied by something other than the present screen. The Nalder screen is old but not as old as the building, and a cursory check of their records has not produced the date of manufacture.¹⁸ (Nalders were in business from the 1860s, although malt and probably barley screens are of a slightly later date.) The graffiti on the hopper of the Nalder machine indicates that it was in use until at least 1956. It would appear that the building may have been used as a malthouse as well as for grain processing.

The main changes have been to the kilns. The 1950s photograph shows the existence of the malt kiln on the

north elevation at the western end but whether it was in use at that date is not known as the modern kiln was already in existence on the southern side. The north kiln was probably demolished in 1959 when the western gable end was rebuilt. The modern kiln on the southern side was a replacement for an older one, shown on the 1875 and the 1896 25 inch Ordnance Survey maps. The original south kiln did not join up to the kiln of the 1828 malthouse as it does now. Therefore the kiln post-dates 1896. The kiln furnace has an H.J.H. King ventilator and it is worth noting that Brooks are listed in King's catalogues of 1906 and 1918 as purchasers of heat regulators. In the 1934 catalogue they are listed as having purchased fans.

One addition associated with the new kiln, and therefore possibly installed at the same time, was the grain (bucket) elevator against the south wall at the western end. It is known that this malthouse's wooden floor was replaced in the late 1940s or early 1950s so any previous hoist trap would have been removed. Certainly some form of mechanised hoist system would have been needed to load the new kiln. It could not have been hand loaded in the same way as the old kilns because the kiln drying floor was too far above the growing floor for hand shovelling.

Malthouse No. 4: the 1828 building

This is the southernmost of the eastern buildings and was built by 1828 according to the rectangular date stone in the eastern elevation. Like the other malthouses on the site it is a brick-built two-storey malthouse with a slate roof. The eastern end of the roof is hipped but the western end is half hipped probably because of the way the kiln abuts the building. The malthouse is five bays wide and seventeen bays long plus the kilns. Windows or doors were originally in alternate bays.

Exterior

The front or eastern elevation is of gault brickwork which wraps round onto the north and south elevations by some 50in. (1.27m). There is a door in this elevation at the northern end which may have been the original entrance. It has a stone lintel as do the three rectangular shaped windows to the south of it. Each window has wooden louvres. On the top floor there are four windows located above the apertures on the ground floor. Between the middle windows from the north on the top floor there is the rectangular date stone and three small tie-bar bosses. There is also a massive tie-bar beam immediately above the ground floor windows.

The north elevation is of red brick in Flemish bond. The windows had wooden frames with louvres. The interesting features which survive in this elevation, are an upper floor door with a substantial canopy over it like that in the south elevation of Malthouse No. 3. This door also has a cat hole in it! Another upper floor level door has under it five courses of blue engineering bricks, again similar to the south elevation of Malthouse No. 3. There is also a squarish bearing-box aperture.

The southern elevation is of red brick in Flemish bond. At the western end the windows are blocked on both the top and bottom floors. In the rest of the elevation only those on the upper floor are blocked. However, it should



Plate 9 Malthouse No. 4, sparkstone.

be noted that the top floor window in the easternmost bay is a blind as opposed to a blocked window. It was constructed as such and may reflect the fact that the barley storage was on the top floor in this area. The western elevation of the malthouse is not external since the kilns are at the western end of the building.

Interior

The main access to the ground floor of this malthouse is now in the north elevation, by doors at the eastern and western ends. The north wall is 18in. (46cm) thick at ground floor level, but decreases to 13in. (33cm) at top floor level.

The steep is located against the east wall and is constructed of brick. The western wall of the steep is flat topped and in it are four slender cast iron columns supporting the main beam. There is no certain evidence for a couch frame, except in the south elevation, to the west of the steep where there appears to be a thicker patch of rendering on the wall. This patch is about $\frac{1}{2}$ in. (1cm) thick and 24in. (61cm) high and stretches for 115in. (2.92m) along this south elevation from the steep wall. The next row of square timber columns beyond the steep columns are on pyramidal shaped concrete bases. The bottoms of the timbers have chamfer stops and between the column and the beam is a metal 'plate'. Just to the east of the eleventh row of columns is a drainage channel running to the north wall, which is not however evident externally. In line with the eleventh row of columns, the floor bricks, which form the growing floor, change to quarry tiles. The bricks, and presumably the tiles, are laid straight on the soil which is now very compacted. Access to the upper floor is by wooden steps in the north-west corner.

At the western end are the kilns. The green malt had to be moved up to the kiln drying floor. Evidence for the original method of transfer to the kilns is limited. In the wall between the malthouse and the kilns are two fairly small apertures, only 18in. square (46cm) more or less in the right location but 62in. (1.58m) above the growing floor. If these were used, then throwing up the green malt through them would have been hard work. It is possible

they only gave access to the underside of the kiln. Later on the green malt was moved to the kiln drying floor by a bucket elevator which still survives. The housing is of wood and the bottom is in a pit.

The stairs come up in the north-west corner of the upper floor. They are very nicely finished for an industrial building. This upper floor is of wooden boards. The tie-beams are supported by squared timber columns each with a wooden pillow (pad) between the column and the beam. Some of the trusses have been strengthened with extra struts. The roof is constructed with angled struts similar to those in the 1817 malthouse. The underside of the roof is lined with horizontal timber boarding. In the fifteenth bay from the eastern end, there is a grain bagging-off point. It is not immediately evident whence the grain came to be screened. The elevator housing seen on the ground floor runs up through this floor and rises above the roof. The resultant tower is slate hung on the exterior. At the eastern end of this upper floor there are square holes for chutes to the steep below. The windows have the usual top hinged shutters with simple wooden clips. The iron hinges of the shutters appear original.

The north kiln is served by two metal doors, one above the other in the wall between the malthouse and the kiln. The bottom one gives onto the underside of the kiln drying floor and the spark plate (Plate 9), which is just visible, is supported on substantial upright round pillars which are upturned brown ceramic drain pipes! The upper of the two doors gives onto the wedge wire kiln drying floor. To the south of the hoist equipment is another pair of metal doors. Due to the rotted nature of the wooden floor at this point, close observation was not possible, but it is reasonable to assume that the top door gives onto the small kiln drying floor and that the bottom door, which divides in two horizontally, gives onto the underside and the spark plate. The top door has a maker's plate on it, 'Crittall'.

The kilns

The modern kiln of this 1828 malthouse is the southern half of the modern kiln of Malthouse No. 3 and therefore is of brick with its own pyramidal slate roof. In the northern elevation is the door access to the kiln furnace area.

The northern kiln furnace of Malthouse No. 4 is a free-standing brick shaft, unlike the shaft of Malthouse No. 3. The shaft is located off centre, more to the north than the south of the chamber. The furnace aperture faces west. It had a cast iron furnace of which the upper door is *in situ*. Unfortunately there was no maker's plate on it. The fire bars closed off by this upper door had been removed as had the bottom door. Above was an intact heat regulator with the control rods for the ventilation plates which survive. Like the 1817 malting, it is by H.J.H. King. There are ventilation slips on north, south and east sides of the shaft. The slips slide so that the draft could be adjusted as necessary.

The old or southern kiln is a brick built structure somewhat shorter in height than the northern kiln, but it has the same type of pyramidal roof structure surmounted by a louvred cowl. The only external elevation visible is the southern one which is of red brick with a window at upper floor level. A very decorative tie-

bar boss in this wall at relatively low height may not relate to the present kiln structure.

The kiln furnace is now approached through a brick built lean-to on the west elevation. Externally the upper part of this lean-to appears to have been rebuilt. The brickwork is similar to the rebuilt part of Malthouse No. 5. Internally there is a main room which gives onto the furnace area and a side room which houses the bottom of the bucket elevator which rises up inside an external slate-hung tower. Probably this elevator was used to load this kiln.

The door into the kiln furnace area is in the west wall of the kiln furnace chamber. There are two shallow and then two deep steps down from the lean-to structure to the furnace chamber. Also in the west wall there are two horizontal sliding wooden slips at shoulder height. They measure approximately 37½in (95.5cm) in length and 17in (43cm) in depth. They would probably help to control the draught. The wall separating the lean-to from the kiln furnace area is surprisingly thick, 18½in (47cm), and has a substantial battered slope on the inside of the furnace chamber at ground floor level.

The furnace is a centrally located brick shaft which is approximately 91in (2.31m) square. The furnace aperture is in the western face. There are ventilation slips in the other elevations of the shaft. They are approximately 40in (102cm) above the floor level. Immediately above the furnace is an H.J.H. King heat regulator. The control rods from beneath the kiln floor survive but not the metal plates they controlled. The main furnace is of cast iron and has the maker's name cast in the arched top. It is virtually illegible now but it may be by Bendall (Lawford Ironworks). The height of the top of the furnace above floor level is 63½in (1.60m) and the iron 'frame' is 5½in (14cm) in width. The door to the furnace has been lifted off its hinges, but the fire bars remain *in situ*. There were twelve of them 1½in (4cm) wide and 3in (8cm) deep. The total width of the trough for the fire bars is 36in (91cm) and it goes back into the shaft some 54in (1.37m). The fire bars are approximately 34in (86cm) above the floor level. The remains of the last fuel burnt still rested on the fire bars. The square door to the bottom of the furnace is *in situ*. The spark plate appears to be of perforated cast iron tiles, and rests on four round pillars located just beyond the corners of the top of the shaft. There was no access to the drying floor of this south kiln, but it is probably of wedge wire resting on an iron framework.

The development of Malthouse No. 4

Most of the changes to this malthouse appear to have taken place between the time of the 1896 Ordnance Survey map, and the 1950s aerial photograph. The main changes were to the kilns.

The first point to clarify relates to the eastern elevation and was raised by the inspector at the public inquiry in 1994. Is the east gault brick elevation of this malthouse a later rebuild? A careful inspection of the mortar and bonding of the gault and red bricks indicated that this elevation and the rest of the malthouse were built at the same time.

The externally visible alterations included the blocking of the top and bottom floor windows at the western end. This may have occurred when the grain or seed screening

machinery was installed in the southern extension of this malthouse. In the north elevation, one of the doors at upper floor level has below its cill a band of blue engineering bricks, a type stronger than the surrounding red bricks. Like the blue bricks inserted in the south elevation of the 1817 malthouse, these were probably intended to provide a more robust surface for lorries to be backed up against to load/unload grain. Internally there are fewer alterations than in the 1817 malthouse in that the steep is still in its original position. The top wooden floor was replaced shortly after World War II.

The most significant external addition was the kiln added on to the northern side of the malthouse at the western end. Up to 1896 this malthouse's kilns were flush with the north and south elevations of the buildings. The modern kiln was only a replacement for the northern kiln. The kiln furnace has an H.J.H. King ventilator and the same King catalogue details apply as noted above for the kiln of Malthouse No. 3.

At the end of their working lives both the old south kiln and the new double kiln were top loaded by mechanical means. Until then both would have been hand loaded or loaded by hoisting baskets of green malt onto the kiln. The replacement of the upper floor after World War II would have removed any remains of a hoist hatch, and there is now no evidence of any hatches in the wall between the malthouse and the kilns. As the new kiln was top loaded it is possible that the kiln was built at the same time as the new elevators were installed.

After ceasing use as a malthouse, the building was used for grain storage and although there have been some alterations, they are not as intrusive as in the 1817



Plate 10 Malthouse No. 4, Boby seed screening machines.

malthouse. However, Boby grain or seed screens have been installed on the southern side of the south wall, in a modern outbuilding (Plate 10). They were for seed processing. Access to this area is from the top floor and has necessitated additional doorways in the south elevation of the malthouse. The machines have not been dated. The 1950s photograph clearly shows this extension then being built.

Malthouse No. 5

This was the most northerly of the western malthouses. It had been substantially altered and like the others on this western side of the site, it had lost its kiln. It was a brick building with a corrugated iron roof. It had a plain gable at its eastern end and a similar one at the western end. It was six bays wide and eleven bays long with original fenestration in alternate bays. The upper floor of this building was a later addition constructed of a different type of brick to that of the lower floor, which was similar to the other maltings on the site.

Exterior

The eastern elevation was dominated by the insertion of a large doorway for vehicle access to the interior. There were two wooden windows with the usual louvres at ground floor level, one on either side of this door. The windows had internal wooden top-hinged shutters, and segmental heads made of alternate headers and stretchers. The north elevation was largely hidden behind bushes and shrubs, but no noteworthy features appeared to survive in either it or the southern elevation.

The kiln, as already mentioned, was at the western end. At ground floor level, at the southern end of this western elevation, was a door, and at the northern end a window. The door appeared to have been inside a lean-to against the kiln whereas the window was external. The window was of the usual design. In between this window and the door was the kiln with its furnace and drying floor. There were two wooden doors at about 5ft 8in. (1.73m) above the present ground level and therefore at original top floor level, indicating that the kilned malt was shovelled off the kiln drying floor directly onto the storage floor. There were also the remains of a round metal chute from the centre of the building. This would have enabled the kiln to be top loaded. The existence of modern bricks in what were the side (north and south) walls, probably indicated that the kiln was rebuilt at some stage. The malthouse wall had been exposed by the demolition of the kiln.

Interior

The interior had been completely gutted. No features of interest were noted.

The development of malthouse No. 5

Despite some drastic alterations, this building was clearly a malthouse. The most interesting aspect of this malthouse was its date. Unlike the rest of the surviving maltings on this site, it may not have been built before 1828, although it was certainly in existence by 1875 (see above for discussion). If this was the case then it was not one of the original eight malthouses on the site.

The 1950s photograph shows that the building had already had its upper storey altered. The new top floor

windows in the north elevation were just visible. The kiln survived at that date, therefore indicating that the building was probably still in use as a malthouse. Sometime after 1950 but before 1955 (see oral history), the large lorry door was inserted in the eastern elevation.

An inspection of the western elevation against which the kiln was located revealed that there were no hatches or chutes from what would have been the growing floor up to the kiln drying floor, but the round chute indicates that the kiln was top loaded. Therefore the kiln was probably substantially rebuilt at a time when mechanical grain handling was available, which was from the end of the 19th century. However, it is more likely that it was a 20th-century rebuild. It is possible that the upper part of the malthouse and the kiln were rebuilt at the same time.

Malthouse No. 6 (Fig. 2)

This was the middle of the three surviving malthouses on the western side of the site. It formed a pair with the malthouse to the immediate south, although it was somewhat larger both in width and in length. It was of brick with a slate roof, half hipped at the eastern and western ends. It was six bays wide and thirteen bays long. Originally windows and doors were in alternate bays. This malthouse had lost its kiln which was at the western end.

Exterior

The east elevation was the front elevation, and had four windows on the ground and first floors, but only two on either side of the central doors in the loft storey. The doors had chains across them and above was a hoist bar. The windows had the usual wooden frames and louvres. They were segmental headed with the usual alternate headers and stretchers. Above the ground floor windows and above the central first floor windows were massive tie-bar beams similar to those on Malthouse No. 4.

The northern elevation was constructed of red bricks in Flemish bond. The window and door apertures appeared to be original. The doors were of wood as were the window frames which had the usual louvres. There were no exceptionally noteworthy features in this elevation. The southern elevation was externally inaccessible.

The western elevation originally had the kiln against it and the apertures to the kiln survived. At ground level at the north and south ends of this elevation were doors, both of which appeared to have been in lean-to structures against the kiln. In the loft above the level of the kiln roof were three windows. A square metal chute protruding from the centre of the wall was for the top loading of the kiln, once mechanical handling had been installed. The doors and hatches to the malthouse are described below.

Interior

The main entrance was by the door at the eastern end of the north elevation. The ground floor was the growing floor with the steep at the eastern end. The windows had internal wooden top-hinged shutters which were held up by simple wooden clips.

The steep was built of brick with a cement rendered surface. It had a central drainage channel but there was no cover. The stop cock was located at the northern end, by the door and the overflow was in the form of a

galvanised iron tank. Although this may seem an unnecessarily cold location for it, it would have been convenient for turning off quickly by someone from the outside. The top of the steep was flat and in the western wall were five slender cast iron columns supporting the main beam. The barley for steeping was delivered by chute from the floor above. There was evidence of four chutes over the steep, but there were also chutes surviving in the seven eastern bays! It seems likely these were not original features since only those in the steep bay and perhaps the ones in the bay immediately to the west could have been for feeding barley into the steep. There was no trace of a couch frame in the floor, nor in the southern wall where a 'lip' might have survived.

The beams to the west of the steep were also supported on five slender cast iron columns. No maker's plate could be located. The capitals were plain square plates and in some cases the columns appear to have either been too short or to have sunk into the ground because there was a pillow between the top of the columns and the beam. In other cases the column rested on a square stone base. The growing floor was of floor bricks and large quarry tiles, now mainly removed. The tiles had simply been laid on compacted earth. There had been some patching with concrete at the western end. Under the seventh beam from the east, there was a drain going to the north wall covered by kiln tiles. It was not possible to determine whether it linked with a drain on the outside of the wall because of the external vegetation. In the fifth bay from the east, against the north wall, was a vertical ladder giving access to the top floor. The main access to the upper floor was by a wooden stair in the westernmost bay against the north wall. The tie-bars on the exterior of the eastern elevation ran back on the diagonal on the inside.

At the western end of this floor, in the middle of the kiln wall, was a relatively modern bucket elevator for loading the green malt onto the kiln. There were two doors on either side of the elevator. There were also two hatches just under ceiling level, both located to the south of the elevator and between it and the southernmost door. They were 59½in. (1.49m) above the current floor level and measured 48in. (1.22m) in width and 23in. (58cm) in depth. The hatch doors were made of wood and were top hinged. The usual simple wooden hooks were used to hold open the doors. When not open the hatch doors were kept closed and in place by very nicely finished wooden pegs. Originally the green malt would have been thrown up through these hatches onto the kiln drying floor.

The upper floor was of wooden floorboards with squared timber columns, five beneath each tie-beam. Between each column and the beam was a wooden pillow or pad. Many of the columns had chamfer stops at the tops. None of these columns had grooves in them. This indicated that the barley/malt was not stored in wooden bins. At the eastern end were the tops of the chutes to the floor below. They were square, measuring about 4in. (10cm) square. At the western end of this upper floor, access to and from the kiln drying floor was by wooden doors with their bases at floor level. Struts supporting the roof rose from the beams. As with the 1817 and 1828 malthouses, it was a simple prop system. The underside of the roof was lined with horizontal tongued and grooved

timber boarding. At the eastern end of the building was a half loft floor behind the doors in the east elevation.

The development of Malthouse No. 6

This building was still clearly a malthouse in 1996, despite the loss of its kiln. It, and the one to the south of it, were the least altered of all the buildings on the site. The east elevation deserves mention because one of the points raised by the inspector at the public inquiry in 1994 was whether the east elevation of the 1828 malthouse which has a similar gault brick front was a later rebuild. Although this question was not posed in relation to this malthouse, it is relevant to it. A careful inspection of the mortar and joints indicated that the east elevation and the rest of the malthouse were built at the same time.

As this malthouse was probably only used for grain storage after it ceased to operate as a maltings there were virtually no alterations, except the insertion of some additional chutes in the eastern end of the top floor. Like the rest of the malthouses on this site it is known that the wooden upper floor and the roof were replaced after World War II. The most recent loss had been the quarry floor tiles on the bottom growing floor.

The 1950s photograph shows that there were in fact two small kilns as opposed to one large one. Also, it confirms that there was a lean-to structure against the north side of the kiln, rather like the small, original south kiln of Malthouse No. 4. The one modernisation to this malthouse was mechanical elevation. The elevator and the chute replaced the original method of loading the kiln by shovelling the green malt up through the hatches and onto the drying floor.

Malthouse No. 7 (Fig. 3)

This malthouse was the southernmost of the three surviving western malthouses. It was slightly smaller than the one immediately to the north of it. It should also be noted that the two buildings were not parallel. This one drifted to the north. Like the others, this malting was a rectangular brick built structure with a slate roof. The roof was half hipped at both the eastern and western ends. It was four bays wide and twelve bays long, and originally windows and doors were in alternate bays. The kiln was at the western end and had been demolished.

Exterior

The eastern elevation was of gault brick, like the one immediately to the south of it, and the 1828 building to the east. In this elevation there were three windows on the ground and first floors, and finally two on the loft floor set between those on the floors below. The windows had wooden frames and louvres. There was a massive iron horizontal tie bar above the ground floor windows and a diamond shaped tie plate immediately above the top floor middle window.

The northern elevation was so close to the next malthouse that it was not possible to inspect it fully. The south elevation was of red brick in Flemish bond. There were some interesting features. One of the upper floor level doors had a cat hole in it. This door also had a massive canopy over it, and under it a substantial stone plinth and a band of blue bricks. Another upper level door

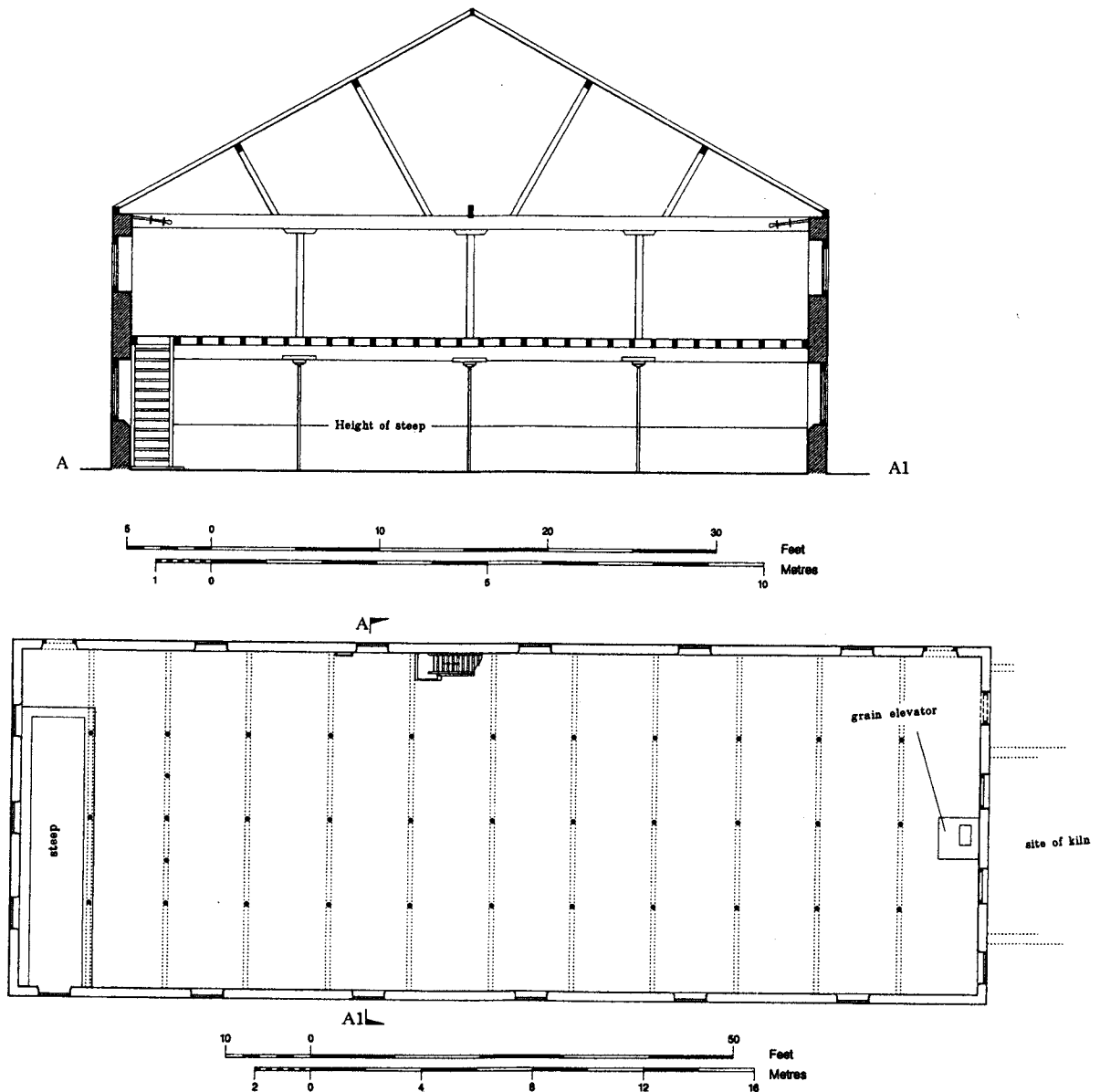


Fig. 3 Malthouse No. 7, ground plan and section (© Crown Copyright. NMR).

also had below it a band of blue bricks. There was evidence for a hoist over it.

The western elevation which once gave onto the kiln was the exterior of the building. The remains of the north and south external kiln walls showed that they were not a straight extension of the main part of the maltings. Thus the windows and doors to the north and south of the kiln walls gave onto the outside. There was also a window in the loft storey overlooking what would have been the kiln roof. Within the kiln there were visible two hatches. These would have provided access from the ground floor to where the kiln drying floor would have been located. Immediately above the hatches were two doors, which gave access from the kiln floor to the storage floor. The round chute which was used to load the green malt onto the kiln still survived.

Interior

The steep was at the eastern end against the eastern and northern walls. No search was made for any remains of a

couch frame. The floor was laid with large quarry tiles. The main beams in this malthouse were each supported on three slender cast iron columns, except for the second from the east which had two additional columns. They had capitals similar to those in Malthouse No. 6, and metal plates between the capital and the beam. The windows had top hinged shutters. The main access to the upper floor was by wooden steps against the southern wall.

The upper floor was of wooden boards. The beams were supported on three square wooden columns, some of which were chamfered, and between them and the beam were wooden pillows. The supports for the roof rose up from the beams but the pattern was slightly different from that in the other malthouses. The roof was lined with horizontal wooden boards. There was wooden ladder access to the loft storey, and a grain elevator against the wall to the kiln.

The development of Malthouse No. 7

This building was also clearly a malthouse despite the loss of its kiln. It may have been used for grain storage after it ceased to be used as a maltings and more recently it had been used for general storage. There had been few alterations to the building.

The comments on the east elevations of Malthouses Nos. 4 and 6 also apply to this malthouse. There was one probable alteration which needs mention. In the south elevation two of the doors at upper floor level had below their cills bands of blue engineering bricks, clearly a stronger type than the surrounding red bricks. As indicated above these were probably inserted to provide a more robust surface against which lorries could be backed up to load/unload grain.

Like the rest of the malthouses on this site it is known that the wooden upper floor and roof were replaced after World War II. Also, like Malthouse No. 6, most of the quarry tiles had been removed from the bottom growing floor because of their high second hand value.

According to the 1950s photograph there was only one kiln and it appears to be somewhat taller than the other kilns on this site. This may be an illusion, or it may be that it was built or reconstructed at a different time, or it may be that it was intended to produce a different type of malt. The one major modernisation to this malthouse was the grain elevator for loading the green malt onto the kiln. This would have replaced the original method of loading the kiln by hand shovelling the green malt up through the hatches and onto the kiln drying floor.

Other structures on the site

There were a number of other buildings on the site. Some were attached to the maltings, notably on the northern side of Malthouse No. 3, and on the southern side of Malthouse No. 4. In the extension to Malthouse No. 4, there were some particularly fine Bobby grain/seed screens. There were other modern structures on the eastern and southern sides of the site. None of these buildings were recorded. There was one other feature of note, a well which is located to the north of Malthouse No. 3 at the eastern end, more or less in the current roadway. It has been suggested that it appears to be of an early 19th century date. Photographs show three pipes rising from it.

Implements and equipment

The few surviving malting implements deserve a separate mention. The surviving kiln drying floors were of wedge wire, but this was only the most recent kiln floor. The original kiln drying floors would have been of perforated ceramic tiles. Whole and damaged tiles survived on site. The whole ones were of the standard size, one foot square and are with one exception not unusual in any way. All have eight small holes on the upper surface to one large round hole on the underside. One is stamped with the maker's name: 'Fison Stowmarket'. The tile that is unusual bears a patent number on it but not a maker's name. The top or upper surface is not flat, but has a circle round each group of holes and lines from the outside holes to the central hole. Such a surface would not have been particularly suitable

for malt. It may have been an experimental tile but at present nothing more is known about it. It is not surprising that kiln tiles were supplied by Fisons of Stowmarket since they were relatively near. What is of interest is that the underside has round holes for the clusters of eight. Later Fison tiles have square holes on the underside for their clusters. Advertisements in the *Brewers' Journal* for the early 1880s show that both types of kiln tile were then available.

Other standard implements were found on the site. There were malt ploughs, of which there were the remains of three, all slightly different. There was one piece tidier, for pushing the piece together at the edges after turning etc. On the kiln drying floor were two Bobby or round wheeled malt barrows for moving the green malt around the drying floor and so helping to ensure that it was evenly spread. It is not clear how the kiln turner was operated with the barrow on the drying floor, so they may have been moved off it. Sacks marked with the Brooks name and date of make also survived on the site.

All the above were more or less movable objects of the malting industry. The other items usually found in a maltings are grain screens and grain dressing machines. Three major companies which produced screening and dressing machines supplied Brooks: Robert Bobby of Bury St. Edmunds, Nalder and Nalder of Wantage, and Robinsons of Rochdale. The machinery supplied was not just for the barley and malt part of Brook's business but also for their extensive and important seed department. One Bobby invoice has survived but otherwise it has not been possible, so far, to trace any of the machine details. The numbers have been retained for further research. Also, as indicated above, the kilns were at least in part supplied by H.J.H. King of Nailsworth. No doubt other kiln parts were supplied by other companies, but no evidence of this has been found.

Conclusions

In 1996, The Walls Maltings site comprised the largest number of Georgian malthouses in one location in both Essex and England. It was also the largest group of large malthouses of that date. The Walls site had seven large malthouses. In contrast other comparable sites have no more than one similar malthouse.¹⁹ It was not until the 1850s that sites are known to have had a multiple number of malthouses, for example in Burton upon Trent.²⁰ There is little doubt that because of their age, size and number, they were one of the most important sites in England. Yet, very little is known of their origins. The date stones provide construction dates, and the first edition 25 Inch Ordnance Survey map confirms the existence of eight malthouses. There is evidence to indicate that by 1854 there were eleven buildings on the site and all of them may have been

malthouses. But whether there were originally eleven or eight malthouses, one is still left with the question as to why they were built where they were, and on such a scale. Commercial and industrial towns produced beer for the consumption of their inhabitants and as malt was the prime ingredient, large quantities of malt were required. London's malt had traditionally come from the Essex/Hertfordshire border, the Lea valley. Good malt was produced in the surrounding lands and there were good transport facilities in the form of the navigable river and the turnpiked Great North Road, which also gave access to the malting barley lands of the Midlands. The availability of good transport was always important for malt production, and certainly the river Stour was navigable at Manningtree, but unlike the Lea navigation, any malt produced at Mistley for London had to all go round the coast and up the Thames in sailing barges. Therefore one might have expected that malt produced at Mistley was at a disadvantage from a transport point of view, but given the success of the venture this does not appear to have been the case. That Edward Norman's venture at malt production was successful is indicated by the fact that he built a second large malthouse just one year after the first, and in the following twenty-one years had built a further six. It is regrettable that so far no evidence has come to light on the reason for the building of the malthouses nor on Edward Norman's early life.

The malthouses had a long working history, starting in 1806 and ending in 1996. Inevitably during this period there were both major and minor alterations. The former comprised the possible extension upwards of Malthouse No. 2 and certainly the later alterations to the building, the re-kilning of Malthouses Nos. 3 and 4, the loss of the kilns of Malthouse Nos. 1, 2, 5, 6, and 7, and the gutting of Malthouse No. 5. The minor alterations include the insertion of doors and other smaller features. These are the obvious alterations, but what is not known is whether the steepers are original, and what type of kiln furnace was in use when the malthouses were built. There are so few comparable sites surviving, that determining what these features were like is difficult.

Malthouses which can with certainty be dated to the first quarter of the 19th century tend to be small and in consequence where they survive they have small stone steepers. Some brick examples do survive, notably at Letheringsett (Norfolk) where the brick built steep is in a lean-to structure at the opposite end of the buildings to the kilns. The steep at Boyes Croft, Great Dunmow, is of brick but the malthouse is narrower and shorter than those at Mistley. The most comparable examples are steepers of a mid 19th-century date. Also, early steepers tended to have a single drain hole as opposed to a drain along the

length of the steep. Does this indicate that the drains were a later addition or that the steepers were re-modelled in the mid 19th century? It will probably never be known. Again, there are few comparable kilns of this date because those which do survive are attached to small malthouses. Where stone was available, they were built of stone, but in Essex, they would have been constructed of brick. There are two comparable examples, again Boyes Croft which is attached to a relatively small malthouse and that at Letheringsett. A slightly later example is to be found at Burghley Park, Cambridgeshire, where there is a fine brick-built kiln furnace in a stone-built malthouse. The original kilns at The Walls may have been similar brick built furnaces. Since the majority were small, it may explain why most of the malthouses had two kilns. Those with wings could have had one furnace in each wing, and those with two together could have had a bank of two furnaces together as at Letheringsett.²¹ The available literature for this period does not assist in determining the details of the furnace.²² As for the kiln drying floors at this date, they were most likely of perforated ceramic tiles as opposed to hair cloths. The earlier tiles would have had fewer holes than the ones found on site which are of a later 19th century date. Finally mention should be made of the squared timber columns and the cast iron columns. The latter were certainly available at this time, with Letheringsett again being a comparable example. However, timber would have been readily available at Mistley and may have been a cheaper option. Many of the timber columns are no doubt original, although some may be replacements or moved from one building to another as the need arose. A comparable malthouse example is to be found at Regent Wharf, Loughborough, Leicestershire. Here the malthouse is of a slightly later date, 1830s-1840s, but being next to the canal was in a position to benefit from readily available timber. A further comparable example is at Alnwick, Northumberland, Dispensary Street, where the 1830s malthouse has squared stone columns.

The later use of some of the buildings for seed processing was a logical development when other malthouses, including those of Free Rodwell at the other end of Mistley, could produce large quantities of malt more conveniently and cheaply because they used imported grain, were capable of steeping more barley at a time, and were fully mechanised. The Walls malthouses could not retain their pre-eminence once larger multi-story malthouses were built later in the 19th century. The firms used to provide the equipment (screens, conveyors and the furnaces) were all well known and included some rather further afield than might be expected, for example H.J.H. King of Nailsworth in Gloucestershire, and Nalder and Nalder of Wantage,

but all this reflects the value of the malthouses to their owners, and the need to have the most up to date equipment.

There is also the human side to be considered. The most recent involvement of men in the malting process is covered above, but the working of the maltings in the 19th century is not known. There is no way of knowing the number of men employed on the site without some form of business record. It is unlikely that any of the malthouses were small enough to have been a one man malting in the 19th century, with the possible exception of Malthouse No 7.

It is to be regretted that more recording work was not undertaken before conversion and demolition of this undoubtedly important site, but fortunately some information has been retrieved to broaden our knowledge of early industrial-scale maltings. But, because so few comparable examples survive, making valid comparisons with site location and development can be difficult. The individual malthouses can be compared with other individual malthouses but at present the site as a whole cannot be compared. Later examples such as Sleaford in Lincolnshire, which has eight early 20th-century malthouses, have not yet been adequately recorded, and in any case are of a much later date, as are Free Rodwell's seven malthouses at Mistley Quay. The inability to compare this site with others of a similar date does, however, demonstrate the uniqueness of The Walls Malthouses.

Acknowledgements

The work of recording The Walls Malthouses and at least an outline of their history could not have been achieved without assistance from a number of people: Anthony Barlow, who accompanied me on my first visit; Anthony Calladine and his colleagues from the former Royal Commission on the Historical Monuments of England, now English Heritage, for survey work; Danny Cook, who had worked at the site; Shane Gould, formerly of Essex County Council; Eric Saxby, who had also worked on the site; the late John Severn, for survey work in 1996; Pete Rogers of Essex County Council for the photographs; Malcolm Tucker, for comments on the timber framing of the buildings; Mr K. Turner, site manager at closure; Essex County Council for allowing the use of the photographs; and the staff at the Essex Record Offices of Chelmsford and Colchester. If I have omitted any one it is not intentional, and I offer my apologies.

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Notes

- 1 Each of the Malthouses Nos. 1, 2, and 3 have a date stone, with the year they were built, 1806, 1807, and 1817 respectively, and Edward Norman's name.
- 2 No attempt has been made to check the parish registers for the family's detailed history.

- 3 The full title of the publication is: Public Health Act: *Report to the General Board of Health, Mistley*, Alfred L. Dicken, 1854.
- 4 See bibliography for full details.
- 5 No. 9 Malthouse is not considered in this report because it was located at Mistley Quay and was demolished prior to 1993.
- 6 This malthouse was Robert Free's malthouse on the Quay at Manningtree.
- 7 H.J.H. King were well-known suppliers of malt kiln furnaces, heat regulators and other malting equipment. The firm was located at Nailsworth in Gloucestershire.
- 8 There are two methods of making malt by the flooring method: piece malting and strip malting. In the former a batch is moved down the length of the growing floor with the result that the batch at the kiln end is older than that next to the steeping cistern.
- 9 In the later 18th century, and possibly in the early 19th century, steeping water was often not changed at all!
- 10 In Essex quarry tiles are known as pammets. However as a tiled floor is a semi-technical description for a particular type of growing floor, the term tile and not pammet will be used in the text.
- 11 The known types of early furnace are discussed in the conclusion.
- 12 This is what Mr Saxby stated. It was not obviously as simple as multiplying what one could do by three!
- 13 Edme are located next to Mistley station and produced malt extract.
- 14 Culms: rootlets and associated debris removed from the kilned malt by dressing (cleaning).
- 15 This seems rather high!
- 16 A more detailed description will be found in the typescript deposited in the National Monuments Record.
- 17 The Egyptian style of this doorway and window were pointed out to me by Tony Barlow. The Egyptian style was so called after the introduction of 'Egyptian' features after the battle of the Nile in 1798.
- 18 Letter from Jonathan Brown at the Rural History Centre, University of Reading, where some of Nalder and Nalder's records are held, to the author, 16 March, 2000.
- 19 The malthouse at Letheringsett, near Holt, Norfolk is a single large example, dated to 1814.
- 20 Wetmore Road, Bass Nos 18 - 20.
- 21 The author has seen all these sites as part of her study of some 390 malthouses. Written reports exist in respect of them all.
- 22 John Reynoldson's *Practical and Philosophical Principles of Making Malt*, 1809, and Rees' *Cyclopedia*, 1819.

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Keir Hardie in West Ham: ‘A constituency with a past.’¹

by W.R. Powell

1 In July 1892 the parliamentary division of West Ham South elected James Keir Hardie as one of the first independent Labour M.P.s in the country. He lost the seat three years later, and never regained it. These events have often been discussed in the context of Hardie’s career and the origins of the Labour movement.² The present paper explores the local background of the episode, from 1880 to 1895.

2 In 1895, a few months after Hardie had been defeated, John Spencer Curwen, who had been one of his supporters, gave a lecture on the recent election, entitled ‘A Constituency with a past.’³ He meant a dubious past, in the sense used by Oscar Wilde in *Lady Windermere’s Fan* (‘many a woman has a past, but ... she has at least a dozen.’)

3 By the 1880s West Ham, adjoining London to the east of the river Lea, was a booming industrial town, with a population approaching 200,000. It became a municipal borough in 1886 and a county borough in 1889. From 1880, as part of the South Essex (Romford) parliamentary division, it was represented by two Conservatives, the banker Thomas Baring, and William Makins, chairman of the Great Eastern Railway, whose carriage works were at Stratford in West Ham. The prospective Liberal candidates were Edward North Buxton, a whig brewer, and Edward Rider Cook, a radical soap manufacturer at Stratford.⁴ By then both the Liberals and the Conservatives had associations in South Essex, with branches in West Ham. The Liberals were the more active. Between 1880 and 1886 they held 130 meetings in West Ham, including many small, educational lectures. The Conservatives held only 19, usually large rallies, like the one in May 1882 attended by Lord Salisbury, the future prime minister.⁵

4 Under the Franchise Act (1884) and the Redistribution Act (1885) West Ham became a parliamentary borough with two divisions, North and South, each with one member. Both divisions were fiercely contested in the following years.⁶ In 1885 the Conservative leader was Major George Banes of Plaistow, partner in a firm of wharfingers.⁷ Bald and thickset, with Dundreary whiskers, he posed as a plain man, unambitious, devoted to the

public good, and a friend of the workers, while advocating peace, retrenchment, reform, and defence of the Empire.⁸ He was actually tough and shrewd, with long experience on the West Ham local board, the school board, and a Volunteer Artillery company, which he himself had raised. He was courteous, friendly and laconic, though capable of forceful speech. Among other prominent Conservatives were David Howard, chemical manufacturer, and Philip Savill, brewer, both at Stratford.⁹

5 The Liberals were led by Frederick C. Blackburn, who had been trained in Birmingham by Francis Schnadhorst, and in 1877 was appointed agent and secretary of the West Ham Liberal association.¹⁰ Most of them were radicals, advocating universal (male) suffrage; one man, one vote; the payment of M.P.s; land reform; free primary education; the reform or abolition of the House of Lords; Irish Home Rule; and a peaceful foreign policy.¹¹ Among the radicals, uneasily yoked, were two groups, nonconformists and seculars. The nonconformists’ leaders were J. Spencer Curwen, musicologist, local historian, and member of Stratford Congregational church,¹² and Dr John Moir, medical practitioner at Canning Town and a member of West Ham school board, who was also a vice-president of the Scottish Labour party.¹³ Besides the main radical programme, these nonconformists favoured the disestablishment of the Church of England and temperance reform.

6 The secular radicals, who were in varying degrees hostile to the churches, were locally active and aggressive. In 1881 they opened the Cromwell ‘patriotic club and institute’ near Plaistow railway station.¹⁴ During the following years, under the leadership of William Volckman, a Stratford jam manufacturer, and Edward Fulcher, a builder, the club mounted an extensive programme of lectures, concerts, and social events for working men. Several meetings were held in support of Charles Bradlaugh’s refusal to swear an oath on the Bible when admitted as an M.P.¹⁵ Bradlaugh himself addressed the club at least twice.¹⁶ Another well-known speaker was the theosophist Annie Besant.¹⁷ In 1883 three lectures on ‘The Origin of Man’ were

given by Edward Aveling, then a prominent radical and later a socialist agitator.¹⁸ He condemned the Bible as scientifically worthless, and gave the Darwinian view: 'Man was constantly evolving, and there was bright hope for the future ... the world would go on upward, higher and higher, and greater happiness to all would be the result.'¹⁹ He is said to have been a brilliant speaker. But his high-flown sentiments at the Cromwell club read ironically in view of his private life.²⁰ In the following year the militant atheist G.W. Foote, an associate of Aveling, lectured to the club on his own recent imprisonment for blasphemy, under the title 'How I fell among thieves.'²¹

7 The club had a concert hall for 500, bar, billiard room, library, and roof-garden.²² Its programmes included 'humorous readings' by the secretary, J.S. Chapman,²³ 'a farce and scenes from Shakespeare,'²⁴ and later a dinner and concert, sponsored by the West Ham branch of the National Secular society.²⁵

8 In 1884 the club held several meetings in support of parliamentary reform.²⁶ In 1885, with a general election approaching, it promoted the nomination of William Volckman as the Liberal candidate for West Ham South. The Liberals had agreed that their candidates for both borough constituencies should be chosen by an elected caucus of 500 members: 250 for West Ham North, and 250 for the South. The caucus system, developed in Birmingham, was designed to make the selection of candidates more democratic, and less susceptible to influence and money.²⁷ It was hated and feared by the Conservatives,²⁸ and disliked by some Liberals.²⁹ The members of each caucus were elected by a show of hands in a series of meetings in the constituency. How this was done at Plaistow, in West Ham South, on 2 February 1885, was described by a witness writing as 'Liberty-loving Englishman.'³⁰ At a meeting attended by some 80 men, mostly Cromwell club members:

As the chairman read out the name of the candidate, a dark-whiskered gentleman in the corner of the room, if he was in favour of the candidate, shouted 'up', and the hands went up. But if the candidate did not meet with his approval he was silent, and no one voted. And these men, who are elected in this manner, set themselves up as representing the electors of West Ham.

9 This account drew a comment from Spencer Curwen.³¹ He agreed that the description of the Plaistow meeting was accurate: the Workmen's [i.e. Cromwell] club had formed about four-fifths of those attending, and had the elections entirely in their hands. But, he added, who is to blame? Those who *didn't* come, including several ministers. Curwen hoped that next year the election of

Plaistow's 91 caucus members would be more widely representative. This letter shows the gulf between the nonconformist and the secular radicals, and particularly the nonconformists' dislike of the Cromwell club.

10 William Volckman's bandwagon as the prospective Liberal candidate gathered speed, and on 10 April he topped the poll in a nomination ballot held at Stratford, defeating Joseph Leicester, a trade unionist and temperance reformer.³² This vote was challenged as irregular by W.H. Smith and others, who said that they would oppose Volckman because he had failed to defend the labour interests of the constituency, because he was the nominee of Bradlaugh and the Cromwell club, and because he had slandered Joseph Leicester. Volckman, he added, was not acceptable to 'the Temperance 250', which was strongly represented in the caucus, nor to religious people.³³ This diatribe was effectively refuted by the West Ham Liberal club, the Cromwell club, and Volckman himself, who said that the proposal to invite him to stand had come from two deputations comprising electors from every polling district, and at least six associations.³⁴ On 22 May Volckman's candidature was approved 'by a considerable majority' at another caucus meeting, at Plaistow.³⁵

11 On 30 May 1885 Frederick Blackburn stated in the press that according to his records, Volckman had 'honourably submitted' to every vote that had been taken and that he had topped the poll on four occasions.³⁶ The last vote had been 'simply one of etiquette, as between the north and south divisions' [of West Ham], to confirm the selection already made by the southern division, 'who on this occasion attended in far greater force than those of the northern, many of which ... abstained from voting ... while a large proportion voted with the minority.' Blackburn added that in due course there would be another meeting of the electors to confirm the choice of candidate. William Volckman had no reason to fear this test, and hoped that it would put an end to bickering.

12 It seems from Blackburn's letter and other newspaper reports that the choice of the Liberal candidate for West Ham South, made initially by the caucus of 250 electors for that constituency, was thought to need confirmation by the full caucus of 500 for the whole borough. A meeting of the full caucus had already approved Volckman's selection, but since it had been poorly attended by northern electors, there was to be a final meeting for the same purpose.

13 Blackburn evidently favoured Volckman, but his influence was abruptly removed when he collapsed and died on 31 May, only twenty four hours after the publication of the letter.³⁷ On 9 June, at the final confirmation meeting, Volckman's

candidature was defeated by 248 votes to 245.³⁸ In the preceding debate he had defended his association with Bradlaugh, while denying that he himself was himself an atheist. Spencer Curwen said that he opposed Volckman not because of his principles, his public capacity, nor his religious opinions, but because he could not win a parliamentary election owing to 'other matters to which it was quite impossible he could refer at that meeting.' The 'other matters' may have concerned Volckman's wife Elizabeth, a French woman usually known as 'Madame Volckman.' On two occasions, in later years, she took action for slander. The first was in 1891, when it had been alleged that she and William were not married.³⁹ In the following year she won damages against two former friends who had said that she had murdered her first husband and had been hounded out of Paris by the police for keeping a brothel.⁴⁰ Such rumours, however false, would have told against her husband as a parliamentary candidate, but the main objections to his candidature were probably his position as a wealthy factory owner, and his connexion with the Cromwell club.⁴¹

14 Almost immediately after the adverse vote of 9 June William Volckman resigned his candidature.⁴² On 22 June W.H. Smith chaired a meeting in Canning Town which resolved to back Joseph Leicester as the 'Labour and Radical' candidate.⁴³ On the 27th a deputation of 50 from 'the Liberal and Radical societies of south West Ham' waited on Volckman at his home in the wealthy residential area of Knotts Green, Leyton, to urge him to reconsider his retirement.⁴⁴ In a high-minded reply Volckman said that he would do so only as the candidate of a united party. He had retired because the caucus had become a battleground of contending clubs whose main aim was not the choice of candidate, but a monopoly of the act of choosing. He agreed that it would be desirable to choose a Labour candidate for West Ham South but why go to Lambeth to find one [Joseph Leicester]? He again denied that he had tried to foist himself on the constituency, and condemned Leicester for encouraging violence against opponents. He hoped that the West Ham caucus would be split into two distinct bodies, for the North and South divisions, each responsible for electing its own candidate. The caucus for West Ham South might then be increased by 50, to allow for its larger population.

15 In the following months Joseph Leicester was gradually accepted as the Liberal candidate for West Ham South. Among his supporters was Henry Worland, a Canning Town corn merchant who was for many years prominent in the public life of West Ham: 'a strong, strenuous, man ... firmer, graver, more prudent every year.'⁴⁵

16 Leicester's success may have owed something to the closure of the Cromwell club. In August 1885 it was reported that the club was being prosecuted for selling liquor to non-members.⁴⁶ It still survived in September, when it was said to be threatening action against supporters of Joseph Leicester, but by 17 October the club premises had been sold to the new vicar of Plaistow, Thomas Given-Wilson, who in December re-opened it as a church mission hall and club.⁴⁷ Given-Wilson later mentioned the Cromwell club in a published description of Plaistow as it had been when he arrived in 1884:⁴⁸

... A great population, some given over to dissent, but more sunk into actual heathenism, among whom the Atheists were making triumphant progress, hundreds crowding to the notorious Cromwell club to hear Bradlaugh, Mrs Besant and the like rave out blasphemous infidelity, robbing the poor creatures who listened open-mouthed, of the only thing that could make their sad, suffering, diseased existences endurable: the hope of immortality, the faith in a loving and merciful Father, and in a Saviour who was afflicted in all their afflictions.

This effusion was part of the tendentious scheme by which Given-Wilson attracted donations towards philanthropic work in Plaistow by proclaiming the miseries of his parishioners.⁴⁹ But it scarcely exaggerated the loathing provoked in some hearts by the Cromwell club.

17 On 26 September 1885 it was announced that the West Ham Radical Alliance club and institute would soon be opening in temporary premises adjoining William Volckman's factory in High Street, Stratford.⁵⁰ It would promote radicalism through a club department (subscription 6s. a year) and a political department (1s. a year). There were said to be over 300 promises of membership. The club had been opened by 7 November, when it was stated also that Volckman was president of the newly-founded Radical Alliance.⁵¹ This Stratford club was presumably intended to replace the Cromwell club, but it is not known to have been involved in the politics of West Ham South. William Volckman himself finally threw his weight behind Joseph Leicester, and on 28 November, general election day, urged his friends to do the same.⁵²

18 By 1885 dissatisfaction with the inadequate social policies of the Liberal leadership, and that of the secularists, was causing some radicals to gravitate to the Social Democratic Federation or the Socialist League. Others formed small, independent clubs which are hard to trace, probably because they avoided the kind of local publicity which might have endangered their members' jobs, at a time when socialists were generally regarded as dangerous revolutionaries. The history of one such club,

skilfully pieced together by Mr S.A. Shipley, sheds light on West Ham's politics as well as the wider issues and activities of London socialism.⁵³

19 The Stratford Dialectical and Radical club, meeting in the 'Telegraph' public house in Leyton Road, was formed in November 1880 by seceding members of the local branch of the National Secular Society, led by 'Captain' Tom Lemon, a former merchant seaman, now a Stratford pawnbroker, and Ambrose G. Barker, a young schoolmaster. Both men had studied under Edward Aveling at the N.S.S.'s 'Hall of Science.' Lemon, who became president of the new club, in 1882 took over the 'Telegraph' in succession to his uncle. Barker, secretary of the club, was the son of a Chartist. He had come up from Northamptonshire in 1878, to teach at the new board school in Church Road, Leyton.⁵⁴

20 The club's meetings were advertised in the *National Reformer* and *Radical* magazines, and by handbills. They included educational as well as political lectures and classes, some given by Lemon and Barker, others by visiting speakers like those from the Social and Political Education League.⁵⁵ The club supported H.M. Hyndman's newly-formed Social Democratic Federation, to which both Lemon and Barker belonged. Barker became chairman of the *Freiheit* Defence committee which opposed the prosecution of the German revolutionary Johann Most.⁵⁶ In April 1882 he represented the club at a meeting in London to welcome Russian revolutionaries, and in June invited one of them, Prince Pëtr Kropotkin, to lecture to the club.⁵⁷

21 The S.D.R. club seems to have had no links with the orthodox radical clubs of West Ham, or even with the Cromwell club, but it did have dealings with a man who was deeply involved in local politics. This was Thomas M. Kelly, who in September lectured to the club on 'British commerce and labour in relation to foreign competition.' He was then described as secretary of the Anti-Sugar Bounty league.⁵⁸ The sugar refineries at Silvertown, in south West Ham, were then losing trade to foreign competitors receiving state bounties.⁵⁹ Since they employed 500 workers, nearly all men, sugar bounties were a major issue in local politics.⁶⁰ Thomas Kelly's lecture evidently went down well, for he was invited back the following week. But he was not what he may have seemed to be. He and his friend Samuel Peters were the leaders of a gang using bogus trade unions to promote the interests of employers and the Conservative party by strike-breaking and other methods.⁶¹ Their activities in West Ham South during the general elections of 1885 and 1886 are mentioned below.

22 In August 1884 the S.D.R.C. took part in the great demonstration at Wanstead in aid of

parliamentary reform.⁶² Speeches on that occasion were made from four platforms, one of which was chaired by Tom Lemon. This is the last known reference to the club. Its secretary, Ambrose Barker, remained an assistant teacher in the same school for 44 years.⁶³ Intelligent and cultured, he collected rare books, and wrote several books himself. He was always eager to join revolutionary associations, and for ten years edited the anarchist journal *Freedom*.

23 The president of the S.D.R.C., Tom Lemon, has been traced no later than 1887.⁶⁴ He was an ambivalent and somewhat sinister figure. Having founded and led this radical club, he later worked for the Conservatives in the general elections of 1885 and 1886. His early life seems to have been colourful and mysterious, and was said to have included service in the American Civil War.⁶⁵ He was a freemason, a financial speculator, and a collector of jade and Edison-Bell gramophone records. Mr. Shipley calls him 'a dyed in the wool Tory democrat.' If this implies fixed political principles, it was not the view of some who observed his actions in 1885-7.⁶⁶

24 On 15 January 1885 a public meeting was held at Tidal Basin to promote Lt. Col. P. Cowan, alderman and a former sheriff of London, as the 'accepted industrial candidate' for West Ham South.⁶⁷ Several leading Conservatives attended, including their agent for South Essex, R.T. Wragg. The meeting was chaired by Tom Lemon, who was said to represent 'the Seamen's Society and other radical associations,' and to be president of 'the industrial committee.' The other members of that committee were named as Samuel Peters (Sugar Operatives Society), vice-president, John McLean (cooper) and Thomas Kelly (Dock Labourers' Society) joint honorary secretaries. These particulars, with the report on the meeting, indicate that Lemon was now closely associated with the Kelly-Peters gang. In presenting Cowan, Lemon said that when sheriff, he had urged that the labour interest should be represented in the London Chamber of Commerce, but that the 'monied mob of the Chamber' would not listen. Cowan himself stressed the need to protect British trade, especially from foreign sugar bounties.⁶⁸

25 The meeting went badly for the organizers. One heckler shouted 'Has Mr. Lemon gone from Radical to Conservative?' When asked who invited him to be a candidate, Cowan replied vaguely that it was the Conservative club of West Ham 'men whom I understood to be the Industrial Three Hundred in this district.' Under further questioning Lemon was forced to admit that he had invited Cowan 'on my own individual responsibility.' Asked what connexion he had with the constituency, Lemon said that he had had a vote in South Essex and would probably have one in West Ham South. In view of

his long-standing connexion with West Ham North this was a disingenuous reply, though not necessarily false in those days of multiple voting, Lemon then added that he had an interest in the constituency 'as one, if not of the working class, then of the class which immediately overlies the working class.' 'You are a paid agent,' shouted a heckler. A resolution adopting Cowan was moved by John McLean, and was declared by Lemon to be carried, but an amendment rejecting him, moved by James Ronan, vice-president of the Canning Town, Plaistow, and Silvertown Radical association, was overwhelmingly carried. In the following month, Cowan, 'not finding a very cordial reception' in West Ham, announced that he had become the Conservative candidate for Tower Hamlets, Whitechapel.⁶⁹

26 In July 1885 the Conservatives adopted William Pearce, of J. Elder & Co., shipowners, as their candidate for West Ham South.⁷⁰ When he fell ill and withdrew, they accepted an offer to succeed him by Alfred Pound of Wroxall (I.W.), a former colonial magistrate from Eton and Oxford.⁷¹ Though unwelcome to those who wanted a working man to represent them, he won over the sugar workers by promising to oppose foreign bounties, and also gained the support of Major Banes.⁷² But at the general election on 5 December 1885 Joseph Leicester, standing as a 'Labour' candidate with Liberal support, defeated Pound by 3,527 votes to 2,545. The Liberals also won West Ham, North, though by a smaller majority.⁷³

27 At the 1886 general election Joseph Leicester again contested West Ham South. In the Liberal split over Irish Home Rule he remained loyal to Gladstone. That must have cost him some Liberal Unionist votes, while the Irish vote, which might have helped him, was not yet properly organized.⁷⁴ During the election campaign he was damaged by some slanderous attacks from the Kelly-Peters gang, failed to convince some former supporters that he had been a good M.P., and made one or two silly speeches.⁷⁵ And he found himself opposed by a strong local opponent.

28 In April 1886 George Banes was nominated as Conservative candidate for West Ham South, at a meeting said to have included 'several prominent Liberals.'⁷⁶ Early in May, at a Primrose League meeting in Plaistow, he said that he had been brought up as a Liberal and was still one essentially, since his Conservatism 'embraced the old Liberal principles of hatred of tyranny, of kindness and help to their fellow men.'⁷⁷ That was not entirely humbug, for only a few months earlier Spencer Curwen had publicly commended Banes for his interest in progress.⁷⁸ In June Banes was challenged by Edwin Newman, who came forward as an 'Independent and Progressive Conservative,'

advocating 'the rights of British labour.'⁷⁹ Newman was one of the Kelly-Peters gang.⁸⁰ At an adoption meeting late in June his candidature was proposed by Kelly and supported by Tom Lemon.⁸¹ But a week later, with their approval, Newman announced that he was withdrawing to avoid splitting the Conservative vote.⁸² It seems more than likely that Newman's candidature was from the first a tactical move designed to assist Banes. Whether Banes connived at it is another matter. But in any case Kelly and Peters would have hoped to gain credit from his election, which duly took place on 7 July 1886, when he defeated Leicester by 2,778 votes to 2,472. At the same time the Conservatives gained West Ham North, unseating the Gladstonian Liberal M.P.⁸³

29 The Conservative government of Lord Salisbury, lasting from 1886 to 1892, was one of the longest in the 19th century. George Banes, M.P. throughout those years, was once criticised for his silence in Parliament by Spencer Curwen, who likened him to the sailor's parrot: 'Can he talk? No, but see how wise he looks.'⁸⁴ Banes himself complained in 1892 that there had been scarcely any chance for a Conservative member to speak in Parliament unless he was connected with the ministry.⁸⁵ In local affairs, during those years, he remained quietly active, with a relaxed attitude to party politics. He remarked in 1889:

I honestly try to do the best I can, without making a great fuss over it, for the interests of my constituents ... I am perfectly free, and no party or personal considerations will ever induce me to vote or act against my conscientious convictions.⁸⁶

This lofty attitude may have inhibited Conservative activity in the constituency at a time when the Liberals, in spite of internal divisions, were full of fight and constantly in the public eye. During the great dock strike of 1889, for example, when Banes claimed to be working for a settlement, he was upstaged by Hume Webster and his Liberals, who got much credit for supporting the strikers.⁸⁷

30 After his election defeat Joseph Leicester was discarded as prospective candidate for West Ham South. A writer with the pen-name 'A Liberal who wants to win,' described him as 'a very good man, but as a politician a great failure ... a windbag,' and this seems to have been the general view.⁸⁸ Leicester had also suffered from financial difficulties arising from his position as a 'Labour' M.P., dependent on local subscriptions to meet his election expenses.⁸⁹ A candidate who was wealthy as well as radical would be attractive, and such a man now appeared.

31 James Hume Webster, born in 1843 at Montrose (Forfar), was the son of a customs officer, and a great-nephew of Joseph Hume, M.P. (1777-

1855), who had for thirty years led the radicals in parliament.⁹⁰ From modest beginnings he had prospered as a banker, and since 1879 he had been head of Hume Webster, Hoare & Co. in the City of London. He had a country seat at Marden Park, in Godstone (Surr.) and bred racehorses. In 1886 he had contested the South Essex (Romford) parliamentary division as a Gladstonian and had done well to come second to the winning Conservative, pushing the previous M.P., now a Liberal Unionist, into third place.⁹¹ After the 1886 election he had approached Hugh Reeves, Blackburn's successor as Liberal agent, with a view to standing for West Ham South. Reeves advised him to 'go for it.'⁹²

32 Early in January 1887 Webster took part in a meeting in Canning Town convened to launch a 'West Ham Central Liberal and Radical association.'⁹³ The platform speakers included W.H. Smith and Henry Worland (now an alderman), both former supporters of Leicester. They were constantly interrupted by protests – possibly justified⁹⁴ – that the meeting was 'a fraud ... a dodge to get the voters ... to recognise a "split off" association as the head of the radical cause,' and that it had been got up in order to foist Hume Webster on the constituency. Later in January it was stated that there were eleven associations claiming to represent the different elements of Liberalism in West Ham South, and that one of them had approached Hume Webster.⁹⁵ Accompanying that report was an account of another meeting in Canning Town to promote Webster's candidature. It was attended by Henry Labouchere, the maverick M.P. for Northampton, who spoke in Webster's favour. Like the previous meeting it provoked fierce opposition, which by a large majority passed a motion demanding a wider choice, and preferably a Labour candidate.

33 In spite of these setbacks, Hume Webster persisted with his candidature. His local supporters, besides W.H. Smith and Worland, included William Volckman, Richard High, and Edward Fulcher, now a borough councillor, all former members of the Cromwell club.⁹⁶ Webster also had influential friends among radicals outside West Ham, including five M.P.s: Henry Labouchere, Sir Wilfrid Lawson, Charles A.V. Conybeare, Thomas P. O'Connor, and Joseph Arch.⁹⁷ Labouchere gave Webster much support in the constituency during the following years, while O'Connor and Lawson occasionally came down for meetings.

34 Hume Webster was a firm but moderate radical, and does not seem to have been personally unlikeable. But many radicals resented him as a rich carpet-bagger imposed upon them by Volckman and extremists like Labouchere. Nonconformists disapproved of Webster's racehorses, while

temperance reformers doubted his commitment to their cause. Webster's opponents, led by Dr. John Moir, brought forward as their candidate, William Morgan, a London businessman who was said to be a trade unionist, and to have worked at one time for a weekly wage; but he withdrew in July.⁹⁸ John Spencer Curwen was then persuaded to oppose Webster, in the absence of a Labour man 'of their wage-earning class.' He opened his campaign in September 1887.⁹⁹

35 Hume Webster and Spencer Curwen confronted each for over two years. The local caucus system had now broken down, and occasional attempts to restore Liberal unity in the constituency came to nothing. The rivals were unevenly matched. Curwen, long established in West Ham, was a high-minded intellectual with a small local business. While devoted to reform on Christian principles, and to temperance, he was not personally ambitious, and shrank from front-line politics. One of his principal supporters, saying that there was 'no go' in him, went over to Webster.¹⁰⁰ Another critic, though admitting that Curwen was a good radical, pointed out that he was deaf: 'how, therefore, can he be of use in the House of Commons?'¹⁰¹

36 Webster was a forceful self-made man of wide experience. He had evidently enjoyed his baptism of political fire in South Essex, and relished the thought of another such battle. The challenge of West Ham South was, perhaps, its main attraction, since he could almost certainly have found a safe seat elsewhere. His views on the question of a working-class M.P. were sensible if not sensitive. Such a man, he told one audience, would have to be paid. He went on:

There is nothing very technical in a working man's life in West Ham, and after all, is there not more advantage in a knowledge of the world, of the men in Parliament and of the permanent government officials that he has to meet in connexion with his work? My experience in life has given me the possession of that knowledge, and the fact that I know three quarters of the present House of Commons is to your advantage ... because no one, however good or able, could stand or do much alone.¹⁰²

37 Webster pursued his candidature with energy and skill, paying particular attention to canvassing, and issuing frequent lists of a 'general committee' of men pledged to vote for him at the next election. He claimed 1,400 such adherents in May 1887, 2,000 in May 1888, 3,130 in October 1888.¹⁰³ At the same time he supported many Liberals appealing for registration at the electoral revision courts. In December 1890 he claimed that since 1887 he had been successful in 1,087 appeals, compared with a

combined total of 363 by other Liberal agents and the Conservatives.¹⁰⁴ In the same period he held 113 public meetings, as against 63 by the Curwenites and 17 by the Conservatives.¹⁰⁵

38 A progressive feature of Webster's campaign was the formation of a Women's Liberal association, with Mrs Labouchere as president.¹⁰⁶ He also gave generously to good causes, providing entertainment as well as political rhetoric. In January 1889, for example, he chaired a concert at Canning Town in aid of the Holy Trinity church schools.¹⁰⁷ The programme included a toy band, conducted by Mrs Hume Webster, and featuring a triangle, a quail-pipe, drums, cuckoo (Miss Hume Webster), trumpets, nightingale (Hume Beckles), jingles, violin (Master Noel Hume Webster), whistles, and piano. Miss Hume Webster sang and recited, and Alderman Worland sang comic songs such as 'Call her back and kiss her' and 'The doctor says I'm not to be worried.' In April 1888 Webster gave a free tea for 500 poor children of Tidal Basin.¹⁰⁸ In the following August he entertained 700 children from West Ham, Leyton and Walthamstow at Marden Park, where they admired his German wolfhound, Marco, a beast bred in central Africa and measuring 6 feet 6 inches from nose to tail.¹⁰⁹

39 Webster's opponents particularly resented his frequent references to the financial contributions that he was prepared to make as a candidate. These implied, said Curwen, that 'he will crush with his gold any man who lives to oppose him.'¹¹⁰ But Webster was unrepentant, saying that his political expenditure was within normal limits, while he did not make charitable gifts unless asked to do so.¹¹¹ There is no doubt that his generosity strengthened his position. So, also, did his readiness to identify himself with working men by joining friendly societies and trade unions.¹¹² And he devoted much time as well as money to the constituency. In December 1890 he said that in the past four years he had spent on average two or three nights a week there.¹¹³

40 Most notable of all Hume Webster's activities in West Ham was his support of the dockers during their celebrated 'tanner a day' strike in 1889.¹¹⁴ There was much local sympathy for the strikers, and when those in West Ham's docks came out late in August, Alderman Henry Phillips pressed for a settlement and launched a relief fund. Hume Webster promptly offered to subscribe £25 a day to the fund for the duration of the strike. He was later said to have subscribed that amount for seven days, as well as smaller sums, while his radical club in Barking Road, Canning Town, provided many free meals for strikers. He also joined in the negotiations which in mid-September settled the strike in the dockers' favour. While his help may not have been crucial to their success, it had been substantial, and earned him great credit. Early in the strike Phillips

told the dockers that Webster had been the first [outsider?] to come to them in their hour of need, and that they would not forget him; and at a victory rally after the strike Webster's arrival was greeted with three cheers.

41 Webster was not unduly disturbed by general criticisms of his wealth, arrogance, and lack of initial support. But when it was suggested or implied that he was guilty of malpractice he immediately threatened legal action. This happened at least twice. On the first occasion Curwen was forced to deny that he had any intention of accusing Webster of corruption.¹¹⁵ Webster accepted this assurance. But a few months later he brought a slander action against (Sir) William Randal Cremer, M.P. for Shoreditch, Haggerston, for remarks made at one of Curwen's meetings.¹¹⁶ This case seems to have arisen from an infelicitous reference by Webster to 'a bastard working man.' He meant a working man who had risen to become a capitalist, but his opponents seized upon it as a rod to beat him with.¹¹⁷ Eventually Cremer also apologised for his remarks.¹¹⁸

42 Curwen and his friends deserve credit for their determined opposition to such a powerful adversary. That they shrank from confronting Webster in the law courts is not surprising. Meanwhile, however, he continued to gain support. In 1887 three borough council members can be identified as his adherents as against 10 Curwenites and 9 Conservatives. By 1890 he had 13 supporters on the council, more than Curwen (5) and the Conservatives (5) combined.¹¹⁹ At the council elections in 1889 five Websterites, out of six vacancies, headed the polls in Canning Town and Plaistow wards.¹²⁰ Webster had fewer nonconformist ministers behind him than did Curwen, but more Irish voters, Roman Catholic priests, and trade unionists.

43 In November 1889 Arnold Morley, Liberal chief whip in the House of Commons, suggested the appointment of an arbitrator to decide between Webster and Curwen, one of whom would then retire, enabling the local party to unite behind the survivor.¹²¹ Negotiations commenced, but on 3 December a mass meeting of Webster's supporters voted against arbitration. He himself was ill and could not attend, but his secretary, J. Ledger Keating, speaking for him, emphasised Webster's support for the dockers, the triumph of his supporters in the council elections, and the accession to his cause of Alderman Phillips and other local leaders. The meeting reached its decision because they felt that Webster was now strong enough to win even a three-cornered election, and because they had heard that three of Curwen's main supporters would not accept any arbitration favouring Webster and might promote another candidate if Curwen withdrew. A month later

Curwen did indeed withdraw, mounting a bitter attack on Webster and saying that he himself was making way for a candidate who would command irresistible support.¹²² In accepting his resignation his committee thought that a coalition would now take place between the Curwenites and 'a considerable party who have hitherto held aloof from both candidates.'

44 Webster's recent illness had been due to ulcers on his vocal chords. It was said to be dangerous, and he was treated by Sir Morell Mackenzie, a specialist on throat cancer.¹²³ But he recovered, and at the end of January was able to attend a meeting in Canning Town addressed by T.P. O'Connor, who had come at Arnold Morley's request to urge the local Liberals to unite behind Webster.¹²⁴ For a few weeks Webster seemed to possess the field, but his opponents were implacable, and brought forward a formidable new candidate.

45 James Keir Hardie (1856-1915), like Hume Webster, was a Scotsman.¹²⁵ Born in Lanarkshire, he had become a miner, a trade union leader and a journalist. In 1888 he had contested Mid-Lanarkshire as an Independent Labour candidate in a parliamentary by-election. In the same year he became secretary of the newly-founded Scottish Labour party, whose president was Robert B. Cunninghame Graham, M.P. for N.W. Lanarkshire, and vice-president Dr John Moir.¹²⁶ Graham, Moir, and W. Randal Cremer are all credited with inviting Keir Hardie to West Ham.¹²⁷

46 Keir Hardie had no previous connexion with West Ham or with Essex. He proceeded cautiously, seeking selection on his own merits, and not as the creature of the Curwenite diehards, while aiming to win over the nonconformists and temperance reformers. At a meeting on 16 April 1890 he confined himself to a general lecture on 'Labour politics,' and obtained a resolution favouring the election of 'a bona fide representative of working class interests, who in addition to being a Home Rule Liberal, will also strive to secure for labour a better share of the comforts and enjoyments of life.'¹²⁸ At another meeting, a week later, his supporters included Cunninghame Graham and Josiah Foster, minister of the Victoria Docks Baptist church.¹²⁹ It was then reported that twelve nonconformist ministers had recently pledged their support for Hardie's views. The meeting passed a resolution in favour of a labour representative for West Ham South, but the chairman, Councillor William East, disallowed a motion naming Keir Hardie as the candidate. Hardie himself added that 'the wooing was going on nicely; they did not want to hurry matters or frighten the people they were trying to woo, and he thought it would be out of place if they made any announcement that night.'

47 On 17 May an open-air meeting of some 250 working men in Canning Town, with few dissentients, adopted Keir Hardie as their candidate 'in the Labour and Home Rule interest.'¹³⁰ For the next twenty months Hardie maintained his candidature in the face of fierce attack from the Websterites. He was a charismatic speaker, dedicated to the Labour movement; and he soon gained the backing of Will Thorne, a rising young trade union leader, who in 1891 was elected to the borough council.¹³¹ But Webster's greater resources enabled him, as before, to undertake more activities than his rival, and thus to gain more publicity. He held 24 meetings to Hardie's 10 in 1890, and 23 to 12 in 1891. His supporters on the borough council numbered 13 to Hardie's 5 in 1890, and 13 to 8 in 1891.

48 Webster's work in the registration courts was also going well, and early in 1891 brought him the adherence of John Walsh, a leading radical who had been one of his critics.¹³² By then Webster was claiming 3,600 'committee' members, and that 600 more were expected after the publication of the next electoral register.¹³³ In July 1891 Keir Hardie alleged that Webster had offered him £150 to withdraw from the constituency.¹³⁴ Webster denied it. It seems likely that Hardie had been offered repayment of his out-of-pocket expenses if he retired, but whether the initial approach came from him, from Webster, or from one of their agents without the prior knowledge of the principals, remains doubtful. In any case the negotiations came to nothing.

49 In December 1891 Webster's 'committee' was said to have reached 4,496, with 526 more expected next year.¹³⁵ On the 5th he attended the third annual concert and dance of the South West Ham Women's Liberal association.¹³⁶ In mid-January 1892 he joined with fellow countrymen, including his arch-opponent John Moir, in a Grand Scottish gathering in Silvertown.¹³⁷ But on 29 January he was found dead in the grounds of his estate at Marden Park.¹³⁸

50 Hume Webster had been shot through the mouth, and there was a revolver in his hand. He had been suffering from the current epidemic of 'Russian flu' and had complained of his throat. It was suggested that he had been fearing the recurrence of the ulcers from which he had suffered in 1889. An inquest decided that he had committed suicide while temporarily insane.¹³⁹ A fact not mentioned in the published report on the inquest was the illness of Sir Morell Mackenzie, who actually died only five days after Webster.¹⁴⁰ The loss of the doctor who had treated his throat in 1889 might well have intensified Webster's depression. A leading article on Webster's death commented that 'no one could look at him without being impressed

by a sense of [resolution and tenacity] largely developed in him ... Nothing about him betokened yielding or weakness.¹⁴¹ He was buried at Marden, 'a kind, generous man, who will be missed by many a toiler and many a trade unionist.'¹⁴² He had been a central figure in one of the most notable episodes of West Ham's history, and was at the peak of his achievement when he died. Now he is now almost forgotten.¹⁴³

51 Keir Hardie, though strengthened by Webster's death, was still opposed by some former Websterites, who cast around for a new candidate.¹⁴⁴ Hardie was uncompromising. He would not seek official recognition from the Liberal party, nor would he negotiate with the Websterites.¹⁴⁵ On Sunday 27 March, at Mansfield House university settlement, Canning Town, he preached an afternoon sermon on the prophet Elijah and God's 'still small voice' (I Kings, 19.11), and in the evening adopted a prophetic role himself, with a lecture urging the formation of an independent Labour party.¹⁴⁶

52 On 8 April a meeting of Websterites chaired by Alderman Henry Worland and including Councillors Edward Fulcher and Thomas Walsh, adopted Joseph Leicester, the former M.P., as the 'Radical and Labour' candidate for the constituency.¹⁴⁷ But Alderman Henry Phillips, who had been a leading adherent of Webster, refused to join them, adopting a neutral stance between the candidates.¹⁴⁸

53 Leicester, who had been rejected six years earlier both by the electors and his constituency party, was not now a serious candidate. At the end of April, with a general election imminent, Keir Hardie's supporters stepped-up their campaign.¹⁴⁹ On 18 June there was a trade union demonstration at Tidal Basin in which Hardie was pulled through the streets in a 'monster boat' called *The Undaunted*.¹⁵⁰ He addressed six meetings on the 20th and others during the following days.¹⁵¹ On 2 July it was announced that Joseph Leicester, after consulting Francis Schnadhorst, had withdrawn in Hardie's favour.¹⁵² This is confirmed by a letter from Schnadhorst to Gladstone: 'in South West Ham ... we acted just at the critical moment and have saved [the seat].'¹⁵³

54 Keir Hardie's election address states that he has been invited unanimously by the 'United Liberal, Radical and Labour party of South West Ham' to stand as a 'Labour, Radical and Home Rule candidate.'¹⁵⁴ He agrees with the present programme of the Liberal party so far as it goes, but reserves the right to take such action, irrespective of the exigencies of party welfare, as he thinks necessary in the interests of the workers. He favours separate parliaments for England, Scotland, and Wales as well as Ireland; the taxation of land values; the provision of houses for workers at low

rents; the elimination of excessive working hours; public ownership of mines, banks, railways, docks and waterways; one man one vote; payment of M.P.s; disestablishment of the Church; pensions for all; and other measures (specified) in the workers' interests.

55 The Conservatives seem to have been inactive in the run-up to the general election, thinking that no effort was needed to ensure their victory. As one of them said in April, 'instead of the Radicals fighting the Conservatives, they were more like Kilkenny cats, fighting against the Liberals.'¹⁵⁵ He predicted that Banes would have the safest seat in the country.

56 When West Ham went to the polls on 4 July 1892 Keir Hardie defeated George Banes by 5,268 to 4,036.¹⁵⁶ The size of the majority – large for the time – must have been partly due to the national swing against the Conservatives. But it also reflected Hardie's personal appeal. A leader-writer thought that he 'had got hold of the working men as no ordinary Liberal would have gripped them ... he is a man of ability, sincerity, and considerable force of character. His constituents believe in him thoroughly.'¹⁵⁷ But Hardie certainly owed something to Hume Webster, particularly for his work in the registration courts. Hardie's election fund had totalled a modest £293, of which the *Workmen's Times* and the Scottish-born ironmaster Andrew Carnegie each subscribed £100. Later, during a strike at Carnegie's steelworks in Pittsburgh (Penn.), Hardie sent £100 to the strikers.¹⁵⁸

57 During the next three years Keir Hardie's main concern was the distress caused by unemployment, and he laboured to persuade the government to look seriously at the problem.¹⁵⁹ On 14 December 1894 the prime minister, Lord Rosebery, came down to Stratford to give a public address. Before the meeting he received a deputation from the West Ham Trades Council concerning unemployment. It was led by Hardie and Archibald Grove, the Liberal M.P. for West Ham North, who claimed that there were a million out of work in the country, and 5,000 in West Ham alone.¹⁶⁰ Rosebery cast doubt on these figures, and while admitting that unemployment was a great evil, said that, so far as he knew 'no practical remedy has really been offered.' He suggested that a formal petition, which Hardie had demanded, should be addressed to the Board of Trade. At the public meeting Rosebery made a brief, witty, but jejune speech urging Labour supporters to adhere to the Liberal party, but containing no reference to unemployment.

58 Keir Hardie was furious at the prime minister's response to the deputation. At a meeting in Canning Town on 17 December he said that

Rosebery had 'come to them as if they were pantaloons at Christmas time, and had asked them to take part with him in his shameful and deliberate attempt to cheat the workers.' He repeated the statement that there were a million unemployed, saying that it was based on Board of Trade figures, which were largely confined to skilled workers. He condemned the government for failing to introduce temperance legislation and payment of M.P.s, and thought that Liberals and Conservatives alike were mainly concerned 'to obtain office and retain it as long as possible.'

59 In January 1895 the West Ham Trades Council carried out a census of unemployment in the borough which proved that the situation was twice as bad as previously thought: 10,131 manual workers were unemployed including 9,500 males over 16, mainly married men; 7,969 of the total were in South West Ham.¹⁶¹ White collar workers had not been counted. In February Hardie presented to the House of Commons a petition from the mayor and corporation of West Ham urging government action on unemployment. The House set up a select committee on the subject, at which he gave evidence.¹⁶² Soon after that Rosebery's government fell. It would be more than ten years before a later Liberal government began to tackle unemployment. But Keir Hardie had been responsible for forcing the subject onto the political agenda, and in this his experience in West Ham played a valuable part.

60 Keir Hardie's criticism of the government in 1894-5 was not a new development. As an M.P. he was, from the first, determined to assert his independence, as he had frankly emphasised in the election address. He promptly demonstrated this by opposing the re-election of John Morley, the new Irish Secretary, as M.P. for Newcastle-upon-Tyne, because Morley was against statutory interference with the working hours of adult males.¹⁶³ This action angered some West Ham Liberals as well as the national leaders. Later in 1892, in a speech to the Congregational Union, Hardie denounced the churches for neglecting social problems: 'The reason why the Labour party has turned its back on the church is because the church has turned its back on Christ in this matter. You preach to the respectability of your congregations ... you forget the withering and suffering masses outside the walls of your churches.'¹⁶⁴ Hardie was howled down by the audience, though one minister admitted that his remarks, while exaggerated, contained much truth. *The Stratford Express* commented that the speech had upset some of Hardie's friends in West Ham, and that he must have forgotten how much he owed to the Congregational ministers in Plaistow and Canning Town.¹⁶⁵

61 Keir Hardie's conduct in the House of Commons alienated many former supporters. His

attendance record was poor, he denounced the two-party system, and by April 1894 was no longer taking the Liberal whip.¹⁶⁶ In June he caused outrage by his refusal to join in the motion congratulating the Queen on the birth of Prince Edward (Edward VIII), coupled with his cynically accurate prophesy concerning the prince's career.¹⁶⁷ He also offended the Irish over Home Rule, as described below. Alderman Worland, who had joined Hardie after Leicester's retirement, had already withdrawn his support.¹⁶⁸ Attempts were made in the autumn to promote a rival Liberal candidate for the constituency, but they came to nothing.¹⁶⁹

62 In June 1895, with another general election imminent, the *Stratford Express* discussed the two candidates for West Ham South.¹⁷⁰ Banes was 'the kind of man whom Englishmen delight to honour ... as near an approach to a typical John Bull as can be found - plain and straightforward ... heartily advocating everything likely to improve the condition of the people.' But Keir Hardie was not viewed in the same light as three years ago. Then he had been regarded as:

an extreme Radical with perhaps a little hankering after Socialism, whereas now he is referred to as a Socialist, who sometimes votes Radical in the House, and sometimes splits the Liberal vote, and so enables the Conservatives to win in working-class constituencies.

The writer added that Hardie's action in the House of Commons might cause many Liberals to go over to Banes; but he admitted that Hardie's action on unemployment during the previous winter had increased his popularity in the docks.

63 A few days before the election a mass meeting of Irishmen in Canning Town resolved not to support Keir Hardie at the polls, because he had broken his promise to put Home Rule first in his programme, and had opposed John Morley at Newcastle.¹⁷¹ On the platform were several Roman Catholic priests. Among them was Timothy Ring from Silvertown, who shouted as the meeting closed: 'Don't let hatred of the Tories stand between you and putting Keir Hardie out. We will vote for anyone to put him out.'

64 When West Ham South went to the polls on 15 July 1895 George Banes regained the seat by 4,750 votes to Hardie's 3,975. In the following month Hardie, in a farewell speech in Canning Town before visiting the U.S.A., said that he hoped to fight the constituency at the next election.¹⁷² But in December Spencer Curwen brought a magisterial case against him in the lecture, mentioned at the beginning of this paper, on 'A Constituency with a past.'¹⁷³ Displaying a chart of the polls in 1885, 1886, 1892 and 1895, he said that the progressives 'had but to advance together and victory was secure.'

It was when the middle class sections held back that defeat came.' Keir Hardie had offended the Irish and alarmed moderate voters by his advanced opinions. He had neglected his Parliamentary duties by attending only 174 divisions out of a possible 810 between 1892 and 1895. On the important Parish Councils Bill he had attended only 16 out of 113 divisions. Hardie had said that he hated Parliament, and that he was an agitator, not a statesman. But, said Curwen, an M.P. must be something of a statesman. He urged working men to take a more active interest in politics, while advising them, in order to win, to choose a 'practical politician.' Keir Hardie would no doubt find another constituency. He must never be brought forward in West Ham again. A new man would have a much better chance. In the discussion following the lecture some speakers were less critical of Hardie, but one of them thought that Labour's chances in West Ham had been 'smashed for a generation' by Hardie's conduct.

65 Keir Hardie never again contested West Ham South. George Banes ('The sailor's parrot: can he talk? No, but see how wise he looks'), held the seat for the Conservatives until his retirement in 1906. But then, at last, the Labour party won permanent control of it,¹⁷⁴ and Keir Hardie became an honoured name in West Ham, chosen by the borough council as the title of a great housing estate built after the Second World War.¹⁷⁵

Sources

The main source of this paper is the *Stratford Express*, quoted below as *S* plus the day of issue. It was the leading local newspaper, founded in 1866, and owned by Wilson & Whitworth (*V.C.H. Essex*, vi. 67, 87). The file in Newham reference library is virtually complete for 1880-95. Published weekly, it includes detailed, well-written and independent reports and comments on political events. Every issue during that period was examined for the present study, producing 840 (A4) pages of notes, to which were made a full personal name index and a selective subject index, to information on the West Ham South parliamentary constituency.

Acknowledgements

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Notes

- 1 This paper follows up work done by the writer for *V.C.H. Essex* volume VI (1973). Most of the research for it was undertaken in the 1970s; and the detailed indexing in 1979-80.
- 2 For good recent accounts: P. Thompson, *Socialists, Liberals and Labour: the Struggle for London, 1885-1914*. (1967); Kenneth Morgan, *Keir Hardie* (1975); F. Reid, *Keir Hardie* (1978).
- 3 S 7 Dec. 1895.
- 4 E.N. Buxton (1840-1924), a noted philanthropist, was prominent in the preservation of Epping, Hainault, and Hatfield forests: *Essex Review*, xxxiii. 44 (obit.); *Who was Who*.
- 5 For the numbers of meetings, 1880-84 see S reports. Lord Salisbury's visit: S 27 May 1882.
- 6 *V.C.H. Essex*, vi. 112.
- 7 *Essex Leaders, Social and Political* (1906 edn.); *Essex Review*, xvi. 200 (obit.)
- 8 S 27 Feb, 25 July 1892; 6 July 1895.
- 9 For Howard: S 25 July, 26 Sept 1885; *V.C.H. Essex*, vi. 78. Savill: S 24 Dec. 1887, 19 Dec. 1891; *V.C.H. Essex*, vi. 81. Gray: S 3 July 1886; *V.C.H. Essex*, vi. 88.
- 10 S 24 Jan., 7 and 14 Feb., 10 Apr. 1880.
- 11 S 17 Sept. 1887, speech by J. Spencer Curwen.
- 12 *V.C.H. Bibliography* (1959), 78; D. McDougall, *Fifty years a borough ... the story of West Ham* (1936), 239.
- 13 F. Reid, *Keir Hardie*, 128, 136. Many refs. in S, including 13 June 1880 (School board); 28 Mar. 1885 (temperance); 14 May 1892 (letter re W. Ham politics).
- 14 S 26 Mar., 14 May, 24 Sept. 1881.
- 15 S 14 May 1881; 27 Jan. 1883; 23 Jan. 1884.
- 16 S 8 Apr. 1882; 27 Jan. 1883.
- 17 S 14 June 1884. For Mrs. Besant see: *D.N.B.*; Y. Kapp, *Eleanor Marx*, i. 268n.
- 18 S 30 June, 8 Sept., 13 Oct. 1883.
- 19 S 30 June 1883.
- 20 Y. Kapp, *Eleanor Marx*, i. 261-72. He was the lover of Karl Marx's daughter Eleanor, who was driven to suicide by his unkindness.
- 21 S 15 March 1884; Y. Kapp, op. cit., i. 269.
- 22 S 24 Sept. 1881.
- 23 S 8 Oct. 1881.
- 24 S 30 Sept. 1882.
- 25 S 12 Jan. 1884.
- 26 S 3 May, 6 July, 27 Aug., 13 Dec. 1884.
- 27 S 24 Jan. 1885, speech by Andrew Johnstone.
- 28 S 27 May 1882 (T.C. Baring); 23 Feb. 1884 (Geo. Banes).
- 29 E.g. Matthew Gray, of the Silvertown Rubber Co: S. 24 Jan. 1885.
- 30 S 7 Feb. 1885.
- 31 S 14 Feb. 1885.

KEIR HARDIE IN WEST HAM: 'A CONSTITUENCY WITH A PAST.'

- 32 S 7, 21 Mar., 11 Apr. 1885.
- 33 S 18 Apr. 1885. The 'Temperance 250' was a pressure group organized on lines similar to those of the Liberal caucus. Dr John Moir was among its leaders: S 11 Apr. 1885, p. 5.
- 34 S 18 Apr. 1885.
- 35 S 23 May 1885.
- 36 S 30 May 1885. The minutes kept by Blackburn are not known to have survived.
- 37 S 6 June 1885.
- 38 S 13 June 1885.
- 39 S 25 Apr. 1891.
- 40 S 16 Jan. 1892.
- 41 One of his supporters said that the 'two minorities' who had worked against Volckman at the caucus were the 'socialistic Radicals' and 'the Whigs': S 4 July 1885.
- 42 On 13 July, according to his later statement: S 8 Aug. 1885.
- 43 S 27 June 1885.
- 44 S 4 July 1885, Volckman lived at The White House. For Knotts Green see *V.C.H. Essex*, vi. 179.
- 45 S 19 Sept. 1885; 25 May 1895 (obit.). Worland had joined W. Ham local board at the age of 23, became mayor of the county borough in 1890, but died at 41.
- 46 S 8 Aug. 1885.
- 47 S 19 Sept., 17 Oct., 12 Dec. 1885.
- 48 S 10 Sept. 1887.
- 49 *V.C.H. Essex*, vi. 219.
- 50 S 26 Sept. 1885.
- 51 S 7 Nov. 1885.
- 52 S 28 Nov. 1885.
- 53 S.A. Shipley, 'The Stratford Dialectical and Radical Club', (unpublished thesis, Ruskin Coll, Oxford, 1967. Copy in Newham reference library). See also, Stan Shipley, *Club Life and Socialism in Mid-Victorian London* (Ruskin Coll. History Workshop pamph. No. 5, 1971).
- 54 For this school: *V.C.H. Essex*, vi. 235.
- 55 For the S.P.E.L.: S. Shipley, *Club Life and Socialism*, 69-70.
- 56 E.P. Thompson, *William Morris, Romantic to Revolutionary* (1955), 330.
- 57 S. Shipley, *Club Life and Socialism*, Handbill of programme of S.D.R. Club for May and June 1882.
- 58 This league was probably identical with the 'Working Men's Association for the Abolition of Foreign Sugar Bounties,' which was one of the organizations run by Kelly and Samuel Peters. See also below.
- 59 For these refineries: *V.C.H. Essex*, vi. 80.
- 60 *V.C.H. Essex*, ii, 496.
- 61 J. Saville, 'Trade Union and Free Labour', in *Essays in Labour History*, ed. A. Briggs and J. Saville (1960), 317 f.
- 62 S 27 Aug. 1884.
- 63 S.A. Shipley, 'The Stratford Dialectical and Radical Club'; E.P. Thompson, *William Morris*, 327 n, 328, 330-2, 414, 500, 530, 746.
- 64 Last known reference: S 17 Sept. 1887.
- 65 S.A. Shipley, 'The Stratford Dialectical and Radical Club'; *Kelly's Dir. Essex*, (1874 to 1886).
- 66 See below.
- 67 S 10 Jan. 1885 (advert.).
- 68 S 17 Jan. 1885 (report).
- 69 S 28 Feb. 1885. In the 1885 general election Cowan was defeated at Whitechapel by the Liberal, Samuel Montagu, later Lord Swaythling: *McCalmont's Parliamentary Poll Bk.*, ed. J. Vincent and M. Stenton (1971); *D.N.B.*, Montagu, Sam. (1832-1911).
- 70 S 25 July 1885.
- 71 S 10, 17 Oct. 1885.
- 72 S 24, 31 Oct., 28 Nov. 1885.
- 73 *McCalmont's Parliamentary Poll Bk.* It is notable that in 1885, when West Ham's population was nearing 200,000, the total number of those voting in both constituencies was only 13, 791. At that period the electorate was restricted to male freeholders and householders.
- 74 S 17 July 1886: letter from M. Fleming, hon. sec. Irish registration committee.
- 75 S 12, 26, June; 3, 17 July 1886 (attack and criticism); 10 July 1886 (silly 'Sodom and Gomorrah' speech).
- 76 S 17 Apr. 1886.
- 77 S 8 May 1886.
- 78 S 12 Dec. 1885.
- 79 S 12, 19 June 1886.
- 80 S 3 July 1886: comments by J. Leicester on 'the notorious Newman, Kelly and Peters gang.'
- 81 S 26 June 1886.
- 82 S 3 July 1886.
- 83 *McCalmont's Parliamentary Poll Bk.*; S 10 July 1886.
- 84 S 7 July 1888.
- 85 S 2 July 1892.
- 86 S 17 Aug. 1889.
- 87 S 31 Aug., 21 Sept. 1889.
- 88 S 26 Jan. 1889.
- 89 S 19 Feb. 1887, 19 Jan. 1889.
- 90 S 30 Jan 1892 (obit.); *D.N.B.* Hume, Joseph
- 91 *McCalmont's Parliamentary Poll Bk.*
- 92 S 21 Apr. 1888, Webster's account of the origin and progress of his candidature.
- 93 S 8 Jan. 1887.
- 94 S 18 June 1887, Letter from Dr. J. Moir.
- 95 S 22 Jan. 1887.
- 96 S 15 Oct. 1887, Webster meeting, at which 'unanimity prevailed.'

- 97 S 5 Feb. 1887. For Labouchere, Lawson, O'Connor and Arch see *D.N.B.* For Conybeare (1853-1919) see *Who was Who*.
- 98 S 29 Jan., 12 Feb., 5 Mar., 2 Apr., 14 May, 18 June, 16, 23 July 1887; 18 Feb. 1888. Morgan was later said to be 'a commission agent in the hat trade': S 17 Oct. 1890.
- 99 S 6 Aug., 10, 17 Sept. 1887.
- 100 S 7 Dec. 1889: Alderman Henry Phillips.
- 101 S 10 Dec. 1887: anonymous letter from 'Nemo solus sapit.'
- 102 S 21 Apr. 1888.
- 103 S 21 May 1887; 12 May 1888; 22 Oct. 1888.
- 104 S 20 Dec. 1890.
- 105 Calculated from *Stratford Express* reports, 1887-90.
- 106 S 19 May, 9 June 1888; 14 May, 10 Aug. 1889; 5 Dec. 1891.
- 107 S 26 Jan. 1889.
- 108 S 25 April 1888.
- 109 S 11 Aug. 1888.
- 110 S 28 Apr. 1888.
- 111 S 21 Apr., 12 May 1888.
- 112 Foresters (S 9 June 1888); Ancient Britons (S 28 July 1888); Druids (S 22 June 1889); United Friends (S 21 June 1890); Sailors' and Firemen's Union (S 12 Oct. 1889); V.&A. Dockers' Union (S 5 Oct. 1889).
- 113 S 20 Dec. 1890.
- 114 This paragraph is based on S Aug. to Oct. 1889.
- 115 S 18 Aug. 1888.
- 116 S 16 Feb. (cf. 2 Feb.) 1889. For (Sir) William Cremer (1838-1908) see *D.N.B.*
- 117 S 19 Jan. 1889.
- 118 S 23 Nov. 1889.
- 119 The borough council, formed in 1886, comprised 36 councillors and 12 aldermen.
- 120 S 7 Dec. 1889.
- 121 S 7, 14 Dec. 1889. Sir Henry Campbell-Bannerman was proposed as arbitrator.
- 122 S 4 Jan. 1890.
- 123 For Sir Morell Mackenzie (1837-92) see *D.N.B.* His best known patient, the Emperor Frederick III of Germany, had died of throat cancer in 1888.
- 124 S 1 Feb. 1890.
- 125 For Keir Hardie's early career see F. Reid, *Keir Hardie, the making of a Socialist* (1978).
- 126 For the Scottish Labour party, its officers and programme, see S 14 May 1892. For Cunninghame Graham (1852-1936) see *D.N.B.*
- 127 F. Reid, *Keir Hardie*, 128; S 18 June 1892.
- 128 S 19 Apr. 1890.
- 129 S 26 Apr. 1890, reporting meeting of 23 April. For Josiah Foster see *V.C.H. Essex*, vi. 130.
- 130 S 17 May 1890.
- 131 F. Reid, *Keir Hardie*, 128; S 31 Jan. 1890. For Thorne (1857-1946) see *D.N.B.* He was later M.P. for West Ham South and mayor of West Ham.
- 132 S 7, 21 Mar., 18 Apr. 1891.
- 133 S 21 Mar. 1891.
- 134 S 4, 11, 18 July; 1, 22 Aug. 1891.
- 135 S 5 Dec. 1891.
- 136 S 5 Dec. 1891.
- 137 S 16 Jan. 1892.
- 138 S 30 Jan. 1892.
- 139 S 23, 30 Jan. 1892. For this 'Russian flu' epidemic, in which the Duke of Clarence, Queen Victoria's grandson, died, see *Haydn's Dictionary of Dates* (1898 edn.), s.v. Influenza.
- 140 S 6 Feb. 1892; *D.N.B.*
- 141 S 23 Jan. 1892.
- 142 S 30 Jan. 1892: the wreaths included 'a very beautiful one ... from Miss Hall-Hall, with a pathetic message ... heart-shaped, made of costly arum lilies ... intertwined with cypress and bay.' Her relationship to Webster is not known.
- 143 West Ham's official history, *Fifty Years a Borough*, ed. D. McDougall (1936), mentions Hume Webster only once, without naming him (p. 271).
- 144 S 6, 13, 20 Feb. 1892.
- 145 S 13 Feb. 1892.
- 146 S 2 Apr. 1892. For Mansfield House see *V.C.H. Essex*, vi. 142.
- 147 S 9 Apr. 1892.
- 148 S 20 Feb., 16 Apr. 1892.
- 149 S 23, 30 Apr. 1892; F. Reid, *Keir Hardie*, 130.
- 150 S 25 June 1892.
- 151 S 25 June, 2 July 1892.
- 152 S 2 July 1892.
- 153 B.L., Add. MS 44295, f. 277, 7 July 1892.
- 154 National Liberal Club, Election Addresses 1892, West Ham South.
- 155 S 23 Apr. 1892.
- 156 S 9 July 1892.
- 157 Ibid.
- 158 S 23 July 1892. Among other subscribers were William Saunders, M.P. for Newington, Walworth, W.S. Caine, M.P. for Bradford East, the Dockers' Union, and J.S. Curwen. A later statement gives the total as £297: S 13 Aug. 1892. See also: F. Reid, *Keir Hardie*, 137f.
- 159 S 8 Oct. 1892; 11 Feb., 19, 26 Aug., 16 Sept., 16 Dec. 1893; 22 Dec. 1894; 9, 23 Feb.; 2, 16 Mar. 1895; F. Reid, *Keir Hardie*, 156f.
- 160 S 22 Dec. 1894.
- 161 S 9 Feb. 1895.
- 162 S 23 Feb., 2, 16 Mar., 1895.
- 163 F. Reid, *Keir Hardie*, 136; S 13, 27 Aug., 1892.
- 164 S 15 Oct. 1892.
- 165 S 22 Oct. 1892.

- 166 S 14 Apr. 1894.
 167 S 30 June 1894.
 168 S 12 May 1894.
 169 S 27 Oct., 29 Dec. 1894.
 170 S 29 June 1895.
 171 S 20 July 1895. For Ring see *Kelly's Dir. Essex* (1892) s.v. Silvertown.
 172 S 17 Aug. 1895.
 173 S 7 Dec. 1895. At Mansfield House.
 174 Will Thorne, who had opposed Banes in 1900, won West Ham (South) in 1906. He held it until 1918 when the constituency was split into two. From 1918 until his retirement in 1945 he was M.P. for the West Ham, Plaistow division.
 175 A friend tells me that her grandparents, strong Labour supporters in West Ham, always had a picture of Keir Hardie in their living room.

INDEX

This index refers to the paragraph numbers printed **bold** in the text, and to the notes, prefaced by *note*.

The following abbreviations should be noted: ald., alderman; And., Andrew; assoc., association; bd., board; boro., borough; (C), Conservative; Chas., Charles; cllr., councillor; const., constituency; ctee., committee; Edw., Edward; Eliz., Elizabeth; Fran., Francis; Fred., Frederick; Geo., George; Hen., Henry; Jas., James; Jn., John; Jos., Joseph; (L), Liberal; Matt., Matthew; parl., parliamentary; Phil., Philip; Ric., Richard; Rob., Robert; Sam., Samuel; sch., school; slt., socialist; soc., society; Thos., Thomas; Tim., Timothy; Vct., Viscount; Wm., William.

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Shorter Notes

A ROMAN STONE MOULD FROM COLCHESTER

by Caroline McDonald and Philip Wise

A stone mould was found in Colchester by Mr Norman Bone, a local metal-detectorist, during May 1997. It was found on a building site for the YMCA hostel in Magdalen Street (TM 003 248), and, according to Mr Bone, was associated with ‘a substantial stone wall’. Other finds from the same area of the site were medieval pottery sherds, including two jug handles, and a lead pilgrim’s ampulla (Shackle 1998, 47).

The mould is of metamorphosed limestone and is in the form of a flat rectangular block. The mould is 62mm in length, 42-44mm in width and has a thickness of 18mm. On one face are the moulds for two dome-headed pins and six pins (Fig. 1). Three of the latter are complete with simple rounded heads and plain shanks, and three unfinished. The unfinished pins are represented in two cases only by round heads and in one by a rounded head linked to a channel, but with no shank. This face has two projecting lead lugs for location in another, missing, half of the mould. On the other face are moulds for

a lozenge-shaped plate brooch with lugs (Fig. 2) and part of another object now cut away. This face also has two holes to receive the lugs from the other missing half of the mould. On one side of the object are clear saw marks running in two directions.

The date of the mould has been the subject of much debate, and at various times has been identified as Saxon or late medieval (Shackle 1998, 47; Anon 1998, 26). However careful study of the objects that would have been cast in the mould suggest that it may be in fact Roman. The type of plate brooch being manufactured here would have been fairly common during the 2nd century AD in Britain. Made of copper-alloy with a hinged pin and often enamelled, this particular lozenge shape can be seen with or without lugs with rarely two brooches the same (Hattatt 1985, 156). Parallels can be seen from near Oxford (Hattatt 1982, 151, fig. 65, 144), Norfolk (Hattatt 1985, 158, fig. 65, 573) and more broadly from Nor’nour, a small island in the Isles of Scilly (Dudley 1968, 48, fig. 19). A

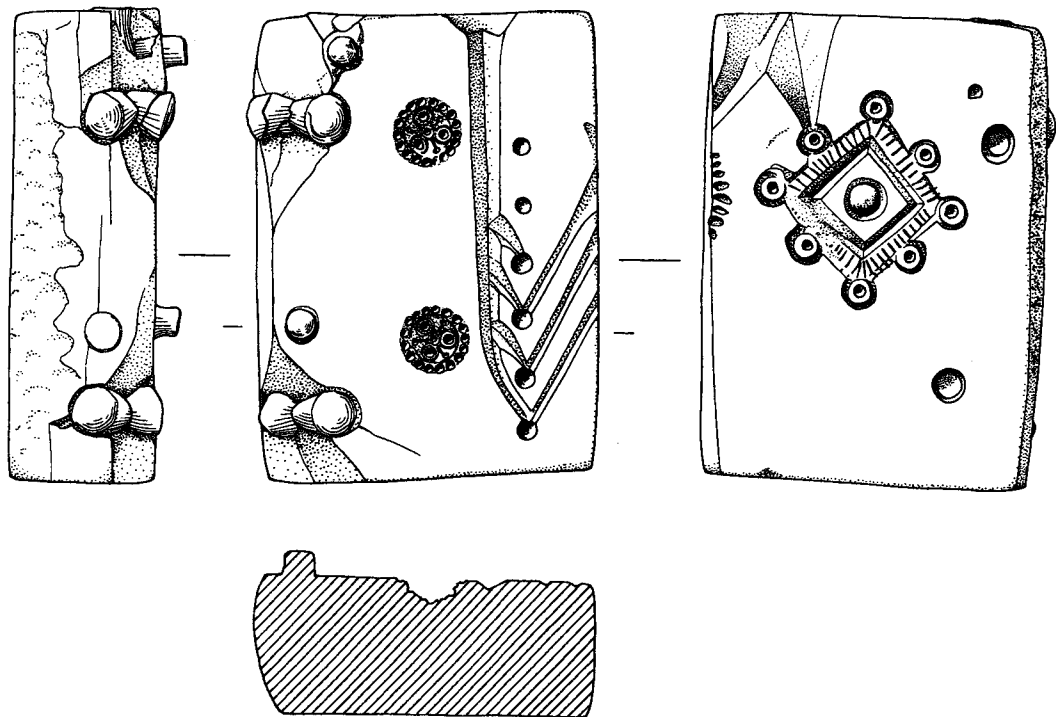


Fig. 1 Roman stone mould from Colchester (1:1).

parallel for the dome-headed pin is found at Colchester, where a 4th century AD silver dress pin, c.320-450AD, can be seen with similar moulded decoration (Crummy 1983, 30, fig. 31, 512).

It is difficult to reconstruct the original appearance and size of the mould. What survives is effectively the central element from a three-part mould, although whether both faces formed part of two-piece moulds simultaneously is debatable. It might be suggested that the mould was originally double its width and at this time had on one face the plate brooch and a second unidentified object. Subsequently it was cut in half and the dome-headed pins and plain pins added on the other face. It therefore appears to have been reused at least once.

This re-use could have occurred in the Roman period and indeed this seems the most likely explanation. Hence in the 2nd century AD the mould was used for the manufacture of copper-alloy lozenge plate brooches and then later, perhaps in the 4th century AD, it was re-carved, though incompletely, for the production of pins and pinheads. However manufacturing with stone moulds continued into the medieval period (Macgregor & Spencer 1987, 194; Bailey 1992, 7) and this fact, combined with the shared properties of many pins, make it difficult to be absolutely certain of the 4th century date.

The production of cast metal items using stone moulds is found widely across the Greek and Roman world. The method associated with the mould from Colchester was 'piece mould' casting where 'halves' of moulds are placed together and molten metal poured directly between them. Any flanges of metal would be cut away after cooling and the item filed to produce a clean edge. Limestone moulds were utilised in Roman Britain, in particular for the manufacture of pewter vessels. However such moulds are said to be unsuitable for casting materials with a high melting point because calcium carbonate begins to decompose at temperatures above 550°C. According to Neil Beagrie (1989, 182), 'Of the alloys in which Roman castings are known, only tin (melting point 231.9°C) or its alloys have melting-points below 550°C... Copper-alloys, with their much higher melting points, are unlikely to have been cast directly in limestone moulds'. He adds that it also seems unlikely that these moulds were used to produce wax or lead patterns which could then have been used to form investment moulds for casting copper-alloy artefacts. On this evidence the Colchester mould is therefore unlikely to have been used for the manufacture of copper-alloy jewellery. Against this there is the fact that all the plate brooches known are actually of copper-alloy rather than tin. It may be that copper-alloy casting could have been undertaken in this particular mould because it is made of

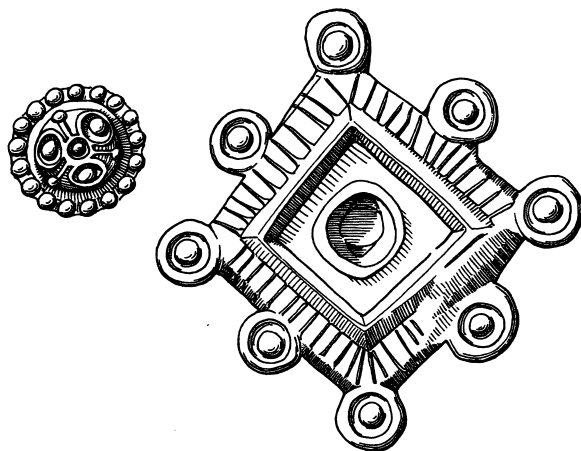


Fig. 2 Positive images from Roman stone mould found in Colchester (2:1).

metamorphosed limestone which has a higher melting point than ordinary limestone. Alternatively fluxes, such as lead, might have been added to lower the melting point of the metal (Brown 1976, 25-6).

Though evidence of brooch manufacture is certainly not unknown from Roman Britain (see for example Stead & Rigby 1986, 122), it is rare to find such direct evidence of jewellery casting. Lozenge brooches are almost entirely confined to an area south of a line from the Severn estuary to Norfolk and it has been suggested that this is evidence of importation of this type from the Continent (Hattatt 1987, 197). Nor'nour was considered to be an area of native brooch manufacture but has recently been reinterpreted as a votive site (pers. comm. Nina Crummy). The mould from Colchester provides evidence that lozenge plate brooches were being produced locally, perhaps copying a Continental style, and suggests that all such types cannot be presumed to be foreign in origin.

It should be noted that the mould was not found under 'strict' archaeological conditions and thus there must be some doubt as to its provenance. However, it is reasonable to suggest that it is Romano-British in origin and represents direct evidence for the 'piece mould' casting of jewellery in Britain, hitherto rare from this period. The mould also casts new light on the method of distribution of the lozenge type brooch in Roman Britain. It remains however a rather puzzling artefact because it is not clear what type of metal it was used to cast and at what date it was re-used.

Acknowledgements

We wish to thank the following for their assistance: Sue Holden (illustrations), Alison Colchester (photography), Jerry Bowdrey (geological identification), Peter Berridge, Paul Sealey, David Andrews and Nina Crummy. The research, drawing and photography of this object were funded by Colchester Museums.

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A ROMAN POTTERY GROUP FROM CANVEY ISLAND

by J. Hedges and T.S. Martin

Circumstances of discovery

The pottery group reported here was found in the area known as Canvey Island Point by Mr L. Carter of Aylesbury, Buckinghamshire, in the late 1970s. The vessels were located on intertidal Crown land to the west of Leigh Beck Point in an area that has produced prolific finds of Roman pottery throughout this century and earlier (Fig. 3).¹ The

presence of the pots was first indicated by the neck of the flagon projecting from the silts of the foreshore. The excavated group was shown to the Essex County Council Archaeology Section in a cleaned condition. Although the opportunity to examine the site context and any possible contents of the vessels was not afforded to archaeologists, it is nevertheless considered that the pottery represents a cremation group which may have been associated with a larger cemetery. 'Twenty-nine Roman urns'² are recorded as being found at a point some 50m to the south-east, whilst 500m to the north-east between Leigh Beck Point and Canvey Point, Roman pottery has often been washed out of the intertidal silts or recovered during dredging operations. In 1926-7 much pottery was dredged up near Leigh Beck Point: '...the complete vessels suggest a cemetery' (Pollitt 1953).

Discoveries have continued to be made since the 1920s and publication of this group of pots adds to the corpus of finds from the eastern point of Canvey Island and underlines the importance of this site (Wymer and Brown 1995, 151-173; Fulford *et al.* 1997). It is also timely given the recent Essex Field Archaeology Unit survey of the area (this volume, p. 459).

Pottery (Fig. 4)

The pottery is recorded with reference to the Chelmsford typology (Going 1987), Monaghan's typology for northern Kent (Monaghan 1987), and Greene's survey of Central Gaulish glazed wares published in the Usk fine ware volume (Greene 1979).

1. Central Gaulish glazed ware beaker reconstructed from fragments but nearly complete (wt. 0.089kg; 1 Eve; rim diameter 65mm). The vessel is decorated with four alternating panels of 'hairpin' (gadroons) and groups of lozenge-shaped groups of dots added *en barbotine*. This arrangement is unusual in that most examples of this type are decorated with just one of these motifs rather than a combination of them. The form, which corresponds to Greene's types 13-15, is comparable to Lyon colour-coat forms rather than Central Gaulish samian vessels. It is the most common Central Gaulish glazed ware form found in Britain.
2. Central Gaulish glazed ware cup with two small loop handles, complete vessel (wt. 0.100kg; 1 Eve; rim diameter 96mm). The vessel is decorated with four panels of barbotine dot decoration and corresponds to Greene's type 10. Similar vessels have been recorded at a number of sites in Britain, including Richborough, Kent (Bushe-Fox 1932, plate XXXVIII.295).
3. Sandy grey ware (47) lid with plain grip, complete vessel (wt. 0.062kg; 1 Eve; rim diameter 95mm). This form is not closely datable, but would not be out of place in a late 1st to 2nd century context.

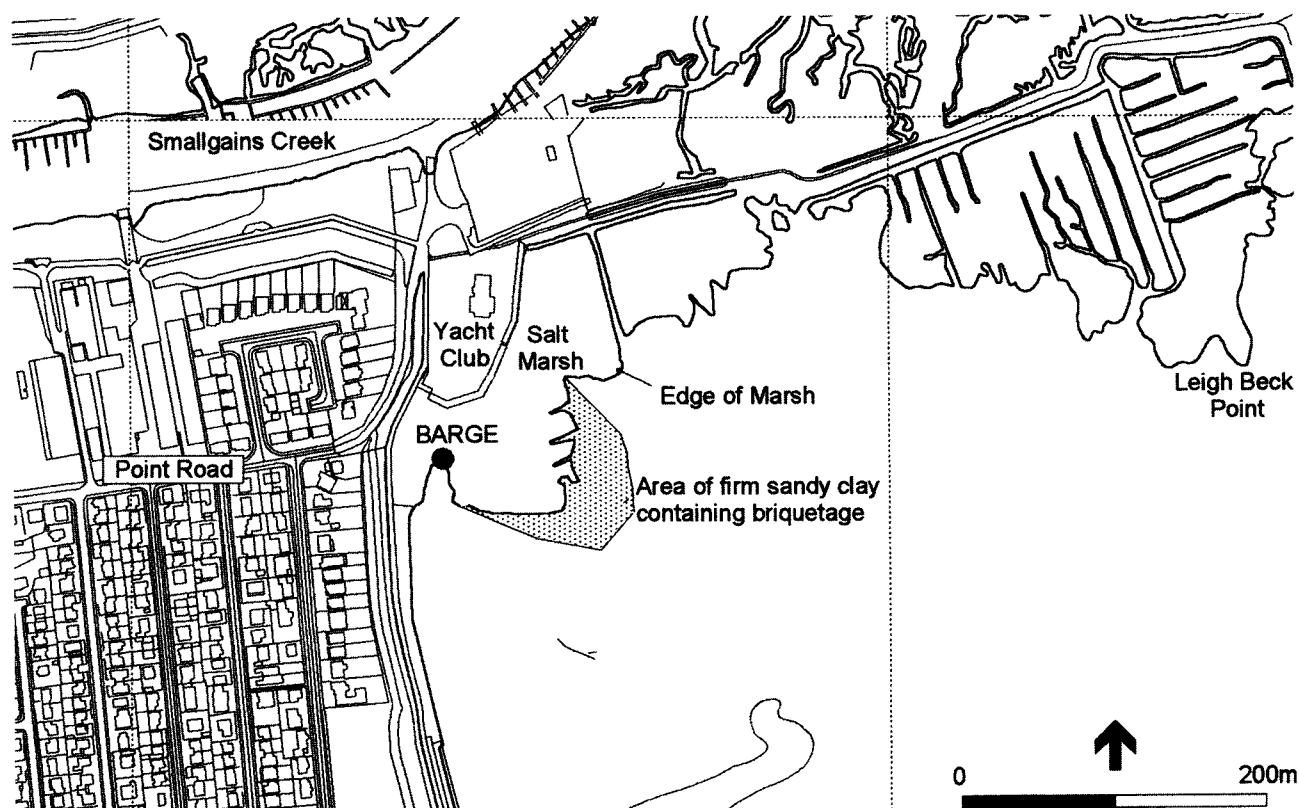


Fig. 3 Map showing the environs of the Roman pottery find.

The form is identical to a vessel from Colchester (Hawkes and Hull 1947, plate LXXXV. 17).

4. Central Gaulish samian (60) dish transitional between forms 18 and 18/31 stamped VITALIS.M.S.F. with die 2a of Vitalis iii, reconstructed from fragments but complete (wt. 0.283kg; 1 Eve; rim diameter 180mm). The fabric indicates that this vessel was produced at Les Martres-de-Veyre. The stamp is also attested at Colchester (Dickinson 1999, 131) and dates to the period c. AD 100-120.
5. North Kent grey ware (32) carinated bowl imitating samian form 37 reconstructed from fragments although nearly complete (wt. 0.509kg; 1 Eve; rim diameter 200mm). The form is not closely paralleled in Monaghan's typology, but loosely resembles a vessel from Upchurch dated to c. AD 70/90-130 (Monaghan 1987, 4H2.3).
6. Verulamium region white ware (26) ring-necked flagon with flared trumpet mouth (Chelmsford type J3), complete vessel (wt. 0.581kg; 1 Eve; rim diameter 42mm). The form probably dates to c. AD 60-120, judging by the evidence from London (Davies *et al.* 1994, 42).

Discussion

The most remarkable feature of these six vessels is that five of them were produced outside Essex and that half are imports from Central Gaul. Les Martres-de-Veyre is the likely source for the samian vessel, while the two lead-glazed vessels may have originated in the Allier Valley or Lezoux, as vessels

from these sources have been identified in London (Davies *et al.* 1994, 128). The other identifiable sources are North Kent and Verulamium (i.e. Brockley Hill). Only the sandy grey ware lid need be a local product; that is produced in Essex.

The dating of the group is problematical. Central Gaulish glazed ware is most commonly associated with pre-Flavian contexts and probably ceased production c. AD 70, although in London they occur in Flavian and Trajanic contexts as well (Davies *et al.* 1994, 128). On the other hand the Central Gaulish f18 (not a proper f18/31) is unlikely to date before c. AD 100. The datable coarse wares, however, seem to be Flavian to Trajanic in date. This would indicate that the Central Gaulish glazed ware vessels should be seen as survivals with the deposition of the group as a whole taking place c. 100/110 AD.

Given that there is strong evidence for an extensive cremation cemetery in the area where these vessels were recovered, it is more than likely that these six vessels represent a further internment rather than casual loss. A number of cremation groups are known c.50m to the south-east, while the Castle Point Archaeological Group has collected large quantities of pottery eroding out of the salt marshes over the last twenty-five years or so from an area c.500m to the north-east between Canvey Point and Leigh Beck. Probable cremation groups were also identified among this material. Assessment of this material by Horsely and Wallace

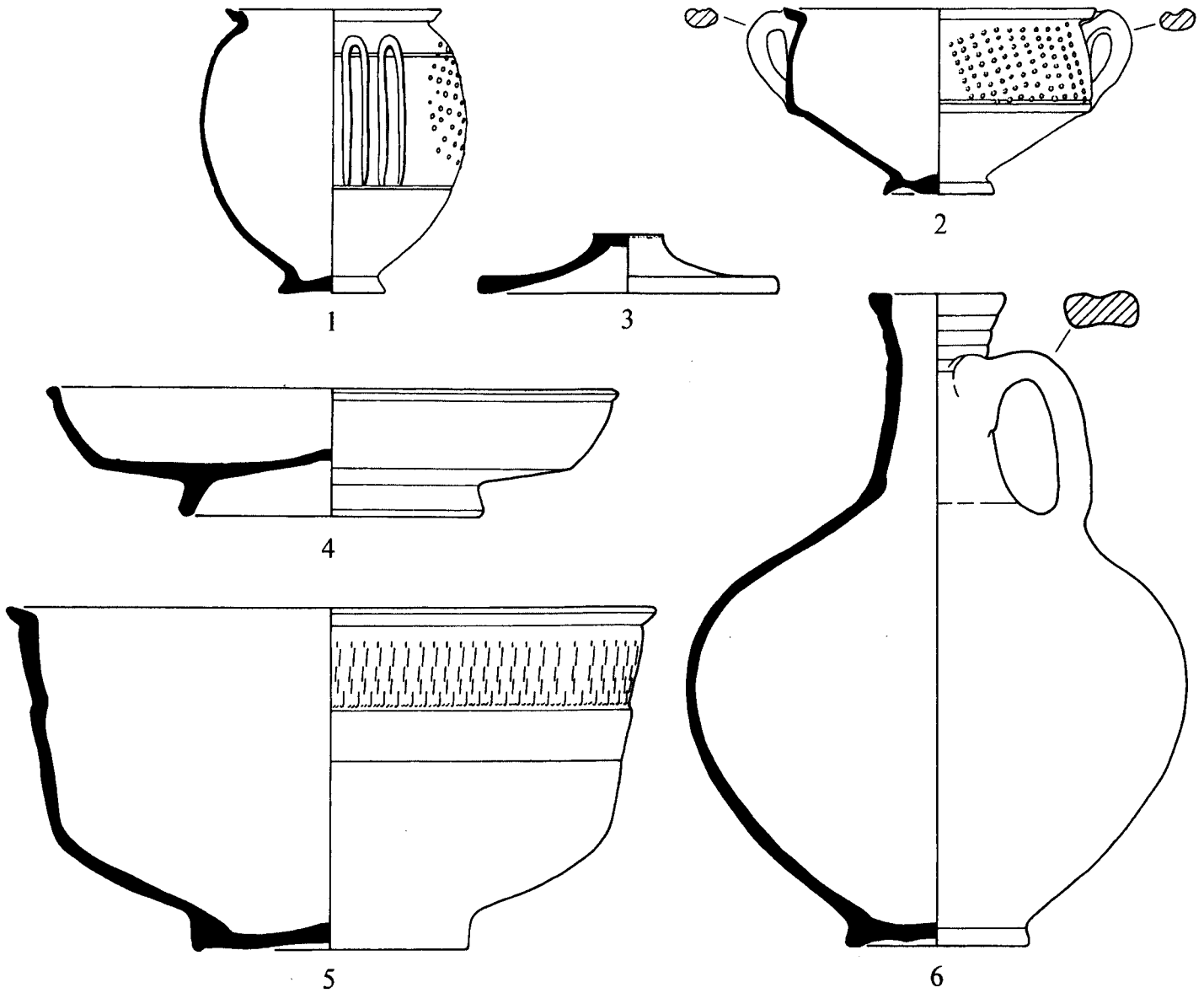


Fig. 4 The pottery from the cremation group.

(n.d.) indicates that this area is rich in exotica with a range of imported fine wares that is unparalleled in Essex outside Colchester. On the other hand the range of coarse wares is more typical of southern Essex sites, with North Kent products being particularly noticeable. Overall, the pottery exhibits a wide date range – 1st to late 4th/early 5th century AD – with a clear bias towards the early period. There is, however, a strong emphasis on the early Roman period. It is unfortunate that this material remains unpublished, as it appears to have regional significance.

The quality of the pottery recovered from Canvey Island appears at odds with the fact that the area around Leigh Beck and Canvey Point may have formed an industrial zone. It certainly saw salt production on some scale during the late Iron Age

and Roman periods. At least three red hills have produced dating evidence that suggests they were in operation during the 1st and 2nd centuries AD (Jefferies and Barford 1990, 76). Furthermore, there is also the possibility that the Leigh Beck red hills may have been the site of a fish curing industry as well (Fawn *et al.* 1990, 33). If these vessels are from a single grave or cremation deposit, it suggests that this was relatively high status. This would suggest that the archaeology of the area between Canvey Point and Leigh Beck is exceptionally complex. The presence of the two Central Gaulish glazed ware vessels is in itself, quite noteworthy, as these are not especially common in Britain. Greene (1979, 99) notes that Central Gaulish glazed ware vessels were especially favoured as grave goods in the Rhineland and Switzerland.

Acknowledgements

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Notes

1. Essex Heritage Conservation Record number 9665.
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CONTOUR SURVEY OF MOUNT BURES CASTLE

Rachel Clarke

The Mount (EHCR 9161), a Scheduled Ancient Monument (SM20674), is located 40m to the north of St. John's church (TL 9045 3255), and is believed to be the remains of the motte of a castle dating from the 12th century, possibly associated with the Sackvilles. A contour survey using a Total Station Theodolite (TST) was undertaken on the Mount and surrounding area by Essex County Council Field Archaeology Unit in March 1997 (Fig. 5). The survey was intended to provide a detailed map of this important monument, partly for inclusion in a permanent display board, and also as part of an ongoing English Heritage funded programme of improved management of the monument.

The motte is situated close to the summit of the natural slope before the land starts to fall away quite steeply to the Cambridge Brook to the west. The steep-sided earthwork, 60m in diameter at the base, survives to 10m above the present ground surface, and is surrounded by a dry ditch c.3.5m deep and between 10m and 12m wide. Very little evidence of the bailey appears to have survived the effects of ploughing and medieval building. A terrace to the south-west of the motte, which had previously been thought to be the remains of part of the bailey (cf. RCHM Essex vol. III, 1922, p. 185), was investigated by the Colchester Archaeological Group (C.A.G.) in 1969, which concluded that it was the result of ploughing in an old enclosed horse pasture. No evidence of a stockade or major fortification ditches was found, although the presence of two parallel ditches indicate a palisade (McMaster 1969, 39). A contour plan of the motte, using a dumpy level, was carried out by the C.A.G in the summer of 1974 during which two large holes on the summit, representing unrecorded excavations from the 19th and 20th centuries, were also noted (McMaster 1977, 4).

The contour survey was fairly extensive and included the pasture field to the north and west of

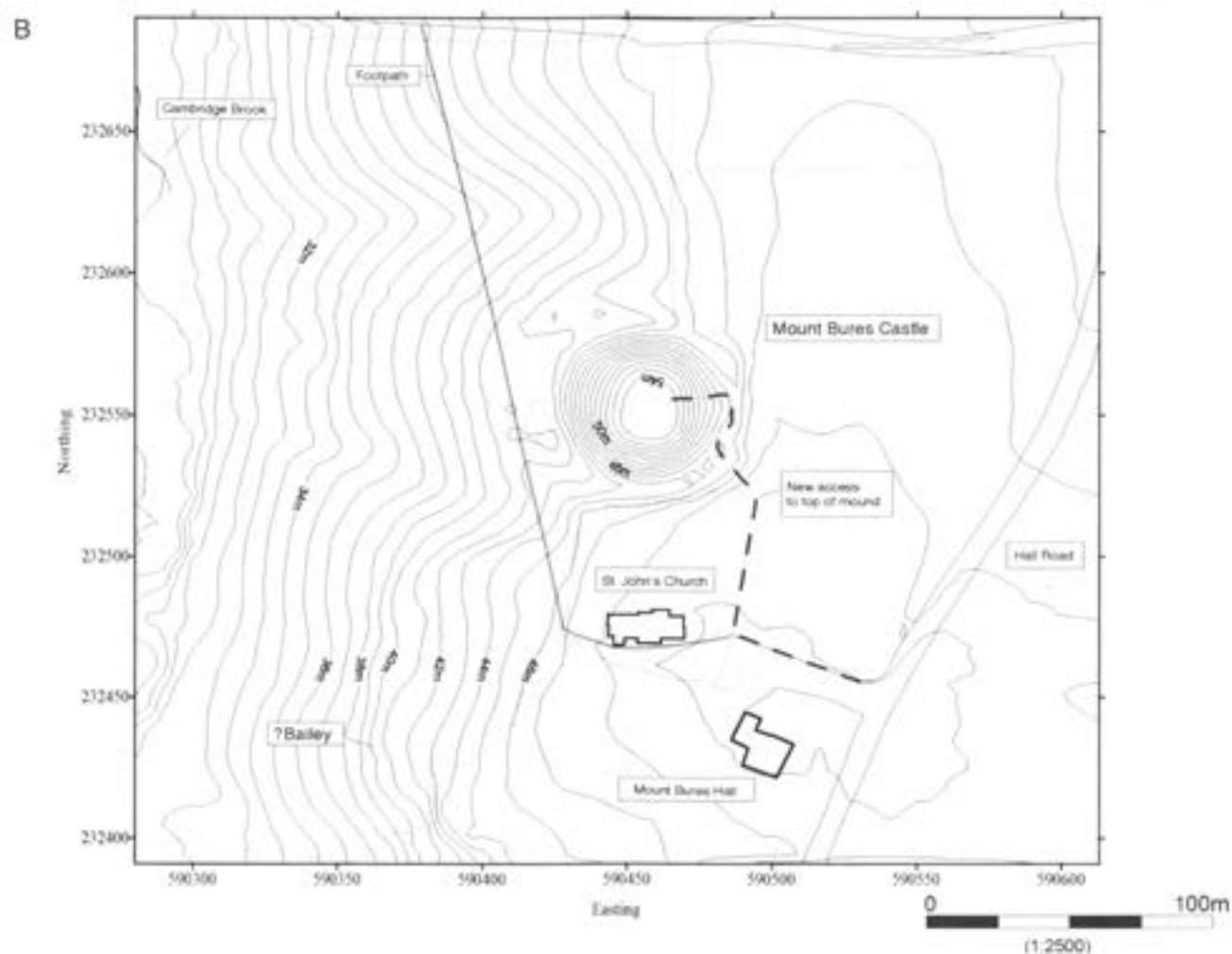
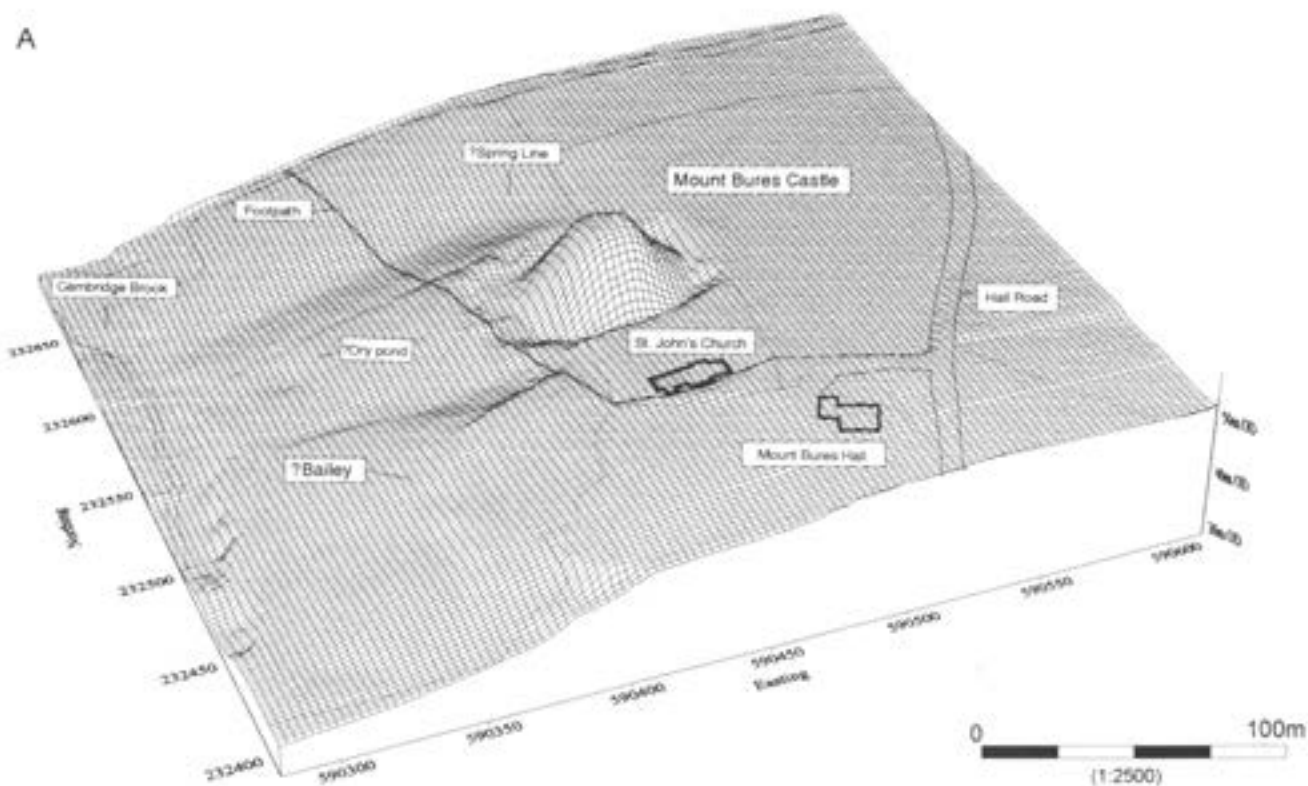


Fig. 5 Mount Bures castle, contour plan (B) and 3-D enhanced model (surface mesh) of the Mount and its environs.

the mound, which sloped down to the brook, and the area to the east up to Hall Road and down to Mount Bures Hall to the south. No evidence of the bailey or earthworks associated with the castle was found, although the terrace investigated by C.A.G. was still very visible (marked on the illustration as ?Bailey), and several probably natural features including a spring line and a large circular depression, possibly a pond, were also recorded (Fig. 5). Some recent disturbance of the monument was noted in the form of several animal burrows of varying sizes dug into the soft sandy gravel around the base of the motte. However, the presence of dense undergrowth and trees covering the sides and top of the mound, which made the survey quite difficult at times, may have helped reduce erosion of the monument.

As part of the management of the monument, a new access to the site has been created via a short footpath to the east of the church, leading to a set of wooden steps mounting the east side of the mound. Selective clearance of the trees on top of the mound has also enabled previously-inaccessible views of the surrounding countryside to be enjoyed by all who visit this important and interesting monument (Plate 1).

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The survey was undertaken by the author with the assistance of E. Heppell, D. Kenny and M. Peachey, with Ian Peet providing initial expert advice. The author would like to thank Ida McMaster for providing background information and advice, as well as the present owners of the Hall, Keith and Gerry Loudon Shand, for their interest and support during the survey.

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LATE 17th-CENTURY APOTHECARY VESSELS FROM 108-110 THE GROVE, STRATFORD

by Jim Leary and Chris Jarrett, with a contribution by Rachel Tyson

Background

An archaeological excavation was undertaken by Pre-Construct Archaeology Ltd at 108-110 The Grove, Stratford, London Borough of Newham (TQ 3905 8451) in April 2001 in advance of the redevelopment of the site (Fig. 6). The excavations revealed a group of pits, cut into the natural gravels, containing domestic refuse dating from the medieval period to the 19th century. This report will concentrate on a small group of pits, dated to the end of the 17th century, which contained a small but important pottery and glass assemblage. The pottery consisted largely of tin-glazed earthenware pharmacy vessels, while the glass was represented by phials and storage jars of varying size, suggesting the presence of an apothecary or pharmacy on the site.

The British Geological map indicates that Taplow gravel overlies London Clay and Woolwich and Reading Beds in the vicinity of the site. The easternmost channel of the River Lea, the Channelsea River, is approximately 500m west of the development. The site and surrounding area is relatively level ground at about 8.0m OD.

By the late 17th century the Stratford area had dramatically increased in size, due to the proximity of London and its position on the major transportation routes leading into the City. Early maps of the Stratford area attest to the growth of the village concentrating on the Stratford High Street frontages. The Oliver map of 1696 shows ribbon development along the High Street and The



Plate 1 The new steps up the side of the castle motte at Mount Bures.

Grove. By the mid 18th century, as the Rocque and Chapman and André maps attest, the community had further expanded, with The Grove clearly marked.

The role of the apothecaries varied much in function and practice, performing such duties as prescribing, preparing and dispensing drugs, diagnosing ailments, midwifery, and blood-letting. Further to this, inventories from apothecary shops show that many sold a wide range of grocery commodities as well as artists materials. Although

apothecaries never received the same respect as the university-educated physicians, they fulfilled an essential role within society, with many commanding a high social status and a large salary (Waller 2000).

An inventory of 1666 for an apothecary shop lists a wide range of vessels, including ‘pottles’, syrup bottles, pill pots and window boxes in glass and pottery, all of different sizes. Nests of drawers and boxes, no doubt in wood, are mentioned for the storage of drugs (Crellin 1970). The fittings from an 18th century pharmacy and laboratory in Winchester survived amongst the mainly Victorian furniture and equipment of a chemist and druggist store; they included dry drug drawers labelled with their contents, delfware jars and mortars and pestles (Lewis and Boorman 1990). A number of premises used by apothecaries were excavated at Lion Walk, Colchester, where the finds included *albarelli*, drug jars, ointment pots, pill-tiles, glass storage vessels, distilling apparatus such as alembics, and mortars and pestles (Cotter 2000).

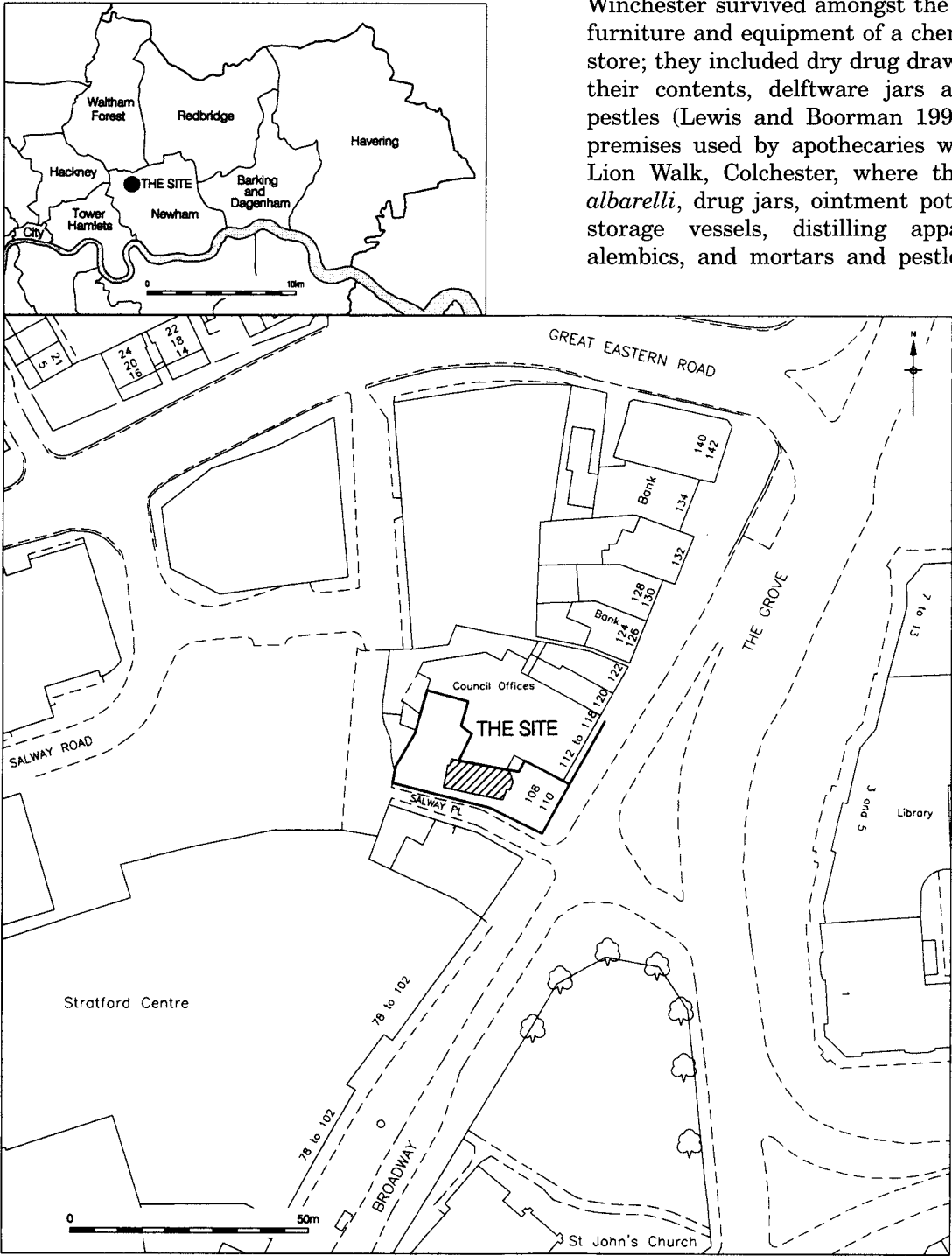


Fig. 6 Stratford, The Grove, site location. (© Crown copyright. Ordnance Survey. All rights reserved. Licence no. MC100014800).

Further, a number of pharmacy wares as well as a quantity of glass phials have been recovered from a pit excavated at 233-246 High Street, Brentford, suggesting that the assemblage had derived from the clearance of an apothecary shop. Vessels included wet drug jars ranging in date between c.1630-1700 and therefore contemporary with the Grove assemblage (Canham 1978).

Apothecary's pots were among the principal wares produced in delftware (tin-glazed earthenware) factories and the demand was high since the community as a whole used them as general storage containers. Amongst the types of ceramic vessels manufactured were dry jars intended for dry preparations, and wet jars intended for oils and syrups. Both wet and dry jars had everted openings, and parchment covers could be tied down over the rims, thus keeping the contents fresh. With the publication of a list of medicinal ingredients in the first London *Pharmacopoeia* in 1618, nearly all apothecary jars were inscribed with the name of their contents (Archer 1997).

The archaeological evidence

The rubbish pits relating to the apothecary shop were set back from the road and were probably to the rear of the shop building which would have fronted The Grove. Any evidence of the building had been removed during the excavation of the present basement in the mid 20th century.

The tin-glazed earthenware from the site (Fig. 7.1-4) was mostly of London origin, the main form being *albarelli*, used for the storage of dry drugs (although not exclusively). These were all decorated with blue on white patterns, mostly with blue horizontal bands on the rim and base, but one had a cable decoration (Fig. 7.3), one a swag design (Fig. 7.4), and another abstract floral decoration. Their quality was variable, with some designs running during firing, resulting in a smudged effect. There was a range of sizes with rim diameters ranging between 110-160mm, and squat to medium in height. A Dutch tin-glazed earthenware drug jar was also recovered. This was finely painted with blue on white decoration, comprising a cartouche with the legend 'T:HYSTER..' over a cherub's head. Running foliage is depicted spreading from the cherub's mouth to cover the vessel (Fig. 7.5). Such a 'running foliage' design was typical for Netherlands-type drug jars and numerous examples of these 17th-century vessels were found during excavations at Colchester (Cotter 2000). The content of this drug jar is listed in the 1689 *Pharmacopoeia Londonensis* as *Troch. Hysterici*, a medicine for women's ailments. Another interesting vessel was a fragmentary handled wet drug jar, rounded in shape with a hollow pedestal base and a pouring nozzle. This was decorated with a blue on

white design, depicting the head of Apollo with two rhinoceros supporters, over a dragon, representing the serpent of disease (Fig. 7.6). This motif is a corruption, probably reflecting the degree of artistic license practised by the pot decorators, of the coat of arms of the Worshipful Society of Apothecaries of London, which is represented by a rhinoceros crest, supported by two unicorns (Dee Cook pers. comm.). A cartouche on the vessel bears the legend '...LYMON...'; however the contents could not be determined.

Other tin-glazed earthenware vessels from these pits included a plain white (Orton 1988 style C) porringer with a convex profile, everted rim, and lobed lug handle with three piercings. Although used for consuming semi-liquid food, physicians also used these vessels as bleeding bowls. A pedestal dish or saucer decorated with a blue geometrical design on white was also present (Fig. 7.7), as were fragments of a bowl and a dish, decorated in a style akin to that of Orton's 'Chinamen in grasses' (style F), dated to between 1670-90.

A number of the glass vessels recorded from the site can also be associated with medical preparations, identifiable as apothecary bottles or phials. These were in a fragile but stable condition. Two small phials (Figs. 8.8 & 9) may have contained small quantities of medicine and have originated from an apothecary. Two bases from slightly larger apothecary bottles were also found (Fig. 8.10 & 11), and may again have contained medicines, or other toilet preparations. The rim and neck of a case bottle is an impressive size (Fig. 8.12). This would probably have had a square-sectioned body, and would have been used for a variety of contents including medicines, toilet preparations and spirits. The size suggests that it may well have been an industrial-sized bottle, for use by a professional apothecary. Another storage vessel was represented by the rim of a thin-walled jar (Fig. 8.13) which would have been used for storing drugs or other solids. No evidence was found for alembics or glass distilling equipment.

A later pit, dated to the early 18th century, produced a large group of pottery containing a number of vessels with a wider range of uses, more associated with a general domestic household, suggesting that the apothecary had been relatively short-lived and that the function of the site had changed. Included within this assemblage were four incomplete colourless lead wine glasses, ranging in date from the late 17th century to the mid 18th century, suggesting a resident of comfortable means. A complete linen smoother was recovered from the same phase.

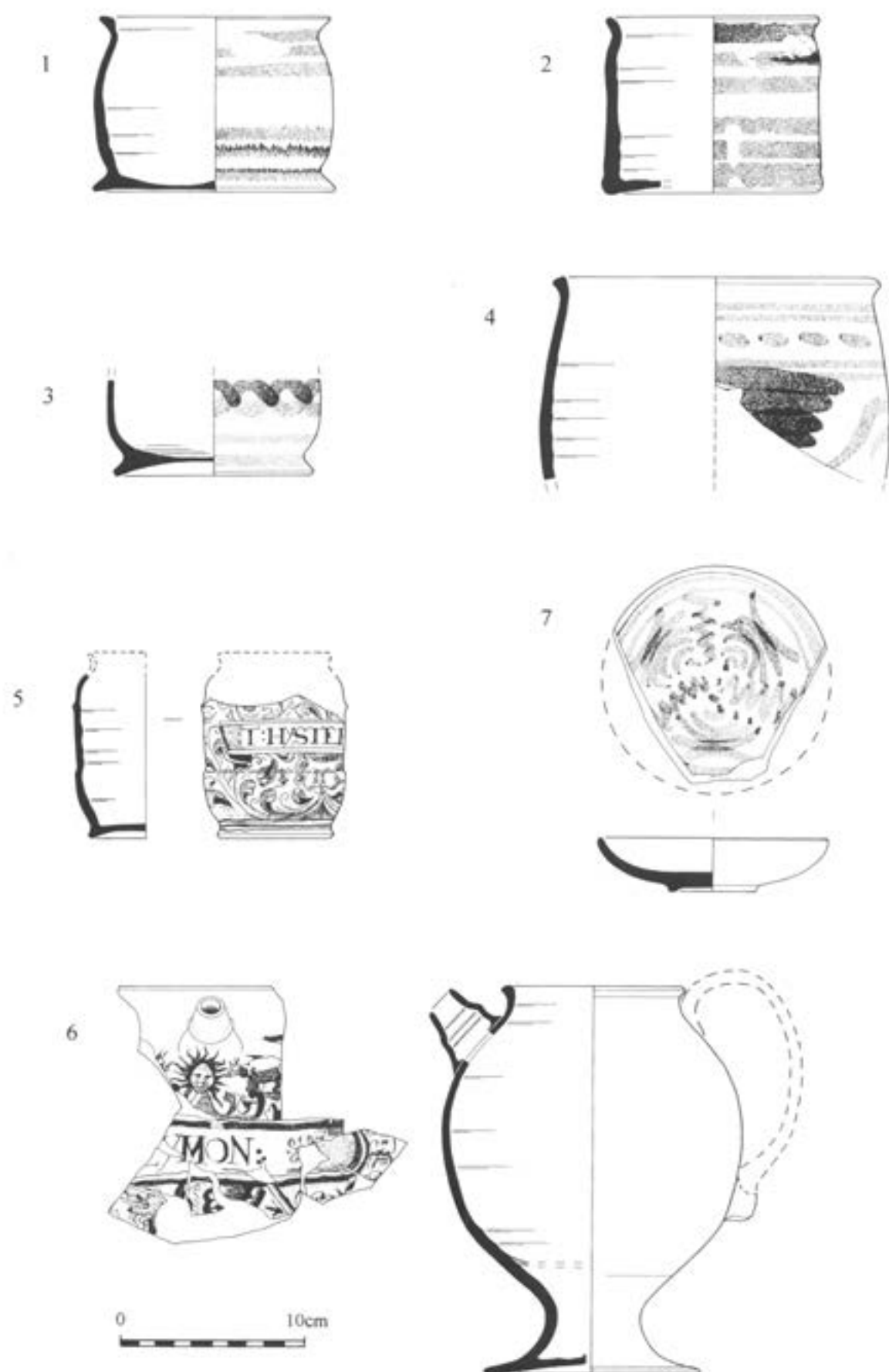


Fig. 7 Stratford, The Grove, ceramic vessels, all with blue on white decoration.

Discussion

The finds from the Grove can be compared to excavations at Lion Walk, Colchester, where a number of premises were known to be used by apothecaries from both documentary and archaeological evidence. The Lion Walk excavations have shown that the material culture of this profession consisted of a low occurrence of domestic vessels, and a high percentage of ceramic and glass pharmaceutical vessels of different sizes. The evidence also included mortars and pestles and distilling apparatus such as alembics (Cotter 2000).

On this basis, therefore, the presence on the Grove site of a number of pharmaceutical vessels, both ceramic and glass, combined with the small assemblage of domestic pottery, suggests the presence of an apothecary shop. It is clear that the assemblage does not represent a full set of apothecary jars, but rather accidental breakage, since it has been suggested that an apothecary might require 75-100 named jars to make a full set. The number of jars would have grown as new drugs were added to subsequent editions of the *Pharmacopeia Officinalis & Extemporanea* (Crellin 1970).

By the start of the 18th century the evidence for an apothecary appears to be absent, and a very different type of pottery assemblage, one centred on serving, hygiene and teawares, indicates a change in activity on the site. The relatively small assemblage of pharmaceutical wares suggests that there was no large-scale clearance of vessels into rubbish pits with this change of activity, and that the 'tools of the trade' were either sold or moved with the apothecary to new premises.

Acknowledgements

Pre-Construct Archaeology Ltd would like to thank Imperial Developments for funding the project. The authors would like to thank David Divers, the publication manager, for advice and assistance and Dee Cook, archivist with the Worshipful Society of Apothecaries of London, for her help in identifying the names and cures of the drug jars. Jim Leary would like to thank the project manager, Kim Stabler, and the excavation team, Ken Bazely, Sam Hatrick and Ben Reynolds, for all their hard work during the excavation.

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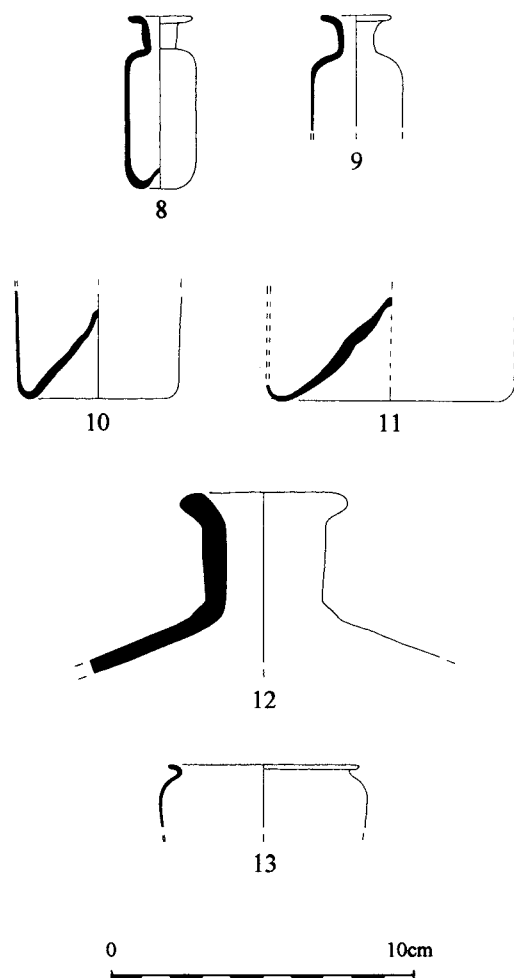


Fig. 8 Stratford, The Grove, glass vessels.

Recent finds from Essex reported to Colchester Museums 1998-2000

by Philip J. Wise

Introduction

In 1997 the Portable Antiquities Scheme was established to complement the 1996 Treasure Act which came into force in that year. The Scheme, popularly known as 'Finding our Past', is designed to encourage members of the public to report all discoveries of archaeological objects. At present there are twelve pilot schemes covering rather less than half of England and all of Wales, but not unfortunately Essex. However Colchester Museums recognises its responsibilities in this area and, despite limited staff resources, has endeavoured to record as many portable antiquities as possible. In the future it is hoped that the Portable Antiquities Scheme will be expanded to cover the whole of England with Essex gaining its own finds liaison officer.

Artefacts

1. Harwich foreshore – Lower Palaeolithic hand-axe

A Lower Palaeolithic hand-axe was found on the beach at Harwich in August 1998 by Mr Roy Middleton and reported in August 2000. It is made of orange-brown flint and has an ovoid shape and a flat profile (Fig. 1). On one face an area of cortex is preserved. The hand-axe is in relatively good condition with only a few modern surface chips. It measures 113mm long, has a maximum width of 72mm and a maximum thickness of 33mm. It weighs 332g.

2. West Bergholt – Late Iron Age bucket mount

Colchester Museums have acquired a very rare late Iron Age bucket mount (Acc. No. 2000.145.1). It was found some fifteen years ago in West Bergholt parish. The mount is made of copper alloy and measures 62mm by 53mm (Fig. 1). It has a design of a male human head of ovoid shape with round eyes, nose and hairline visible. All other details have been lost due to wear. At the top of the mount is a circular suspension loop and there are three projecting 'arms' from the sides and base. Only that at the base is complete and has a small perforation to take a rivet. The back of the object is slightly hollow.

This discovery is of great importance because there are virtually no human representations known from Late Iron Age Britain. There are only seven other well-provenanced examples from four sites: pairs of mounts from Welwyn (Herts.), Aylesford and Alkham (both Kent) and a single find from Thealby (Lincs.) (Powell 1966, 225; James & Rigby 1997, fig. 19; Jope 2000, plate 182i). There is also a poorly recorded example from the 'River Ribble' thought to have been found at Ribchester (Lancs.) (MacGregor 1976, no. 316). All these mounts are dated to the early 1st century AD.

Also found in the same location as the West Bergholt bucket mount was a small fragment of bronze casting waste (Acc. No. 2000.145.2). This is significant and may indicate that there was metalworking taking place on the site in the Late Iron Age period.

3. Beaumont-cum-Moze – Roman harness mount

An openwork harness mount of copper alloy was found in autumn 2000 by Mr John Jennings while using a metal detector at a site in Beaumont-cum-Moze parish. The mount has a trumpet-pattern design, and is of rectangular shape, with four studs on the reverse for attachment to leather. It measures 40 x 27 mm. Mounts with this *Trompetenmuster* design are found throughout the Roman Empire, including Britain. They seem to have originated in the products of a 'factory' established at Baden-Argau in Switzerland, which, during the 1st century AD, produced scabbard ornaments and chapes as well as circular harness mounts. These harness mounts spread into Germany, Gaul, Austria, northern Italy and Britain in the wake of the Roman army's advance. The disc-shaped mounts were copied locally, and British producers were particularly influenced by versions from the Rhineland. This example was probably made in Britain during the 2nd century AD (Frere 1947, 18, fig. 6,7; MacGregor 1976, 186-9).

4. West Bergholt – Roman silver finger ring

Colchester Museums have acquired a Roman silver finger ring (Acc. No. 2000.143). The ring is

described as being found 'many years ago', probably in the early 1990s. It was found with a metal detector at a rural site in West Bergholt parish. The ring is of so-called 'keeled design' in which triangular shoulders project at an angle to a plain ovoid bezel (Johns 1996, 48-49) (Fig. 1). The shoulders are decorated with a geometric pattern in high relief and join the hoop at a marked carination. The hoop has a narrow D-shaped section. The internal diameter of the ring is 15-16mm, the external diameter (across the shoulders) is 21mm and the hoop thickness is 1-2mm. The ring weighs 2.51g.

The ring may be dated to the 3rd century AD and is an example of Henig's Type VIII (Henig 1978, 38, fig. 1). A similar silver ring is recorded from Richborough (Kent) which has a raised circular bezel bearing a crude design. This ring is also dated

to the 3rd century AD (Bushe-Fox 1949, 126, no 92, plate xxxv).

5. St. Osyth – Roman gold earring

A Roman gold earring was found in St. Osyth parish by Mr Spencer Keble whilst using a metal-detector in May 1999. It was reported to Colchester Museums under the terms of the 1996 Treasure Act, and subsequently acquired by the museum (Acc. No. 2000.54).

The earring is made of round gold wire up to 1.25mm thick that has been formed into a complete loop (Fig. 1). It is decorated with three evenly spaced groups of grooved lines. It weighs 1.27g and has a length of 21mm. Although the object is a complete loop, it is clear from grave finds that it functioned as an earring. For example a grave discovered in Lexden Road, Colchester, contained a

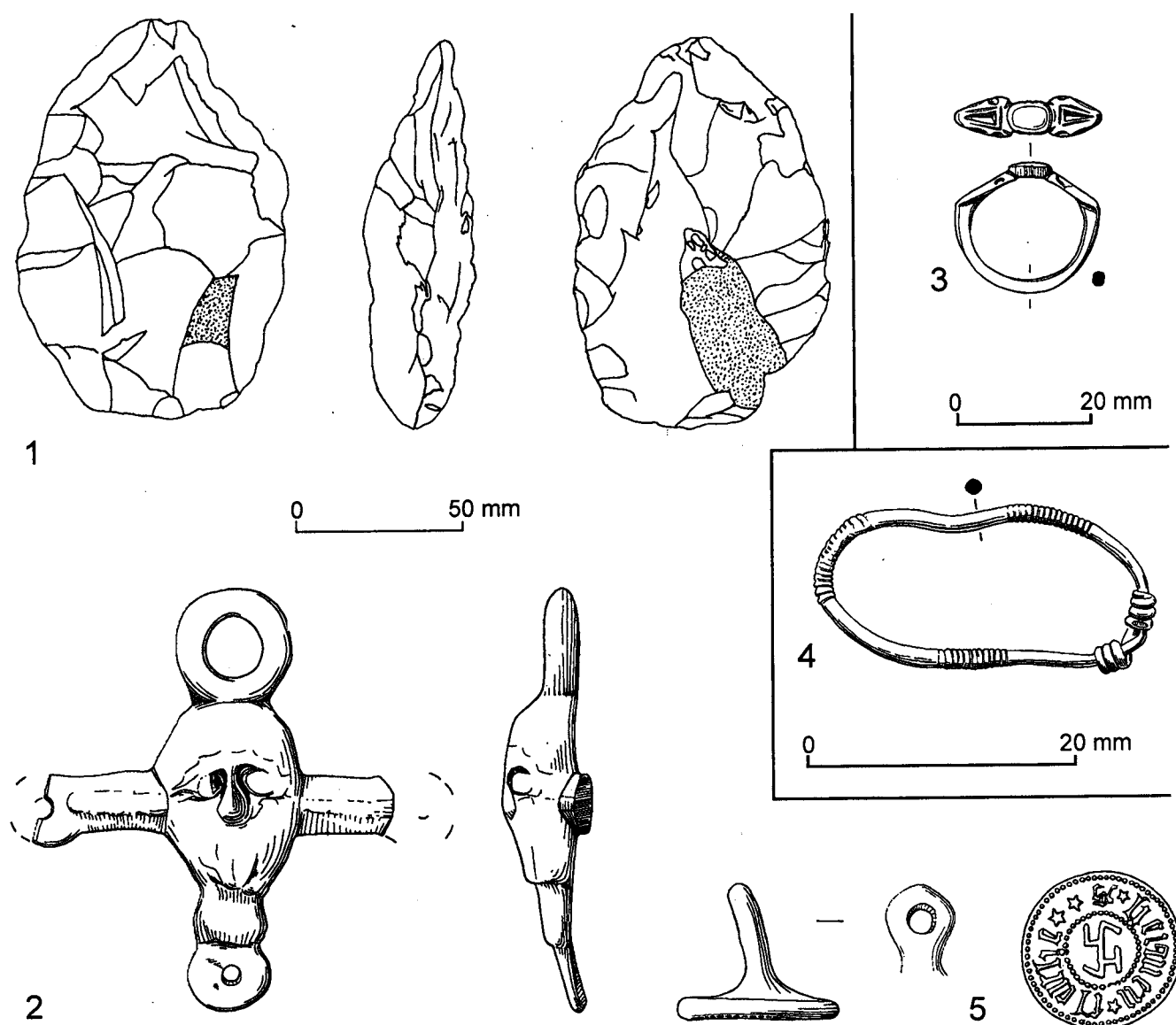


Fig. 1 1 Lower Palaeolithic hand-axe from Harwich foreshore; 2 late Iron Age bucket mount from West Bergholt; 3 Roman silver finger ring from West Bergholt; 4 Roman gold earring from St. Osyth; 5 medieval seal matrix from Halstead.

pair of these rings located to either side of the skull close to the ears (Allason-Jones 1989, 49 nos. 27-28). Presumably such earrings were inserted into the ear lobes and then had their ends secured by winding them around the loop. This design of earring is dated to the 3rd century AD and is an example of Allason-Jones Type 3 (op. cit., 5-6).

6. Messing – Anglo-Saxon pin

Mr David Marvin found a fragment of a copper-alloy pin whilst using a metal-detector at Messing in November 1998. The pin has a collared globular head decorated with ring and dot ornament. The head and surviving part of the shank have a length of 25mm. The pin may be dated to the 8th or 9th centuries and is similar to a find from Bawsey (Norfolk) (Webster & Backhouse 1991, 231, no. 188h).

7. West Mersea – Anglo-Saxon mount

A copper-alloy mount was found at West Mersea in October 1998. It is decorated with two design motifs: a human face with prominent eyes and nose, and a triangular area enclosing a disjointed limb. The face is similar to those found on the feet of the florid cruciform brooches of the 6th century. The lower areas of the design retain substantial evidence of gilding. The back of the mount is plain and there is no evidence of any means of attachment. The mount appears to be largely complete, although there is possibly some damage to the left side. The mount measures 44mm long by 22mm wide.

8. Beaumont-cum-Moze – medieval finger ring

Mr R. Watcham found a copper-alloy finger ring at Beaumont-cum-Moze whilst using a metal-detector. The ring is a narrow flat hoop decorated with a series of single cross patterns separated by bands of knurled decoration. It has a diameter of 18mm, a width of 4mm and a thickness of 0.5mm. The ring is of 12th century date and is similar to a silver example from the Lark Hill hoard (Worcs.) (Zarnecki *et al.* 1984, 293, no. 320e).

9. Langenhoe, near Colchester – medieval seal matrix

A medieval seal matrix was found in July 2000 at a site at Langenhoe, near Colchester. It was subsequently donated to Colchester Museums (Acc. No. 2001.7). It is cast in lead and of 'pointed oval' type, with a perforated lug on the reverse. The legend reads in Lombardic lettering '+:S'[K]ATERIH:KNO?PT:' and the design is a cross motif of long and short petals. The matrix measures 35mm long by 21mm wide by 9mm thick. It dates to the mid 13th century. The original owner of the seal was probably a woman named Katherine Knope. Knope is a variant spelling of Knape, which is a surname, derived from the Old English word *cnapa* meaning youth or servant. As Knope or

Knoppe it is found in Mount Bures parish including a Katherine Knope whose will was proved in 1548. As Knape or Knapp it is recorded for Lawford, Dedham and Great Bentley in the 16th century (Reaney 1997, 267; Emmison 1958, 247-8). Interestingly a comparable seal belonged to another woman – Alicia Jernihas of Bury St. Edmunds, dated c.1260. This is of similar material, size and shape to the Langenhoe find and has a design of 'a long leafy cross with three pellets in the angles' (Nelson 1936, 17, no. 21).

10. Tiptree – medieval seal matrix

Mr David Marvin found a cast copper-alloy seal matrix whilst metal-detecting a site at Tiptree. The seal is of pyramid type, with a triple neck roll on a hexagonal stem and a quatrefoil terminal with piercing. The legend reads 'IESUSELDANO' following a star initial mark and there is a quatrefoil design. The diameter of the face is 19mm, and the seal has a height of 24mm. It may be dated to the early 14th century. The legend is in French and has an amatory character (*Je suis sel d'amour*). Similar legends occur on two seals in the British Museum (Tonnochy 1952, 147, no. 719; 148, no. 721).

11. Halstead – medieval seal matrix

A medieval seal matrix has been found by Mr B.G. Heayes on farmland near Halstead. It is cast in copper alloy, of pyramid type with a hexagonal stem and large pointed terminal with a circular piercing (Fig. 1). The legend reads '*SI*HEMUEU *FICURILE*' and the design is a swastika-like symbol. The matrix has a diameter of 23mm and a height of 20mm. It dates to the early 15th century. The legend is unintelligible. The swastika-like symbol may be intended to represent a merchant's private mark, but is unlike the normal form of such marks (see for example Tonnochy 1952, 126 no. 589, or 127 no. 594). At present this appears to be a unique design.

12. Margaret Roding – medieval seal matrix

Mrs G. Lee found a copper-alloy seal matrix whilst metal-detecting a site at Margaret Roding. The seal is round with a perforated lug on the reverse. The legend reads 'S'ESTIENE DESEIRT TIOP' following a cross initial mark, and there is a cinquefoil design. The diameter of the face is 19mm, and the seal has a thickness of 7mm. It may be dated to the period 1250-1350. The legend appears to be blundered. Cinquefoil designs are less common than quatrefoils, but a 14th century example is in the British Museum (Tonnochy 1952, 146 no. 712).

13. Wix – Post-medieval Dutch custom house seal

A lead custom house seal has been found at Wix by Mr David Marvin. On one face is a crowned Dutch shield bearing the rampant lion of Holland, crowned

and holding a sheaf of arrows in the right paw and a sabre in the left; to the right of the shield is the control number 235 and to the left a ?W. On the other side is an inscription in horizontal lines, only partially legible: [UITGRANDE / REGEN /] EN AC[CYNSE]N / XII. The seal has a maximum diameter of 25mm. 18th-century Dutch custom house seals have been found only in England, either in London or East Anglia, where they are relatively common. These seals were placed on a variety of merchandise including textiles (Mitchiner 1991, 954, nos. 2691-2).

Coins

1. Colchester – Roman republican denarius

A republican denarius of C. Considivs Paetus, minted in Rome in 46 BC, was found in a back garden in Plume Avenue, Colchester, in about 1960. On the obverse is the laureate head of Apollo facing right within a laurel-wreath border. On the reverse is a curule chair, with above C CONSIDIVS, and below PAETVS (Crawford 1974, 476/465).

2. Mersea Island - early denarius hoard

In the early 1990s Mr Jack Marley recovered five denarii from a site at Cudmore Beach, West Mersea, with the aid of a metal detector. The find came to the attention of the writer in the summer of 1999 and the coins were subsequently purchased by Colchester Museums (Acc. Nos. 2000.45-49).

The group would appear to represent at least part of an early denarius hoard of the mid-1st century AD. Such hoards have been considered recently by John Orna-Ornstein who notes a concentration in the eastern counties of England, especially Norfolk and Suffolk. It is generally believed that these hoards were deposited at the time of the Boudican revolt of AD 61/2 (Orna-Ornstein 1997, 23-9, fig. 1). Given the proximity of Mersea Island to the colonia of Colchester sacked during the uprising, it is certainly a possible explanation in this case.

The hoard contains the following coins: a legionary issue of Mark Antony, dated 32-31 BC (Crawford 1974, 544/13); an unusual issue of C. Sulpicius Platorinus struck in 13 BC during the reign of Augustus (RIC I, p.73/408); two examples of a *Pontif Maxim* issue of Tiberius dated AD 36-7 and sometimes described as the Biblical tribute penny (RIC I, p.95/30); and an unidentified coin.

3. Little Oakley – two early Anglo-Saxon coins

Two Anglo-Saxon gold shillings or thrymsas have been found near Little Oakley by Mr K. Mealing. The first was found in the early 1990s. It is the so-called oath taking type which has on the obverse a pearl diademed and draped bust in front of which is a forearm with large open hand placed on a cross (North 1980, 32/17). Michael Metcalf proposes a

date for this type in c.656 when the Peterborough Chronicle describes the consecration and endowment of the town's monastery ending with the witness list of those who attested the charter 'with their finger on Christ's cross and agreed to it verbally'. This 'oath-taking' thrymsa therefore may have been minted in Peterborough in commemoration of this event. It is certainly notable that this type has a 'north of Thames' distribution with, for example, three coins found at the 'productive site' at Coddtenham, north of Ipswich (Suffolk) (Metcalf 1993, 47-49).

The second thrymsa was found in November 2000. It is in pale gold and was struck by the moneyer Pada (North 1980, 34/31). Pada was probably based in East Kent as his coins are chiefly found in Kent and the London area (Metcalf 1993, 73-75). Another find of an Anglo-Saxon silver coin from the area, a Series B sceat, was reported in 1995 (BNJ 1995, no. 114).

4. Layer-de-la-Haye – penny of Offa of Mercia

An Offa penny was found in November 1998 by Mr J. Sadler whilst using a metal-detector and subsequently acquired by Colchester Museums (Acc. No. 1999.53). The coin was struck at Canterbury by the moneyer Ethelnoth around 787-792. It has a weight of 1.19g (North 1980, 59/286).

Acknowledgements

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Archaeology in Essex 2001

edited by A. Bennett

This annual report, prepared at the request of the Advisory Committee for Archaeology in Essex, comprises summaries of archaeological fieldwork carried out during the year. The longevity of many projects often results in a lengthy post-excavation and publication process. The publication of these summaries therefore provides a useful guide to current archaeological research, and the opportunity to take an overview of significant advances. This year 109 projects were reported to the County Archaeological Section (Fig. 1).

Sites are listed alphabetically by parish; the directors of excavations, organisations involved and information regarding the location of archives, including finds, are listed where known. Projects continuing from previous years are indicated by reference to previous summaries in the relevant 'Archaeology in Essex'.

Contributors are once more warmly thanked for providing information. The map is by Alison Bennett. The original summaries, and any associated limited circulation reports, have been added to the Essex Heritage Conservation Record (EHCR, formerly SMR) held by the Heritage Conservation Group at Essex County Council, Planning Division, County Hall, Chelmsford CM1 1QH. Regarding sites in the London Boroughs of Barking and Dagenham, Havering, Newham, Redbridge, and Waltham Forest enquirers should contact the Greater London SMR, English Heritage London Region, 23 Savile Row, London, W1S 2ET.

Progress in Essex archaeology 2001

Introduction

This year the total number of summaries reported here is 109, an increase of 27 on last year, and one less than the previous year. Evaluations have shot up to 52 from 27. Excavations remain at a similar level of 15 (14 last year). Ten projects followed on from work in previous years. This year 3 projects have been carried out by individuals and 5 by local societies. Only the most significant summaries are mentioned in the following period paragraphs.

Prehistoric

A borehole sunk at Newham revealed environmental evidence from the late Mesolithic through to the Late Bronze Age (69). Neolithic environmental evidence came from Dagenham (29). Evidence for Middle Bronze Age environment came from Newham (68), and Late Bronze Age/early Iron Age occupation evidence came from Birchanger (6). Possible Early Iron Age settlement evidence came from Kelvedon (56). A Late Iron Age cremation was found at Witham (108).

Roman

Colchester revealed various remains: early Roman evidence came from Sheepen (16); there is evidence for a substantial building (17), and for a house with a mosaic floor (20); there is also evidence for the Roman waterworks (21). Deposits associated with the Roman small town were found at Great Dunmow (39). Geophysical survey at Leaden Roding (57) indicated possible settlement evidence. Evidence for a possible farmstead came from Rainham (77). Possibly agricultural ovens and cremation burials were found at Witham (108).

Saxon

Sunken-featured buildings were found at Heybridge (53) and Witham (108). Evidence for early/middle Saxon settlement was found at Thorpe-le-Soken (96). Saxon pottery has come from Birch (5), Chelmsford (9), Moreton and Ongar (65), and Tollesbury (98).

Medieval

Continuing work at Foulness (33) is showing evidence of occupation from the 14th century. A possible infilled moat has been found at Great Hallingbury (43). Extensive medieval and post medieval remains came from Kelvedon (56). Geophysical investigation took place at Pleshey (75). A possible hunting lodge was found at Stansted (87). There were the remains of a medieval farmstead at Witham (108).

Post-medieval

A 17th-century cauldron-manufacturing site has been found at Colchester (19). The remains of a Napoleonic building has come from Harwich (51). Evidence for late 19th-century brickworks has come from Benfleet (4) and Parkeston (74). A 19th-century ornamental moat was investigated at Mountnessing (66).

Summaries

1. Alphamstone, land adjacent to St. Barnabas church (TL 878 355)
H. Brooks, U.E.A.

An area of 1.96 hectares west of St Barnabas church and the scheduled Roman villa site (Essex Monument 24872) was fieldwalked (using standard Essex methodology) by students of the University of East Anglia Certificate in Field Archaeology & Landscape History. Finds included Roman, medieval and post-medieval pottery, Roman brick/tile, prehistoric flints and burnt flints. The

only significant quantities were of burnt flint, and Roman brick/tile, both close to the church and villa.

Archive: H. Brooks, then Bt.M.

2. Alresford, Church Farm (TM 0630 2065 centre)
K. Orr and H. Brooks, C.A.T.

In advance of regrading of a field adjacent to the existing quarry at Alresford, a fieldwalking survey over a 2.96 ha. plot west of Church Farm recovered very low weights of archaeological material. There were no significant concentrations. Following the fieldwalking survey, excavation of a 2100m² area centred at TM 0620 2080 uncovered ditches, probably field boundaries, and a large (quarry?) pit. Associated pottery dates from the 13th-16th century. No structures were identified, but the finds would suggest that a medieval settlement was once located west of St. Peter's church.

Archive: C.A.T., then C.M. (ref. 2001.213)
Report: C.A.T. Report 166

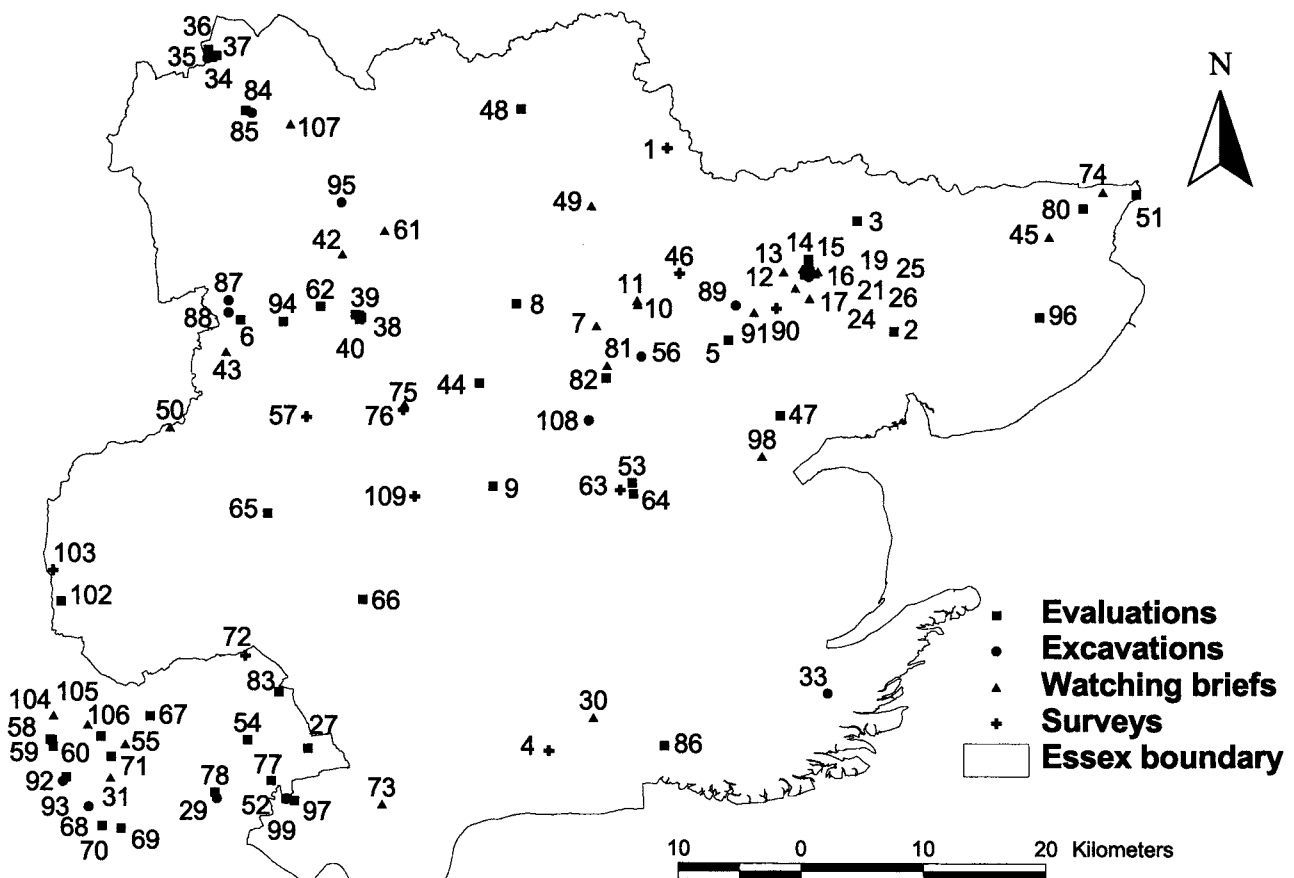


Fig. 1 Essex and the adjacent London boroughs, showing the location of the places mentioned in the text.

3. Ardleigh, Wick Farm (TM 033 296)
M. Germany, E.C.C. (F.A.U.)

Small quantities of prehistoric flint, Roman pottery and tile, and post-medieval pottery, tile and brick were discovered by fieldwalking survey on the site of a proposed reservoir. A small spread of burnt flint, which is possibly prehistoric, was found in close proximity to a complex of cropmarks (EHCR 2574, 8490).

Archive: C.M.
Report: F.A.U. Report 824

4. Benfleet, 56-58 Vicarage Hill (TQ 7816 8642)
E. Heppell, E.C.C. (F.A.U.)

An archaeological desk-based assessment was undertaken on c. 2ha of land on the southern side of Vicarage Hill, Benfleet. No concentrations of activity within the area are recorded for the prehistoric, Roman, Saxon and medieval periods. By 1771, the date of the earliest cartographic record, the area had been cleared and was probably being used for agricultural purposes; in 1841 the area is recorded as arable land. An examination of cartographic sources would suggest that no features associated with this use, such as former field boundaries, lie within the study area.

By 1882, a brickworks was operating at South Benfleet, with part of the site of the works extending into the study area. The main works (the kiln etc.) stood in the vicinity of the end of Greenwood Avenue and now lie below housing on Sidewell Avenue and St. Mary's Drive. To the north of this, in the southern half of the study area, there were large quarries, which are likely to have destroyed any archaeological remains formerly present. Although the boundaries of the brickworks extended into the study area it is unlikely that there were any significant structural elements in this area. Should they have existed they are likely to have been damaged or destroyed by subsequent landscaping prior to the house construction between the First and Second World Wars.

Archive: S.M.

5. Birch, Birch Pit northern extension
(TL 928 199 centre)
C. Crossan, C.A.T.

An evaluation uncovered several prehistoric ditches in the north-east corner of the site, including a Bronze Age ditch from which a quantity of pottery and flintwork were recovered. A parallel pair of ditches further east were probably of later prehistoric date. Two large quarry pits were apparently in use in the Roman period, although

some Saxon sherds were found in the backfill of one. Features elsewhere on the site were sparse, but included post-medieval or modern field boundary ditches as well as a large pit used to dump materials left over from the US Air Force base at the end of the Second World War.

Archive: C.A.T., then C.M. (ref. 2001.82)

6. Birchanger, M11 Slip Roads, Stansted Airport
(TL 5200 2200)
F. Brown, F.A.

Desk-based survey and field evaluation in advance of remodelling Junction 8 of the M11 identified an area of c.3ha adjacent to the carriageway of the M11 as containing significant archaeological remains of prehistoric date. Subsequent excavation uncovered remains of Neolithic to Late Iron Age date. These comprised small groups of Neolithic and Middle Bronze Age pits, with more substantial evidence for occupation of the site from the late Bronze Age/early Iron Age when in addition to further pit groups (including tentative water-holes) a sinuous ditch indicates enclosure for the first time. Ring gullies of possible middle Iron Age date clearly locate settlement which became increasingly defined by ditched enclosures into the later Iron Age. By this period the form of the main enclosures, attached trackway and field boundaries suggests a typical small farmstead. This appears to have gone out of use prior to the Roman period. A later field system constructed over the farmstead was undated.

Archive: O.A., to go to S.W.M.

7. Bradwell, Rivenhall Airfield (TL 820 210)
S. Gibson and Mark Peachey, E.C.C. (F.A.U.)

Continuous monitoring of topsoil stripping prior to quarrying at Rivenhall Airfield (EHCR 14183) recorded a curvilinear gully and four pits. The gully in the north-west edge of the site measured 12m long by 0.5m wide and 0.22m in depth, and contained prehistoric pottery. The four pits in the centre north of the site were roughly circular and measured 0.7-0.8m in diameter and 0.1-0.2m in depth. All of the pits had charcoal-rich fills and one contained possible medieval pottery. Construction of a haul road for the quarry was also monitored. It was devoid of any archaeological features.

Archive: Bt.M.

8. Braintree, former builder's yard, St. Michaels Road (TL 755 228)
M. Peachey, E.C.C. (F.A.U.)

An evaluation was carried out prior to the building of flats on the site of a former builder's yard. The development area lies on the edge of the Roman

settlement and opposite the medieval St. Michaels church. The only archaeological features uncovered by the evaluation trenches were three pits. Two of these contained very small quantities of post-medieval tile, while the third was not datable. The archaeological evidence from this and a previous evaluation on another part of the same site suggests Roman and medieval activity in the immediate area is extremely limited.

Archive: Bt.M.
Report: F.A.U. Report 977

9. Chelmsford, Cuton Hall, Chelmer Village Way (TL 7358 0802)
M.J. Saunders, T.V.A.S.

Evaluation revealed two ditches, one modern and the other possibly medieval but probably later. Two residual sherds of pottery were found, one early Saxon and the other Saxon or Iron Age.

Previous summaries: Bennett 2001, 253
Archive: T.V.A.S., to go to Ch.E.M.
Report: T.V.A.S. Report 01/16

10. Coggeshall, 11a East Street (TL 854 227)
P. Connell, E.C.C. (H.A.M.P.)

Watching brief on foundations for a small extension revealed a black waterlogged deposit at the base of the foundation cut, at a depth of c.1.5m. The deposit lay below mixed post-medieval deposits, was c.500mm in depth and contained oyster, butchered large mammal bone, peg-tile and a small quantity of late medieval/early post-medieval pottery (a flanged bowl rim and strap handle of sandy orange ware and early type post-medieval red earthenware). The deposit also contained much organic material including macro-plant remains and worked and jointed timber fragments in an excellent state of preservation. The deposit possibly represents a shallow pit or pond.

11. Coggeshall, church of St. Peter ad Vincula (TL 8534 2302)
K. Orr, C.A.T.

Observations were made on groundworks for a new extension on the north side of the church and on a drain trench through the churchyard. Burials dating from the 18th or 19th centuries (some previously disturbed by a WWII bomb) were recorded and reburied. The presence of residual Roman pottery and tile reinforces the theory that Roman structures, possibly of a high status, existed close to the church.

Archive: C.A.T., to go to Bt.M. (ref. BRNTM 2001.10)

12. Colchester, 24 Castle Road (TM 0008 2548)
K. Orr, C.A.T.

A watching brief on this new house recorded Roman finds and features, including an *opus signinum* Roman floor surface and a collapsed wall to a building near the Castle Road frontage.

Archive: C.M. (ref. 2001.107)
Report: C.A.T. Report 158

13. Colchester, Colchester Castle, High Street (TL 9985 2530)
H. Brooks, C.A.T.

Colchester Borough installed new floodlights around Colchester Castle in time for Christmas 2001, and CAT were contacted to dig the cable trenches. These were 300mm wide and 800mm deep, around the whole of the castle. The soil layers cut through were entirely post-medieval, and were probably a result of a combination of modern gardening activities, 1930s excavations at the front of the castle, and earthmoving in preparation for opening of extension to the Castle Park in 1929. As far as it is possible to judge, the trench bottom penetrated as far as rubble layers probably contemporary with John Wheeley's demolition of the castle in the 1690s.

Archive: C.A.T., to go to C.M. (ref. 2001.238)

14. Colchester, Colchester Garrison PFI site (TL 994 233 centre)
K. Orr, C.A.T.

An archaeological watching brief was carried out during two phases of hand-digging of geotechnical boreholes and test-pits. 109 boreholes and test-pits were monitored. The majority of the finds from the test-pits were post-medieval in date, with a notable lack of medieval artefacts. Roman pottery or tile was retrieved from 16 of the test pits. These did not come from any defined features, and were mixed in with post-medieval and modern material, indicating that archaeological remains had been disturbed. One human skull fragment was recovered.

Previous summaries: Bennett 2001, 255
Archive: C.A.T., to go to C.M. (ref. 2001.168)
Report: C.A.T. Report 154

15. Colchester, land west of Colchester General Hospital (TL 9931 2650)
C. Crossan, C.A.T.

Field evaluation in advance of development revealed a widespread area of linear features of late Iron Age/early Roman (pre-Flavian) date. For the most part, the evidence from the exploratory trenches is in the form of discrete plots of ditches and gullies of

the period and is currently too fragmentary to permit an overall pattern to emerge. Other finds included a single find of late Bronze Age to early Iron Age pottery and two ditches of medieval or possibly later date.

Archive: C.A.T., to go to C.M. (ref. 2001.151)
Report: C.A.T. Report 165

16. Colchester, Colchester Institute, Sheepen Road (TL 9883 2570)
K. Orr, C.A.T.

The site lies on the eastern side of the late Iron Age and early Roman industrial centre and settlement at Sheepen. The watching brief on a new catering block produced an assemblage of 1st-century AD Roman amphorae and mostly 1st-century AD pottery of types commonly found at Sheepen. Several pits were recorded, one of which was dated by ceramics to the early Roman period. A short stretch of mortared Roman tiles presumed to be the wall or foundation of a Roman building were found by the contractors after the watching brief had finished.

Previous summaries: Bennett 1999, 223; 2000, 223; 2001, 257

Archive: C.M. (ref. 2001.3)
Report: C.A.T. Report 131

17. Colchester, Colchester Sixth Form College (TL 9928 2545)
S. Gibson E.C.C. (F.A.U.)

An archaeological evaluation carried out prior to the construction of a new computer block, found evidence for the remains of a substantial Roman building. This consisted of a thick layer of broken painted wall plaster and a well-preserved *opus signinum* floor. A sealing deposit of 'dark earth' was found to cover the demolition deposits, up to a thickness of 2m. The undisturbed nature of the dark earth and the demolition deposit, suggest that the well preserved remains of a substantial Roman building exists below the proposed development area.

Archive: C.M.

18. Colchester, Sixth Form College, North Hill (TL 9928 2536)
K. Orr, C.A.T.

During observations on the creation of a new fire engine access, Roman layers were reached in one small section of the site. This consisted of Roman brick and mortar at 1.8m below ground level. In the rest of the site modern made-up ground was encountered, the result of terracing of the hill. A large spread of old glass and ceramic bottles was recorded just below the surface of the tennis court.

Archive: C.M. (ref. 2001.126)
Report: C.A.T. Report 148 21.

19. Colchester, former Post Office site, 29-30 Head Street (TL 9936 2508)
D. Dungworth, E.H. (C.f.A.)

Excavated features by C.A.T. in 2000 included a number of 17th-century pits cutting underlying Roman layers. At least one pit produced large quantities of ceramic moulds, some of which appear to have been for the manufacture of bells while others appear to have been for the manufacture of cauldrons. Seven fragments of copper alloy and copper alloy slag were examined using a scanning electron microscope and energy dispersive spectrometer. The compositions and microstructures of the samples indicate the casting of a copper alloy rich in antimony. This alloy was not used for the casting of bells but was used for casting everyday objects, such as cauldrons. The ore(s) used to produce this alloy can be found in Britain and elsewhere, however, given the date, a source in Germany is most likely.

Previous summaries: Bennett 2001, 255-6

20. Colchester, North Station Road, adjacent to Victoria Inn (TL 9932 2577)
K. Orr, C.A.T.

An archaeological evaluation consisting of four trial-trenches revealed part of a previously unknown mosaic pavement adjacent to an unusual Roman sunken feature, the walls of which were lined with *opus signinum*. The mosaic is a plain black-and-white pattern featuring opposed black or white triangles. It had been repaired at least twice, once by resetting the original pattern, and later by replacing parts of the floor with red tiles. The walls of the feature had been robbed out, leaving the *opus signinum* freestanding. The feature contained a large amount of painted wall-plaster, as well as a 4th-century coin. The sunken room and mosaic pavement were part of a 2nd- or 3rd-century house in the suburbs to the north of the Roman town, on present-day North Station Road. Parts of the same structure may have been seen before. A mosaic pavement was found in 1880 on the south side of Victoria Chase (immediately north of this site), and a tessellated pavement was discovered in front of the Victoria Inn in 1929 (immediately east). An engineering solution is now being sought to allow the proposed new buildings to bridge over the archaeological remains so that they can be left *in situ*.

Archive: C.A.T., to go to C.M. (ref. 2001.153)
Report: C.A.T. Report 163

21. Colchester, St Mary's Hospital, Balkerne Hill
(TL 991 253)

C. Crossan, H. Brooks and K. Orr, C.A.T.

Excavations on this site to the west of the Balkerne Gate (the west gate of Roman Colchester) were carried out in advance of housing development. There are at least four previously recorded Roman masonry buildings and numerous Roman burials on this site, confirmed by an evaluation in 1997.

One aim of the 2001 excavation was to locate the Roman temple so that it could be preserved *in situ* as part of the new development. Unfortunately, it has proved elusive. Despite severe truncation, there have been some interesting remains. Over thirty Roman burials confirm the existence of the 'Union Cemetery' here, consisting principally of inhumations, with a small number of cremations. Some of the burials are accompanied by grave goods (principally pots or items of jewellery), including a fine face pot. Remains of three Roman masonry buildings have come to light, including one seen previously in the 1997 evaluation. There is an outside possibility that this is the structure mistaken for the temple. A second structure has been heavily robbed, but survives as a rubble-filled trench. The third structure, apparently a fragment of a cellar, has produced some very fine Roman painted wall plaster.

Perhaps the most interesting discoveries are two clay-lined water channels or culverts. Surviving iron straps suggest the clay channels once had a wooden lining, and their size suggests that they could move large volumes of water - presumably more water than the standard Roman wooden water pipes found elsewhere in the town. One of the channels heads north-east across the site from the direction of Lexden (from where water is thought to have been piped to the Roman town) towards the modern waterworks at the foot of North Hill. Interestingly, this site is noted by Rex Hull (1958) as a possible location for Colchester's Roman baths (which remain undiscovered), so a heavy-duty water channel heading towards it would be expected. What is more difficult to understand is the direction of the second channel, which appears to be coming from the direction of the Sixth Form College on North Hill.

The first stage of the excavations came to a halt in October 2001 after a mitigation strategy was devised to allow large parts of this site to be preserved *in situ*. It is anticipated that further excavation will be carried out in the spring of 2002 following demolition of standing structures.

Previous summaries: Bennett 1998, 197-198

Archive: C.A.T., to go to C.M. (ref. 2001.64)

22. Colchester, 4 St Peter's Street
(TL 9942 2554)

K. Orr, C.A.T.

This site lies close to the south bank of the river Colne. An evaluation by two test trenches located a mortar floor at 1.5m below present ground. The associated dating evidence is not conclusive - the floor could be medieval or Roman. Analysis of a sample suggests that the floor had a covering of straw. Fragments of a medieval louver from a post-medieval context suggest a high status medieval house stood nearby.

Archive: C.A.T., to go to C.M. (ref. 2001.200)

Report: C.A.T. Report 164

23. Colchester, St. Peter's Vicarage, North Hill
(TL9935 2530)

S. Benfield & K. Orr, C.A.T.

Observations were made of groundworks for a new sewer trench at St. Peter's Vicarage. The watching brief revealed part of a Roman tessellated floor, and a probable robber trench. These features may have been from a house fronting the Roman street. An almost complete Roman jar may be part of a votive deposit associated with the house.

Archive: C.M. (ref. 2001.172)

Report: C.A.T. Report 156

24. Colchester, Spring Lane, Lexden
(TL 9728 2542)

K. Orr, C.A.T.

A watching brief along a new water main to the east of Spring Lane revealed two or three sand quarry pits dated to the Roman period. One pit contained Roman bricks which were voussoirs from an arch over a door or window, indicating the presence of a high status Roman building nearby.

25. Colchester, Topfield, Rawstorn Road
(TL 9902 2522)

K. Orr, C.A.T.

Three trial trenches revealed Roman pits, ditches and probably four Roman inhumations. All features were shallow and were covered by at least 1m of topsoil containing residual Roman pottery. This indicated that the previous land surface had been stripped at some stage, and other material dumped on top.

Archive: C.M. (ref. 2001.70)

Report: C.A.T. Report 134

26. Copford, Holmwood Grove, London Road
(TL 9825 2410)
K. Orr, C.A.T.

A watching brief recorded two ditches running east to west across the southern part of the site, 25m and 37m north of London Road (which roughly follows the line of Stane Street Roman road). There were no finds from either of the features. The ditches may have been dug at the same time as Stane Street as they were aligned to it, but they could have been field boundaries or drainage ditches of later date. They do not appear to correspond to any field boundaries on the OS 1st edition 1874-76 map or later maps, so they are earlier than the 19th century.

Archive: C.M. (ref. 2001.44)
Report: C.A.T. Report 129

27. Cranham, Great Barn (TQ 585 865)
M. Peachey, E.C.C. (F.A.U.)

A fieldwalking survey was carried out on 16ha of farmland forming one of the proposed sites for the Thames Chase community forest. With the exception of burnt flint and post-medieval tile, the survey recovered low quantities of material from the ploughed surface. Concentrations of finds in the field immediately adjacent to the M25 were particularly low, possibly the result of disturbance during the construction of the road. A large area of burnt flint within the westernmost field is however suggestive of prehistoric activity and a concentration of slag in the eastern field may suggest further activity here, although undated. Most other finds are probably derived from manuring.

Archive: M.L.
Report: F.A.U. Report 782

28. Cressing Temple, Dovehouse Field
(TL 8016 6820)
T. Ennis, E.C.C. (F.A.U.)

The fourth season of excavation in Dovehouse Field was situated to the immediate north of the 2000 excavation and to the immediate east of the 1998 excavation, linking these two areas together. Numerous features were excavated dating mostly to either the early Roman or late Roman periods. Two large, Late Iron Age/early Roman, north-south orientated ditches, first seen in 1998, were further explored where they crossed the north-western corner of the 2001 area. A series of five north-east to south-west orientated ditches, varying in date from early to late Roman and first seen in 2000, were also further excavated as they continued across the

eastern side of the excavated area. Orientated at right angles (NW/SE) to this series were two in-line early Roman ditches, separated by a 6m gap between their terminals. These two ditches might be an internal sub-division within a larger field enclosure, with the gap in between forming an internal route way. A line of at least three postholes cut the fill of one of the ditches; one of the postholes contained pottery dated as late 2nd century.

The posthole line was sealed by an extensive, but patchy flint cobble surface sitting in a very slight hollow. The cobbles were set into the top of the underlying natural clay and appear to be of a late Roman date. Sealing the cobbles was a large irregular spread of dark grey silt that infilled the top of the hollow. This silt contained frequent small, abraded sherds of pottery dating to the late Roman period. A smaller area of this deposit had been excavated in 1998 when it had been interpreted as an animal wallow. The results of the 2001 excavation suggest that this silt resulted from accumulation of mud on a cobble surface (or surfaces), probably laid as an agricultural working or processing area. This silt also includes an element of rubbish dumping probably deposited when the cobbles were no longer in use. A separate small area of flint cobbles was identified at the northern edge of the site.

A number of gullies, pits and postholes of a late Roman date were excavated to the north of the site. Two slots had been part excavated in 1998 when they were believed to have formed part of a late Roman timber building. However, further investigation showed them to be a short slot and a much longer L-shaped gully that were clearly not part of a building, but may have formed part of a small fenced animal enclosure. A post-hole within this enclosure contained sherds of a late Roman jar. The latest features excavated were two shallow gullies and one posthole dating to the medieval period.

Previous summaries: Bennett 1999, 218-219; 2001, 258

Archive: E.C.C.

29. Dagenham, former Ford of Dagenham Plant, Manor Way/Consul Avenue, Hornchurch Marshes
(TQ 5110 8240)

R. Densem, C.A.

Seventeen machine dug archaeological prospecting test pits were opened on derelict land in December 2000. The purpose of the pits was to establish the presence or absence of former palaeo-landsurfaces and any associated cultural residues. A sequence of alluvial deposits was found in each pit and this included peat in at least fifteen of the test pits. Substantial parts of ancient preserved 'bog trees'

were found in six of the test pits, and samples were retrieved from eleven different trees. The preserved trees and peats were believed to be of prehistoric date, owing to the depth of the deposits (several metres) and the lack of any artefacts. Most of the trees were yew and two were alder.

An archaeological excavation of a trench c.15m by 20m in area which was stepped down to a depth of 4.5m was carried out in February 2001. Palaeo-environmental samples from the peat and from preserved wood were taken by ArchaeoScape (Royal Holloway, University College London) under the direction of Dr Nick Branch. Carbon 14 date determinations confirmed the Neolithic date for the alluvium and peat that contained significant environmental material. No artefacts or features were found.

Archive: C.A.

30. Daws Heath, land north of Pound Wood (TQ 8180 8911)

A. Cooper, E.C.C. (H.A.M.P.)

A watching brief was carried out during excavation of a wildlife pond. A previous evaluation had produced negative results. Prehistoric worked and burnt flint were also found on all sides of the pond and may represent prehistoric occupation in the area. A large amount of tile, including at least some Roman material, was found over a wide area on all sides of the pond. This was particularly concentrated in the north-eastern corner of the site. In addition a single abraded sherd of possibly Roman grey ware pottery and several pieces of post-medieval pottery were found.

Archive: E.C.C.

31. East Ham, 137/141 High Street North (TQ 4237 8402)

G. Potter, C.A.

A watching brief during preliminary soil investigation produced some pottery dated c.1480-1550. Subsequent evaluation revealed an Early Iron Age pit cut into the natural brickearth. This produced an assemblage of 123 potsherds, representing a minimum of twelve vessels. A single potsherd from a reworked subsoil was of Late Iron Age/early Romano-British or early medieval date. There was also one apparently early though undated cut feature. Earlier post-medieval evidence consisted of a possible linear feature which produced two red ware sherds of c.1580-1700, plus a single sherd of 1480-1600 from the subsoil. Other features related to late 19th-century and subsequent development of the site, and included a backfilled cellar, concrete wall bases and

construction make-up. A further archaeological watching brief is to be carried out during construction.

Archive: C.A.

32. East Ham Football Club, Penroyal Avenue (TL 4340 8120)

R. Scaife, A.J. Clapham, H.C.M. Keeley, Beta Analytic for H.A.T.

Environmental samples were taken from peat during an evaluation in 2000 at Pennyroyal Lane to establish the palaeobiogeography of the region and detail the impact of prehistoric activity on the environment. Pollen, plant macrofossils, sediments and radiocarbon dating samples were subsequently analysed. Analysis suggested that the peat sequence was of late Holocene date, post-'primary elm decline' and spanned the Early Neolithic to the Late Bronze Age/Early Iron Age period. Initially, vegetation was dominated by wet alder carr woodland, which was gradually replaced by drier carr woodland. This changed to more open grass/sedge fen, possibly due to deforestation associated with human arable cultivation and increasing regional wetness caused by rising sea levels. Some 5m of made ground and alluvium overly the natural gravels across the site.

33. Foulness, Great Burwood Farm (TR 009 911)

B. Crump, F.C.A.S.

Foot and mouth disease restrictions plus inclement weather delayed fieldwork in 2001. Evaluation trenches were excavated in the parlour area, in the labourers' kitchen area, and in the east outshot (brewhouse). These were taken down to the natural. Each trench produced pottery dating from the 15th to 19th centuries. The trench in the east outshot produced evidence of a possible early building in the form of possible timber imprints in the natural. The trench in the labourers' kitchen produced around 200 fragments of peg tile along with fragments of a 15th-century slip-decorated cistern. These latest finds sit on the natural and are in close proximity to the timber imprints. In conclusion it appears that this particular site at Great Burwood shows signs of continuous occupation from the late 14th century until the early 20th century.

Previous summaries: Bennett 1999, 229-230; 2000, 217-218; 2001, 259

Archive: F.C.A.S.

34. Great Chesterford, All Saints church
(TL 5060 4274)

P. Dey, G.C.A.G. and T. Ennis, E.C.C. (F.A.U.)

An evaluation trench excavated to the south of All Saints church uncovered a north-south orientated wall foundation probably dating to the late Roman period 0.4m below the present land surface. The foundation only appeared in the north and south facing sections of the trench, as the remainder had been removed by a grave cut. A small patch of undisturbed subsoil survived to the east of the wall foundation in the south facing trench section. The remainder of the trench contained mixed grave fill suggesting the presence of several inhumations. Towards the present day ground surface at the east-end of the trench lay a 19th/20th-century path leading from the south door of the church to the gate of Bishops House.

Archive: S.W.M.

Report: F.A.U. Report 945

35. Great Chesterford, EMC Building, Plextek,
Ickleton Road (TL 5022 4265)

D. Hillelson, T.H.N.

An excavation and watching brief were carried out as part of the development and landscaping of former agricultural land between the south side of the Cam and the railway line in Great Chesterford, between October 2000 and January 2001. Three small areas (trenches 1-3) were opened, and the excavation of two drainage runs (trenches A and B) was observed. Trench 1 corresponded to the building footprint and revealed evidence for Romano-British activity in the form of two ditches, a number of small pits and a posthole. Environmental evidence suggests that the principal ditch across Trench 1 was a boundary ditch and that both domestic and industrial/craft activity were taking place in the immediate vicinity. Trench 2, which corresponded to the area of a septic tank, lay close to the River Cam. It showed a series of deposits, which may represent Roman and post-medieval building-up of the river bank. Trench 3, which corresponded to the area of the balancing pond, revealed a dark soil layer, containing pottery of 2nd-century date and Roman tile, which may represent either a Roman soil, or later dredging of the river.

Archive: to go to S.W.M.

36. Great Chesterford, Fairacre, Newmarket
Road (TL 5032 4334)

D. Hillelson, T.H.N.

An evaluation was carried out as part of a proposal to construct a new dwelling. The site falls partly

within the scheduled ancient monument defining the Roman fort and town. Two evaluation trenches were excavated to assess the level of archaeological survival in this area. Two possible linear features were identified and have been dated to the Roman period, although they were not excavated at this stage. The feature in trench 1, which ran on an east-west alignment, has been tentatively interpreted as the northern ditch of the Roman fort which is believed to cross the site.

Archive: to go to S.W.M.

Report: T.H.N. Report 114

37. Great Chesterford, Old Village Hall, Rose
Lane (TL 5100 4283)

S. Hickling, E.C.C. (F.A.U.)

Three trenches were excavated on the former site of the old village hall at the corner of Rose Lane and High Street prior to a proposed residential development. The only archaeological features encountered were modern, consisting of three small pits containing modern pottery and bottle glass and the base of a modern sewer trench. Towards the High Street, considerable root disturbance was encountered. If the High Street marked the site of medieval and later ribbon development as appears, the lack of archaeological features in this area suggests that development here was not very dense. Place names and the nature of field boundaries to the south-east of the site suggest the presence of common land (house names such as The Furze and High Green, and the allotment gardens). Although there is little to suggest archaeological activity within the evaluation area, there has been a great deal of earth movement on the site in order to level it, which may have destroyed any archaeological remains.

Archive: S.W.M.

Report: F.A.U. Report 407

38. Great Dunmow, rear of 42b High Street
(TL627218 centre)

Kate Orr, C.A.T.

This site is within the area postulated as the east side of the Roman town (Medlycott 1998). A trial trench evaluation uncovered several modern or post-medieval pits and ditches. There were residual Middle Iron Age and Roman potsherds and Roman tile, but no features earlier than the post-medieval period.

Archive: C.A.T., to go to S.W.M.

Report: C.A.T. Report 133

39. Great Dunmow, Dunmow Junior School, High Stile (TL 6237 2185)
P. Boyer, H.A.T.

Topsoil stripping, trial trenching and test pitting on the site was followed by a programme of excavation, monitoring and recording prior to, and during the construction of new classroom facilities and ancillary works close to the centre of Great Dunmow. The initial work revealed layers of made ground of recent date that overlay stratified Roman deposits associated with the Romano-British small town at Great Dunmow. The excavation, monitoring and recording revealed a number of features and stratified deposits, mostly Roman in date, though a few undated features may have been prehistoric. There were also a small number of post-medieval features. Most notable amongst the Roman features were four 2nd-century AD urned Roman cremations with accompanying pottery vessels.

Archive: H.A.T., to go to S.W.M.

40. Great Dunmow, land at the rear of 60-67 Springfields (TL 6270 2150)
D. Hounsell, W. Keir, H.A.T.

An evaluation was undertaken prior to redevelopment this site within the area of the Romano-British small town at Great Dunmow. 19th-century quarrying had disturbed part of the site. Two trenches were excavated: Trench 1 encountered a layer containing 2nd-century Roman material, in addition to sparse abraded sherds of later Roman and post-medieval date. No features were recorded above or below this layer. A similar layer in Trench 2 sealed a ditch, probably of 18th-century date.

Archive: H.A.T., to go to S.W.M.

41. Great Dunmow, United Reformed Church (TL 6283 2163)
R.V. Gardner, H.A.T.

The site lay in the car park and grassed area of the United Reformed Church Hall. Three trial trenches were excavated, revealing stratified Roman deposits, though some parts of the site had been truncated by post-medieval gravel quarrying. Roman deposits dated to the 1st to early 2nd centuries AD, reflecting the known pattern for this part of Great Dunmow. Finds were sparse and generally in poor condition. They comprised Roman tile and brick, nails and oyster shells. Most of the pottery appeared to have been locally produced. Features included ditches and a pit in addition to a levelling/occupation deposit present across part of the site.

Archive: H.A.T., to go to S.W.M.
Report: H.A.T. Report 974

42. Great Easton, Blamsters Hall Farm, Duton Hill (TL 613 268)
A. Garwood, E.C.C. (F.A.U.)

Monitoring uncovered little evidence of significant archaeological deposits or retrieved any diagnostic material indicative of occupation. This may in part be due to the extensive re-use and redevelopment the farm has been subjected to over the past two to three hundred years and may account for the destruction of any more ephemeral surface deposits across the site. However, dark organic waterlogged material was uncovered below the demolished Victorian farm buildings across the centre of the site and at a greater depth in some of the building footprints. These deposits, in conjunction with the presence of sand along the higher roadside and less permeable boulder clay spread across the remainder of the site, suggest that this area of the farm historically suffered from poor drainage. These organic deposits may also be associated with a series of ponds that previously partnered the existing pond to the south-west. The underpinning work within the aisled barn and ground reduction in the granary mainly revealed 19th-century repair work to the frames and plinth walls.

Archive: S.W.M.
Report: F.A.U. Report 914

43. Great Hallingbury, Ladywell (TL 518 188)
A. Letch, E.C.C. (F.A.U.)

Monitoring of groundworks on three large house plots to the east and south of the former Hallingbury Place (EHCR 4373) found elements of a possible infilled moat to an earlier hall (pre 1550s), and walls and drains relating to phases of the post-medieval house.

Archive: S.W.M.
Report: F.A.U. Report 755

44. Great and Little Leighs, land north of Goodmans Lane (TL 7245 1640)
M. Peachey, E.C.C. (F.A.U.)

An evaluation on the proposed route of the A131 bypass revealed features in four of seventeen trenches. These four trenches were in areas identified by fieldwalking (EHCR 14579) and cropmarks. A possible roadside ditch for the Roman road from Chelmsford to Braintree and Long Melford (EHCR 6057) was discovered along with two small ditches, one containing some medieval pottery, and some features which may have been

medieval plough furrows. Following the trenching evaluation a borehole survey was undertaken to investigate the sediments in the valleys of the River Ter and Straw Brook

Archive: Ch.E.M.

45. Great Oakley Lodge (TM 1900 2835)

P. Connell, E.C.C. (H.A.M.P.)

Following reporting of finds of pottery and bone while repairing a land drain, site inspection revealed a feature cutting the grey clay subsoil. Finds comprised Romano-British coarsewares, large mammal bone, charcoal and oyster. Also reported further down the trench was wood and timber. The wet conditions meant no further investigation could be made.

46. Great Tey, field by Roman River (TL 888 253)

P. J. Cott and J. Fawn, C.A.G.

A fluxgate gradiometer survey was undertaken to try to follow the Roman road which Mr. J. Fawn has excavated a few 100m further south. The results were insufficient to confirm or deny the alignment of the road at this point.

47. Great Wigborough, Abbots Hall Farm

(TL 970 138 centre)

H. Brooks and C. Crossan, C.A.T.

A fieldwalking evaluation of a 24 ha area identified four significant clusters of finds: one concentration of Roman pottery (Roman site 1) and one of both Roman and medieval pottery (Roman site 2/medieval site 1). Two other clusters of Roman pottery, tile and briquetage were so closely grouped that they are probably parts of a single large archaeological site covering approximately 1 hectare (Roman site 3). Following the fieldwalking, the clusters were tested by trial-trenching in October 2001. Red earth was found in most of the trenches in Roman site 3. This helped to define the position of two red hills, one corresponding to a previously known red hill at TL 970 137, and a second, previously unknown red hill. Internal details in the red hills included clay-lined tanks, which are presumably examples of 'settling tanks' as found on other red hill sites.

A geophysical survey by Aline and David Black located distinct 'hot spots' over the known red hill site. Fired clay structures like hearths are particularly susceptible to detection by magnetometry, and it may be that the geophysical survey has located a number of salt-drying hearths on this particular red hill. A watching brief on the excavation of a lake on the same project exposed a

possible timber jetty. Sample timbers have been sent for dendrochronological dating

Previous summaries: Bennett 2001, 260

Archive: C.A.T., to go to C.M. (ref. 2001.178)

48. Great Yeldham, Applegates, Church Road

(TL 7585 3869)

S. Gibson, E.C.C. (F.A.U.)

An evaluation was carried out prior to the construction of new houses in the grounds of Applegates (EHCR 28341), a house dating to the 16th century (Watkin 1997). The site is opposite the parish church of St. Andrew. Two trenches were excavated and no archaeological features identified. Two abraded sherds of medieval pottery were the only finds made.

Archive: Bt.M.

49. Halstead, St. Andrew's Church

(TL 8160 3080)

M. Peachey, E.C.C. (F.A.U.)

Five graves were uncovered during a watching brief on the realignment of the north-west corner of the churchyard to accommodate road widening. Very little evidence to date these graves was found with the exception of a vaulted brick tomb, which contained iron coffin grips probably dating to the late 18th or early 19th centuries. No evidence for an earlier churchyard boundary was found.

Archive: Bt.M.

50. Harlow, land to the rear of 141 Old Town

(TL 4725 1267)

A. Letch, E.C.C. (F.A.U.)

The watching brief covered the excavation of foundation trenches for two houses, close to the Roman town of Harlow. Several garden features and gravel/sand extraction pits of probable 20th-century date were observed in section. No layers or features of archaeological significance were observed and no finds collected. The lack of any archaeological material in the mostly undisturbed house plot to the south of the site suggests that the Roman occupation did not spread this far.

Archive: H.M.

Report: F.A.U. Report 926

51. Harwich, Barrack Lane (TM 2612 3181)

M. Germany, E.C.C. (F.A.U.)

Evaluation of the site of a proposed new school uncovered one of the buildings relating to the defence of Harwich during the Napoleonic period.

The building appears to be one of a number of roadside strip buildings depicted on a 19th-century map of Ordnance lands at Harwich (reproduced in Godbold 1994). Investigation was limited by the need to preserve the remaining deposits; the building was represented by robbed-out brick walls, near the top of a sequence of post-medieval layers more than 0.7m thick. A number of post-medieval/modern ditches were also uncovered.

Archive: C.M.

Report: F.A.U. Report 880

52. Havering, Belhus Woods Country Park
(TQ 5674 8240)

R. Wardill, E.C.C. (F.A.U.)

A magnetometer survey was carried out on a 2.2ha site of proposed tree planting to determine the source of a scatter of brick and tile noted in the Essex Conservation Heritage Record (EHCR 5090) and still apparent on the field surface. The main anomaly located within the survey area was a broad band of mixed polarity magnetic responses approximately 18-20m wide running diagonally across the site from the south-west to north-east corners. This type of response is characteristic of a spread of brick and tile rubble, probably associated with a trackway. It is likely that the rubble has been dispersed from the path of the original trackway by ploughing. A trackway is identifiable on early Ordnance Survey mapping in this location. Other anomalies present within the survey area are all indicative of modern ferrous interference or natural features.

Archive: M.L.

53. Heybridge, 39-45 Crescent Road
(TL 8494 0827)

T. Ennis, E.C.C. (F.A.U.)

Nine trenches were excavated prior to residential development on land adjacent to the site of the major excavation at Elms Farm (Atkinson and Preston 1998), and close to Drury's 1972 excavation, which uncovered evidence of early Saxon settlement (Drury and Wickenden 1982; Wickenden 1986). Each of the six trenches in an area of grassland situated to the rear of the properties on Crescent Road uncovered archaeological features. Among them was a large ditch, which may be a continuation of the wood-lined late Roman ditch excavated at Elms Farm. Possible sunken-featured buildings of Saxon date were also observed, and prehistoric and Late Iron Age surface finds recovered. Trenches excavated to the north of this area, in the gardens at the rear of 39-45 Crescent Road, uncovered fewer features, although

there was evidence of considerable recent disturbance. Further work is envisaged.

Archive: E.C.C.

54. Hornchurch, 14, 16, 22, 24 and 42 High Street (TQ 5358 8719)

P. Boyer, H.A.T.

The site lay within the historic core of Hornchurch on the south side of the High Street between Abbs Cross Lane and Abbs Cross Gardens. Four trenches were excavated in advance of proposed residential development. Post-medieval features were recorded in areas close to the street frontage. A small late medieval/early post-medieval feature was recorded as well as a large, re-cut medieval ditch/pit dating to the late 13th or early 14th century.

Archive: H.A.T.

55. Ilford, Balfour Road (TQ 4360 8680)

R. Duckworth, P.C.A.

In a watching brief on the site of a demolished multi-storey car park, six trenches were observed. The aim was to gauge the extent of survival of the natural brickearth deposits and any Palaeolithic artefacts or ecofacts associated with these deposits and the underlying terrace gravels.

The stratigraphic sequence of the natural brickearth was found to exist across fifty percent of the site. No archaeological features were observed in this horizon. Limited evidence for prehistoric activity was observed in the form of several pieces of possibly struck flint from the surface of the terrace gravels, within two of the six trenches. No evidence of settlement or occupation was encountered and no potential environmental horizons were identified. Possible foundations for Ilford Lodge (a house that occupied the site prior to the construction of the car park) were observed, but the extent of survival of this structure is negligible.

Archive: P.C.A.

56. Kelvedon, Lances, Church Street
(TL 8569 1852)

J. Mordue, E.C.C. (F.A.U.)

An archaeological excavation was carried out on the site of a proposed new vicarage on land south-east of the church of St Mary the Virgin. Evidence of a Roman cemetery is recorded from the vicinity of the church (EHCR 8149), but the settlement centre is known to lie further to the north-east. Previous evaluation had uncovered features of prehistoric, Roman and probable medieval date (EHCR 18002-3).

The excavation uncovered further postholes, suggesting prehistoric occupation of the site

associated with an enclosure possibly dating to the Early Iron Age. Residual Roman pottery was also found, but the site would appear to lie outside the main area of settlement and also the limits of the cemetery. Medieval and post-medieval activity was extensive, mainly dating to the 15th to 16th centuries, and consisting of property boundaries represented by large ditches, and domestic waste pits.

Archive: Bt.M.

57. Leaden Roding, Leaden Hall Farm
(TL 584 136)

P. J. Cott, P. Sharpe, and Dr. P. Morris

This was a resistivity survey of the supposed fort and settlement where the Roman road crosses the River Roding and changes alignment. It has been backed up by a magnetic susceptibility survey, which shows evidence of occupation in the expected area. Further work to be done in 2002.

58. Leyton, 24 Grange Road (TQ 3747 8712)
S. Hammond, T.V.A.S.

Evaluation revealed three post-medieval pits, two modern pits, a brick-lined manhole and a modern brick foundation.

Archive: T.V.A.S., to go to M.L.

59. Leyton, 19A Primrose Road (TQ 3763 8709)
R. Densem, C.A.

An evaluation trench measuring 15m by 2m in plan was opened in advance of the building of four dwellings. Natural sand and gravel was observed under several alluvial layers of varying organic content. The lowest appears to have been the ancient low-lying floodplain of the River Lea, cut in one place by a small palaeo-channel. The upper ones are thought to be the bed of one of two ornamental lakes, sunk during the 18th century in the grounds of the since demolished Leyton Park Grange. Above these were layers of earth dumped prior to, and as a consequence of, residential redevelopment in the 19th century. The site was covered by a modern concrete surface. There was no evidence of prehistoric, Roman or medieval activity.

Archive: C.A.

60. Leyton, Oliver Close Estate, Oliver Road
(TQ 3768 8654)
D. Divers, P.C.A.

Following the excavation of three evaluation trenches, two trenches revealed truncated natural gravels directly below modern concrete and associated make-up layers. Trench 1 revealed

features which were fully excavated and the area extended to the east (Trench 4) to include the area on the terrace threatened by the proposed new housing. The small pits and post holes found probably represent an extension of the Bronze Age activity recorded in earlier excavations at Oliver Close Estate to the south. A possible sherd of Roman pottery that was found in a cut may represent the extension of the Roman activity also recorded in earlier excavations to the south.

Archive: P.C.A., to go to Vestry House Museum

61. Lindsell, menage at Cherry Plum Cottage
Bustard Green (TL 6475 2869)
N. Crank, H.A.T.

Topsoil stripping of the site, which lay in a paddock field adjacent to a stable, revealed a natural ground surface of slightly silty clay. A small quantity of abraded medieval and post-medieval pottery was recovered from the topsoil. Monitoring and recording did not encounter any archaeological features.

Archive: H.A.T.
Report: H.A.T. Report 903

62. Little Easton, Little Easton Airfield
(TL 595 225)
S. Hickling, E.C.C. (F.A.U.)

The evaluation was carried out on the site of a proposed gravel extraction pit and its associated haul road. A desk-based assessment of the extraction site showed that it lay within a 16th-century deer park, which remained parkland until the construction of an airfield during the Second World War. A recent excavation south of the site uncovered a small Romano-British farmstead. 56 trenches were excavated and archaeological features were recorded in seven trenches. Two medieval pits were identified, as well as two pits and two ditches which were undatable, and several possible small pits or postholes. In the northern portion of the site there was considerable disturbance caused by the construction of the World War Two airfield.

Previous summaries: Bennett 2001, 262
Archive: S.W.M.
Report: F.A.U. Report 630

63. Maldon, Beeleigh Abbey (TL 8400 0771)
R. Wardill, E.C.C. (F.A.U.) and W. Clark (M.A.H.G.)

At the request of the owner, magnetometer surveys of two areas were carried out in the grounds of Beeleigh Abbey (EHCR 7760-1). The purpose of the work was to determine, where possible, the location

of any surviving remains of the monastery precinct or subsidiary buildings.

The majority of magnetic anomalies detected in an area of lawn to the east of the abbey appeared to be caused by existing surface features or sub-surface rubble/ferrous objects. A single linear anomaly indicative of an archaeological feature was detected in the south of the survey area. It runs the full length of the lawn and parallel to existing garden paths and plant beds. Subsequent excavation suggested that this was a robbed out wall.

A number of anomalies indicating possible archaeological features were recorded in the meadow to the west of the abbey. The most obvious was a possible trackway running diagonally across the survey area, although it may be of recent date. There were several anomalies characteristic of pits, ditches and gullies, mostly poorly defined and difficult to interpret due to magnetic interference caused by disturbance/dumping. One narrow anomaly suggestive of a ditch approximately 0.50m wide appears to form a largely complete rectangular enclosure approximately 7m wide and 13m long. This anomaly may represent the remains of a structure. Excavation by M.A.H.G. has since uncovered a late medieval hall house and other structures.

Archive: C.M.

Report: F.A.U. Report 958

64. Maldon, 33-39 Market Hill (TL 8505 0735)
M. Peachey, E.C.C. (F.A.U.)

An archaeological evaluation consisting of four trenches was carried out on a residential development. On the lower part of the site, towards the River Chelmer, a layer of greenish grey silty clay was revealed at a depth of 1.4m. It contained 12th- to 13th-century pottery and was probably a layer of river mud either *in situ* or dumped as a result of dredging. In a trench higher up the slope of Market Hill, a gully and two probable pits were discovered. The gully contained 12th- to 13th-century pottery and was probably a boundary or drainage ditch. In most trenches a thick layer of post-medieval garden soil was present.

Archive: C.M.

65. Moreton and Ongar, Bundish Hall, Ongar Road (TL 5519 0572)
W. Kier, N. Crank, H.A.T.

The medieval moated site of Bundish Hall is a scheduled monument (SM 33254). Widespread recent activity associated with dumping and levelling was recorded in three small trial trenches hand-dug in advance of development proposals. A single undated ditch was sealed by dump deposits in

Trench 1. The ditch was aligned north/south, similar to the main axis of the current access track across the site and the current crossing point of the moat to the south. No structural remains of medieval date were recorded. Trench 3 revealed an unbonded red brick corbelled foundation, probably of 19th-century date and corresponding to a retaining wall that stands to the west. Residual finds from recent layers of dumping included sparse prehistoric, Roman and Saxon pottery sherds.

Archive: H.A.T.

Report: H.A.T. Report 1003

66. Mountnessing, Thoby Priory (TQ 6297 9872)
T. Ennis, E.C.C. (F.A.U.)

The area surrounding the scheduled monument (SM Essex 124, EHCR 5301) was investigated prior to a proposed development. Topsoil had been removed from the yard areas west and north of the site. Ten trenches were excavated; the only feature definitely identified was a narrow drain located within the former Victorian walled garden. Features were observed in two further trenches, but the high ground water levels prevented examination; these will be explored in the next phase of evaluation. The position of the 19th-century ornamental moat (EHCR 5300) was identified and the northern and southern arms explored. The southern arm was over 2m deep and much wider than the northern; the fills of both were clearly modern.

Archive: Ch.E.M.

Report: F.A.U. Report 826

67. Newbury Park, land bounded by Aldborough Road North, Roy Gardens and Oaks Lane (TQ 456 891)
M. Peachey, E.C.C. (F.A.U.)

The evaluation was carried out in advance of a proposed housing development on land formerly occupied by garages mixed with some rough grassland. Two possible ring ditches have been recorded by aerial photography nearby; such features have been excavated elsewhere on Fairlop Plain and found to be of prehistoric date, either structures or funerary monuments. The site also lies close to the medieval moated site of Aldborough Hall. All four of the evaluation trenches were excavated by machine down to the gravel subsoil: no archaeological features were identified or finds recovered.

Archive: M.L.

68. Newham, A13 Prince Regent Lane
Improvements, Freemasons Road Underpass
(TQ 4062 8170)
M. Beasley, G. & P.L.

The current excavation is the latest phase of a continuing programme of archaeological investigations as part of the A13 Thames Gateway DBFO Contract. In total, 10 excavation trenches and 26 test pits have been dug at the site of the Prince Regent Lane Improvements, giving a detailed profile along the terrace edge. Previous small-scale investigations and a long-term watching brief have recorded ditches and pits of Bronze Age and Roman date as well as overlying peat and a late Holocene alluvial sequence.

This excavation revealed a double row of large oak piles over two metres below the surface of the former Canning Town Recreation Ground. These have been radiocarbon dated to the Middle Bronze Age (3400 +/- 50 (Cal BC 1780 - 1540)). The rows, spaced c.900mm apart, extend for 15m east to west, across the excavation area. Each c.100-250mm diameter pile was driven into the ground to a depth of up to 800mm, perfectly preserving the marks created by the bronze tools used to cut the tapered ends 3,500 years ago. Flint and bone tools, pottery, timber cut-offs and animal bone were found at the base of the overlying peat to the south of the timber rows; representing debris from Bronze Age settlement adjacent to the Thames floodplain. Remains of butchered sheep and cattle bone, together with the remains of domestic dogs, were also found. It is possible that the piles supported a plank walkway into the Thames-side marshes, which formed during a period of rising sea level, or that it represents a revetment or platform at the terrace edge.

The radiocarbon dates indicate that the peat sequence formed rapidly over the posts and the associated debris spread. A C14 date from the top of the peat dates the layer to 3280 +/- 50 (Cal BC 1680 - 1440). Plant seeds, pollen, snails, fish bones and frog bones, preserved in the marshland peat, demonstrate that the piles were constructed across a freshwater wetland environment dominated by willow and alder, with wetland plants such as bulrushes also present. Cereal grains reveal that barley was grown on the drier gravel terrace immediately to the north.

To the north of the post structure a series of pits, ditches and post holes were found, suggesting more intensive settlement activity occurring closer to the drier ground. Pottery, flint tools and debitage were recovered from these features, indicating that they are contemporary with the timber structure.

Archive: G. & P.L.

69. Newham, 145-155 Albert Road (TQ 4325 7990)
G. Spurr, R. Scaife, N. Cameron, J. Corcoran
M.o.L.A.S./M.o.L.S.S.

A single borehole was sunk and core samples taken. The stratigraphy found consisted of organic silts and clays dating from around 6000-3000 BP (Late Mesolithic/Early Neolithic to Late Bronze Age) overlying gravels and capped by inorganic clays. Palynological analysis found evidence of elm and lime declines, together with evidence for associated woodland clearance and cereal production within a few hundred metres of the site. Brick fragments at the peat/organic clay interface at the top of the peat may relate to medieval occupation and the flood events which documentary evidence claims to have led to the abandonment of the area in the early 15th century. Two samples were submitted for C14 age estimation. These were taken from the top and bottom of the peat/organic clays and gave the result of 1410-1040 BC (calibrated, 98% confidence) for the top and 5050-4760 BC (calibrated, 98% confidence) for the bottom.

Archive: M.L.

70. Newham, ETAP Hotel (Former Silvertown Goods Yard) North Woolwich Road (TQ 4171 8011)
G. Spurr, C. Halsey, J. Corcoran
M.o.L.A.S./M.o.L.S.S.

A west-east transect of 4 auger holes was drilled into the top of the floodplain gravels (c.7-9m depth). The surface of the gravel sloped from -3m OD, in the west of the site, up to -1m OD in the east. It was overlain by a fining-up sequence of clayey sand to sandy clay (with a surface at around 0m OD), which was thicker in the east of the site than in the west. This deposit probably represented increasingly sluggish water flow and the silting up of the Late Glacial braided river channels during the early Holocene. The sand and clay effectively levelled-up the irregular surface of the underlying gravel.

As river levels fell still further during the early Holocene, woody plant growth took root in the river muds. This led to the accumulation of peat. The base of the peat has been dated to 5350 +/- 110 BP (4370 to 3960 Cal BC) in the west of the site (at -0.4m OD) and 5210 +/- 110BP (4320 to 3770 Cal BC) in the east of the site (at 0.1m OD), suggesting that a similar environment existed across the entire site at this time. The peat is likely to represent a wet, marshy woodland environment, which appears to have continued to exist on the site until about 2110 +/- 70BP (1520 to 1200 Cal BC - date from the top of the peat, at 2.2m OD in the western part of the site).

Towards the west of the site, large timbers within the lower part of the peat were drilled through, at

about 0.2m OD. It is impossible to tell from an auger hole whether such wood is likely to represent naturally fallen trees or a man-made structure. Within the peat a silty clay deposit with frequent wood fragments was recorded in every auger hole at around 0.5 to 1m OD. This is likely to represent a period of increased wetness, possibly higher river levels and prolonged flooding, when extensive pools of standing water lay on the woodland floor. However, no dates were obtained for this event. Above the peat 1-1.5m of silty clay was recorded in every auger hole. This probably represents the transition from wet woodland to river mud - possibly sedge fen or mudflats - associated with the rising river levels of the historic period. It might also represent seasonally inundated pasture (especially in its upper part). The alluvium was overlain by 1-2m of make-up.

Throughout the Holocene part of the sequence, the auger holes in the east of the site recorded evidence suggesting closer proximity to a water channel than the auger holes in the west (i.e., disturbance, sand lenses and humic mud as opposed to peat). It is likely that a creek or channel flowed close to the eastern part of the site in the prehistoric period.

The dates and sequence of deposits recorded on this site are comparable to other sites in the North Woolwich area. Peat was accumulating throughout the period that timber trackways have been found on other nearby sites, and the level of the underlying sand and gravel is similar to that at Fort Street, 1km to the west, where a Neolithic trackway was found at about -1m OD. The potential of the Former Silvertown Goods Yard site to preserve such remains is therefore good. In addition, the peat on the present site is preserved to a higher elevation than on other sites in the area and, as a result, its date of final inundation by river mud appears to be later. Thus ecological evidence for the Iron Age environment of the area is likely to be preserved within the upper part of the peat, which is not commonly found.

Archive: M.L.

71. Newham, Three Rabbits Public House, 833 Romford Road (TQ 4245 8578)
J. Sygrave, M.o.L.A.S.

Mid-red brown sandy silt brickearth with iron panning was observed at c.9.94m OD. A cesspit, well and wall were recorded and were probably associated with the earlier post-medieval inn on the site.

Archive: M.L.

72. Noak Hill, Weald View, Paternoster Row (TQ 5340 9405)
P.K. Linford, E.H. (C.f.A.)

Excavation by the Rochford Hundred Archaeological Group at Noak Hill uncovered the remains of a rectangular kiln constructed of stacked tiles. Typological evidence suggested that the site was associated with the manufacture of Mill Green ware which was produced in the region during the 13th and 14th centuries AD. However, it was not clear whether the excavated kiln had been used for the production of this pottery. Archaeomagnetic analysis produced a mean thermoremanent direction of high precision and indicated that the kiln had last been fired between 1365 and 1405 AD.

Previous summaries: Bennett 1999, 220

73. Orsett, Whitmore Arms, Rectory Road (TQ 6458 8196)
S. Hickling, E.C.C. (F.A.U.)

A watching brief was carried out on the construction of a car park for the Whitmore Arms. The site is close to an extensive cropmark complex (EHCR 5191), probably representing numerous phases of settlement and agricultural activity. Several areas of post-medieval disturbance were noted below a late 19th-century topsoil, which was presumably laid as levelling when the Whitmore Arms was constructed. Although some abraded 17th-century pottery was found, it is likely that the disturbance dates to the late 19th century. No evidence of any earlier features was uncovered.

Archive: T.M.

74. Parkeston, former Brickworks, Una Road (TM 2340 3200)
A. Letch, E.C.C. (F.A.U.)

A watching brief undertaken after clearance of the site prior to development exposed the flue and chimney base of a beehive kiln. Largely intact steam-powered brickmaking machinery dating to the 19th and 20th centuries was spread across the site and an earlier horse-powered wash mill was located at the north end of the area. Concrete barrage balloon bases located to the east of the site attested to the importance of the area as a port during the Second World War. Further work is anticipated during topsoil stripping when it is hoped to expose the body of the beehive kiln in plan and also an oblong-shaped kiln nearby, seen on the 1923 OS map.

Archive: C.M.

75. Pleshey, College of Canons (TL 663 142)
P. J. Cott and M. R. Cuddeford

Resistivity survey was carried out at the request of E.C.C. Despite the presence of large trees in the survey area, the presence of a rectangular building was confirmed in the field immediately to the south of the church.

76. Pleshey, Lavender Cottage, Back Lane
(TL 6642 1461)
P. Connell, E.C.C. (H.A.M.P.)

A watching brief on foundations for a new extension revealed a pit/cut feature in section, c.1m deep, cutting natural chalky orange clay lying below c.500mm topsoil. The topsoil contained post-medieval pottery and clay pipe fragments. The dark fill contained oyster, charcoal and small amounts of sooted medieval coarseware. At the time of the visit only one edge of the feature could be clearly defined.

77. Rainham, Berwick Ponds Farm (TQ 5550 8385)
N. Crank, D. Hounsell, H.A.T.

The site is located north of Berwick Ponds Farm, north-east of Rainham. Forty-five trenches were excavated in advance of creation of an agricultural reservoir. The evaluation recorded multi-period archaeological features across parts of the site, principally in the north-east. Most features dated to the middle and late Iron Age and Romano-British period. Roman material dating to the late 1st to mid 2nd century was recorded in the north-east of the site, while late Roman finds were located in the south-east. These features were probably associated with a farmstead settlement on the gravel terraces of the river Thames.

Archive: H.A.T.

78. Rainham, 111-113 New Road (TQ 5093 8289)
R. Densem, C.A.

Two evaluation trenches were opened on the site which lies on sand and gravel and brickearth, c.1.75km north of the Thames overlooking lower ground to the south. The site was between two ancient rivers, the Rivers Bean and Ingrebourne which flow southwards into the Thames. An excavation at Launders Lane in the late 1970s/early 1980s on a cropmark site some 3.5km to the east has produced important prehistoric and Roman remains (Greenwood 1982). The natural in trench 1 was sand and gravel at c.2.95m OD while in trench 2 natural was sandy orange silt/clay (brickearth) at c.2.62m OD. These deposits were sterile and waterlain. The natural in trench 1 was cut by a north-south aligned ditch-cut, c.1.1 to 1.3m wide

and c.0.55m deep. It contained a greyish-brown sandy clay/silt fill that was fully excavated. The only find was a prehistoric struck flint.

The ditch and the natural in both trenches were overlain by a post-medieval sand clay/silt 'ploughsoil' that was grey coloured in trench 1 and which was grey-brown coloured in trench 2. Cleaning of the sections produced one clay tobacco pipe stem and this demonstrated that the layer had been worked in the post-medieval period. The top of the 'ploughsoil' was at c.3.19m OD in trench 1 and at c.2.97m OD in trench 2. The 'ploughsoil' was cut by a small rectangular pit in trench 2 containing 20th-bricks. The 'ploughsoil' and the pit were overlain by dumped modern grey and brown sand with clay/silt, charcoal, and brick and concrete fragments.

Archive: C.A.

79. Rainham, Wennington and Aveley Marshes
J. Chandler, A Croft, M. Osborne, O.A.

The desk-based assessment of the Rainham Reserve has revealed three principal cultural heritage elements. These are the medieval/post-medieval reclaimed marshland landscape, the potential buried archaeology, and the Aveley Marsh military landscape. The excellent survival and good condition of the marshland is remarkable. Although it has been adversely affected by the silt lagoons and military developments of the 20th century it is the most important element of the reserve's historic landscape. The sub-surface archaeological and palaeo-environmental deposits have an unknown level of significance, although they have the potential to reveal considerable information about the prehistory and early history of the area. The military landscape, primarily of Purfleet Rifle ranges, is a very much later superficial addition to the landscape.

80. Ramsey, proposed new primary school,
Church Hill (TM 2173 3066)
M. Germany, E.C.C. (F.A.U.)

The late 18th- to mid 19th-century phase of Michaelstow Hall was investigated by trial trenching. A brick-built basement or cellar, which may have been part of the hall, was found along with a brick-built drain and evidence for timber ancillary structures. A small assemblage of post-medieval finds such as glasses and wine bottles and good quality pottery was also discovered.

Previous summaries: Bennett 2001, 263
Archive: C.M.

81. Rivenhall, Church of England Primary School, Church Road (TL 829 178)
K. Orr, C.A.T.

An evaluation comprising three small trial trenches failed to identify any structural remains which might be associated with the adjacent Roman villa site. The principal remains uncovered were modern drains and other features relating to past uses of the school. Roman brick/tile and pottery were found in residual contexts. A watching brief carried out during the subsequent building of an extension to the school was negative.

Archive: Bt.M. (ref. BRNTM 2001.1)
Report: C.A.T. Report 150

82. Rivenhall, land north-west of Rivenhall Oaks Golf Course (TL 828 168)
M. Germany, E.C.C. (F.A.U.)

A fieldwalking survey on 13.25ha of land to the north-west of Rivenhall Oaks Golf Course identified a possible medieval roadside settlement adjacent to Rickstones Road. No other archaeological sites were identified and there was no correlation between finds distribution and a circular cropmark enclosure (EHCR 14121) previously interpreted as being prehistoric.

Archive: Bt.M.

83. Romford, Harold Court (TQ 561 911)
J. Archer, E.C.C. (F.A.U.)

A field walking survey uncovered a greater than average distribution of burnt flint in two distinct areas. Finds of Roman, medieval and post-medieval material were also present. The concentrations were low and showed no obvious patterns, probably being deposited through manure spreading.

Archive: M.L.
Report: F.A.U. Report 1054

84. Saffron Walden, Elm Grove (TL 5389 3824)
T. Ennis, E.C.C. (F.A.U.)

Two trenches were excavated prior to the construction of two bungalows. The excavation trenches were sited to locate the southern side of the medieval town enclosure ditch known as the Repell Ditch or *magnum fossatum* (EHCR 443). The north side and centre of the ditch were located, but the south side lay beyond the limit of excavation. The profile suggested that the true width of the ditch, if fully excavated, would be in the region of 6m. No sign of an accompanying bank or rampart was identified next to the ditch. The presence of two post-medieval pits in this area suggests that the

bank had been removed by this time. More modern features included an 18th-century wall and a series of five probable 18th/19th-century horticultural trenches.

Archive: S.W.M.

85. Saffron Walden, Hanover Place, Abbey Lane (TL 5337 3840)
T. Vaughan, E.C.C. (F.A.U.)

Previous excavation by M.R. Petchey before the construction of Hanover Place uncovered archaeological deposits from a wide range of periods. Occupation of the site in the 10th/12th century consisted of a series of enclosure ditches forming the boundary of a medieval toft within the village. One of several palisade trenches marking the boundaries of the toft was cut by a large ditch, which ran parallel to the town enclosure ditch, the *magnum fossatum* (Bassett 1982, 74-9).

The present evaluation was carried out ahead of residential development. Five trial trenches were opened, and at no point were features pre-dating the post-medieval period identified. A large ditch ran though four trenches on the same alignment as the feature recorded by Petchey. However the ditch was of markedly different character and did not contain the medieval material excavated by Petchey; the purpose and origin of the ditch remain unclear. Other features included 17th/18th-century postholes, pits and gullies and an undated ditch.

Archive: S.W.M.
Report: F.A.U. Report 839

86. Southend-on-Sea, 255 Victoria Avenue, Prittlewell (TQ 8760 8674)
J. Mordue, E.C.C. (F.A.U.)

A single trench was excavated inside this 15th-century building, revealing further courses of a chalk wall in the west bay oven. This wall may represent 16th- to 17th-century underpinning of the original structure. Several occupation layers were excavated producing finds in the range of early medieval to the 19th century, although the majority dated to the 16th/17th centuries. The trench was excavated to natural gravel.

Archive: S.M.

87. Stansted Mountfitchet, long stay car park phase 3, Stansted Airport (TL 5200 2300)
F. Brown, F.A.

As part of the continued expansion of the airport, a final phase of passenger car parking is under construction. Located on the western side of the

airport landholding, an area of around 15.8 ha was subject to desk-based assessment and field evaluation. This indicated two separate areas of prehistoric activity and a possible post-medieval focus. Subsequent excavation revealed slight evidence for Neolithic and early-mid Bronze Age activity, with more substantial remains of late Bronze Age date including several post buildings and a well-preserved burnt mound deposit. Enclosures and a driveway of Iron Age date were also recorded but appear to be peripheral to a settlement focus off-site to the north. A single ditch flanking a palaeochannel and associated with alluvial deposits may be of Roman date.

The most significant remains, covering an area of around 1.8ha, were of late medieval/early post-medieval date. Almost the complete ground plan of a timber and brick building, together with yards and outbuildings, and comprising a number of phases, was uncovered. This survived in a fragile state, having been almost completely dismantled in the late 17th/early 18th century, and then having suffered plough damage over an extended period. Enough survived, however to suggest a specialised use, possibly as a park or hunting lodge. The isolated position of the building supports this and field names and boundaries suggest it lay within a hitherto unsuspected medieval park. Finds from the site include a good collection of arrowheads and horse equipment that may provide further circumstantial evidence for the function of the site.

Archive: O.A., to go to S.W.M.

88. Stansted Mountfitchet, Thremhall Priory Farm (TL 5300 2140)
T. Vaughan, E.C.C. (F.A.U.)

Two trial trenches were excavated in the yard of Thremhall Priory Farm, ahead of a proposed redevelopment of the farmyard and associated structures. The earliest feature encountered was an east-west aligned ditch, which contained 13th-century pottery. Other features uncovered consisted of gullies, drains and wall foundations, and were the remains of demolished 17th/18th-century farm buildings and associated agricultural activity. The wall foundations matched the footprint of a barn recorded on the 1st edition Ordnance Survey.

Archive: S.W.M.

89. Stanway, Abbotstone quarry (TL 934 227 centre)
S. Benfield & H. Brooks, C.A.T.

This season saw the final phase of excavations on this large cropmark site. The earliest important feature uncovered in phase 1 (1999) was a ditch

defining a roughly circular enclosure - a potential prehistoric house site. The majority of the other site features were the ditches of three enclosures spanning the later Iron Age to the mid 3rd century AD. The 2000 season was largely rained off, so the task in 2001 was to complete the excavation of the north (and larger) Roman enclosure, and to excavate the second half of the potential prehistoric house site.

The main results have been the discovery of many more ditch lines than were visible on the air photographs, or were generally expected after the previous season of digging. The remaining part of the ditch around the prehistoric house site was excavated, and an oval of postholes was discovered, defining the site of a prehistoric structure with an internal diameter of 8-11 m.

The development of the site is as follows: the earliest enclosure seems to have grown out of the circular middle Iron Age house site, and to have been added to progressively, until it was regularised by being recut in the Roman period as what we now call the north enclosure. The south enclosure was added later on, also in the Roman period. Some of the ditch lines are boundaries from an adjacent field system. The oval structure is an obvious focus for Iron Age occupation, but Roman structures were elusive. With small quantities of Roman window glass, roof tile fragments and even flue tiles coming from this site, there is an obvious mismatch between finds and site evidence. Perhaps the Roman structures were surface-built, and have left no trace. The flue tile, if from a hypocaust, would require some low-level floor or cavity which has not been found, so perhaps these finds occur here as rubbish. There were also a number of medieval ditches and postholes. Interesting finds were a skull in a Late Iron Age ditch, and a possible four-poster structure outside one of the Roman enclosures.

Previous summaries: Bennett 1998, 203; 1999, 215-6
Archive: C.A.T., to go to C.M. (ref. 1999.48)

90. Stanway, Gosbecks Archaeological Park, Shrub End (TL 967 225)
P.J. Cott, Dr. T. Dennis, Mr & Mrs. Black

The south-east corner of the Park was surveyed with a fluxgate gradiometer, as part of the long-term plan to survey the whole Park area. The team has decided to standardise on a survey density of 4 readings/m in the forward direction, and at every metre in the lateral direction, with an instrument sensitivity of 0.1nT. A complex pattern of enclosure ditches, large pits, and the side ditches of the Roman road from Colchester has been uncovered. The detail presented is superior to that of the existing aerial photographs of the site. The work was reported to the Colchester

Museum Curator of Archaeology and P. Crummy, and will continue in 2002.

91. Stanway, Wallace's Field, Tarmac Quarry (TL 9490 2215)
S Benfield, C.A.T.

A watching brief during topsoil stripping revealed a number of prehistoric flints and Roman sherds, and a single prehistoric sherd in unstratified positions. There were five features with a charcoally fill which are almost certainly recent tree-removal pits.

Previous summaries: Bennett 1997, 220-1; 1998, 206-7; 1999, 216; 2000, 221-2; 2001, 255-6
Archive: C.A.T., to go to C.M. (ref. 2001.100)

92. Stratford, 241-263 High Street (TQ 3851 8375)
D. Jamieson, M.o.L.A.S.

A north-east/south-west aligned channel of probable post-medieval date was observed on the western side of the site. This measured 6m wide and 0.70m deep, cutting through a 0.9m thick deposit of clean orange waterlain clay. Below the clay, natural gravel was identified at 1.47m OD. To the north of the palaeochannel, a shallow east-west aligned linear feature (a boundary or road ditch?) was located. This was covered by a possible medieval/post-medieval topsoil, which had been truncated to a depth of 2.47m OD by modern basements. The excavation suggested that during the post-medieval period the local topography was relatively flat and may have contained tributaries or braided channels related to the Channelsea river.

Archive: M.L.

93. Stratford, 2-6 New Mount Street (TQ 3879 8406)
R. Bull, M.o.L.A.S.

In the northern part of the site, natural gravels were identified at 2.28m OD. These were overlain by reddish brown and yellowish brown sandy silts which were cut by an undated ditch of north-south alignment. The ditch was sealed by a deposit of grey-brown sandy silt, suggesting that the area was reclaimed land during the period c.1550-1650. This deposit was truncated by Victorian drains and foundations, overlain by modern rubble and made ground.

In the central part of the site, natural orange brown brickearth was observed sloping gradually from 3.01m OD at the north end of the excavation trench to 2.72m OD at the south end. Three linear features were cut into this deposit: the first contained pottery dated to the period AD 350-400,

the second was undated, and the third contained material dated 1620-1650, including pottery, tile and clay tobacco pipe. A square feature measuring 0.46m across each side and 0.38m deep contained material dating from 1580-1900. The features were overlain by fine greyish-brown silty sand. Victorian cellaring had truncated all deposits at the south end of the trench, and above this only modern rubble and made ground were present.

In the southern part of the site, natural brickearth was observed at 2.48m OD. This was overlain by grey mottled orange brown sandy silt which in turn was cut by an east-west aligned post-medieval ditch. The ditch was sealed by grey brown sandy silt alluvium, above which only 19th-century foundations and features (including a brick soakaway cutting a Victorian rubbish pit) existed.

Archive: M.L.

94. Takeley, Dunmow Road (TL 5645 2130)
C. Mayo, P.C.A.

The evaluation consisted of seven trenches that indicated that past human activity in the area was concentrated in the west of the site, with little archaeological strata revealed in the eastern field. The excavation that followed revealed evidence of two or more possible phases of construction of a building. Pottery from postholes suggested that this was medieval in date. Archaeological remains were encountered below layers of topsoil, subsoil and ploughsoil. All features were cut into a layer of natural alluvial clay. Sixteen postholes of varying sizes and depths were excavated. Associated with some of these were three beam-slots or gullies.

Archive: P.C.A.

95. Thaxted, land at Weaverhead Lane (TL 6123 3100)
D. Hillelson, T.H.N.

An excavation was undertaken on the site of a small factory to the rear of properties fronting on Town Street, Thaxted. The site was being redeveloped for housing. Approximately seventy features were recorded across the site, of which the earliest were a pit, a cess pit and a possible boundary ditch, all of late medieval or early post-medieval date. Excellent preservation in some of the features, particularly to the south of the site where there was waterlogging, allowed the retrieval of a wide range of artefacts including leather shoes and wood fragments. Evidence for cutlery manufacture, in the form of worked bone offcuts, bone knife handle components and copper-alloy fragments, was present across the site. The range of material seen would suggest a later 17th-, or even early 18th-century date for the

assemblage, assuming no redeposition. Two fragments of boxed halved oak building timbers, one of which was potentially 14th-century in date, were also retrieved.

Archive: T.H.N. to go to S.W.M.

96. Thorpe-le-Soken, Thorpe Hall

(TM 1820 2175)

A. Letch, E.C.C. (F.A.U.)

Seven evaluation trenches were excavated on the site of a planned car parking area for a future residential health spa in order to investigate several cropmark features to the south of the site (EHCR 3153). Archaeological activity was concentrated in the south-west of the site where a stratified sequence of ditches, gullies, pits and layers indicated occupation from the mid Roman to the early/mid Saxon and medieval periods. Some correlation between cropmarks and excavated features was established.

Archive: S.W.M.

97. Thurrock, Belhus Woods Country Park

(TQ 5740 8225)

B. Barker, E.C.C. (F.A.U.)

Two trenches were excavated in the vicinity of proposed tree planting to evaluate the presence and dating of a putative rectilinear Roman ditch that had been identified through cropmark evidence on aerial photographs (EHCR 5095). The upper fill of Trench 1 contained finds including coal, burnt clay, struck flint and brick. These appear to be residual, and the deposit probably dates to the 19th or 20th centuries. Trench 2 revealed a substantial feature which contained demolition debris and domestic refuse. The finds comprised brick, tile, stone-work, pottery and animal bone. The pottery suggests a late 18th-century date for the deposit. Neither trench located features that could be confidently associated with the ditches identified on the cropmark plot, nor was archaeological material of Roman date found. The feature in Trench 1 was on a different alignment from the cropmark and probably represents a post-medieval field boundary. The feature in Trench 2, although positioned approximately where the cropmark ditch should be, was much wider and more characteristic of a substantial pit.

Archive: T.M.

98. Tollesbury, 10 High Street (TL 9555 1048)

P. Connell, E.C.C. (H.A.M.P.)

A watching brief on foundations for a new dwelling revealed a large feature cut into natural sand and gravel with a dark fill, c.2m in depth. Although the

fill had been removed from site, the section contained oyster, bone, organic material and undated ceramic burnt material. Three sherds were recovered from some dark spoil which probably came from the feature, one of which dates to the 5th/6th centuries. The other two may be either Roman or medieval.

99. Upminster, Belhus Woods Country Park

(TQ 5675 8240)

R. Wardill, E.C.C. (F.A.U.)

Magnetometer survey was carried out to determine the source of a scatter of brick and tile noted in the EHCR and still apparent on the field surface. The main anomaly was a broad band of mixed polarity magnetic responses approximately 18-20m wide running diagonally across the site from south-west to north-east. This type of response is characteristic of a spread of brick and tile rubble probably associated with a trackway. It is likely that the rubble has been dispersed from the path of the original trackway by ploughing. A trackway is identifiable on early Ordnance Survey mapping in this location.

100. Upminster, Pages Farm (TQ 555 895)

M. Peachey, E.C.C. (F.A.U.)

This 64ha site is a proposed location for the Thames Chase community forest. The fieldwalking survey identified a scattering of medieval pottery, and a small concentration of post-medieval pottery, close to Hall Lane, along with large concentrations of post-medieval tile. A small concentration of burnt flint was also observed in the north-west field of the survey area.

Archive: M.L.

101. Upper Colne and Stour valleys

C. Peal

Dowsing survey was undertaken to try and find the missing sections of Margary's Routes 33a and 24. Two distinct groups or generations of roads were revealed, one with an *agger* of c.3m width, running north from the Strawbrook near the A131 at Great Leighs. This is a similar width to Route 34a between Long Melford and Baythorne End. Where these roads ran near to rivers they appear to have been aligned as near to the rivers as possible. In contrast, the line from Sible Hedingham eastwards towards Kedington and on towards Long Melford has an *agger* width of 5-7m and follows a very straight route on higher ground. The lines traced out of Chalkney Wood all appeared to be of the wider group. Despite much time spent searching for a crossing of the Colne River near the inferred line of Margary's Route 33a, nothing was detected between

Halstead and the Station Road crossing near Heddingham School.

102. Waltham Abbey, Hawes Lane
(TQ 3835 9845)

B. Barker and S. Hickling, E.C.C. (F.A.U.)

A fieldwalking survey on land adjacent to the former Royal Ordnance site at Waltham Abbey identified a concentration of burnt fire cracked flint in the north-west corner of the survey area. This suggestion of prehistoric activity is supported by the recovery of two sherds of prehistoric pottery. A large amount of post-medieval pottery and tile was also recovered. It is thought that this material originates from a demolished building located in the south-east corner of the field. Evaluation trenches did not identify any features associated with the burnt flint concentration. A number of 10th- to 13th- century features were recorded at the south-western corner of the development area, consisting of a line of postholes and associated gullies, ditches and pits. The postholes and gullies possibly represent a substantial structure. A considerable amount of burnt material in the final phase of occupation suggested that the structure was destroyed by fire. A little residual Roman and prehistoric material was also recovered, probably eroded from the hilltop to the north.

Archive: E.F.D.M.

103. Waltham Abbey, Royal Gunpowder Factory
(TL 377 010)

J. Murray, L. Prosser, H.A.T.

Throughout 1999 and 2000, the conversion of the former Royal Gunpowder Factory at Waltham Abbey to a heritage park and museum prompted an extensive programme of monitoring and recording, together with historic building recording. The complex covers a wide area along the banks of the river Lea and comprises over 200 surviving buildings of the late 18th to late 20th century, reflecting the development and manufacture of gunpowder and subsequent explosives technology. The closure of the former RARDE in 1991 resulted in neglect and decay of the complex. Restoration work included the excavation of derelict canals and the conversion and repair of many buildings of architectural and historic significance. Archaeological monitoring of new service trenches within the scheduled area of the site revealed few additional features, and monitoring of the other site works confirmed the widespread removal of contaminated ground after the closure of the site, though timber canal revetments and a demolished chimney base were discovered. Work included the detailed recording of a Grade I Listed gunpowder mill and a large group of buildings associated with the expansion of the factory in the

late 1870s. The fabric of the two surviving 18th-century buildings at Walton's House and the saltpetre refining and mixing houses were recorded in detail.

Archive: on-site

104. Walthamstow, Vestry House Museum
Garden (TQ 3776 8911)
R. Densem, C.A.

A watching brief was undertaken in November 2001 during groundworks for the construction of a new visitor centre. The natural was sand and gravel, overlain by a weathered subsoil under a buried soil, which was covered by a topsoil. The earliest sherd found dated to the period c.1480-1600; other pottery that were found dated to the late 19th or 20th century. A few modern pits were found and there was no evidence of any prehistoric, Roman, Saxon or medieval activity. A small area of exposed brick foundations was thought to relate to the 19th-century cottages that formerly stood on the site.

Archive: C.A.

105. Wanstead, land at the rear of 46-50 High Street (TQ 4056 8834)
R. Densem, C.A.

A watching brief was carried out on the excavation of the basement for a new block of flats, to the rear of existing 19th- and 20th-century properties fronting the High Street. The site had potential for a south-west to north-east aligned Roman road from London to Great Dunmow (Merrifield 1969, 54-6; Margary 1973, 250-1). Only some 1m or more of stratigraphy was visible along the south and west sides the excavation, and up to 2m along the north and east sides. The sections along the south and west sides contained some modern or late post-medieval intrusions. There was one 18th-century quarry pit that produced one post-medieval black glazed ware sherd in the east section. The top of natural sand and gravel was visible here, and in the north sections it was overlain by a pale grey gravelly ploughsoil which produced no finds. There was a late 18th- or early 19th-century boundary/garden wall along the southern side of the site. There was no trace of any Roman road metalling, or of its *agger*. It is unlikely that the Roman road ever crossed this site.

Archive: C.A.

106. Wanstead, The Temple (TQ 4162 8740)
R. Densem, C.A.

Four evaluation trenches were excavated in advance of a proposed landscaping and display scheme for the mid 18th-century historic garden features on the west side of the Temple, also of the same date. The Temple is a mock-classical building, designed as a garden feature, and it lies behind and east of an artificial mound, which was part of the same design. The evaluation trenches were to supply additional information on the location of the original edge of the mound and on the presence or absence of previous gravel paths. The edge of the mound was found, together with some pottery dating evidence. Residual Roman tile fragments were also found, which may relate to Roman features recorded in the area in the 18th century.

Archive: Lesley Howes Archaeological Services

107. Wimbish, Tiptofts moated site (TL 5702 3737)
A. Garwood, E.C.C. (F.A.U.)

An archaeological watching brief on drainage works, revealed a substantial amount of 19th- and 20th-century disturbance in the area of the south wall. These groundworks were associated with both the removal of a presumably rotten sole plate along the south wall and its subsequent underpinning using coursed brick and concrete, and the laying of an earlier phase (c.20th century) of drainage. Of most archaeological significance was the presence of a distinctive dark brown clay layer previously recorded in test pits and in many of the underpinning trenches excavated as part of the renovations undertaken in 1995. It was thought at the time of the renovation works that this layer was deposited around the late 13th-century service wing prior to the construction of the 14th-century aisled hall. However, its presence below the service wing reveals that the construction layer was deposited across the entire moat platform at the same date.

Archive: S.W.M.

108. Witham, Maltings Lane (TL 814 134)
N. Lavender E.C.C. (F.A.U.)

The proposed development of the 47 ha site to provide some 800 houses, community centre, school, playing fields and a business park led to a series of evaluations during the later 1990s. These indicated extensive occupation during the Roman and Saxon periods and more limited evidence for Late Iron Age and medieval activity. Full excavation of a series of areas totalling around 6 ha began in October 2000 and has continued throughout the year. Most of the occupation on the site was of Late Iron Age and

Roman date, although prehistoric, early Saxon and medieval features have been identified. Many of these features appear to have been field boundaries of various dates, although a number of discrete enclosures, particularly from the Late Iron Age and Roman periods, may be associated with domestic and agricultural occupation.

One Early Iron Age ditch and a number of probably contemporary pits have been identified, but evidence for prehistoric activity has so far been limited. At the north end of the area, close to the Maltings Lane frontage, there was a wattle-and-daub structure of early Roman date enclosed by several phases of curvilinear ditches, with a gravelled entrance and internal bank. The early ditches were backfilled and the enclosed area extended, with a group of ovens being built to the east of the wattle-and-daub structure. This seems likely to have been agricultural, with the ovens being corn dryers. Detailed interpretation awaits the analysis of environmental evidence from the area. A number of cremation burials on the crest of the hill are of 2nd-century Roman date, but a further cremation to the north was Late Iron Age. Three early Saxon sunken-featured buildings have been excavated, and more are expected to be located as excavation proceeds. Apart from this, few Saxon features have been found. Finds include a complete miniature pottery flask and an iron girdle hanger.

Also close to the Maltings Lane frontage lay the remains of a medieval farmstead. There was a small quantity of residual prehistoric and Roman material but all securely dated features were of the 10th to 16th centuries. The house was built on top of an earlier ditch and was badly damaged, but several construction phases could be discerned, dating from the 11th to the 14th century. It was of beamslot and posthole construction; no occupation layers survived. A large rubbish deposit north of the house dated to the 14th and 15th centuries, and a rubbish pit to the south cut through an earlier, undated, inhumation burial. West of the house was a large pond, with associated ditches and gullies that may represent attempts at water management. Several phases of boundary ditches lay to the east and south, dating from the 11th to the 16th century. Two well-preserved structures dating to c.1200 were found; a deep pit with associated burning was probably for drying corn, and a small rectangular posthole structure may be the remains of a hen house or similar building. One other definite structure was identified on the eastern edge of the area; it had two construction phases, of beam slots replaced by postholes, and was probably for animal shelter or crop storage.

Excavation of the ditch of the Pondholton Enclosure in the east part of the site, which has been suggested as the site of the Saxon Burh,

suggests that it is a comparatively recent field sub-division.

Archive: F.A.U.

109. Writtle, Writtle College Agricultural Reservoir (TL 6726 0717)
E. Heppell, E.C.C. (F.A.U.)

A desk-based assessment of the site of a proposed agricultural reservoir near Writtle College indicated that although archaeological remains from most periods are recorded within 1km of the study area, none fall within the site of the proposed reservoir. Medieval finds in the area are concentrated around the site of King Johns Hunting Lodge (EHCR 659) 500m to the west. Cartographic sources indicate that in the post-medieval and modern periods the land has been used for agricultural purposes, and give some indication of the presence of clay pits. The layout of the fields remained the same until the establishment of the college, when orchards currently occupying the site were planted.

Archive: Ch.E.M.

Abbreviations

Bt.M.	Braintree Museum
C.A.	Compass Archaeology Ltd
C.A.G.	Colchester Archaeological Group
C.A.T.	Colchester Archaeological Trust
C.M.	Colchester Museum (formerly Colchester and Essex Museum)
Ch.E.M.	Chelmsford and Essex Museum
E.C.C.	Essex County Council
E.C.C. (H.A.M.P.)	E.C.C. (Heritage Advice Management and Promotion)
E.C.C. (F.A.U.)	E.C.C. (Field Archaeology Unit)
E.F.D.M.	Epping Forest District Museum
E.H. (C.f.A.)	English Heritage (Centre for Archaeology)
F.A.	Framework Archaeology
F.C.A.S.	Foulness Conservation and Archaeological Society
G.C.A.G.	Great Chesterford Archaeology Group
G. & P.L.	Gifford and Partners Ltd
H.A.T.	Hertfordshire Archaeological Trust
H.M.	Harlow Museum
M.A.H.G.	Maldon Archaeological and Historical Group
M.L.	Museum of London
M.o.L.A.S.	Museum of London Archaeology Service
M.o.L.S.S.	Museum of London Specialist Service
O.A.	Oxford Archaeology
P.C.A.	Pre-Construct Archaeology Ltd

S.M.	Southend Museum
S.W.M.	Saffron Walden Museum
T.H.N.	The Heritage Network Ltd
T.M.	Thurrock Museum
T.V.A.S.	Thames Valley Archaeological Services Ltd
U.E.A.	University of East Anglia

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Historic buildings notes and surveys

edited by D.D. Andrews

The buildings described here have been recorded either through private research, or else in the course of planning development control work, often according to the provisions of Planning Policy Guidance notes 15 and 16. We are grateful to the owners, agents and contractors whose help and co-operation has made this work possible.

The Essex Tree-Ring Dating Project

D.D. Andrews

New dates are given in Table 1. The results for High Easter, Hatfield Broad Oak, and Wakes Colne have been obtained in the context of the current Small Aisled Halls Project undertaken and funded by Essex County Council in collaboration with Ian Tyers of Sheffield University. The work at Bentfield Bury and Beeleigh Abbey has been funded by owners. The Beeleigh timbers are the first from Maldon to have been successfully dated. The reason for the previous failures remains unclear, but monastic timbers have now on a number of occasions proved to have an above average number of rings, so the success at Beeleigh is unsurprising if gratifying.

St. Andrew's Hospital, formerly the Billericay Union Workhouse

Adam Garwood

This report describes the results of a detailed survey undertaken by the Essex County Council Field Archaeology Unit, in response to the demolition of the majority of the hospital buildings at St. Andrew's Hospital, Billericay (Fig. 1). The survey encompassed all buildings on site, but particularly focused upon the former Union Workhouse and Porters Lodge, both early designs by George Gilbert Scott and William Bonython Moffatt, and the equally significant casual wards and infirmary block.

After the passing of the Great Reform Act of 1832, a non-party Royal Commission headed by Nassau Senior and Edwin Chadwick, was set up to look into the problem of poor relief and in particular the rising Poor Rate. Following the reports of 26 Assistant Commissioners who had travelled

extensively across the country, the Commission concluded that the Old Poor Law had fallen into widespread corruption and the Poor Law Amendment Act was passed in 1834. The implementation of this act removed the responsibility for the poor from local level and established the Poor Law Commission, a central governmental body charged with uniting the parishes and creating the Poor Law Unions. Each Poor Law Union had its own workhouse, directly overseen by a Master and Matron and administered by a Board of Guardians. The Poor Law Report of the same year set out that poor relief should be concentrated in large workhouses and that conditions for inmates should be 'less eligible' than those faced by the lowest independent paid labourers (Crowther 1981).

The Poor Law Amendment Act created a need for more workhouses to serve the Poor Law Unions. These workhouses were usually built on the outskirts of a town, away from urban centres, but central to the Union so that the pauper should not walk more than 10 miles from the parish boundary to claim relief. After the site was selected an architect was either appointed outright or a competition was held to select the most suitable design. During the period 1836–41 a total of 323 general mixed poor law institutions were built or were under construction across the country, while many more had been altered or extended. However, by the early 1840s the workhouse building boom was beginning to tail off with only 14 commissions in 1840, six in 1841 and three in 1842 (Morrison 1999).

Formed by the unification of 26 parishes, the Billericay Union was founded on the 10th October 1835. Expenditure for the construction of a new workhouse, replacing the old workhouse on Laindon Road, was authorised by the Poor Law Commission in June 1839. Following the acquisition of 11.5 acres of land (Stock Hill Field) to the north of the town centre, the Board of Guardians commissioned architects Scott and Moffatt, on the grounds that their designs provided a far superior alternative to standard square and hexagonal models popularised by the Commission architect Sampson Kempthorne (Fig. 2). By the later 1830s Scott and Moffatt's

HISTORIC BUILDINGS NOTES AND SURVEYS

Table 1. Recent tree-ring results for Essex.

Parish	Building	Date	Timbers	Analyst	Report
Doddington	Church belfry	1709 & 1735	Sole plates	I. Tyers	See Church Miscellany
Great Dunmow 21/99	15 High Street	1381-1407	South range	M. Bridge	AM Lab Report
Great Easton	The Bell	1527/28	Roof	M. Bridge	This vol. p.
Hatfield Broad Oak	Forest Cottage	1359/60	Aisled hall	I. Tyers	
High Easter	Ramseys	c.1280-1325	Aisled hall	I. Tyers	
Little Totham	All Saints	after c.1075	North door	I. Tyers	This vol. p.
Maldon	Beeleigh Abbey	1513/14	Frater roof	I. Tyers	ARCUS 574f
		1511-39	Dorter roof		
		1624	Timber-framed wing		
Stansted	Bentfield Bury barn	1453	Arcade posts	M. Bridge	Available from author
Wakes Colne	Crepping Hall	1301-37	Base cruck hall	I. Tyers	
Wakes Colne	Normandy Hall	1367/68	Aisled hall	I. Tyers	
		1527/28	?Kitchen		
Widdington	Prior's Hall outbuilding	1490/91	5-bay building	I. Tyers	EH CA Report 46/2001
		1563/64	1-bay east extension		
		1578-1613	2-bay west extension		
Walthamstow	Old House	1564-92	West wing	M. Bridge	VA 32, 2001, 72

Notes 1) English Heritage *Ancient Monument Laboratory Reports* are now *Centre for Archaeology Reports*, obtainable from Fort Cumberland, Eastney, Portsmouth PO4 9LD.
2) ARCUS (Archaeological Research and Consultancy at the University of Sheffield Research School of Archaeology) Reports are available from West Court, 2 Mappin Street, Sheffield S1 4DT.
3) Dr. Martin Bridge is based at UCL, London University.

designs had characteristically adopted a neo-Elizabethan style displaying rich architectural treatment and an ostentation rarely seen in other contemporary workhouses. After a certain amount of compromise due to budgetary constraints, Billericay Union Workhouse finally opened on Michelmas Day 1840, at a cost of £11,000 (ERO/G/B1M4). In addition to the main workhouse building, the site also comprised a porter's lodge fronting Norsey Road, a mortuary, laundry and male/female infirmary buildings, all set within landscaped grounds, bordered by screens of native and imported trees.

The design of the mixed workhouse centred on the separation of the principal inmate groups, namely classifications allied to gender, old age, health, the able bodied and children. Built to a H-shaped linear plan with a south-facing principal façade, the main workhouse could be divided centrally about the hub of the Master's Block, with females and children occupying the rooms on the Stock Road side and the males in the corresponding ranges along Norsey Road. Separate male and female dayroom and dormitory blocks flanked the central 2½ storey Master's block, distinctive in its increased levels of ornamentation and use of

mullioned bay windows to the front and rear (Plate 1). The two perpendicular 1½ storey cross-wings, of which the Stock Road cross-wing included a female receiving ward and children's ward, both terminated to the south with richly embellished single-storey units housing the chapel and board rooms. Scott and Moffatt's earlier workhouse designs frequently incorporated the chapel and board room within a free standing entrance block fronting the main building, although their later arrangements, such as at Billericay Union, were designed to open-up the decorative façades by relocating these units into the end bays of the cross-wings. To the rear of the central block were the kitchens, boiler house and the laundry, while gender-segregated airing yards, placing adults to the rear and children to the front, utilised the open space between the cross-wings.

The workhouse was constructed using simple components although typically, status and visibility had a bearing upon the level of treatment. Brick embellishments such as diaperwork and the dressings of corners and window surrounds were more prominent on the facades and higher status areas. This theme was echoed in the door surrounds and was particularly noticeable in materials used

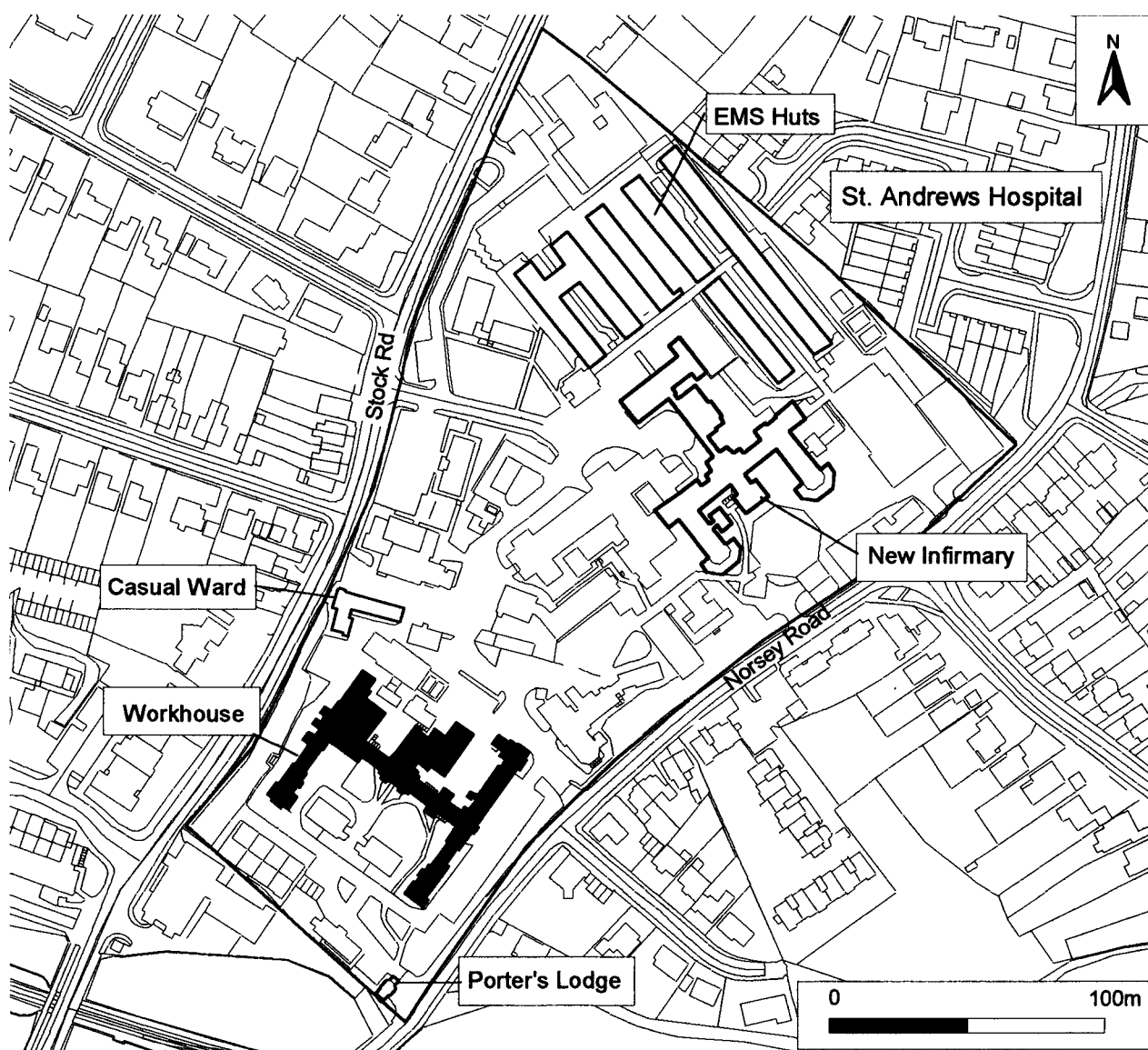


Fig. 1 Location of St. Andrew's Hospital, Billericay. (© Crown copyright. Ordnance Survey. License no. MC100014800).

for fenestration. Plain timber sash or casement windows (originally diamond panes) were used throughout the inmates' wings, the windows of the chapel and boardroom were built from moulded cavetto brick, while the mullioned windows of the Master's block were exclusively sandstone (Plate 1). An assortment of plain and diagonally-set stacks, plus frequent use of gabled dormers contributed to the texture of the roofscape, although a clock turret, central to the roof above the Master's block, was removed following a structural report from the County Architect (1930). The changing use of the building, its enlargement and subsequent reuse of space, have had a negative impact upon the survival of original internal features and spatial relationships. However, within the modern minimalist landscape of offices, clinics and laboratories, there still remains pockets of original décor, particularly in higher status areas such as the boardroom and Master's block.

As a result of the provision of outdoor relief for able-bodied paupers, by the mid-19th century the workhouse typically catered for the old, infirm, handicapped, mentally deficient (not accepted into contemporary lunatic asylums), unmarried mothers, children and vagrants. Thought to be of 'dissolute character', the vagrants or casuals were deliberately kept separate from the main workhouse in, as at Billericay, purpose-built casual wards. These deliberately inhospitable buildings comprised ranks of cramped unheated dormitory cells in which the casuals earned their relief through monotonous hard labour, stone-breaking, oakum picking or working the fields. Although a harsh regime, the casual wards remained in constant use up until after the Second World War, when a marked downturn in the itinerant population resulted in the closure of many of these specialised buildings.

The founding of children's homes, epileptic colonies and TB sanatoria during the earlier

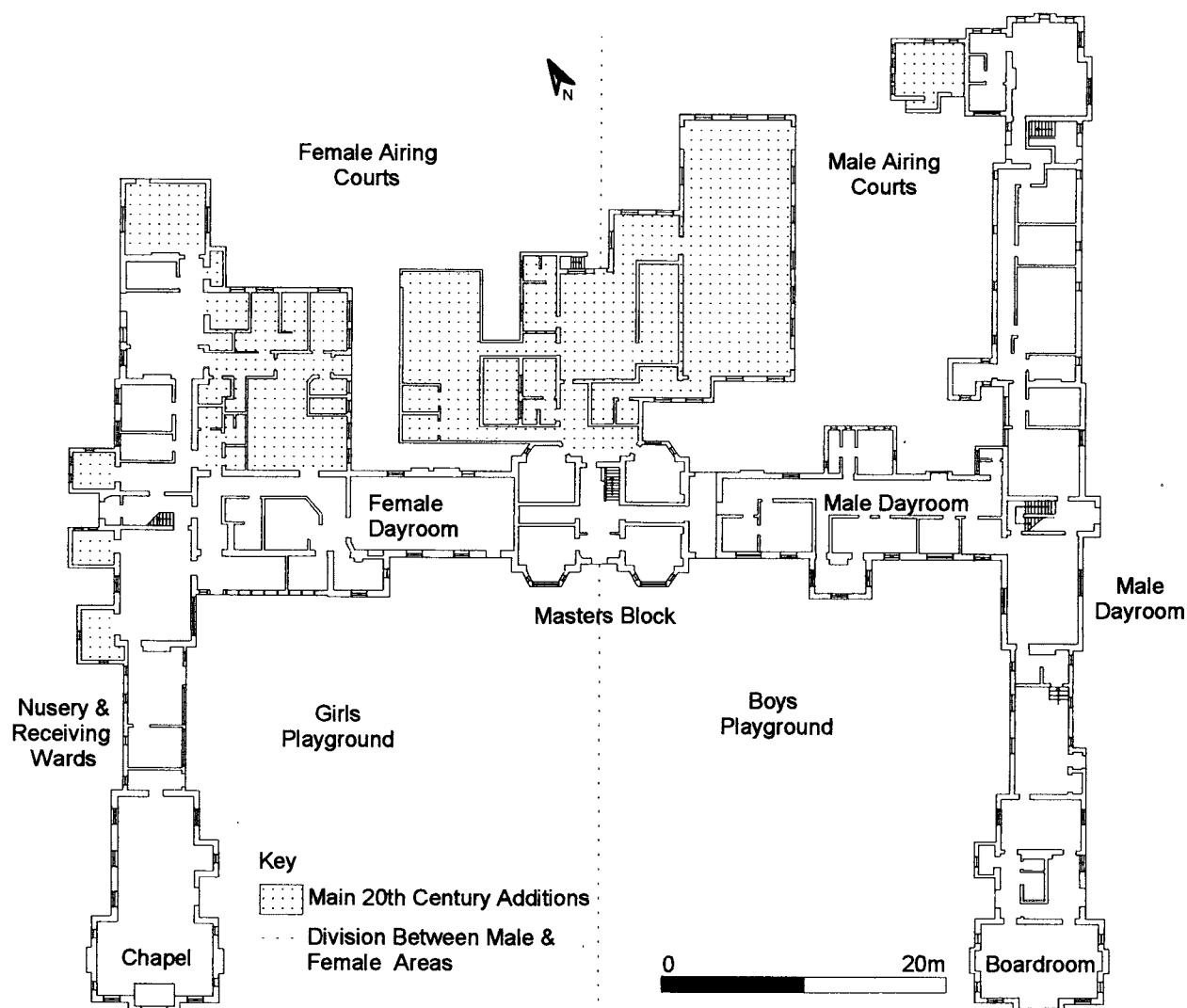


Fig. 2 Ground floor plan of Billericay Union Workhouse.

decades of the 20th century removed whole inmate classes from the workhouse, while the introduction of non-contributory old-age pensions (1908) and the National Insurance Act (1911) had a significant impact upon the able-bodied seeking poor relief. With the passing of the Local Government Act of 1929, the Board of Guardians were dissolved and responsibility was transferred to the County Councils. At this point the workhouse was renamed St. Andrews Hospital, in a conscious attempt to distance itself from the stigma attached to Poor Law Institutions and as part of its progression towards becoming a district hospital. This realignment was reinforced by the construction of a new south-facing Infirmary (1925) built with an emphasis on open-air and sunshine treatments, and the gradual shift of the site nucleus to the north-east away from the older institutional buildings. During World War II the hospital was taken over by the Emergency Medical Services, and seven pre-fabricated medical huts, catering for service and civilian casualties, were built on land to the rear of the infirmary.

After nationalisation in 1948, major building programmes included the outpatients block, operating theatre, and following the success of the Plastic Surgery and Rehabilitation Unit established in 1973, a new Regional Burns Unit was opened in 1982. St. Andrew's continued to provide hospital services until its closure in 1998 and relocation to Broomfield Hospital, Chelmsford.

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Plate 1 Former Billericay Union Workhouse, the Master's Block (façade).

Borley Lodge Farm, Borley Green, Borley

Brenda Watkin

Introduction

The farmyard at Borley Lodge (TL 841426) comprises four listed buildings: three barns, although one was formerly a house, and an outbuilding that is also listed as a former house. During the residential conversion of these buildings, an opportunity was provided to study them more closely, and to question the list description of the outbuilding. The description states that this has numerous door and window openings, and that originally one of the three bays was floored. It also says that the original cladding was vertical boarding fixed to horizontal rails notched into studs, mostly still *in situ*. Vertical boarding is not as common as horizontal boarding, but surviving evidence of its use spans from the 13th-century Wheat Barn at Cressing Temple, the 15th-century Nettleswellbury Barn, Harlow, and through to the 20th century in small farm buildings. However, there is in fact no evidence for the use of such boarding on this building, and it will be argued below that it had a daub render instead.

If the outbuilding was a house, how did it function in plan form? There was no sign of any

soot blackening from an open hearth, or any evidence of controlled smoke dispersal. The scatter of windows and doors do not conform to the pattern expected in terms of a traditional domestic plan form (Figs. 3 and 4).

Description of the outbuilding

The three-bay building is orientated north-south, with external dimensions of 32ft. (9.75m) x 16ft. (4.88m), with the southern bay 12ft. (3.66m) x 32ft. (9.75m) partitioned from the northern bays (Fig. 4). The present height of the building equates to a house of one and a half storeys. There is evidence for a floor in the southern bay, but this was only clamped to the eastern wall where peg holes and housing notches survive. This evidence was not found on the western wall but there is clear evidence for a bridging joist being housed in to the central stud of the southern exterior wall (Fig. 5). The floored area therefore only occupied half of the bay creating a lofted space.

The frame is of well-converted oak. The jowled storey posts were obtained by halving a tree, creating mirror pairs of posts some still retaining bark on the jowls. The tie-beams are straight and the open frame has curved braces (Fig. 4). The roof has been rebuilt but evidence survives in the reused rafters for side purlin construction with an outshot running along the eastern wall. The walls are close studded with the studs, 5½-6in. (140mm-150mm) x 3-3½in. (75mm-85mm) running the full height from sill to wall plate. The stud intervals are about 1ft. 4in. (405mm), but there are wider gaps (2ft. 4in., 710mm) in the framing on the western wall of the southern bay, the function of which is unknown (Fig. 4). Horizontal trenches are cut across the exterior faces of the studs, except where openings

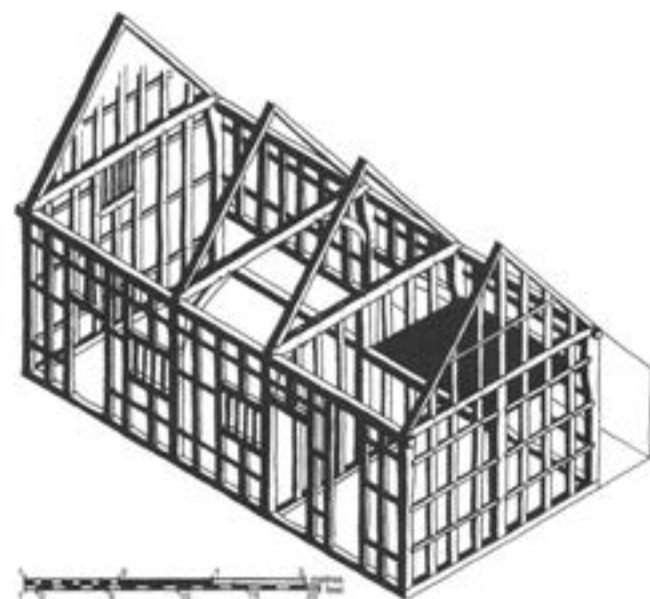


Fig. 3 Isometric frame drawing of the outbuilding at Borley Lodge Farm.

HISTORIC BUILDINGS NOTES AND SURVEYS

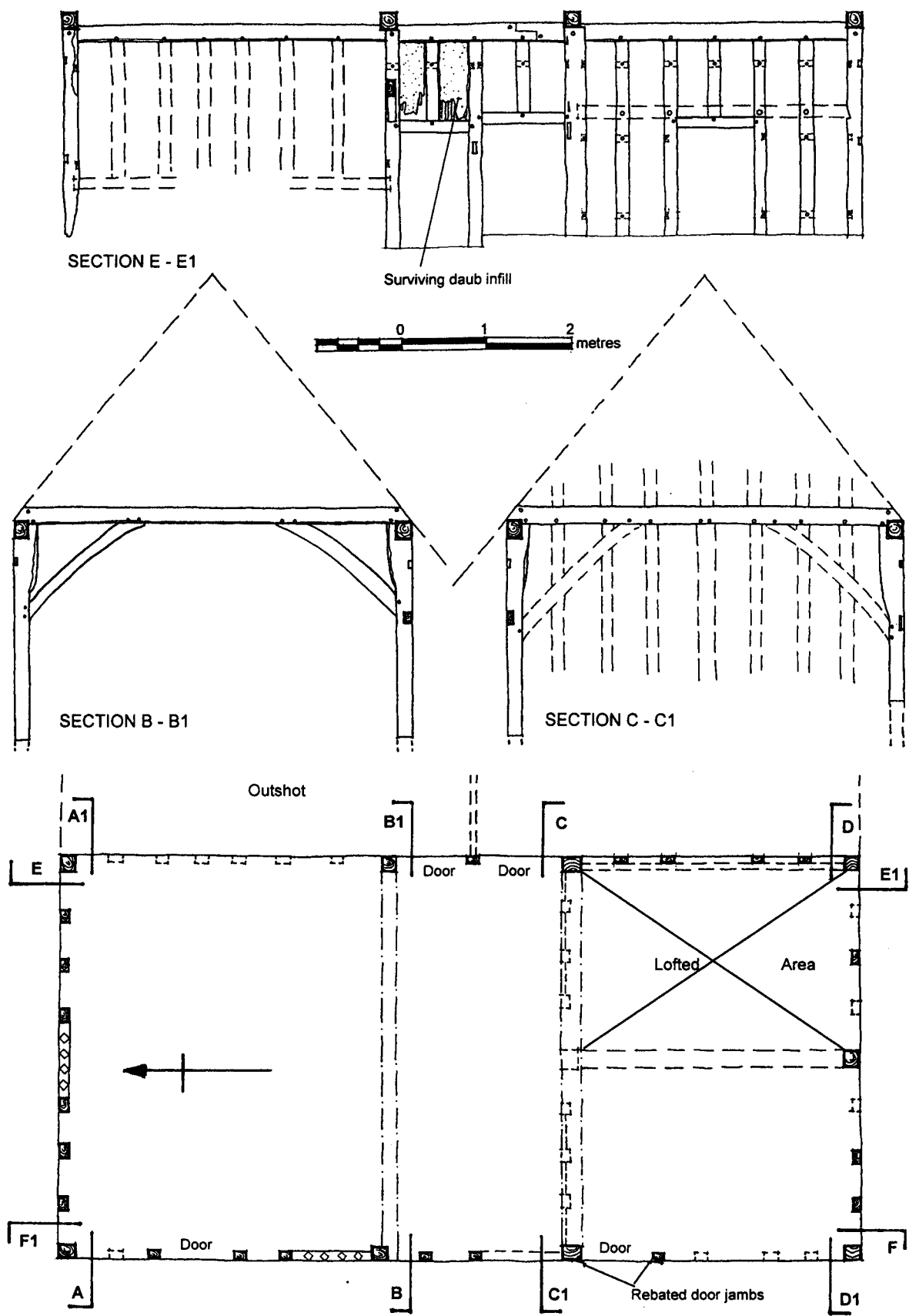


Fig. 4 Plan of the outbuilding at Borley Lodge Farm, with elevations of the two internal trusses and the interior of the east wall.

occurred, and in places these were still filled by rails 1in. (25mm) wide x 3in. (75mm) deep, pegged and set flush with the external faces of the studs. However when the modern weatherboarding had been removed from the building, there was no evidence of any nail holes that would have resulted if vertical boarding had been fixed to the rails. There was also evidence in the form of V-shaped cut outs in the sides of the studs that the close studding had been infilled with wattle and daub. Two panels of daub were found over a doorhead into the outshot with vertical split wattles tied to both the cross bars and rails. Small areas of earth render still remained adhered to the rails and daub on the inside of the outshot. This is a type of construction found in Suffolk where the practice of covering the exterior of the timber frame starts earlier than in Essex, and it would appear that the exterior was originally fully rendered across the daub infill, rails and studs.

The pattern of door and window openings appeared at first glance to be very random with three doorways being positioned in the eastern wall (Fig. 4). The western wall contains two doors: one rebated to the exterior, which gave access to the

closed end bay, and the other, lower and unrebuted, which opened into the remaining two bays. Two low diamond-mullioned windows in the western wall and a high level mullioned window in the northern end elevation (Fig. 5) lit the two-bay area. Once it had been established that the building had always had an outshot to the east, the doors started to make sense in that they provided access between the partitioned bay and the open bays and to the two separate parts of the outshot, whilst those in the western wall gave direct access into the two separate areas of the building (Fig. 6). There is no conclusive evidence that the southern bay had a window, but as the studs are missing, there might have been a window as those surviving had lowered heads with a central stud over the window, tenoned and pegged into the wall plate, perpetuating the pattern of the close studding. However the wider gap between the studding could have been slatted to provide light and ventilation.

The carpenters' setting out and numbering marks were not the usual scribed or chiselled ones, but had been marked in red ochre. The use of this type of identification had only been noted previously

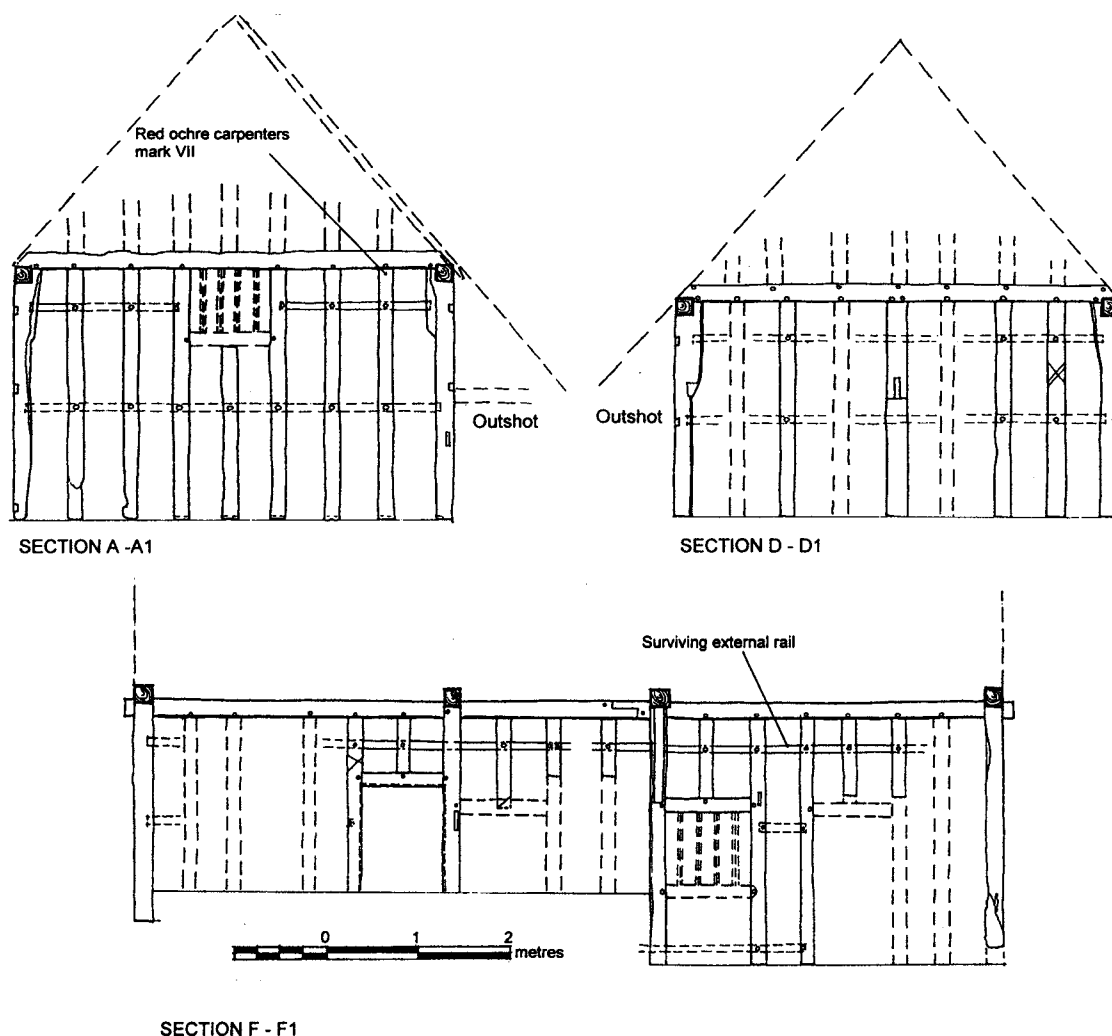


Fig. 5 The outbuilding at Borley Lodge Farm, elevations of the two end trusses and the interior of the west wall.

in a few buildings such as the early cross-wing at Garlester's Farmhouse, Bulphan, and Paul's Hall, Belchamp St. Paul.

Discussion

If the outbuilding was not a house, what was its function? An article in the *Journal of the Historic Farm Buildings Group* on Suffolk farmsteads, by Susanna Wade Martins and Philip Aitkens, discussed the type and construction of Suffolk farm buildings. In the description of livestock accommodation, it is noted that cattle sheds are less likely to be lofted than stables and that there was usually less concern about lighting, whereas stables needed to be well ventilated and lit for grooming and harnessing. As the original floor had been lost there was no evidence for drainage channels. At Borley Lodge Farm, a manger remained along the southern end wall but these have usually been replaced many times during the life of the building. Mortices in the two northern storey posts of the eastern wall appear to have housed a rail creating a low aperture or apertures into the northern section of the outshot. This could have been for a manger or even for removal of dung. The construction of the walls with the daub infill between the studs and the addition of the earth render to the outside would have certainly resulted in warm and draught free stables for the horses. Given the interchangeable nature of cow houses and stables, noted in Suffolk, the building could happily have performed one or other of the functions or even provided for both. Perhaps it was flexibility of use that preserved the building. Although at first glance the door heads appear to be low, the position of the sole plate cannot be fixed as the studs have rotted at the base. However there is evidence at the existing floor level for the start of another trench for a lower rail suggesting that the building was at least 2ft. (610mm) higher.

Dating of the building is difficult given that there are no decorative mouldings as found in houses. However the use of edge-halved and bridled scarf

joints, rather than the bladed scarf joint of the 17th century, and the use of close studding rather than primary braced construction, points to a possible late 16th century date. If this is correct then it is among the few survivors of early stables or livestock buildings in Essex, unlike Suffolk where many more have been identified.

Acknowledgement

I would like to acknowledge my debt to the owner of Borley Lodge and the developers of the site for their forbearance during the many visits to record the building during conversion.

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Braintree, Bocking Place

Andy Letch E.C.C. (F.A.U.)

Built in the period 1885-87 in 'Jacobethan'/Arts and Crafts style, Bocking Place was a major residence of the Courtauld family, who made their fortune in the manufacturing of silks and crepes and were part of the 19th century nouveau riche middle classes. The house and grounds were formed to emulate the country estates of the landed upper classes, which were aspired to, while internally the building had clearly defined zones for family and servants. High status areas, where the family entertained and had their own personal rooms, are suitably grand, while the service areas are more basic. Individual routes of perambulation were kept separate to enable either party to perform their functions.

In 1920 the house was sold and converted to a school. The character of the house was retained in the conversion, although some of the smaller areas were enlarged to become classrooms. The ethos of Braintree Intermediate School was to educate children in a supportive, caring atmosphere, to which the former family home was intended to contribute. As a mixed school, segregation between the sexes was not an important issue, however to ensure the efficient running of the school, boys and girls had their own points of entry, as did the staff, who were segregated into male and female staff rooms.

Archive: Essex Record Office

Braintree, Flacks

D.D. Andrews

This is a large public house in the High Street, opposite the junction with South Street. The list description, which dates from when it was known as the Wheatsheaf, attributes it to the 19th century. Refurbishment in 2001 drew attention to the

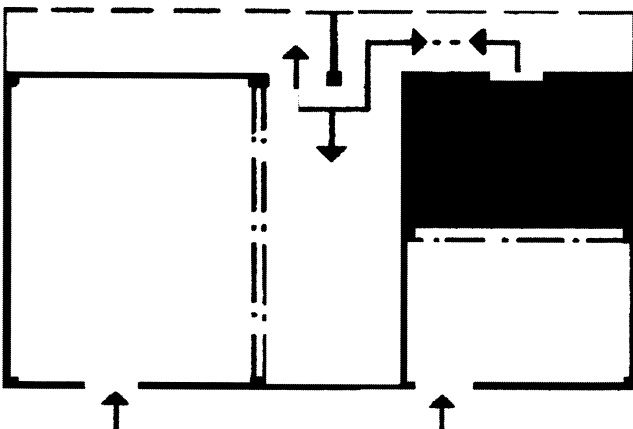


Fig. 6 Circulation diagram for the outbuilding at Borley Lodge Farm.

existence of a much older timber frame which had in fact been visible for some time, but which has since been covered up. This represents a cross-wing 4.7m wide at right angles to the street, and occupying the southern end of the building. Only the southern wall at the ground floor, which still has wattle and daub infill with an interesting keying pattern, is at all well preserved. There are two bays, separated by a partition from a third bay which is incomplete. There may have been further bays to the rear. No doubt the front was jettied, but this could not be demonstrated. The frame has narrow studding at 400-450mm centres. The first floor was made with soffit tenons with diminished haunches. A door position could be identified in the partition wall, and another in the north flank wall close to it. The sole plate on the north side is preserved in the cellar floor. At the first floor, there only survive two storey posts and part of a tie-beam. On the evidence of the floor joist joints and the narrow studding, the cross-wing can be assigned to the 16th century.

In the south wall, a window was inserted close to the partition wall. It had moulded mullions with intermediate rods to support the glazing, and can be dated to the 17th century. This window indicates that there must have been a gap between the cross-wing and the building to the south which is also late medieval but which was refurbished in the late 19th or early 20th century, and which is now contiguous with Flacks.

The building later underwent a phase of drastic remodelling: the first floor was raised in height, as was the roof, an extra storey being added, and a brick chimney stack was inserted through the middle of the partition wall. This stack has a massive base which was an integral feature of the large brick cellar. The bricks look possibly late 18th-century rather than 19th-century in date. In the cellar, there is a short vaulted tunnel between the southern and northern parts which seems to have been cut through to link them at a later date. If this is correct, it means the 16th-century building was remodelled in the late 18th or early 19th century and joined with the building to the north, the two units being linked behind the existing plastered brick façade with its parapeted roof. The ceiling of the northern part of the cellar includes reused medieval timbers. There are also two semi-circular profile light wells.

Flacks is revealed as one of a series of late medieval buildings down the west side of this part of the High Street, extending from College House in the south to the Boar's Head and beyond to the north. The old buildings occupy frontages about 12m wide. In view of the position opposite the churchyard, which must have occupied a focal position in the market town founded by the bishop of London in 1199, it is likely that they represent

sub-divisions of larger planned house plots of perhaps 4-5 rods (20-25m) in width.

Braintree, The Swan

D.D. Andrews

Introduction

The Swan stands on the east side of Bank Street at its junction with Swanside in Braintree town centre, south of the east-west line of Stane Street or the old A120. This part of the town had formed an open marketplace, which has gradually been occupied and infilled with permanent buildings. The evidence for this is the somewhat irregular disposition of the buildings and their cramped sites, lacking much surrounding space in the form of yards and backlands. In the case of the Swan, the building does have a large yard, but shops and stalls built into its flank leave little doubt it originated as an infill building. The Braintree marketplace was extensive and awaits full analysis. The refurbishment of the Swan in 2000 did not involve much opening up of the building, the frame of which is largely concealed or covered with thick black paint, but it did present an opportunity to examine the development of the building and its role in the history of the marketplace.

The buildings which comprise The Swan

Excluding the range of post-medieval outbuildings on the north side of the courtyard, the Swan comprises five distinct units (Fig. 7), which in approximate chronological order are:

1. a cross-wing on the north side, identifiable as such largely from a jowl post at its north-east corner. This wing was only 3.57m wide. Its full length is uncertain but since the jowl post belongs to a closed truss which may have been the back wall, it may have been almost square. If so, then it may be simplistic to think of it as a cross-wing, and instead it should perhaps be regarded as a shop (in the widest sense of the term) or a market building. Probably associated with it is the rear wall of the central portion of the Swan. This is unrelated to the framing of the rest of this part of the Swan and has a small edge-halved scarf joint in its top plate. It would be normal to think that this was a hall attached to the cross-wing, but in a marketplace context, the function of the buildings may not be so readily predictable. These building elements have few visible features, but the timber is of relatively modest scantling and the studs seem quite widely spaced. A 15th-century date seems likely.
2. a long four bay east-west range on the south side of The Swan, set back from Bank Street, facing on to Swanside on its south side which is jettied. This building had a row of shops in its south side which is described in greater detail below. The rear elevation of this range is only well preserved at the first floor, where there are two four-light diamond-mullioned windows. This building has narrow studding, face-halved scarf joints, internal bracing and a clasped-

purlin roof, features indicative of a late 16th-century date.

3. the three-bay unit at the south-west corner of the Swan is a separate build, with a jettied gable on Bank Street. This seems to be later than the long range behind it. An empty mortice in the south side of the corner post of the rear shop range may be associated with an earlier structure in this corner position. The height and spacious dimensions of the existing

building suggests it is a grander replacement of an earlier one, doubtless encroaching on to the street. The Bank Street elevation has been remodelled and inside there are few visible features. On Swanside, there is evidence for shops of an unusual type, which are discussed below, and at the first floor for an oriel window. Again the building is datable to the later 16th century.

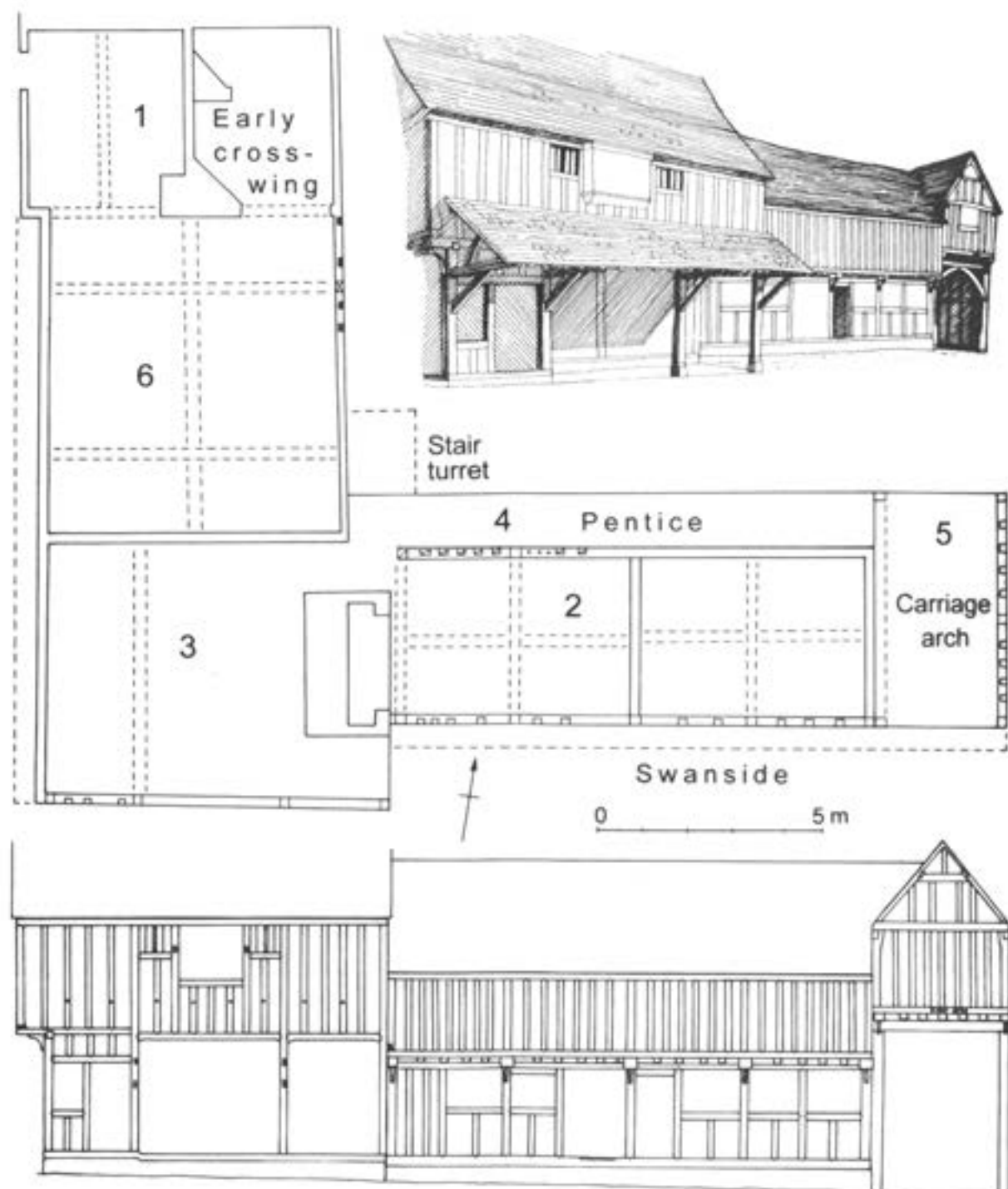


Fig. 7 Braintree, The Swan, plan showing the development of the building, reconstruction of the elevation to Swanside, and reconstruction of its original appearance by D.F. Stenning. (Bank Street is on the west side of the building).

4. an outshot 1.2m wide was added to the north side of the long range along Swanside. It is presumed that this is not an original feature as its roof does not continue the line of the rafters of the main roof, but joins that roof a little way above the eaves and is set at a slightly slacker pitch. This structure appears to be earlier than the carriage arch to the east (see below) because this occupies the full depth of the main range and the outshot. It is also earlier than the main building on Bank Street (6 in the sequence) for the latter has been built on to it. Originally, this was probably a pentice, or even a gallery, rather than a fully enclosed outshot as it is today.
5. the carriage arch on the south-east corner of the complex. Conveniently this has an inscription on its lintel 'EWW 1590', a date which seems entirely credible. This lintel and inscription have been renewed, but the inscription is recorded in the RCHM and by Hewett (1969, 149), who published a drawing of the carriage arch. The building seems to lack bracing at any point in its construction, and has a clasped purlin roof in which the rafters reduce in thickness above the purlins. At least some of the studs are made from quartered trees.
6. the central portion of the Swan on Bank Street, which filled the space between the units 1 and 3 and replaced a smaller and more modest structure linked to the 'cross-wing' to the north. This unit is very wide (7.05m internally) and, since it seems to utilise a pre-existing back wall, must have encroached on Bank Street. It was built with two long binding joists so disposed as to make it of one wide central bay with a narrower bay to each side. Set into these binding joists, there is at the ground floor a line of roughly central bridging joists, and at the first floor two north-south rows of bridging joists. Because there seem not to have been any partitions beneath the binding joists, they have sagged badly. This unit has jowl posts with a roll or bowtell moulding at the bottom of the swelling, lamb's tongue chamfers on the joists, primary bracing, and frieze windows, all indications of a 17th-century date. The frieze windows and substantial timbers show that this unit was of ambitious appearance. Jettied to the front, with the other units it formed a long-wall jetty building. The apparently undivided ground floor was probably a shop or workshop. The first floor seems also to have been a single chamber. There was also an attic. Examination of the roof shows that there was a dormer window in the roof facing on to Bank Street. The gable to the rear is an original feature, though now larger than when first built. A fragmentary and tight spiral stair, only preserved now at first floor level, gave access to this gable and the attic.

A chimney was later inserted at the junction of the long shop range and the south-west corner unit on Swanside and Bank Street, occupying one of the shop or stall units in the latter. The brickwork of this is Tudor: it is probably 17th century. This is the only chimney that can be identified; others may have been lost as the front of the building has

been cleared of impedimenta to form bar space for the pub.

Archaeology

A glimpse of the stratigraphy beneath the building on Bank Street (unit 6 in the analysis above), where deposits were preserved beneath the suspended floor, was afforded at a point where a concrete foundation had been inserted for a post to support the spine beam. Two phases of suspended floor, both 20th-century, overlay a layer of redeposited chalky Boulder Clay about 120mm thick. This may have been more than one layer and included peg tile lying flat. Deposits of this sort were put down as levelling or flooring layers when constructing a building. Whether this was associated with the standing building (unit 6) or that which preceded it (part of unit 1) is uncertain. Beneath the clay was a thin brown sandy silt, which in turn overlay a hard gravel in a blackish sandy silt loam matrix containing oyster shells. This probably represents the surface of the marketplace before buildings were erected on it.

The long shop range on Swanside

This is a low narrow building of modest construction. Its reconstruction is assisted by the almost complete survival of the original sole plate, which indicates that street level on Swanside has remained substantially the same for 400 years. The ground floor is divided into half by a partition which seems original. The eastern half has a door and a row of three shop windows. These are of a standard and familiar pattern, comprising openings or windows occupying about half the height of the wall. The western part of the range is less easy to interpret, and does not mirror that to the east. It seems to comprise an unusually wide doorway, to the west of which are two shop windows. The first floor is also divided into two units, each of which had a diamond mullion window to the rear. There seem to have been no first-floor windows in the south elevation. There are no surviving internal features that relate to the use of the building. All that can be said about the building is that it comprised two units each with a shop at the ground floor and a chamber above. There are large numbers of dowel holes in the south elevation, probably for stalls and counters, features which are documented outside shops (cf. Keene 1990). However, these are associated with later timbers which have been inserted into the wall, and none seem original to the shops as they were first built.

The corner building at the junction of Bank Street and Swanside

The south elevation of this building is of particular interest. It is of three bays. At the ground floor, the westernmost is a conventional shop, comprising window and adjacent door. The other two bays both

have at the ground floor wide openings, with no studs, measuring about 2.5m, beneath mid rails which have slight swellings like soffit jowls where they are jointed into the posts. These seem to represent open stalls in the side of the building. Pairs of mortices in the storey posts, and, at the first floor, dowel holes on every other stud, show that this side of the building was sheltered by a pentice or lean-to roof. There is nothing further that assists in the reconstruction of how the building was used: inside, it has been opened up for use as a pub and there are no original features. This is unfortunate as shops, or stalls, consisting of large openings in the side of a building, are unusual today and these may be unique survivals. Certainly a recent comprehensive review of the evidence for medieval shops does not include ones of this type (Clark 2000).

History

The Swan has been an inn since 1769 (ERO Q/RLv 24) but clearly was not built as such. In 1687, a premises known as the Swan was included amongst property belonging to John Huxley of Edmonton and his wife Sarah, daughter of Richard Wortham, grocer of Braintree (ERO D/DU 629/2). It was described as 'neare the corne markt' and was divided into several tenements, sixteen occupiers paying a total annual rent of £30. It is possible that the initials 'EWW' and date 1590 on the carriage arch refer to Elias Wortham who is recorded in Braintree documents at the end of the 16th and in the early 17th century. He was a man of substance and one of the 'Four and Twenty' who effectively governed the town (Emmison 1970).

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Chelmsford, 91 High Street

D.D. Andrews

No. 91 High Street stands roughly in the centre of Middle Row, a north-south block of market infill with the High Street to the east and Tindal Street to the west. The property comprises three units: a three-storey timber-framed shop on the High Street with an 18th-century brick front and a jetty to the narrow alley (Crown Passage) to the north; a three-storey shop on Tindal Street, 19th-century and built of stock bricks; and a space between them which must once have been a yard but which is now occupied by a single storey 19th-century building. Because of its jetty, the eastern unit has long been regarded as one of the oldest, if not the oldest, building in the High Street. According to the list description, it is late 16th century.

Refurbishment of the premises in 2001 revealed the timber frame of the shop on the High Street (Fig. 8). This is a two-bay structure about 6.5m wide by 8.3m deep. The principal timbers in the frame are about 200-250mm square. The main posts rise the full height of the building. They are over 8m long and seem to be made from single trees. On the High Street at the ground floor, more massive timbers almost one foot square were used for the posts and rails of a shop front which can be reconstructed with an almost central door flanked by large windows. The jetty on Crown Passage to the north is built with wide section floor joists. These are reused late medieval timbers, clearly selected because narrow section joists would look visually unsatisfactory in a jetty. Elsewhere in the building, the joists are all narrow section (90-110mm). Reused timbers also occur in the floor and wall framing, which is primary braced. The studs to which the braces are connected are pegged. There are no studs in the south wall, because it was built up against a pre-existing building. This too has primary braced walls and was probably rebuilt after the construction of no. 91. The position of doors, stairs and chimneys is no longer evident, though the absence of mortices for common joists in the bridging joist at the first floor in the south-west corner may indicate that there was a stair there. The roof, which includes some softwood, apparently original, is of gambrel profile and runs round all four sides of the building, enclosing a central valley about 1.5m long which drained into a gutter within the roof void. The façade is handsome, with sash windows set back behind the brickwork with flat gauged brick heads and keystones, and a stone string course.

The character of the timber framing suggests that it cannot be earlier than the first half of the 17th century. Although it was not possible to adequately assess the relationship of the brick façade to the

frame, it is probable that they are integral and contemporary. This would explain the massive scantling of the timbers used in the façade at ground floor, as they had to carry the weight of the brick façade. Taking into account the brickwork and the framing, a date of c.1725 can be proposed for the building. It may not as old as had been thought but it is still probably the oldest in the High Street and an interesting example of late timber framing. Presumably the jetty had been a feature of the previous building on the site and was retained as the property had rights over the land to the north and to maximise floor space.

At the time of 1591 survey of Chelmsford, illustrated by the well known Walker map, this property was the site of a newly built shambles (Grieve 1988, 171). In the second half of the 18th century, by which time it had been rebuilt as recorded here, it belonged to Joseph Wiffen, perfumer and hairdresser (Grieve 1994, 223).

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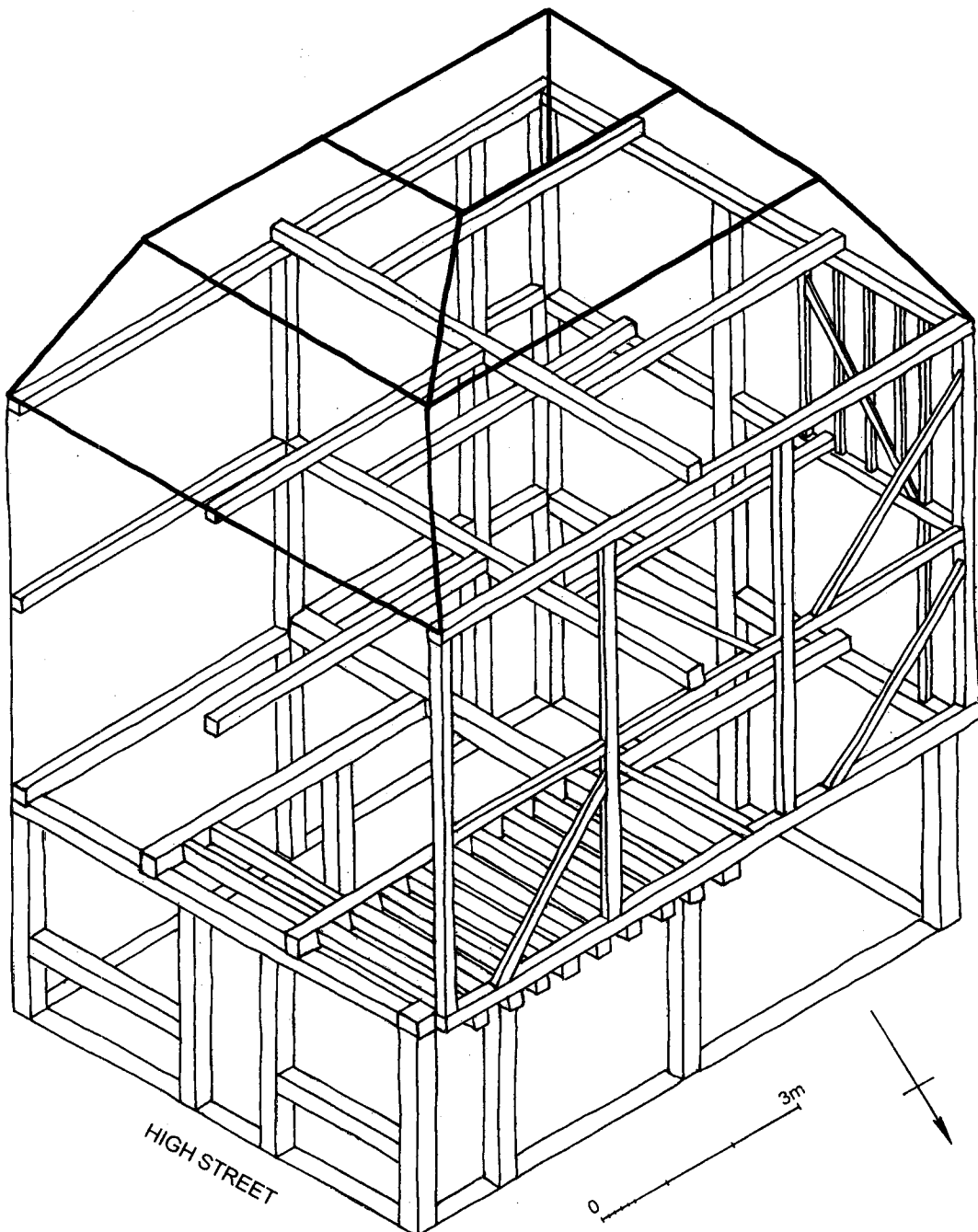


Fig. 8 Chelmsford, 91 High Street, the timber frame.

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Chelmsford, Marconi Mobile, Waterhouse Lane (TL 6970 0640)

Andy Letch E.C.C. (F.A.U.)

Recorded before partial demolition and conversion, the buildings are typical of the pre-fabricated factory and office units assembled in the 1960s and 1970s. The buildings were utilitarian in design and construction, and were therefore of only limited interest. However, they were important in terms of the history and growth of Marconi, which until the end of the Cold War in the 1980s was one of the largest defence contractors in the country.

Archive: Essex Record Office

Brocks Farmhouse, Twitty Fee, Runsell Green, Danbury (TL 7933 0625)

Brenda Watkin

Introduction

This house was first recorded in 1988 and recently revisited as the result of further documentary research being carried out by the owner. The property was copyhold, and in the court rolls (ERO D/DBr. m34) for 1533, it is recorded that John Vessey 'held for himself and his heirs by free charter one tenement called Brokks tenement formerly Edward Vessey's with five crofts of land by estimation twenty acres of land...'. The position of the land was given as 'more or less lying in the hamlet of Rounsell between the park of the Lord ffitzwater called Woodham Walter Park to the north and land formerly of John Ulting called Ryphams land to the south...'. The land holding in 1533 was thus 20 acres. The original 15th-century house built on the site was a single cross-wing house with an open hall and in-line service end, a type frequently depicted on the late 16th-century maps surveyed by the Walker family, and representing 15.5% of the properties on those of their maps sampled by A.C. Edwards and K.C. Newton (1984). If the five crofts was the only land holding of the family, then it allowed for the improvement of the house in the 16th century.

Description of the building

The existing building clearly shows the upgrading and changes that have taken place through the centuries (Figs. 9 and 10). Apart from the loss of the service end, the original house has survived

virtually intact. The two-bay high-end cross-wing is built from well converted oak and divided into two rooms at ground floor with a stair trap giving access to the two-bay upper chamber. Access to the open hall was from the room containing the stairs and thus a separate private parlour or bedchamber was created of slightly smaller size. The roof of the cross-wing was of crown-post construction with hipped roofs to the north and south elevations.

The open hall is orientated east-west and of unequal bay division with the narrower bay housing the cross-passage. The positions of the hall windows are still clearly visible. The western wall contains the two service doors with three-centred arched heads and the flat-headed stair door. Bracing at the high end of the hall consists of paired braces falling from the central storey post of the cross-wing and housed into the mid rail and sole plate with a separate brace over the parlour door out to the jettied first floor of the cross-wing. Evidence also survives for the high-end bench in the form of peg holes across the studs of the high-end wall.

In the 16th-century the open hall was floored over and a stair tower built in the space to the rear of the hall and the side wall of the cross-wing. The entrance to the stair tower is now through a three-centred arched-headed doorway that could have been relocated from the original doorway between the hall and parlour. The transverse bridging joist of the inserted floor has a double ogee with step and hollow mouldings. The common joists are housed into it by soffit tenons with diminished haunches. In the narrow bay containing the cross passage, an opening 10ft. (3.08m.) x 3ft. 9in. (1.15m.) has been formed by the change of direction of the joists and the use of a clamped trimmer against the north wall. The transverse joists are tenoned and pegged into an axial joist and the side clamp, rather than the easier practice of lodging a free end on the clamp. The use of a fully trimmed opening for the insertion of a brick stack is unusual given that the brick jamb of the hearth would be positioned against the external wall.

At first-floor level, the insertion of a floor into a hall of one and a half storeys presents problems due to the low position of the tie-beam. The innovative solution undertaken at Brocks was the removal of the tie-beam and braces and the insertion, under the truncated crown post, of a high collar and shallow braces forming an A-frame roof.

Discussion

The conversion in the 16th century of the hall truss from the usual tie-beam construction to an A-frame truss resulted in the unencumbered use of the attic space. However, it is far from the standard solution of leaving the tie-beam in place thus limiting access, or cutting the tie-beam to provide a doorway. The

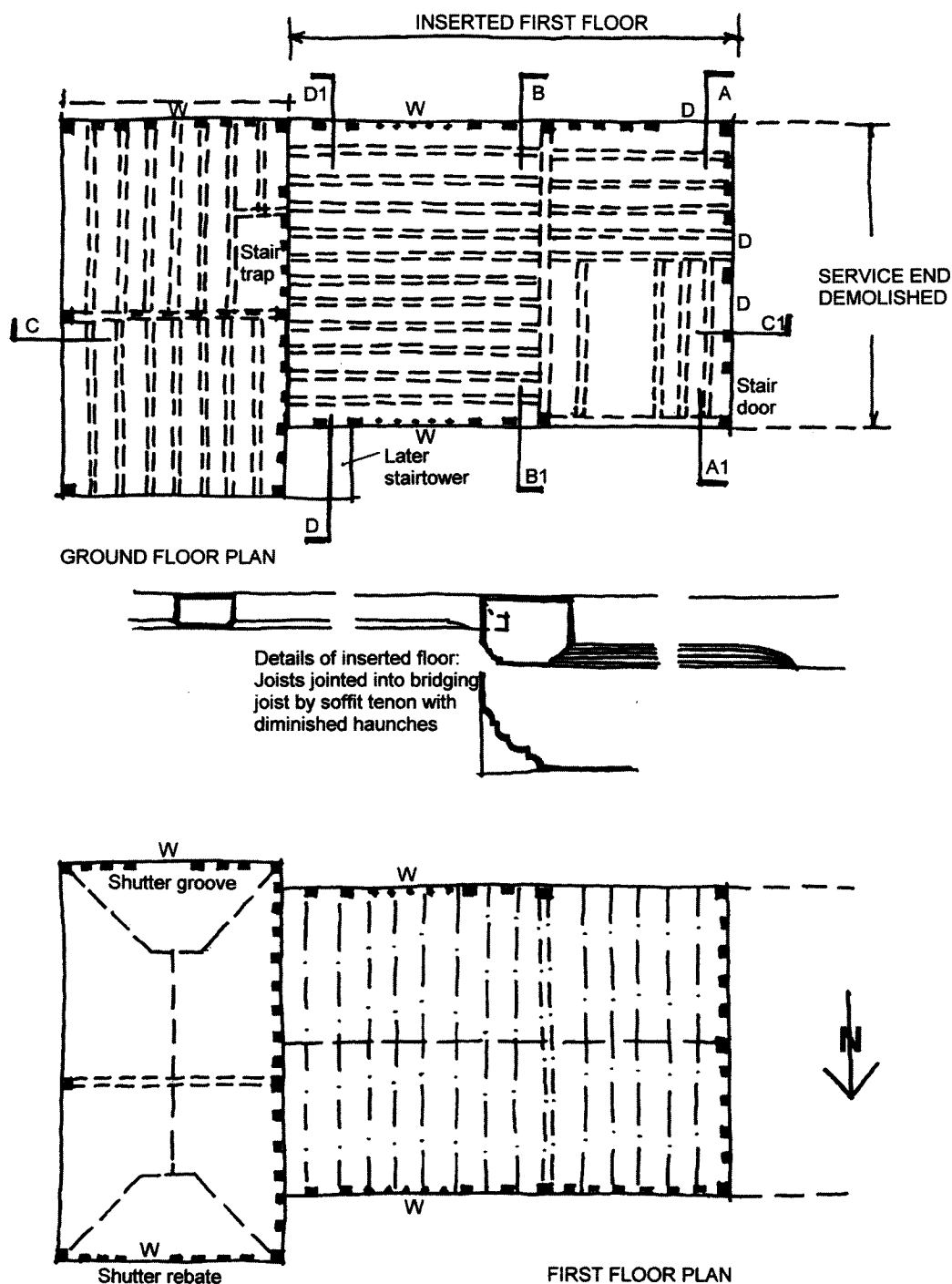


Fig. 9 Brocks Farmhouse, ground and first-floor plans.

use of A-frames, in first-floor chambers, is contemporary with the common use in the 16th century of the side-purlin roof, so this was an innovative solution to the problem.

The fully framed opening in the inserted floor causes problems in interpretation and it is suggested that it originally formed the base for a smoke hood. This would have been constructed from sloping timbers infilled with daub and parged internally with cow dung in a similar way to a

timber stack. It has long been suggested that the differential colouring on the Walker maps denotes a brick or a timber stack. However, in the research of smoke dispersal this is a simplified statement, as many timber stacks finish with a timber ring-beam below the height of the ridge and the stack then continues in brick. So in many instances a timber stack internally would have been recorded as brick externally. As there was no support back down to the ground using a smoke hood, the construction could be kept lighter by extending through the ridge

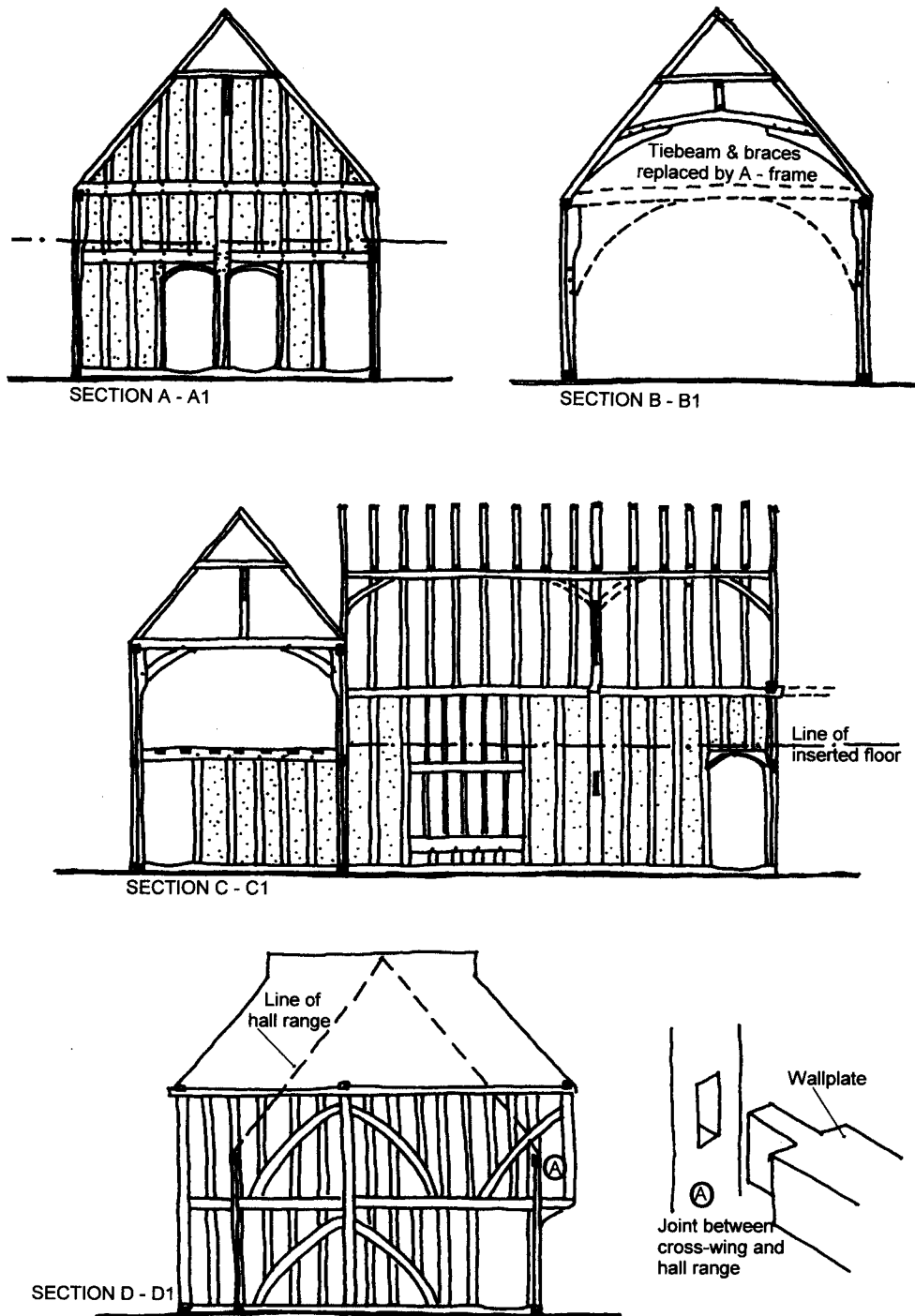


Fig. 10 Brocks Farmhouse, sections through the building.

with timber construction so that a percentage of timber stacks recorded on the Walker maps could also be smoke hoods. Unfortunately these features leave little evidence of their former existence, so until more conclusive evidence can be obtained of exactly how they were fitted into a building, one can only question and speculate. However the smoke was dispersed, the insertion of the floor and the A-frame modification in the 16th century represent a solution that has allowed the use of a medieval house through to the 21st century.

Acknowledgement

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The Elmbridge School, formerly the Fyfield Truants School, Ongar Road, Fyfield

Adam Garwood

The redevelopment of Elmbridge School, and particularly the conversion of the Grade II listed main school building (Abbey House) into 18 residential units, led to recommendations by the local planning authority that a survey, focusing upon the architectural, historic and sociological characteristics of the site, should be completed. The survey was undertaken by the Essex County Council Field Archaeology Unit in accordance with a brief issued by the Heritage, Advice, Management and Promotion Section of the County Council's Planning Division. The school is located 2.25km north of Chipping Ongar and lies within 30.2 acres of sports fields and recreation grounds, c.0.5km south-west of the village of Fyfield (Fig. 11).

During the early days of compulsory education truancy was sufficiently common, particularly in urban East London, to warrant local authorities building schools to which habitual truants might be sent. The West Ham School Board (founded as a result of the Education Act of 1870) commenced construction of the Fyfield Truants School in 1884. It was designed to provide 'excellent accommodation for 80 boys' and was purposefully sited at some distance from the capital to dissuade the boys from absconding and returning home. Due to a decline in the truancy rate during the late 19th century, Fyfield was converted into an Industrial School, a type of institution where children were sent so as not to be subjected to the 'less eligible' conditions and corrupting influences of the workhouse. These schools prepared the children for future employment by providing industrial training, general education and religious and moral tuition. It was hoped that, having acquired these industrial and social skills, the children would be able to lead a life independent of the poor rates.

The abolition of West Ham School Board in 1902 resulted in its replacement by education committees attached to the urban, district and county councils. In 1910, and in response to the Childrens Act of 1908, which broadened the range of offences for custodial care within the industrial school system, pupil and staff accommodation was increased (80 to 110 boys) with the addition of a new dormitory block and staff accommodation (Abbey Flat). Due to a marked downturn in truancy levels after the Great War, Fyfield closed as an Industrial School, to re-open in 1923 as the West Ham Residential Open-Air School, a joint educational and convalescent establishment catering for both boys and girls recovering from respiratory diseases. To facilitate this change, existing classrooms were converted to increase levels of fresh air and sunlight, a new open-sided dining hall

was built to the rear of the main building, and programmes of graduated exercise combined with open-air rest periods became a fundamental component of the open-air curriculum. In 1956 the open-air school closed, but re-opened in 1958 as a residential school after its acquisition by Essex County Council. Renamed Elmbridge during the 1980s, the school remained open to boys of secondary school age until its final closure on July 15th 1994.

Abbey House was built on an H-plan, and is formed from a composite of 2½, 2- and single-storey ranges (Fig. 12). The 2½-storey main range, housing the classrooms, assembly hall and dormitories was five bays in length and lay central to a pair of 2-storey single side bays and cross-wings. Corresponding single-storey classrooms project to either side of a formerly walled front courtyard, entered from the main drive through a brick archway incorporating an elegantly designed cast-iron tympanum.

Adopting an Arts and Craft style and conforming with a relatively formulaic design, the main elevations were built using yellow stock brick, but incorporated red brick to accentuate apertures, quoins, and as decorative detail on gables and stacks (Plate 2). Hard blue bricks were used to protect areas prone to wear and damp, such as angles, sills and plinths. Tall Dutch gables emphasise and

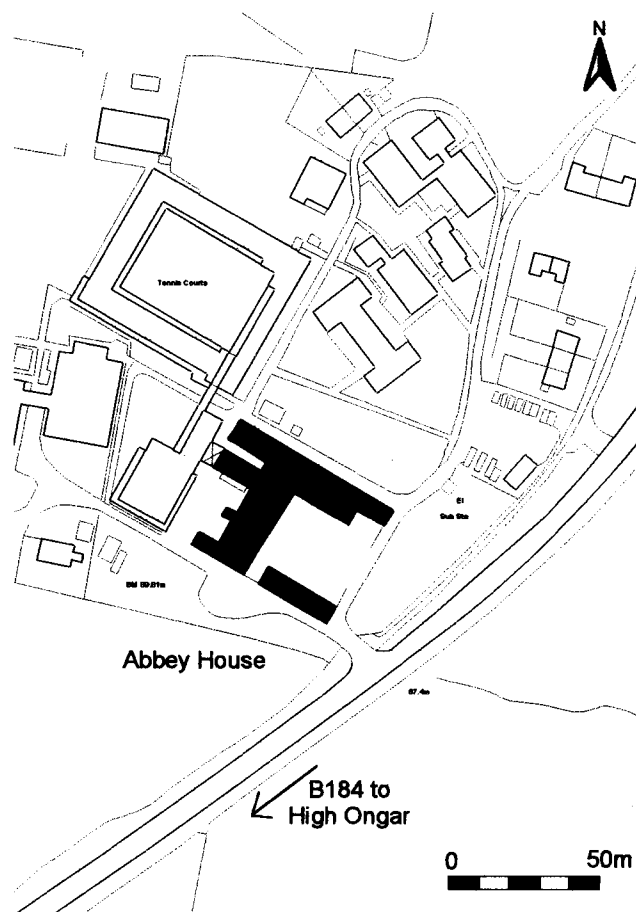
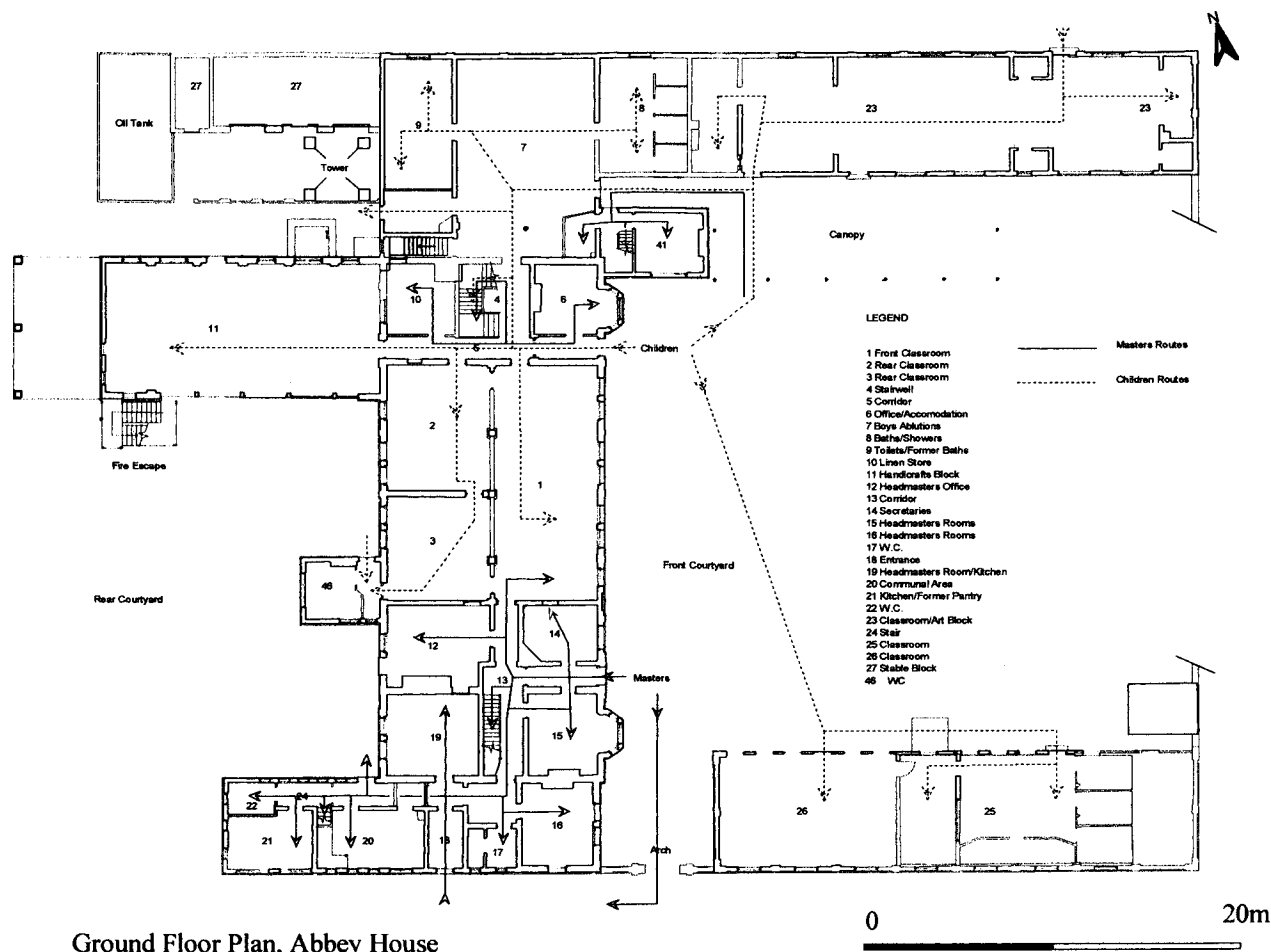
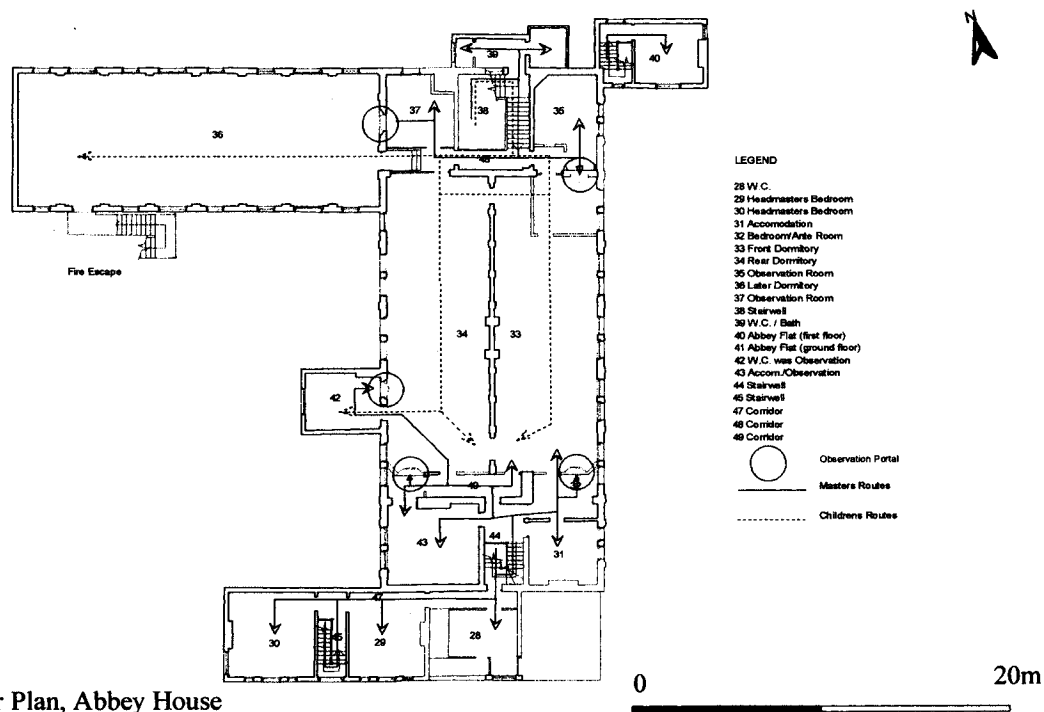


Fig. 11 Elmbridge School, location plan.



Ground Floor Plan, Abbey House



First Floor Plan, Abbey House

Fig. 12 Elmbridge School, ground and first floor plan.

ornament the principal and rear façades, while similar but slightly smaller gables enhance the roofscape in the side bays and master's quarters. Simpler triangular- and segmental-headed dormers betray the staff accommodation in the cross-wings. The original windows were a disparate assortment of horned sashes, of which the larger examples lighting the dormitories and classrooms incorporated integral hoppers and were opposite-set, to encourage cross-ventilation. The sills of the tall ground floor classroom windows had been lowered when the school was converted to an open-air institution. Ridge ventilators, light lanterns and open-sided classrooms, formed part of this later work. The hipped and tiled roofs were decorated using crested ridge bonnets and terracotta finials, while a clock turret with a leaded cupola and weather vane dominate the main roof. Later additions, including a two-storey dormitory wing, self-contained staff accommodation (Abbey Flat) and an observation block, were built in keeping with the original style but lacking the equivalent level of architectural finesse.

Although no original plans of the building were located and internally few original features survive, the building had not been adversely effected by successive development and therefore a fair representation of its original spatial layout remained. The ground floor of Abbey House was divided into three main areas with the headmaster's office, administration, masters' and staff rooms sited in the southern side bay and cross-wing. Central to the building (not including the classrooms that flank the courtyard) were classroom, assembly and handicraft areas, while the boys wash and boot rooms occupied the northern

bays (a water tank adjacent to the boot room, was reportedly filled by hand as a punishment for unruly boys). The first floor was principally devoted to large open dormitories, attendant staff rooms and the headmaster's private quarters.

The segregation of masters and boys is noticeable within the building by its division into master and staff only areas and by the separate routes of circulation maintained to provide privacy, ease of permeability, observation and to aid co-existence within this shared living space. As Abbey House remained all male, these routes were not further complicated by the introduction of female boarders. The two principal entrances from the front courtyard ably demonstrate this segregation. The higher status, more architecturally elaborate masters' entrance enabled staff only access to the staff and office areas of the southern ranges, the central classrooms and the private staircase to the masters' bedrooms and dormitory attendant rooms. Conversely the less embellished children's entrance gave access to the classrooms and handicraft areas, wash rooms and an open-well staircase that led up to the dormitories of the first-floor. The maintenance of this barrier would have been a prerequisite to successful co-habitation within the building and one it seems very unlikely that the children would be permitted to cross. Discipline, fundamental to the day-to-day running of the school, was maintained overnight by the use of observation portals (Plate 3) built into party walls between the staff attendant rooms and dormitories. This form of control by observation continued into the 20th century as portals were incorporated in the design of the later rear dormitory block and the



Plate 2 Elmbridge School, façade.

attendant rooms (subsequently converted to toilet blocks) attached to the main dormitories.

Although this type of building was constructed to a relatively standard plan, contemporary architectural fashion and the integration of contemporary views on medical practice, all had a significant bearing upon the design and development of the school, and ultimately the appearance of the building that survives today.

Great Dunmow, The Kicking Dickey Public House

Adam Garwood

A small washhouse at the rear of the public house was recorded prior to conversion. Some original elements survived including a galvanised copper and associated hearth. Water heated in the copper would be used in the day-to-day washing and laundering of linen and clothing associated with the running of the public house. Although buildings are shown on the site on the tithe plan (1840), the wash house and adjacent barn first appear on the 1st Edition Ordnance Survey (1875); this is the also the first cartographic evidence for the use of the building as a public house, then named the Railway Tavern.

Archive: Essex Record Office



Plate 3 Elmbridge School, boys' dormitory at first floor, showing observation portal on far wall.

The Bell (former public house), The Endway, Great Easton

M.C. Bridge and D.F. Stenning

This is a two-storey long-wall jetty house of conventional plan, with one bay partially removed and substituted by a c.1600 cross-wing. The service end retains traces of the buttery/pantry partition, and elsewhere are the moved remnants of a muntin and rail screen, including the moulded jamb of the hall door. The roof is gabled with wind-braced side purlins, reduced principal rafters, and inclined struts over the solar partition. Of especial interest is the truss over the hall chamber, which is of A-frame type, with arch bracing to the lower of a pair of collars (Fig. 13). Elements of this roof (a purlin, collars, principal rafters) have been tree-ring dated to 1525-49, with a ceiling joist below giving an end date of 1527/8, which is likely to date the entire structure (Bridge n.d.). Essex A-frames tend to be late 16th and 17th century in date, and so this is a remarkably early example.

This roof type was clearly employed to provide an impressive chamber over the hall, at a time when it is uncertain what function this room would have served. The issue of roof frame origins. Rayne Hall has similar trusses, possibly of similar date, but there the posts have extended jowls and the roof has simple crown posts. A high status roof over the Red Lion at Billericay has a series of elaborately moulded A-frame trusses, perhaps of the late 15th century. Even earlier, and in the same town, nos. 6-10 Norsey Road utilises A-frames, with extended jowls to gain headroom through closed partitions. At Hosdens, Great Maplestead, A-frames are again used to gain headroom, but the lower binding timber is a halved collar, rather than a tenoned tie-beam (Watkin 2000). By the late 16th century, the roof had become popular, and Rebow House, Head Street, Colchester, is a grand example. The later A-frames of the 17th century tend to be unrelated to the posts below (e.g. the 1624 wing at Beeleigh Abbey, Maldon).

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Oak House, Bridge Street, Great Yeldham

Brenda Watkin

Introduction

Oak House is the eastern section of an L-shaped building now divided into two tenements. From the

east the front elevation reads as a typical double cross-wing house with a central two-storey hall range. From the west the northern cross-wing has been extended to form a range to the rear with two smaller gabled extensions, one possibly a former stair tower, and the other overlapping the southern cross-wing (Fig 14).

The southern cross-wing

The frontage range is clearly of two builds as evidenced by the double storey posts demarcating the southern cross-wing and the hall range. The northern wall of this cross-wing is infilled with studs whilst the southern frame of the hall is an open truss with curved braces from the storey posts to tie-beam. It is unclear whether the cross-wing or the hall was built first. However, both must have replaced earlier structures.

The southern cross-wing was originally jettied on the eastern elevation and constructed with the traditional close studded framing of the area. A large oriel window was positioned centrally in the front (eastern) elevation and echoed in form and size at first floor level. A diamond mullioned window is positioned in the northern part of the rear (western) elevation. A shutter groove for the window was cut into the underside of the midrail. Due to the proximity of the window to the corner storey post there were two shutters sliding to each side of the window. The present brick stack now prevents the use of the shutter run on the southern side and, given the presence of the peg positions in

the midrail, it is clear the stack is a later feature. Originally the new room would appear to have been unheated but why was it necessary to position the rear window off centre? This usually happens when there is a rear stair trap giving access to the upper chamber, but no trimming of the floor joists was seen and the floor construction appeared complete and contemporary.

The floor joists are chamfered with lamb's tongue stops and are of flat section. The use of the lamb's tongue stop in Essex has been documented to c.1564 (McCann 1985). They are housed into the transverse bridging joist with soffit tenons and diminished haunches. The soffits of the bridging joist and the south midrail have been hacked back making it difficult to see if the ground-floor room was divided or if the midrail now within the building was the original end wall. The mortice of a shouldered door head survives in one of the studs in the northern wall but it is difficult to tell if the stud or the doorway has been moved. The quality of the timber and features give the impression that the cross-wing was originally built to perform the function of a parlour but if this was the function why was it unheated? With the loss of the soffit of the bridging joist, it is not possible now to tell if there was a division on the ground floor and if the function was as unheated service rooms.

As previously stated there is no evidence for access to first-floor, via a framed stair trap, within the southern cross-wing and access by a stair tower appears unlikely. The first floor northern wall of the cross-wing appears to have been an open frame later infilled with studs cogged and nailed into place. Was the open truss giving access to the previous building and the wall was infilled at a later date once the rebuild had taken place?

Hall and northern cross-wing

The jetty is carried from the southern cross-wing across the hall and the northern cross-wing. The hall range is divided into two bays, with the corner of the northern cross-wing marked by a storey post on the rear (western) elevation. The original division pattern of the ground floor is now difficult to determine again due to the loss of timber from the soffit of the bridging joist marking the southern extent of the cross-wing. The joists in the hall range are unchamfered whilst the bridging joists are chamfered with lamb's tongue stops. Nail holes to the underside of the common joists and the bleached lines from the lime plaster show that originally the ceilings were plastered. No stack position was found to heat the hall but evidence for a window was found in the rear wall of the bay adjacent to the northern cross-wing. The axial bridging joist in the northern cross-wing has an ovolo moulding that is similar to that used on the window mullions. The change of

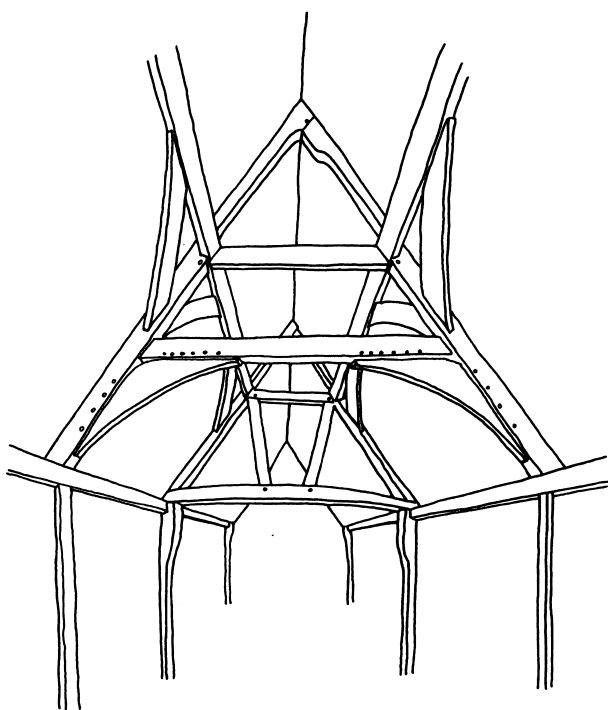


Fig. 13 The Bell, Great Easton, roof over the upper chamber.

moulding suggests that the hall and cross-wing were divided by a stud partition (evident on the RCHM survey of 1914), but with the loss of the soffit of the transverse bridging joist the partition and door position cannot be assessed. The common joists are housed with shouldered soffit tenons with diminished haunches and were originally plastered over as in the hall range. This is a common feature from the mid 16th century, and accords with the use

of display glazing in the form of oriel windows and frieze lights which made a greater degree of reflected light possible. The cross-wing is heated by a lateral stack, and has oriel windows with flanking frieze lights in the north and east elevations. These windows have ovolo mullions and are glazed with diamond-shaped quarries.

At first-floor level the hall chamber comprises two unequal bays, although the central tie-beam and

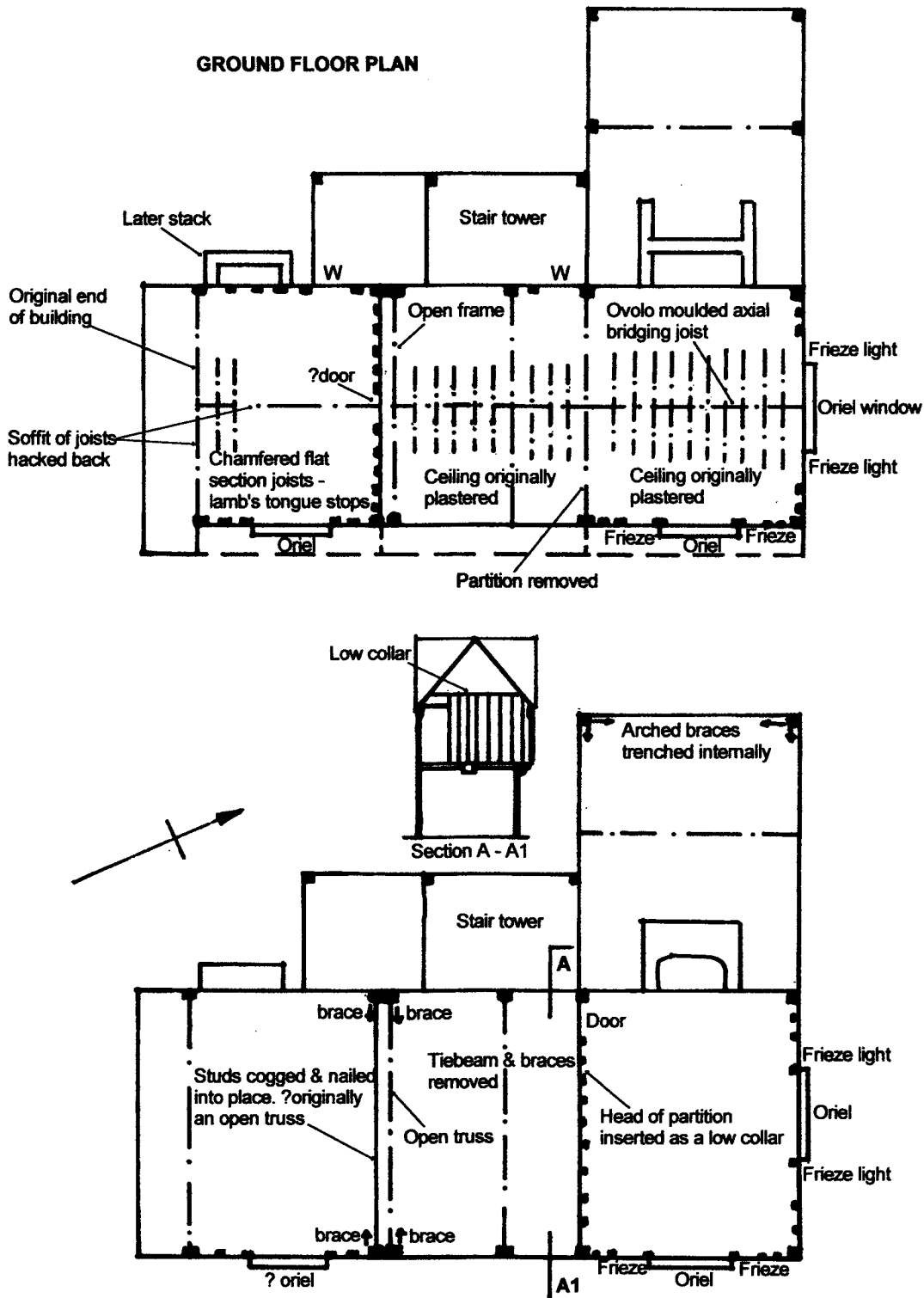


Fig. 14 Great Yeldham, Oak House, floor plans.

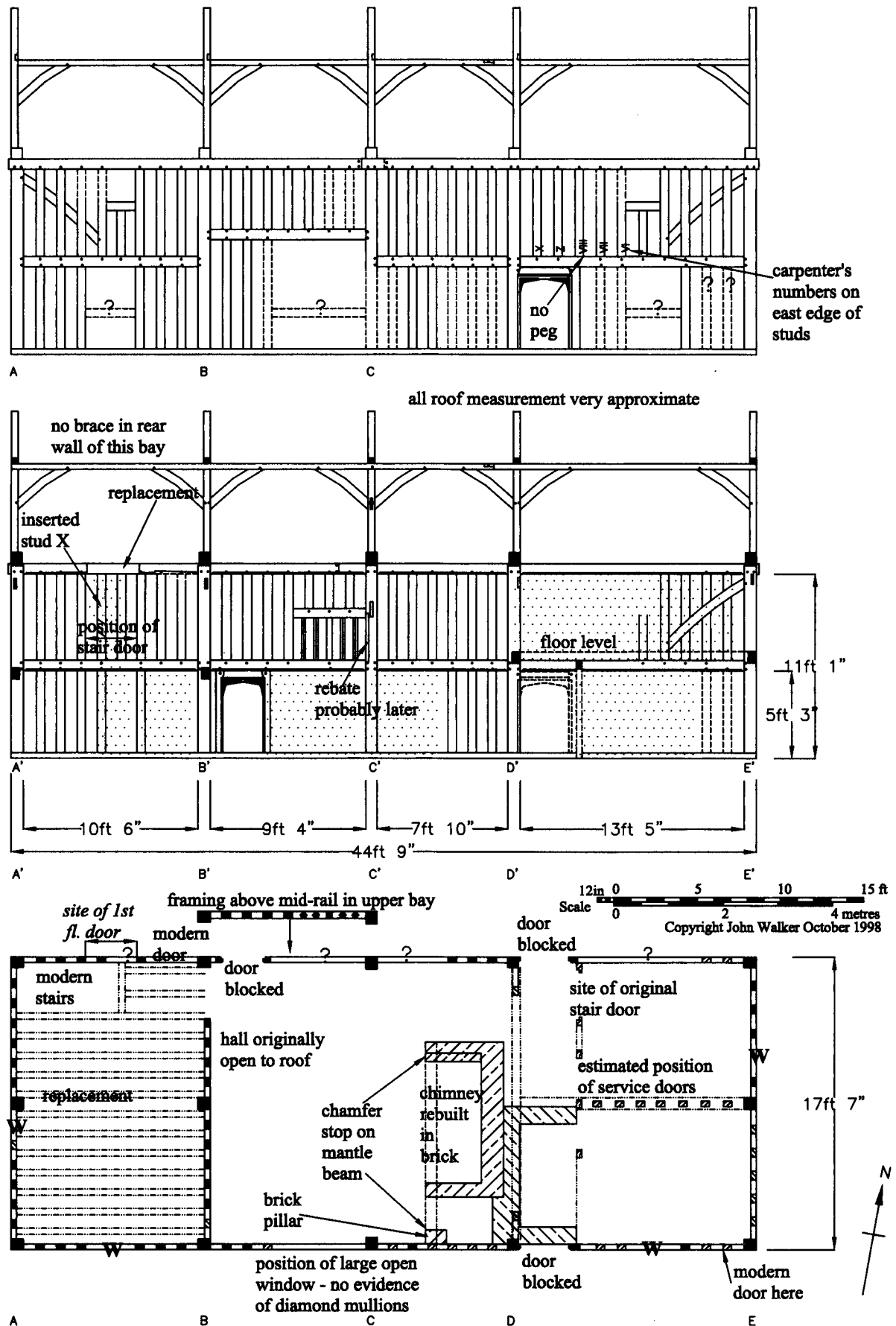


Fig. 15 Old Cottage, Little Chesterford, plan and elevations. Stipple on the elevations indicates areas of concealed walling. Hatched studs on the plan are missing.

braces have now been removed. The close studded partition forming the southern wall of the cross-wing has been set so that the head of the wall is above the wall plate level. This is an unusual form of construction as the framing of a first-floor partition usually consists of studs morticed into the underside of a tie-beam and not into a low collar. However it does give increased head height to the door head and suggests that the carpenter was not constructing the cross-wing as a separate structure but creating a 'feature' gable to the front elevation. The parlour chamber was heated at first-floor level, and the oriel/frieze windows with leaded lights replicated in the same pattern as on the ground floor.

A rear wing extended from the northern cross-wing and at first floor has slack pitched internally trenched arched braces from the jowled storey posts. This could have functioned as a kitchen and service chamber instead of the normal cooking function provided by a heated hall. The stack is wide enough to have contained back-to-back hearths and the stair tower, placed to the rear of the hall range, would have provided covered access at both ground and first floor level.

Discussion

Although the building can be classified as domestic the plan form varies from the expected norm of unheated service rooms against the hall with large cooking hearth and access through to a heated parlour. The southern cross-wing appears to be unheated but has status features such as an oriel window. The hall also appears to be unheated and so the cooking function could have been carried out in the rear wing. The heated parlour in the northern cross-wing is a classic example of status hierarchy with oriel windows flanked by frieze lights, all glazed, and a plastered ceiling that could have been decorated. Access to the first floor appears to have been via the stair tower to the rear of the hall and this would appear to have also been the method of access to the southern cross-wing that would normally have had its own independent access.

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Old Cottage, Little Chesterford

John Walker

Old Cottage (map ref. TL 515 418) is a timber-framed house built with an open hall heated by a chimney stack backing on to the cross-passage. It faces south and has a medieval three-unit plan of, from east to west, two service rooms with single chamber above, undershot cross-passage, open hall,

and unheated parlour with chamber above (Fig. 15). However the service chamber may have had its own fireplace, and the stairs for the chamber over the parlour were probably in a stair tower, now gone, entered via a door in the rear wall at the high end of the hall. The hall window at the front may have been glazed, but that at the back of the hall and all the other windows were unglazed diamond mullions. The building is 16th century, probably built in the first half, or at the latest the third quarter, as it has a crown-post roof.

Later developments included flooring the hall, and making the two service rooms into a single room heated by a brick fireplace built on the back of the hall chimney stack, blocking the cross-passage. The size of the fireplace suggests the old service rooms became the kitchen. This new stack also provided a fireplace for the service chamber replacing any earlier one. It is not clear where the new front door was now that the cross-passage had been blocked. It may have been at the rear through the old north cross-passage door opposite the side of the chimney stacks, making a lobby entrance. The entrance today is at the south-east corner as shown on the plan.

The building was examined in May 1998 when the front plaster had been stripped off, exposing the timber-framing of the front wall.

The open hall

There was clearly no floor in the hall originally as the front window rises above the level of the floor of the chambers at both ends, though its head is below the wall plate. The rear hall window is similar (Fig. 15). The upper floor is therefore a later insertion, as are the first-floor doorways into the hall chamber. The roof is not smoke blackened, which shows that the hall must have been built with a chimney stack. The hall's low end truss DD' has an opening on the first floor, further supporting this interpretation. The shape of this opening indicates the south side of the stack rose vertically against the wall through the ground and first floors. Normally the side wall of the chimney slopes in towards the centre unless there is a fireplace above. Thus this large rectangular opening raises the possibility that the service chamber was built with a fireplace. Also the tie-beam is stop chamfered across the opening on the service side (Fig. 16, DD'). Against this, the chimney stack inserted into the medieval open hall at the Old House, Rochford, Essex, rises vertically against the front wall up to the wall plate before sloping towards the centre. This enabled decorative recessed arches to be built into the brickwork above the fireplace. However this medieval wall plate is some 2-4ft. (0.6-1.3m) lower than in Old Cottage, so is not entirely conclusive. An additional factor, which is not entirely consistent with a first-floor fireplace, is that the stud spacing in the service chamber is

1½in. (40mm) wider in the east end wall and the hall side of the service chamber compared with the front wall, suggesting this is not the best chamber.

The present chimney has been rebuilt. There are many different sized bricks in what survives today. The original, or if not, a very early, fireplace mantle beam survives. It has an apotropaic mark scribed with a compass. Although none of the stops can actually be seen, it is clearly stop chamfered along its edge for a fireplace opening of around 11ft. (3.35m). This has been shortened in the present fireplace by rebuilding the south jamb to give an 8ft. (2.44m) opening. The old mantle beam is retained continuing beyond the fireplace, with its south end resting on a brick pillar. There is no evidence visible that this beam was once part of a timber chimney.

Stairs

It is suggested the stairs to the parlour chamber rose along the back wall in a stair tower. The stairs for the service chamber rose from the back of the cross-passage (Fig. 15), the usual medieval position. There is no evidence for a stair trap in a similar position in the parlour. There is an original door in the north wall at the high end of the hall (Fig. 15, A'E'). As this is for a door opening outwards to the north, there must have been another structure beyond it, either a wing or a stair tower. The corresponding first-floor entrance into the parlour chamber must have been in the middle of the north wall of the chamber as shown on the elevation A'E'. This wall has no brace, and the two centre studs are insertions or replacements. Stud X, the western one of the pair, is pegged to the mid-rail, though the peg is slightly

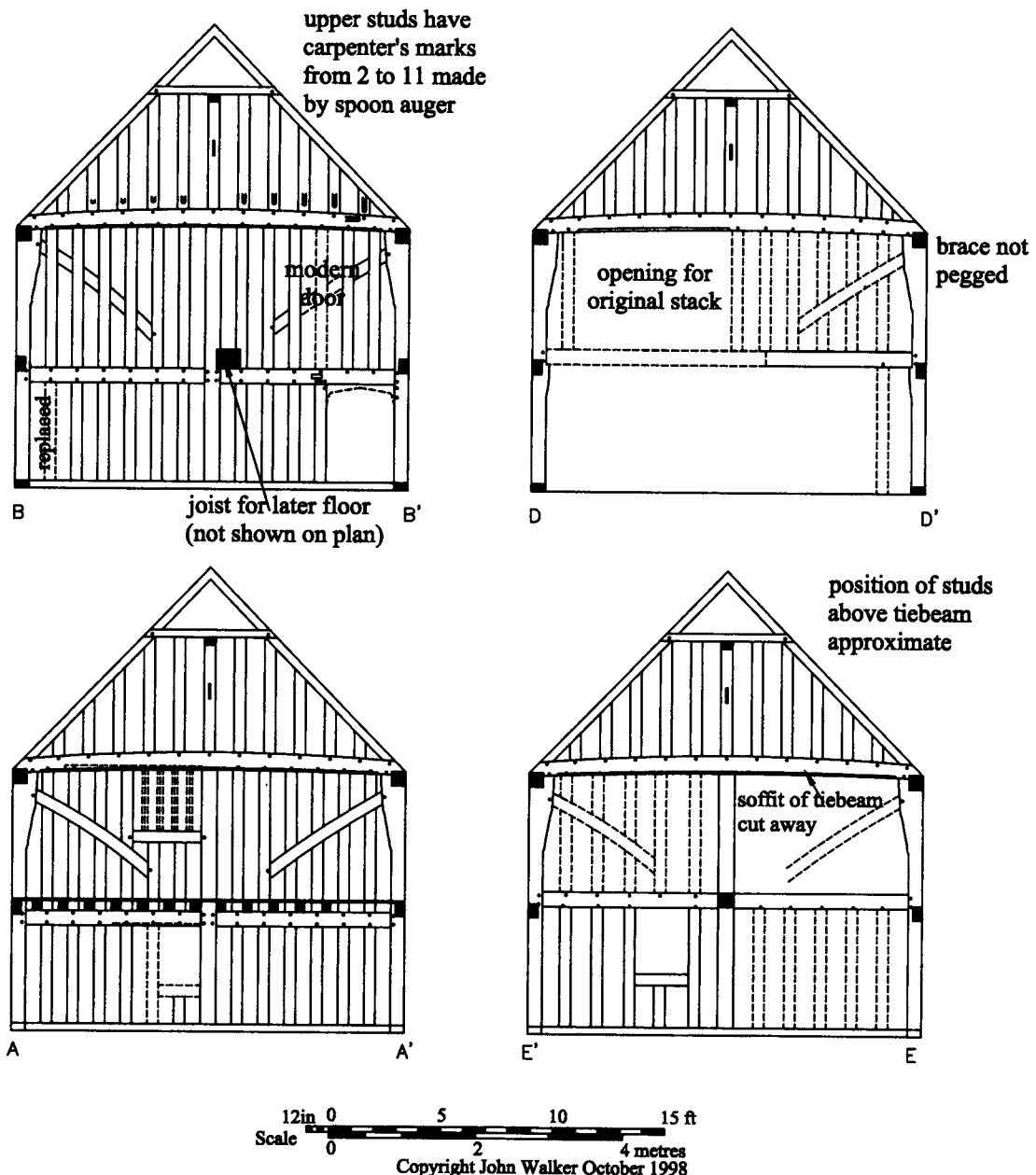


Fig. 16 Old Cottage, Little Chesterford, sections.

larger than those used elsewhere in the building. It is not possible to see if the eastern stud is pegged, but it is narrower than other studs. This provides a 3ft. (0.9m) opening, much the same as for the front door and the door from the hall to the parlour, though that from the hall to the stair tower is narrower, 2ft. 6in. (0.75m). There is no evidence visible inside the building on the studs flanking the opening for a doorhead, but if there was not a door here, then there appears to have been no way into this upper chamber.

Windows

The front (south) window to the hall was different in size, and style, to the rear one. The latter was interrupted by the mid-rail, and surviving is a six-light diamond mullion window rising 2½ft. (0.75m) above the mid-rail (see elevation A'E'). This probably continued below the rail, the soffit of which is covered. However on the front, the mid-rail in the high end bay was raised 1½ft., and the window was a complete unit below it, uninterrupted by a mid-rail (Fig. 15, AE). It was not a diamond mullion window as there are no mortises in the soffit of the raised rail, but unfortunately nothing else survives of the window opening. It was smaller than the rear window, and raises the possibility that it had glass panels. All the other windows in the house had unglazed diamond mullions.

Carpenters' marks

Marks made by a spoon auger are visible on the studs above the tie-beam in the truss at the high end of the hall ((Fig. 16, BB'), numbered from 2 to 11.

The only marks visible on the tie-beam are for stud 11. Roman numerals were used on the eastern inner edge of the studs in the front wall of the service bay (Fig. 15, AE). Interestingly 9 is represented by Z; sometimes this is used to denote 10. Stud VIII is not pegged to the mid-rail, but the numbering showed it to be original. Marks could not be seen, or found, on studs elsewhere along the front wall.

Timber-framing

The building is 44⅓ft. by 17½ft. wide (13.6 x 5.3m). The soffit of the wall plate is 11ft. (3.35m) above the ground, but the height of the doors, 4½ft. (1.4m), suggests the building was originally at least 1½ or 2ft. (0.6m) higher. It is built of oak, and has close studding with stud-to-stud braces halved across the inner face of the timbers, doors with depressed four-centred arches with decoration in the spandrels, and a crown-post roof with very narrow cranked braces, the 16th-century type (Fig. 17). In the open truss of the hall, the crown post is octagonal. The scarf joint in the wall plates is a face halved and bladed scarf, and from the peg position appears to have both blades housed. This is the 16th century form; in the 17th century, or possibly slightly earlier, the housing was removed.

Tendring, Hall Farm (TM 143 243)

Andy Letch

A programme of building recording was undertaken prior to the conversion of the central area of the farm to office use. The survey found that the

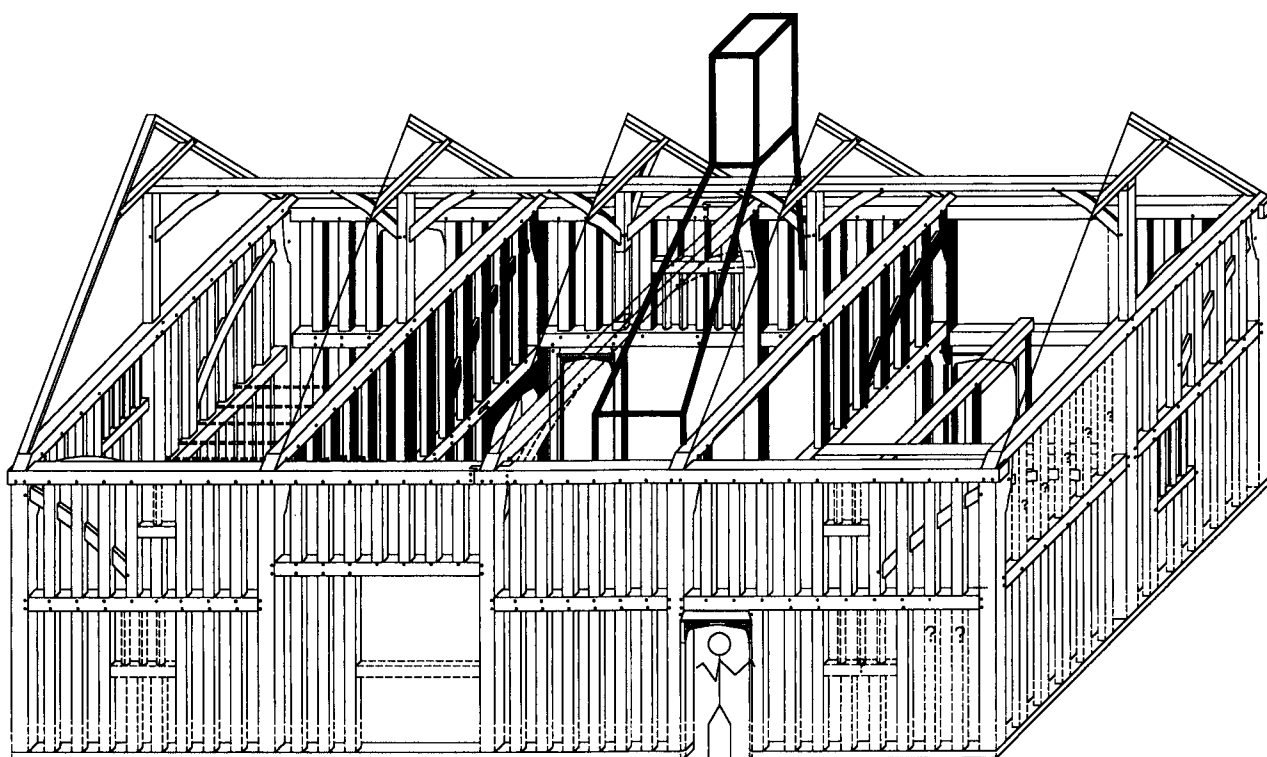


Fig. 17 Old Cottage, Little Chesterford, reconstruction of the timber frame.

buildings in this part of the site were Victorian in origin, elements of a modest model farm complex based around two large stockyards. Another building to the east of the former granary appeared to be earlier, possibly dating to the 18th century, and showed signs of former human habitation.

Archive: Essex Record Office

Thorpe-le-Soken, Thorpe Maltings (TL 1780 2135)

Adam Garwood and Andy Letch

An historic building appraisal was carried out on the Grade II Listed maltings ahead of conversion. The maltings, built in the late 1870s, are important for two reasons. Firstly, their association with Robert Free, a nationally important innovator in the industry, and secondly the rarity value in combining the production of both pale and crystal malt on the same site. Despite technological changes, some original elements of Free's production techniques survive, including all five kiln furnaces (four still retaining their damper mechanisms), the steeping tank, evidence of line-shafting and hatches within many of the tiled growing floors. Much of the building's original spatial integrity has remained, although the building in general has suffered badly from the elements since the removal of much of the slate roofs. In particular, the second and attic floors of Malting No. 1 are in a state of collapse

Archive: Essex Record Office

Tilehouse Farm, Willingale Doe

John Walker

Tilehouse Farm is situated in the hamlet of Birds Green, on the northern edge of the parish of Willingale Doe (map ref TL 587 088). It is a timber-framed lobby-entrance house of two main building phases, part 16th and part late 16th/early 17th century. The southern part is a 16th-century service wing, originally jettied to the east towards the road. The hall, which was on its north side, was replaced in the late 16th/early 17th century by the present two storey and attic range (Fig. 18). This originally consisted of two bays containing two rooms on each floor, but the northern bay was destroyed at some time in the past.

The 16th-century service wing

This is a splendid example of the upgrading of accommodation in the 16th century as farm incomes rose. It was built against an earlier building on its north side, probably an aisled open hall heated by a central hearth. The wing, jettied to the front, is of two bays plus, unusually, a smoke bay at the end (Fig. 19). It was divided on the ground floor into two rooms and was entered from three doors in the

centre of the north wall. The centre door gave access to a stair trap and opened outwards confirming it was a stair door. The two flanking doors opened inwards into each of the rooms. The rear room may have been a kitchen as it has a 4ft. (1.2m) smoke bay at the back. The roof above this bay is smoke blackened. The front room may have been a parlour, rather than a service room, as it had a large canted bay window to the front under the jetty. This could have been similar to that at Clavering guildhall. The room also has a very small single diamond-mullion window between two studs in the south wall. It is possible this room was heated by a fireplace in much the same position as the present brick stack as it is not possible to see whether there were originally timber studs in this part of the wall. However, this is unlikely as it would have been a little awkward with the three doorways beside it.

Upstairs consisted of two rooms. The rear room was entered directly from the stairs, and the front room through a door in the partition at the top of the stairs. The roof is a clasped side purlin with diminished purlins and windbraces. Only the area over the smoke bay is smoke blackened as the partitions rose to the apex of the roof.

The wing is nearly 20ft. 8in. (6.3m) long on the ground floor, and the three doors are exactly in the centre of the wall of the cross-wing. In medieval houses with two service rooms, these are usually in the centre of the low end wall of the open hall. This raises the possibility that the medieval hall was 20ft. 8in. (6.3m) wide; in which case it may have been aisled.

The wing is built with jowled posts and close studding at around 1ft. 8in./1ft. 9in. (500-540mm) centres, with tension bracing halved across the exterior of the studs. The exact date of the appearance of close studding is not certain, but it became common in the early 15th century. External tension bracing continued into the 17th century, but started to change to being halved across the inside of the studs, and thus not visible on the outside of the house, in the late 15th/early 16th century. The side-purlin roof was not widely adopted in Essex until around the middle of the 16th century, the crown-post being the ubiquitous form until then. The scarf joint used is the edge halved and bridled type, which first appears around 1375 and continued until at least the 1570s, gradually being replaced by a new form, the face halved and bladed scarf, a version of which appeared early in the 16th century. The floor joists are laid on their widest edge, and have centre tenons with housed soffit shoulder, a form found in the 15th century, but less common after the first quarter of the 16th century. It thus seems likely that the wing is built around the middle of the 16th century, possibly slightly before given the scarf and the floor joist joints, though this implies a relatively early use of the side purlin.

The 17th-century hall range

The old open hall would probably have had a chimney stack inserted into it either when the cross-wing was added or slightly later in the 16th century, based on evidence from other buildings. But its side walls would have been very low if it was an aisled hall, and in the late 16th/early 17th century it was upgraded to the newly fashionable lobby-entrance house. A brick chimney stack was built against the north wall of the cross-wing with four fireplaces providing heating for the rooms on both sides on both floors. The cross-wing's jetty was underbuilt by pushing the front wall out level with the upper floor - the old framing still survives - and the medieval hall was replaced by a timber framed two-storey building built flush with the front east wall of the cross-wing. This new range consisted of a chimney bay to the south and two full bays to the north, divided into two rooms on each floor. It had an attic, and the upper floor and roof were reached by stairs to the west of the chimney stack, in much the same position as today's stairs. The front door opened into a lobby on the side of the chimney stack. The northern bay, which no longer survives, was entered from doors on both floors in the north wall of the surviving bay (Fig. 19). The surviving ground floor room, but not the chamber above, was lit by a large window in both side walls flanked by smaller frieze windows. All these windows were glazed. In effect

the house was turned round and the front room of the old cross-wing became a heated parlour, with a hall to the north in the surviving bay of the 17th-century building, and an unheated service room beyond that in the lost bay.

The roof is of clasped side purlin type, with diminished principals. The floor joists have diminished haunch soffit tenons, which first appeared around 1500 and rapidly became the almost standard floor joist joint in Essex until the mid 17th century. The common joists are laid on their narrow edge, not on the flat side as in the Middle Ages. The ceilings on both floors of the surviving bay are divided into three with two principal bridging joists, rather than a single central one.

Dating

The earliest lobby-entrance houses in England are thought to be those built by Bishop Vesey in around 1490 for his tenants at Sutton Coldfield, Warwickshire (Cooper 1999, 116). In Essex this form is not widely adopted until around the 1570s, and continued to be widely used well through the 17th century. Tilehouse has a number of features which suggest it is late 16th or early 17th century. Attics are generally a later development in Essex: some probably date from the late 1570s, but they are more common after 1600. Similarly some early

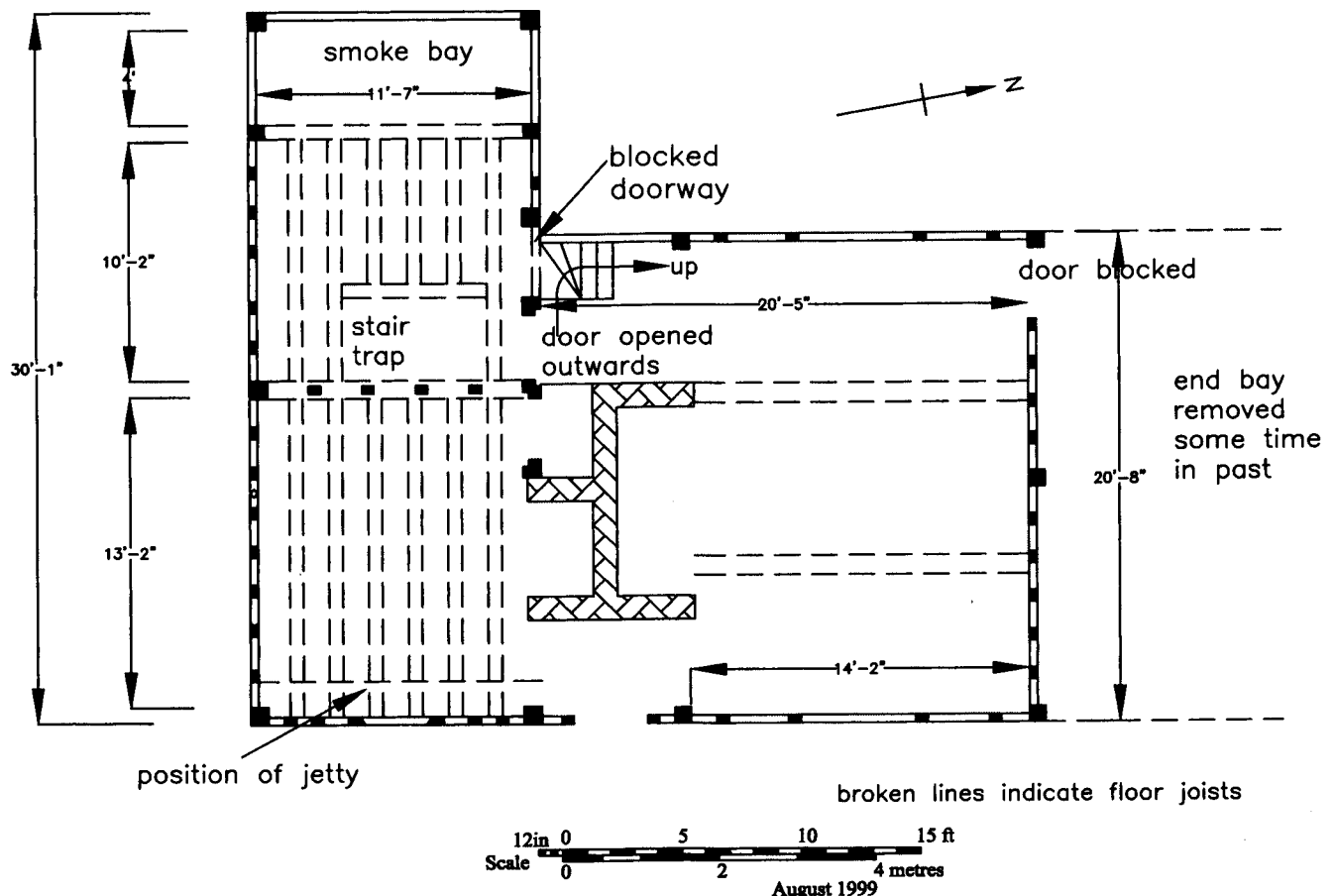


Fig. 18 Tilehouse Farm, Willingale, ground plan.

lobby-entrance houses have only the ground-floor rooms heated, the heating of upper rooms becoming common during the 17th century, though there are a number of 16th-century examples. The timber framing has tension braces halved across the inside of the studs and the posts are jowled, both of which features were steadily being replaced from the mid-16th century by new forms, though the overlap lasted well into the 17th century. The laying of the joists on their narrow edge started from the mid 16th century. The chamfer stop on the principal joists is a bar stop with a notch behind; the notch tends to be a 17th century feature.

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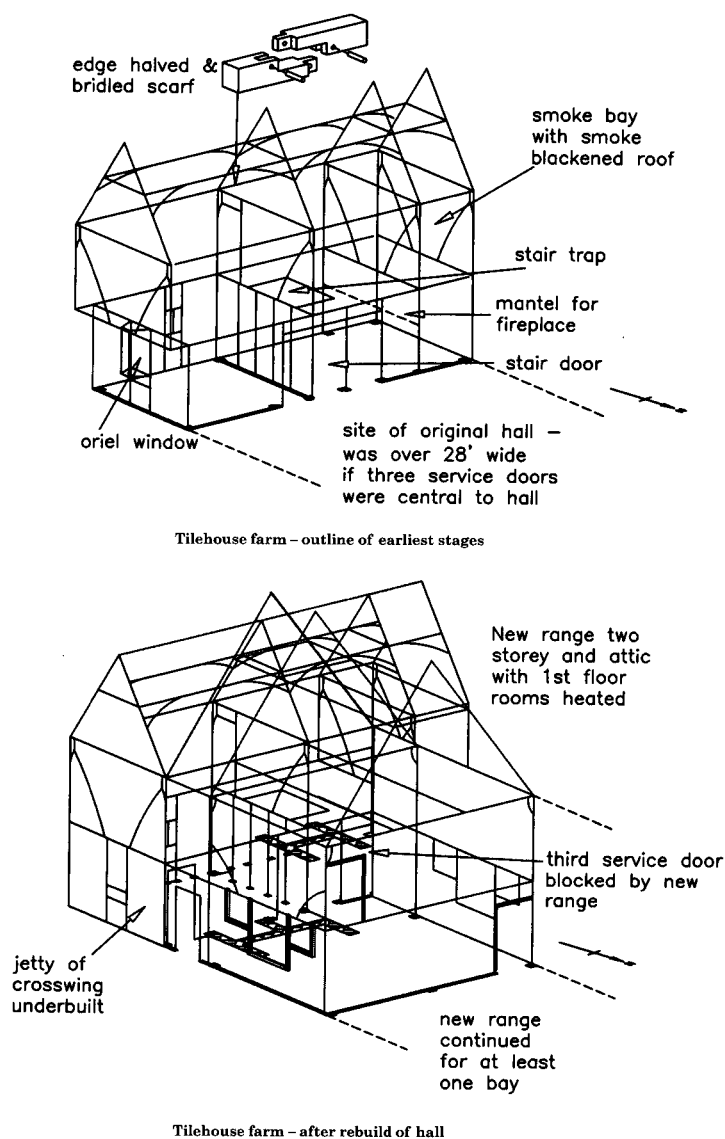


Fig. 19 Tilehouse Farm, Willingale, diagrams to explain the development of the house.

Church miscellany

edited by D.D. Andrews

These reports summarise the results of observations made at churches in the course of building work. More detailed reports can be found in the Essex Heritage Conservation Record at County Hall. Thanks are due to incumbents, parochial church councils, contractors and architects, without whose collaboration and assistance this work would not be possible.

Abberton, St. Andrew

D.D. Andrews

St. Andrew's is a small church comprising a 14th-century nave, 16th-century tower, an 18th-century porch, and a chancel entirely rebuilt in the 19th century. In 2001, repairs were carried out to the chancel and nave roofs, and to the general fabric of the church.

The chancel is built entirely of 19th-century brick (230 x 110 x 70mm), apparently built in two skins although laid to English bond. The roof is of softwood, with clasped purlins and a ridge piece. The collar of the medieval roof is preserved in the east side of the chancel arch. Traces of the Victorian decorative scheme were evident on the chancel walls. There seems to have been a red dado with a frieze above it, and then a pinkish white finish above. At the top of the wall, there was a simple naturalistic foliate frieze in red, of which small portions were uncovered. This decoration had been covered with limewash, and then with the existing greyish colour, possibly Sandtex, which is to be found throughout the church. The bottom of the chancel walls had been replastered to a height of about 1.5m against damp.

The east wall of the chancel is no longer bonded to the north and south walls, the bricks joining these elements having been snapped by movement in the structure. An iron tie has been inserted in the south-east corner, and there may be one in the north-east corner. The south wall has also moved away from the chancel arch, to which it was rather roughly keyed. It was concluded that the dramatic movement in this wall may have been due to the 1884 earthquake, which implies that the rebuild in brick was earlier than that date.

Where revealed, the nave masonry is a rather distinctive mix of ill-sorted and only roughly coursed flints, field stones, and some larger stones which include septaria. Externally, the masonry facing is probably original, as what looks like medieval mortar appears beneath modern repointing. However, the presence of bricks of various dates raises the possibility of there having been refacing.

There is extensive cracking round the top and sides of the plain chamfered chancel arch. On the south side of the arch, the masonry looks possibly different to that of the nave. A difference of build (the chancel arch being a later insertion), rather than subsidence, might explain the crack at the base of the wall between the arch and the south wall of the nave.

At the east end of the south wall of the nave, a void was found in the wall thickness (Fig. 1). It had been blocked in Tudor brick and the occasional piece of stone, and was inspected through small holes in the blocking. Its full size and shape remained uncertain, but it is plastered, with a curving back, about 500mm deep, the bottom of it about 850mm above floor level and the top at least 2.75m above floor level. Recesses or niches representing aumbries, piscinae, or stoops, are commonly found in church walls, especially in this position at the end of the nave or aisle where there would have been an altar. However, they are much smaller than this example, for which it is difficult to propose a satisfactory explanation. Possibilities are that it housed an altar or a shrine or a tomb, or helped accommodate a flight of steps, presumably in wood, to the rood beam. Whatever it was, the Tudor brick blocking leaves little doubt that it was removed by the Puritan reformers at the Reformation.

Above this recess there is a beam which has been cut off. This was a tie-beam, not a normal rood, forming the bottom of the truss at the east end of the nave. The roof is ceiled and could not be examined, but it seems to be a plain rafter couple construction. The bottom of the couples is concealed by lath and plaster, so that the ashlar pieces cannot be seen. It looks as if there may be no inner wall plate or fascia; if there was, it may have rotted away.

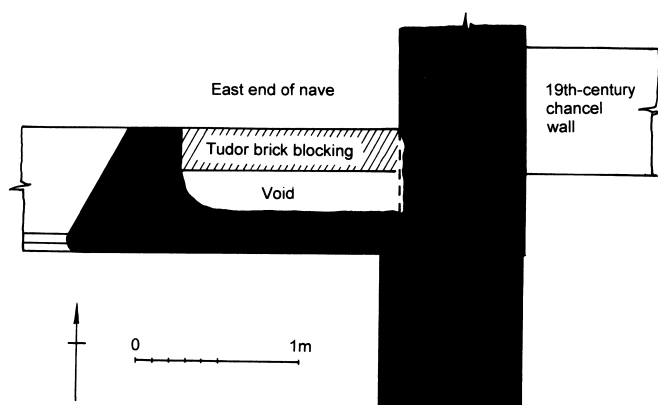


Fig. 1 Abberton St. Andrew, plan showing void found at the east end of the south wall of the nave

There is a thin wall plate running longitudinally down the middle of the wall beneath the sole pieces. The iron tie bar against the chancel arch which was inserted to do the job of the truncated tie-beam was attached to this plate on the north side. The disintegration of the plate must explain at least in part why the tie bar is no longer in tension. The profile of the truncated tie-beam, and of the surviving tie at the west end of the nave, is narrow section, suggesting that the roof is late 16th or 17th century in date.

Doddingtonhurst. The repair of the belfry

D.D. Andrews

The renewal of the sole plates and repair of the main posts in 2001 presented an opportunity for the re-examination of this important belfry. It was illustrated by Hewett (1964) who attributed it to the 13th century. An attempt to tree-ring date it as part of the Essex Bellframe Survey was unsuccessful, unfortunately so because it preserves a bellframe that seems to be integral to its construction, a feature rare amongst late medieval belfries.

The belfry was re-assessed for tree-ring dating, but the principal members, although of massive scantling, are from very fast grown trees, and quite unsuitable for dating purposes. At bellchamber level, there are four substantial trestles for three bells. The bellframe construction indicates that the bells were originally only chimed. The 'cross-trees' at the bottom of the spire have mortices in their soffits for braces. Curiously, there are no corresponding mortices in the studs at the top of the tower, which suggests there has been significant rebuilding (unless the joints are an error on the part of the carpenters). The top plates butt and are tenoned (not mitred). There are some interesting double tenoned joints at this level. The heads of the traceried windows are not Baltic oak and do not properly fit the cut-outs for them in the sides of the

studs, which suggests that they are replacements. The value of the Perpendicular style of the tracery for dating is accordingly compromised, though they could well be exact copies of the originals.

The relationship of the cross-quadrate nave roof and the belfry is unclear. In the bay occupied by the belfry, there is a wall plate of larger and more robust section, but it is not evident whether this preceded or superseded the nave wall plate. However, the general style of the belfry, with large fillets carried down the main posts, resembles that of the roof and they very likely belong to the same building programme.

The belfry has been extensively restored. The staining of the timbers often makes it difficult to recognise the replacement members. The truss against the west wall is much renewed. The post at the north-west corner bears the following graffito:

I.F. [?R]oot
1790

Timbers were renewed elsewhere at this time, and the work very probably included the replacement sole plates. In a second phase of repair, new tie-beams were inserted alongside the originals, that on the western side being supported on two posts, and a form of secondary framework inserted into the belfry. This helps support the frame of the tower proper. A post belonging to this secondary framework in the north-west corner is inscribed:

H.C
1850

The south sole plate was found to be in an advanced state of decay due to wet rot. The east post seemed to have a bare-faced tenon formed on its east side which connected with the sole plate. The braces were not tenoned into the plate, which was bedded on peg tile. Two pieces of presumably 18th-century window glass were found in removing the sole plate. These are pale green, 2mm thick, bubbly, and probably crown glass. Their features are consistent with an 18th-century date. More of this type of glass was found subsequently. The northern sole plate was also badly decayed. Only one of the belfry posts was found to be in a poor condition, that at the north-east corner.

Behind the brick facing of the north cill wall, the top of it was made of randomly laid bricks, part bricks and pammets (fragmentary, 7, 8 and 9 inch) in an off-white mortar. Most of the bricks were reused Tudors, or small fairly well made ones of probably late 17th or early 18th century date. There were also several 19th-century bricks laid on edge. These were either a repair to the cill wall, or else they indicate that the sole plate dated from 1850 rather than 1790. Below the top courses, the wall was made of Tudor bricks (225 x 120 x 45-50mm) which were in poor condition, having been under

considerable compression. They were bonded with a brown mortar. This lower part of the wall was clearly older, 15th or 16th century to judge from the bricks. If original to the belfry, then this wall implies that it dates from the middle or second half of the 15th century, or later still, as bricks were not commonly in use before that time.

From the north-west corner, where the sole plate had run into the west wall and a void in the masonry was plugged with bricks, some Tudors (240 x 105 x 55mm) with two quarter round mouldings were recovered. These may have come from the reveal of a brick window which had perhaps been removed in the course of 19th-century restoration.

Slices taken from the sole plates which were removed and replaced were successfully tree-ring dated by Ian Tyers of Sheffield University. They gave end dates of 1706 and 1735. They are presumably associated with the 1790 work, seasoned or reused timber being preferred for a location in which they were in compression. Alternatively, they indicate a phase of repair which has yet to be detected elsewhere in the structure.

To summarise, a 13th-century date for the belfry is unsustainable. The traceried windows, if copies of the originals, and the Tudor brickwork of the cill wall, indicate a 15th-century date, which fits with the style of the carpentry and also the nave roof, which is probably approximately contemporary with the belfry. The sole plates replaced in 2001 were 18th century, possibly associated with a major phase of repair documented by an inscription dated 1790. A further restoration is indicated by a graffito of 1850.

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Floor tiles from the church of St. Mary, Feering

D.D. Andrews

Five medieval floor tiles are kept in the church chest. These are probably the same as those which the Royal Commission on Historical Monuments found 'loose in vestry, incised and slip tiles, one with the arms of Vere, the other with those of ?Shirley' (RCHM Essex 1921, 98). They comprise three green-glazed line-impressed tiles (or tiles which have stamped decoration and then been glazed), and two two-colour tiles (with typical cream-coloured slip decoration which was then covered with a transparent glaze). Four of the tiles have a hard dark grey fine cement adhering to their base and sides which impedes an assessment of their fabric and manufacture. In one case, this cement has a

piece of slate attached to it. If indeed the same tiles as those recorded by the RCHM, then this cement is older than one might think.

The two-colour tiles (Fig. 2)

These both have heraldic designs, one clearly being De Vere and the other, which the RCHM identified as possibly Shirley, being paly of six with a charge in the dexter quarter which might be a bird. Both tiles have undercut edges, and both are probably made with the stamp-on-slip technique. The De Vere tile is about 113mm square. Because of the cement attached to it, its fabric cannot be assessed. The pattern round the base of the shield is no longer clear. The ?Shirley tile is 118mm square and 23mm thick. This tile is free of cement. It has a red somewhat sandy fabric, and does not have a sandy base. These slip decorated tiles are typically 14th-century. Their place of manufacture is uncertain, but they probably belong to the Central Essex group identified by Drury.

The line-impressed tiles (Fig. 2)

The tiles, which are damaged, none being quite intact, measure 120mm square and are 25mm thick. They are well made and typically have undercut sides. They have a fairly fine-textured red fabric containing common rounded grains of sand, and a little flint, iron ore and darker clay lumps. They tend to have a reduced core. The bases are not sandy. The design is stamped on to the surface of the tile from a wooden mould and then covered with a dark green glaze. Two have the same design, a six-petalled flower or daisy within a foliated circle. This pattern is readily constructed by taking the radius of a circle and marking off points on its circumference. It is commonly found incised on stone and timber in medieval buildings: it can be regarded as possibly little more than an attractive pattern, but it is also interpreted as a

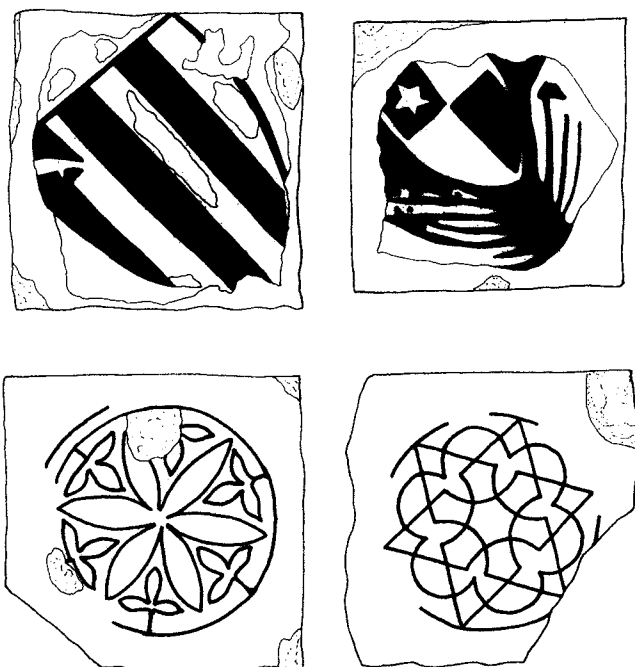


Fig. 2 Feering church, two-colour and line-impressed floor tiles.

talisman for warding off evil spirits. The third tile has a design based on a star formed from intersecting triangles which is known as Solomon's knot. None of these designs are present amongst the tiles in the British Museum collection (Eames 1980). Identical tiles with both designs have however been found in the excavations at Rivenhall church (Drury 1993, fig. 5), whilst tiles with the Solomon's knot (but slightly thinner) occur amongst the material recovered from the excavations at the Maldon Carmelite Friary (Ryan 1999, 92).

Line-impressed tiles were typically made in the 14th century. A notable pavement with line-impressed decoration, datable to the 1320s, survives in Prior Crauden's chapel in Ely Cathedral (Eames 1980, 83). It is uncertain where the Essex examples were made: Drury suggests a source in the Stour valley.

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Gosfield, St. Katherine

D.D. Andrews

In 2001, the pammets in the Wentworth chapel and at the east end of the nave were rebbeded. In the middle of the chapel, between the sanctuary step and the tomb of Sir Hugh Rich, the base of a tomb was uncovered. Its dimensions (2.6m x 1.25m) were the same as those of that of Sir Hugh Rich, and it represented its original position before it was moved to its present location in a space formed within the steps up to the Nugent family pew (cf. Elliot 1913). (Sir Hugh Rich married the daughter of Sir John Wentworth, whose tomb stands a little to the south-east under the arch between the chapel and the chancel). The tomb base consisted of slabs of Purbeck marble about 150mm wide. On these were the impressions left by the slabs which formed the sides which were about 50mm thick. Within the framework of the marble slabs, there was a row of bricks partially obscured by mortar but probably Tudor in type. The space between these bricks was filled by a hard whitish mortar which had probably

been laid to seal it off when the tomb was dismantled.

An earlier mortar bedding for the 12 inch pammets was found 50mm below their present level, on a level with the top of the tomb base. The pammets are probably 18th or early 19th century in date; whether they are contemporary with the construction of the Nugent family pew is possible but uncertain. The pammets were relaid slightly higher on sand bedding when the tomb of Sir Hugh was moved to its present position probably in 1953. On the east side of the tomb base, there was a row of bricks with rudimentary frogs datable probably to about the middle of the 19th century. Where to the south there had been excavation to a greater depth, it could be seen that this brickwork is at least three courses deep and extends under the sanctuary step, on the side of which is the inscription, 'ENTRANCE OF THE VAULT', presumably that of the Wentworth family. The 19th-century brickwork is probably associated with the blocking of the entrance to the vault.

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Lambourne, St. Mary and All Saints. Redecoration 2002

D.D. Andrews

During redecoration in 2002, cleaning down of the east wall revealed painted decoration to either side of the east window in the form of pediments belonging to a classical architectural scheme. The painting is in shades of yellow and brown and looks very competent. The modelling and shading is well done. The northern example, which was the most completely uncovered, has scrolled decoration within the pediment. On both sides, the exposed area of painting terminated at the base of the architrave below the pediment, at which point the wall had been made good with a skim coat of modern finishing plaster. This suggests that the painting may have been a surround for a wall monument. Alternatively, it framed texts of the sort that were put on church walls after the Refomation.

The newly discovered painting is handsome and interesting, particularly in the context of this small rural church with its richly decorated Georgian interior filled with monuments. The painting must date from the 17th or 18th centuries. It is probable that the mouldings round the top of the east window, which today terminate at the level of the string course, originally extended down the sides of the window but have been removed. If so, then the painting must have pre-dated the window in its present form. The remodelling of the interior of the

church has been attributed mainly to c.1726, but observation of recent work to the fabric suggests that, although much of the work may have been done then, the interior has acquired its appearance as a result of work done over a relatively long period of time (Andrews 1997). In particular, it is possible that the chancel work dates from the end of the 18th or the beginning of the 19th century. Thus it is possible that the painting is 17th-century work which was removed in the early 18th century, but also possible that it is early 18th-century and was expunged in a later phase of alterations to the chancel.

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Littlebury, Holy Trinity

D.D. Andrews

A toilet was inserted in the north-west corner of the nave in 2002. The timber suspended floor in the area was lifted; in its present form, it was 20th-century, doubtless a replacement of a 19th-century one, as the pew platforms have been renewed relatively recently. The sub-floor void was 400mm deep. Beneath it, there was a compact deposit of reddish or yellowish brown earth with pieces of lime and building debris. This was probably a trampled surface dating from the time of the floor construction, which includes frogged bricks and therefore probably dates from the second half of the 19th century. The solid parts of the floor, beneath the timber sleepers and the tiled alleys, incorporate a surprising amount of reused stone. None of the fragments was readily recognisable. It is possible that this came from the chancel when this was rebuilt in 1870-75. Some reused stone also occurs in the exterior of the north wall at this end of the aisle. The 19th-century work seems to have been very extensive, though whether it took place all at the same period is another matter. Central heating pipes were found to run east-west through the floor to the underground boilerhouse outside the west wall.

The north aisle wall has foundations made of rubble in a weak brown mortar. At about 300mm below floor level, the foundation becomes rather earthy and may not have been mortared, consisting of stones simply packed into a trench. No evidence was seen for any burials in this part of the church. Nor was there any evidence for a west wall of the aisle, west of its present position, i.e. on a line with the east wall of the tower.

Little Totham, All Saints

D.D Andrews and B.J. Crouch

Drainage

A foul drainage trench 500mm wide was excavated by machine in 1999 from the north side of the tower, where it was 750mm deep, to a point about 20m from the south-west corner of the tower, where it was 2m deep. On the north side of the tower, the natural was a hard yellow-brown clay present at a depth of 400mm. Opposite the west side of the tower, the deposits became increasingly silty and gravelly, though there was still clay on the bottom of the trench. To the south of the tower, the natural was gravel in an orange-brown sandy loam matrix, with occasional clay lenses. Very little human bone was noted in the trench or amongst the spoil. Nor were any grave cuts evident, though that is not to say that they were not present, for several coffin nails were found. Bone seemed more common in the vicinity of the tower than elsewhere. A sherd of medieval sandy greyware pottery (fabric 20) was found on the spoil to the south of the church.

The following archaeological features were observed:

1. At the north-west corner of the tower, there was a layer of brick and building debris. This may be quite old, as Tudor bricks were noted in the spoil, and could be associated with the construction of the tower (which is brick behind the knapped flint facing) in 1527.
2. The trench clipped the edge of the tower foundation, which projects by up to 600mm and is at least 1.2m deep. It is made of large blocks of indurated conglomerate and flints in a whitish mortar. The absence of flint-working waste in the spoil implies that the flints were brought in already knapped.
3. At a distance of about 12m to the south of the tower, a patch of burning was noted in the side of the trench at a depth of 800mm. It consisted of a charcoal layer over a reddened scorched brickearth or clay. It was similar in size to the lead-working hearths sometimes found in churches, but there was nothing to indicate that this was its function and it could have been of almost any date. There was no evident floor or surface associated with it.

The foundation trenches for the extension

In 2001, an extension in the form of a north porch was added to the church, making use of the old north door opening which had long been blocked. The strip foundations were dug to a depth of 1.5m. Where these butted the church, it could be seen that the wall is built mainly of indurated conglomerate, with a little septaria and some other types of stone. It has an offset foundation projecting about 200mm and about 900mm deep, made of gravel packed in a trench. This would have been dug from ground level at the time of the construction of the existing church. The present depth of the offset foundation

indicates that ground level has risen by about 500-600mm. The foundation projects less on the west side of the north door: this could be because of a misalignment between masonry wall and foundation, or might possibly be an indication that the nave has been extended to the west. On the west side of the north door, there are, below ground level, two jamb stones set just within (i.e., to the east of) the side of the doorway as it is today (Fig. 3). This implies that the Norman door has been rebuilt, a conclusion supported by the existence of peg tile packing between two of the voussoirs and a higher arch above the stone one made entirely of peg tile. (Peg tile was not in use until after about 1200, and probably not common until the 14th century). The line of an earlier threshold made of paving bricks or fragmentary pammets could be discerned about 170mm below the existing concrete threshold.

The natural, a stiff yellow clay with grey mottles, was found at a depth of about 1m, except where graves had been dug. Three graves were found, one in the trench for the east wall of the extension and two in that for the north wall, the edge only of the third being clipped at the north-west corner. The presence of two in a line directly beneath the north wall of the extension indicates that in this area there are rows of graves about 1m apart. The graves occurred within a depth of about 1.3-1.5m. Since ground level has risen, they must originally have been buried at a depth of 3-4 ft. The burials were contained in coffins: because the clay is moist, the wood had been preserved as a dark brown organic layer. Nails were also found. The skeleton on the line of the north wall was that of a young person who had not yet their full set of adult teeth. It is only possible to guess at the date of these graves, but they are probably late medieval.

The north door

The Caen stone ashlar of the Norman north door (Plate 1) may be original, but, as noted above, it is indisputable that the doorway has been rebuilt. In addition, behind the outer arch there is a timber lintel. Norman doorways typically have an inner archway without the use of lintels. This is how the south door is built (though examination of this shows that the eastern half of the arch has been rebuilt with an outer arch also formed in peg tile). The presence of the timber lintel explains the flat top of the wooden door, which was cut down to fit it. Medieval doors normally have an arched top. This rebuilding was not very skilful: the arch has partially dropped, and the stonework of the jambs is irregular and out of true. The top corner of the door on the west side was cut off so that it could be manoeuvred round the lintel and hung on the pintle. The top hinge had also to be bent back to enable it to fit, a small rectangular portion of wood being cut out in the process. An area of shelly

mortar on the western door reveal is datable to the 12th century and seems to be original render which survived the rebuilding, later being covered by hair plaster.

On the east side of the doorway embrasure, the corner had been hollowed out to form a curving recess. This was plastered, the plaster forming a lip at the bottom where the corner had collapsed or been demolished. It seems to have been a niche about 450mm high, possibly a holy water stoup. A wooden bar set in the masonry of the door jambs held the door firmly in position and represented an initial blocking of the doorway. This was secured to the door with a crude wrought iron staple possibly of 18th-century date. The doorway was subsequently sealed off in late 19th- or early 20th-century red bricks bonded with lime mortar. This brickwork seemed to be continuous with the plinth or offset down the inside of the north wall which is formed in plastered brick. The wall had been painted with pinkish purple limewash. A similar colour can be seen behind on the Tudor brickwork behind the matchboarded panelling in the tower.

The removal of the door clarified some aspects of the history of the doorway. The wooden bar was a draw bar. The slot for it was present in the eastern jamb. In the western jamb, there is a stone with a recess cut in it to receive it. Tudor brick and floor tiles occur in the jambs as packing round the pintle and the draw-bar slot. This suggests a 16th- or 17th-century date for the rebuilding of the doorway. (Possibly the rectangular window at the west end of the north wall is also of this period, though its joinery is modern). The lower threshold noted externally may be contemporary with the rebuilding of the doorway.

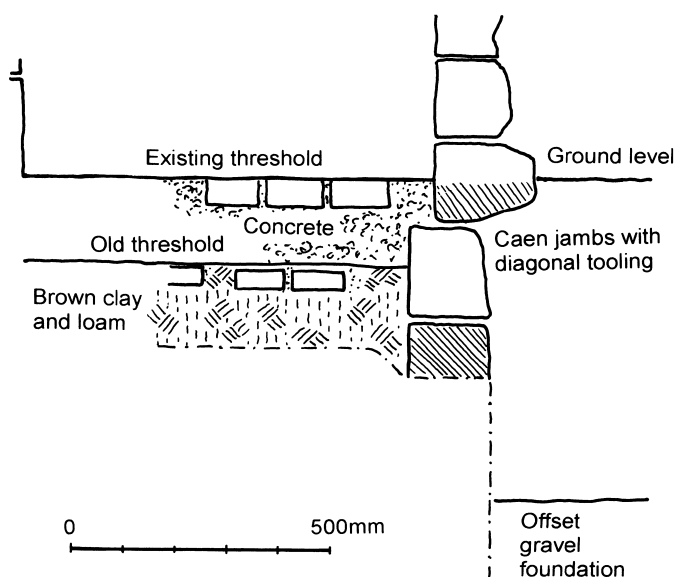


Fig. 3 Little Totham, detail of the west side of the north door jamb and the threshold before the construction of the extension.

Amongst the material used to fix the draw bar in the slot, there was a Suffolk white flooring brick of the type found in the sub-floor void and beneath the suspended floor of the tower. This suggests an early 19th-century for the initial blocking of the door.

The door itself is made of five sawn vertical tongued and grooved boards, and is in good condition except for the bottom which has rotted and been repaired with a plank with the date 1958 on it. The grooves do not extend to the top of the door where they are in effect concealed or secret, the ends of the boards being butted. The boards are secured on the inside with three battens or ledges of rounded profile which are fixed to them with pegs, two per board except for the narrowest which only has one. Externally, nails have been driven into these pegs, with the effect of both concealing them and securing them more firmly. The ironwork on the exterior of the door is problematic: it comprises a top hinge with typical C-shaped decoration, and a barbed strap. The latter did not function as a hinge. There ought to have been another hinge with C-shaped decoration at the bottom of the door. Although the door was originally taller, the

threshold having risen and the top having been cut down, this can only have been by about 1-2 ft, which seems insufficient to accommodate another hinge with C-shaped decoration.

The ledges and the ironwork all indicate the door to be very old, as old as the stonework of the doorway. Geddes (1999, 341) dates the door and its ironwork to 1150-75. This date is roughly consistent with the presumed construction of the existing church building, the other most datable feature being the richly carved Norman south door which may be somewhat earlier, c.1120 (Richard Gem pers. comm.).

When the door was overhauled by H. and K. Mabbitt Ltd, an impression was taken with modelling clay by Ian Tyers of Sheffield University of the tree rings on the bottom of the board nearest the hinge. His report on the analysis of the tree rings is as follows:

The 169-year sequence obtained from this position dates from AD 829-997 inclusive. The series matches particularly well with the extensive tree-ring chronologies obtained from London excavations, but also matches the relatively sparse contemporaneous sequences from elsewhere in the south-east and East Anglia. Examination of the board shows that the plank is quite wavy grained and that as many as 70 additional rings might be present further up the board. Allowing for these and the missing sapwood, a date for the wood used in the door of after c.AD 1075 is indicated by this result.

The door is clearly an important survival, one of the earliest dated doors, if not the earliest, in the country. The date raises the possibility that it may be reused. Reuse might explain the problems presented by the ironwork, the missing C-hinge and the fact that the straps seem excessively wide for the door aperture.

The floors inside the church

The 20th-century floor boards were lifted in the north-west and south-west corners of the nave and replaced with paving bricks. In the south-west corner, the void was only about 120mm deep. Here the earth had a compact surface with traces of an orange sandy deposit, probably the bedding for a tiled floor, beneath which was a brown loam. In the north-west corner of the nave, there was a void about 280mm deep. Here there was a dry dusty layer consisting of building debris at least 50-70mm deep which in places had a trampled surface and in others was quite loose. In places there were sandy patches which looked like bedding for tiles.

In the course of excavating the drain for the toilet, the boarded floor in the tower was lifted to reveal a brick floor 230mm below it. This was made



Plate 1 Little Totham, the north door before the construction of the extension.

of Suffolk white pavers (235 x 115 x 45mm) datable to the 19th century. Unless there was a step down into the tower, this implies that the floor in the nave has been raised by about 230mm.

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Navestock, St. Thomas. The Waldegrave vault

D.D. Andrews

The Waldegrave family obtained the manor of Navestock at the Reformation. Their vault is located against the north side of the chancel. It is a large rectangular structure, the vault itself standing above ground level and being covered with cement render. It has been compared unfavourably to an air raid shelter. Originally, however, there was a small building with a hipped roof over it, as old prints show. This was probably damaged and removed when a land mine fell in 1940. Because of concern about the vault trapping damp in the adjacent chancel wall, a breach was made in its west wall to enter and investigate it.

The vault is built of red bricks measuring 225-30 x 105 x 65mm. They have diagonal pressure and kiss marks. The brickwork is all of one piece, and is probably of much the same date as the earliest identified burial in it, which is of 1763. This would be consistent with the wall monument in the chancel which records the burial of the first earl who died in that year in the family vault.

The east end of the vault has a brick and stone framework forming two levels of staging to accommodate the coffins. In the west half, there are in addition coffins in two layers covering the brick floor. Altogether, the vault holds 17 coffins, including those of two infants. In the west wall, an arched doorway, now blocked with two large slabs of York stone laid on edge, led to stairs up to the churchyard. There is also a similar blocked door at the west end of the south wall. This apparently led up to the chancel, where an arch scribed in the plaster behind the choir stall probably marks its position. It suggests that there may have been a family pew in this position. At the top of the east wall, a repair in crude brickwork and cement mortar marks where there has been a recent break-in.

The coffins are single break and triple shell. Many have extensive remains of their outer furnishings of velvet, upholstery nails and decorative fittings. The grips and handles are substantial, of gilt copper, many with the characteristic 18th-century cherub motif. One has an escutcheon in the shape of an open book used in

the corners of the rectangles formed by the upholstery nails. Another, in the lower layer of those on top of the staging, has a well preserved board at the foot of the coffin with a handsome gilt copper grip and grip plate, both with a pair of cherubs, below a large coronet.

Seven rectangular and fairly plain breast or depositum plates were found, none *in situ*. They comprise the following:

The Right Hon^{ble} James Earl of Waldegrave/Viscount Chewton, Lord Steward of the/Duchy of Cornwall, Lord Warden of the/ Tannries, one of the tellers of the Exchequer/A fellow of the Royal Society/One of the Lords of his Majesty's/most Hon^{ble} Privy Council/and Knight of the Most Noble/Order of the Garter,/died April 8th 1763 Aged 48

The Right Hon^{ble}/Lady Frances Waldegrave/died May 28:1768/Aged 6 years/7 months 22 days

The/Honourable Edw Waldegrave/third son of/GEORGE/Fourth Lord of Waldegrave/Born 28th August 1787/DIED/in the service of his country/22nd of January 1800

William Arthur/youngest son of/John James/the Right Honble/Earl Waldegrave/who departed this life/26th April 1821/Aged 1 year 10 months

The Right Hon^{ble}/Elizabeth Countess Dowager/of Cardigan/Widow of/James Earl of Cardigan/Born 27th May 1758/Died 23rd June 1823

Camelia Jacoba/Baroness Radstock/Widow of Admiral/Lord Radstock/died 10th October/1839./Aged 76 years

John James/Henry Waldegrave/Esq^o/He died 26 April/1840

Acknowledgement

I am grateful to members of the Essex Family History Society for the records of the breast plates.

Nevedon, St. Peter

D.D. Andrews

This is a small church comprising a 13th-century chancel, a 14th-century nave, and a modern vestry and porch. Of particular interest is the relationship between the chancel and nave. The chancel has quoins at the junction between the two, an indication, in the view of the RCHM (Essex, IV, 1923, 96), that the chancel was built up against a timber nave.

On the north side of the nave and chancel, and the south side of the nave, there is a rather pebbly render which is flush with the stonework which is clearly very old and may be an original render or shuttered finish. This finish has survived cement ribbon pointing which has now largely weathered off. All the masonry is Ragstone, but Reigate is used

for the lancets in the chancel, for patches of ashlar which occur round the lancets on the south side, and also for the straight joint formed by the quoins in the north side at the junction of the chancel with the nave. In the north chancel wall, the masonry is less refaced and lifts and horizontal lines can be traced. Here there is quite a lot of a brownish ferruginous looking stone which might be a south Essex sandstone. There is at least one piece of Roman tile. Peg tiles at the top of the north chancel wall suggest it may have been raised.

Drainage (1996)

A drain was excavated round the church, initially to a depth of 6in. The foundations extend to that depth. No evidence was seen for offset foundations except at the vestry where there was a lime mortar offset projecting 8in. which raises the possibility that it stands on an earlier structure or is not entirely modern. The nave has a plinth which seems original, as does the south-west diagonal buttress. The chancel does not have a plinth except on the south side. The diagonal buttresses have probably been added to the chancel, though the evidence is not clear as the north-east corner has been refaced or rebuilt and gulleys obscure the situation. The buttresses at the east end of the nave seem to be original. The foundation of the buttress on the north side seems to make a straight joint against a large Reigate block forming a foundation at the west end of the chancel, corresponding to the Reigate quoins above. The infill between these quoins and the nave wall was probably necessary because the plinth was butted against the quoining, not allowing for the fact that the top of the wall would be offset. In other words, there seems to have been a laying out error. Concrete foundations were encountered round the porch, which post-dates the RCHM survey.

Renewal of floors and plaster (2001)

The boarded floor was lifted and renewed in the nave. The floor is about 200mm below external ground level. The sub-floor is about 200mm deep. Removal revealed a medium to somewhat orangey brown silty clay with some mortar and other debris in its surface, but no obvious signs of old floor levels. It is possible that this was a levelling layer preparatory to flooring the church. New concrete sleeper walls 150mm deep for the floor construction were set into this layer; the trenches for them were not inspected. At the west end of the south side of the nave, there was a certain amount of charcoal, possibly indicating that there had been a hearth or a fire. In the north-west corner of the nave, there was a cement screed; the reason for this was uncertain. There were no obvious signs of graves or of subsidence.

Removal of plaster from the base of the south and west walls of the nave revealed excellently coursed and well built Ragstone rubble masonry. The bottom of the walls is bonded with a brown earthy mortar, probably to the height of the external plinth. Above this level, the walls are bonded with an unusual reddish brown mortar.

Removal of panelling in the chancel revealed its walls to be built of small pieces of stone about 120-150mm in size. A variety of stones are present, including Ragstone, flint, chalk, and possibly fragments of reused ashlar.

On the east side of the east window in the south wall of the chancel, a Reigate ashlar was uncovered, the remains of a somewhat wider splayed reveal for the window embrasure. There is a layer of plaster which looks 19th-century in date on the Reigate masonry of the embrasure, pre-dating the narrowing of it, indicating that the latter dates from the 19th or 20th centuries.

At the south end of the east wall, a brick patch about 700mm wide in what look like rather purplish Tudor bricks could mark the position of an aumbry or a niche. The remains of a reredos are present in this wall, with a vertical chevron border picked out in black in a white marble or similar stone.

Behind the panelling in the chancel, there were also traces of a Victorian decorative scheme, with painting in blue and red, and at dado level, a simple stencilled frieze of alternating roundels and lozenges in black and red.

All the plaster in the church seems to be 19th or 20th century, except on the north wall of the chancel where there is a layer of soft lime plaster beneath the painted plaster in places. This has been keyed and does not seem to preserve a painted surface.

Tillingham, St. Nicholas

D.D. Andrews

The chancel

The masonry of the south and east walls of the chancel were raked out and prepared for rendering in lime. The chancel is assigned to the 13th century because it has lancet windows. A vertical join could be discerned at the west end of the south chancel wall. To the west of this line, the mortar contains shell, there is a greater variety of building materials (Roman brick, large rounded flints, ferricrete, field stones), and Roman brick is laid in levelling courses reflecting the lifts, several of which were evident. To the east, the masonry is more uniform, comprising coursed and tightly packed septaria blocks, and a large patch of flints in the upper part of the wall. This difference probably extends to the foundations: prodding of the area at the base of the wall suggests that the east half has an offset

foundation just below ground level, while the west half does not.

This observation suggests that the west end of the chancel (like the north nave wall) dates to the 12th century or earlier, and that there was once a small chancel 5.9m (20 ft.) long which may once have had an apse.

The western of the three lancets in the south wall, which is in the older masonry, is set at a slightly lower level than the other two, and has a somewhat different rear arch. It is probable that this was inserted in the wall (?replacing a Norman window) before the chancel was lengthened. This would explain its lower position. Above it, there is masonry consisting of coursed septaria blocks which resembles that of the later part of the wall to the east, indicating that when the chancel was lengthened, the wall at this end was raised in height by 600mm.

The large rectangular area of roughly knapped flints in the upper part of the eastern end of the south chancel wall looked initially like a repair, but in fact is probably 13th century. It may reflect a shortage in the supply of septaria, which came to be replaced in flint.

Above the two eastern lancets in the later masonry, it was possible to see outer arches formed of septaria voussoirs. This confirms the antiquity of the windows which have externally been totally restored. In the early masonry of the west half of the south wall, there could be seen the position of the south door, the blocking of which includes much reused stone and dates from the late 19th century. No original element of the doorway surround was visible.

The east wall of the chancel has been extensively repointed and refaced, but there was evidence, in the form of outer arches, that the three lancet windows are original. The clasping buttresses at the corners of the chancel are modern. A difference in the masonry at the top of the gable indicated that the parapet is modern and that there was formerly a tiled verge.

The south aisle

Inside the south aisle (the arcade is 14th century, but the aisle was rebuilt in the 19th century), removal of plaster from the east wall revealed 19th-century brickwork. Externally, the wall is built of septaria and reused stone, including a block (?Caen) with chevron ornament.

The north wall of the nave

The north door shows this to be 12th-century or earlier. A building joint is evident, running horizontally near the bottom of the wall and then rising obliquely to a higher level. This resembles the major joint, probably reflecting a seasonal break or

a significant interruption in the building programme, found in the north and south walls of Rivenhall church (EAH vol. 32, 2001, p.138) where the earliest part of the fabric is dated to the 11th century. At Tillingham, the fabric of the lowest part of the wall includes large rounded flints. Above this band of masonry, the wall is made of tightly packed septaria. Within the septaria masonry, there is another oblique stepped building joint just to the west of the Norman door. It is probable that these building joints do not represent a significant time scale but merely seasonal or longer interruptions in a single building campaign. These builds cannot be identified in the north wall of the chancel because of 19th-century refacing and the 19th-century vestry. However, the masonry at the base of the north nave wall resembles that which was visible at the bottom of the west part of the south chancel wall, both portions of masonry sharing the very distinctive large rounded flints. It is probable, therefore, that this early, possibly 11th-century build, extended into the western half of the chancel. It is difficult to assess the relationship of the Norman door to this build as some of its lower jambs have been renewed, but it looks as if it could have been inserted. If so, the door may be contemporary with the shallow buttress at the north-west corner of the nave as the early build does not extend as far as the west end of the church, implying that it has been lengthened in this direction.

Walthamstow, St. Mary. The Conyers vault

D. Andrews and G. Barrett

In the course of relaying the floor at the east end of the south aisle, a vault was found just beneath it. Two relatively small inscribed stones which had been temporarily removed from above the vault, commemorating Mary, wife of John Conyers, *ob.* 1701, and Tristram, their son, *ob.* 1711, leave no doubt that this vault belonged to the Conyers family. There are a further three such slabs on the north side of the east end of the aisle, to [Tris]tram Conyers, *ob.* 1684, to his wife []rid, *ob.* 1694, and to [John] Conyers, *ob.* 1724.

The vault is made of red bricks measuring 230 x 110 x 65mm which look 18th-century in character. It is large, 4.5 x 2.7m and 1.9m high. The north side of the vault is contiguous with the respond and first pier of the arcade. It contains about twelve coffins, stacked in two layers at the east end, with the exception of two on the ground in front of them. One of the coffins is that of a child. Apart from one thick elm board, the outer wood shells and all the decorative features of the coffins, except the coffin plates, have been cleared away. This is not the only sign of disturbance: the western half of the vault has

been reinforced through the construction of two yellow stock brick buttresses which support an RSJ on which rests a steel plate, the west end of which is picked up by another RSJ spanning across the entrance where steps led down into the vault. The southern buttress is built with lime mortar and corresponds to an old repair in the flank of the vault, perhaps where it has been opened on a previous occasion. The northern one is bonded with cement mortar and, together with the steelwork, probably dates from repairs subsequent to war damage, as too does the pile of well broken up rubble (cement screed and stock bricks) which fills the western half of the vault.

The coffin plates preserved are as follows:

1. A plain rectangular incised lead sheet, probably cut from from the lead shell:

Iohannis Conyers
de walthamstow
In Com Essex Arm^e
Obiit x^o Die
Martii Anno
Aetatis 76 Annoq
Domini 1724/5

2. A rectangular lead plate with a raised border with a stamped foliate pattern, and a fine copperplate inscription:

S^r
Gerard Conyers
Knt Senior Aldermⁿ
Of the City of London
Died 20th July 1737
Aged 88 years

3. A rectangular tinplated iron plate, badly corroded:

M^r Theodore
Norton Died
Jan y^e 22 1729
Aged 81 years

4. An oval copper plate, its border almost entirely missing, with a deeply incised inscription:

M
Will^m Russell
Died Feb^{ry} y^e 10th
1742³
Aged 80 years

5. A badly corroded lead rectangular plate to:

James Reade Esq
Died 26 August
1776
Aged (?) 57 Years

6. A rectangular brass plate with very precise mechanical lettering:

M^{rs}
Elizth Yates
Died 7th July
1788
Aged 74 Years

Above the inscription is a quartered shield: 1 and 4, between three three-barred gates, a winged animal or bird; 2, a molet; 3, a bar dancetty.

7. An elaborately decorated stamped rectangular plate, rather corroded:

John T[]
Reade ESQ
Died 14 []
1810
Aged 59 Years

Identical particulars on a clearly legible plain rectangular lead plate with a simply decorated border, which must have been attached to the lead shell whereas the above plate would have been attached to the outer wooden coffin, leave no doubt that this commemorates John Tysse Reade.

8. A rectangular lead plate with a simple border:

John Tole
Corbett Esq
Died 9th January
1835
In his 40th Year

9. A plain rectangular lead plate:

M^{rs}
Hannah Reade
Died 16 June
1839
Aged 66 Years

One of the coffins in the top layer has inscribed on it: Mrs Mary Reade/Aug.st 1754. Another coffin has a lead plate attached to it which reads: Dame Ann Conyers/Obiit Dec 16th 1728/Aged 61. With the coffin plates is a tin-plated fitting in the shape of a shield with an impaled coat of arms which is barely legible because of its poor condition. The large number of individuals who were probably unrelated to the Conyers suggests that burials have been moved from elsewhere in the church and placed in what would otherwise have been an underused vault. Because the vault was so close to the floor surface, and because of its poor condition, the top of it was lowered and rebuilt with concrete lintels.

A second vault was also found at the east end of the nave, just to the north of the first pier of the

south arcade. It measures 2.15 x 1.85m. The crown of this vault has been opened in the past leaving a hole approximately 400mm square covered with a stone slab. This was slightly enlarged to enable access to be gained. The segmental vault one brick thick is bedded in an extremely dense red-brown mortar. The whole of the interior is rendered with a thin coat of a similar material which has been finished with a pale yellow limewash with lines painted on it to represent ashlar masonry. A small area of render which had spalled away revealed yellow stock bricks. On the east side there is an opening which has been bricked up. The vault contained six lead coffins, including one of a juvenile. They are in good condition but have clearly been disturbed as they are haphazardly placed and the small one is virtually standing on end. No coffin plates were visible though there were marks where they had been attached.

In the chancel, the work revealed the position of the pre-1930s sanctuary step in Portland stone located to the east of the existing, whilst rebuilding the existing step uncovered a ledger, previously partly visible, to Elizabeth Alwyn (interred 23 Jan. 1653) and her daughters, Ann, interred 12 April 1659 and wife of Thomas Westley, Residentiary Canon of Wells cathedral, and Mary, interred 27 Jan. 1679 and wife of William Peirs, Bishop of Bath and Wells.

In the same programme of work, two small vaults were found adjacent to the north side of the east wall of the north aisle. Both are covered by stone slabs which are overlaid with oak block flooring in a cement screed. The slabs over the southern one were supported on timber plates which had almost completely decayed. There is almost certainly a third chamber towards the south as part of a stone slab is visible projecting beyond the western edge of the area of woodblock flooring that extends across the width of the aisle.

The walls of the northern vault are of limewashed brickwork. A blocked opening in the south-east corner led to the exterior of the church prior to the erection of the vestries in the 1930s. A shallow recess in the south wall adjacent contains a cast iron ventilator at high level which is visible also in the southern vault. The floor is paved with pammets measuring 280 x 300mm. There are two stone coffin supports. The single coffin retains its outer wooden shell and inscribed plate. It is that of a clergyman, not a previous incumbent.

The walls of the second southern chamber are rendered and limewashed. Through a small hole in the east wall can be seen a void backed up by rough brickwork. Access to the chamber is through an opening in the south-west corner which is protected by a heavy iron door fitted with a lock. A sunken area leading to the door has been partly bricked up,

possibly to provide a foundation for a cast iron column supporting the east end of the gallery. There are two coffins in the vault. The outer wooden shells are disintegrating, revealing the lead inner shells. One of the coffins is of Mary Anne Harvey Bonnell of Pelling Place, Old Windsor, Berks., who died 15 November 1853. The other is of Jane Bonnell who died 23 September 1841.

Writtle, All Saints. The reflooring of the west end of the nave

D. Andrews and B. Crouch

Two areas measuring 6.6 x 5.0m and 3.7 x 3.3m at the west end of the south aisle and the nave either side of the central alley had the pew platforms removed and were refloored with a carpeted finish level with the tiled alleys. This involved excavation to a depth of 225mm below the tiled alleys and the laying of a screed on lean mix with concrete reinforcing.

Removal of the pew platform on the north side of the nave revealed a compact orange-brown surface, probably a brickearth with some added lime, about 50mm below the tiled floor. This must represent a make-up layer for a floor. It was fairly extensive, but did not cover the entire area. For instance, it was not present by the western respond where there seemed to be a softer deposit, probably a fill. This respond had been rebuilt using medieval stonework after the tower fell in 1800. One of the stones at its base has been revealed as bearing the inscription: J BORLEY/Ast 14 1801. The first pier from the west is built of large sandstone blocks and represents Victorian restoration later than the work subsequent to the collapse of the tower. A number of the other piers in the church have been renewed in the same material. The guide books to the church indicate that this occurred in 1879 (Upton 1930; George 1963; Platt 1992). The pier base cut the orangey brown make-up, which possibly dates from the re-flooring and re-seating of the nave in 1869 (Upton 1930, 41).

Further recording was carried out when the level had been further reduced over the two areas. This revealed more surfaces, two tombs at the bottom of the responds at the ends of the north and south arcades, and the position of several cut features which must have been graves. A more resistant block of stratigraphy left on the north side of the nave was examined and removed archaeologically. These features and deposits can be arranged in a chronological sequence as set out below. Those events indicated with a letter in brackets cannot be directly related to the main sequence and have been placed in what seems the most probable chronological position. Before describing this sequence, some aspects of the main fabric of the church deserve comment. The south wall of the

south aisle had no offset at its base, whereas the east wall does. It is unclear whether this offset is integral with it, but it raises the possibility that the walls are of different dates. The walls are panelled internally and could not be examined in detail. No clear evidence was seen beneath the two westernmost arches of the arcades for foundations representing the walls of the church before it was supplied with aisles. Arguably this was because of the presence of graves. However, west of the first pier of the south arcade, there was a lighter coloured stony deposit which could have been the line of a robbed out wall. In addition, the southern half of the respond at the west end of the south arcade rests on flints in a matrix of earth which could also represent an old foundation or robbed wall. If so, there was an earlier church on the same footprint but without aisles.

The archaeological sequence has been interpreted as follows:

- I. Reigate stonework found below the western respond of the south arcade belonged to the remains of a stone and Tudor brick tomb. The sides of the interior were covered with a limewashed skim of plaster. The base was firm but unlined; it was only 450mm below the surviving top of the sides. Traces of decayed wood on the bottom indicated that the burial had been in a coffin. The appearance of the tomb cannot be reconstructed with precision: it was possibly a low table tomb with a ledger on top of it. The bricks suggest a late 15th- or 16th-century date. The presence of pammets as well as Tudor brick in the fill argues for the tomb having been dismantled when the respond was rebuilt over it in 1801 at the time of the reconstruction of the tower.

A similar stone and brick tomb was found in an analogous position on the north side of the nave, extending east from the western respond of the arcade. The surviving stratigraphy in this area was removed to reveal it as 0.45m wide, at least 1.8m long, and with a surviving depth of 0.3m. It had a brick base. The sides made of reused Reigate ashlar had been partially robbed. The surviving stones had been plastered and limewashed internally. Reused stones, parts of a traceried window with mullions with a hollow chamfer, and a small polygonal Purbeck shaft, possibly from a font, were found in the fill of the tomb. The bricks in the construction of these tombs suggest that they date from the late 15th or 16th centuries. Presumably they were low table tombs, surmounted by ledger stones. Both tombs had a curious alignment oblique to that of the arcades, and seem to have formed a symmetrical arrangement with a splay directed towards the tower arch (Fig. 4). The presence of pammets and 18th- or 19th-century brick in their fills suggests that they were dismantled and their contents removed during the restoration after the collapse of the tower in 1800.

- II. In the northern part of the southern area, and the eastern part of the northern, there was an extensive chalk layer, in places overlain by a thin layer of charcoal, which constituted the finished level for the formation of the new floor. The chalk layer butted (and was therefore later than) the north side of the tomb beneath the south arcade. These layers clearly represented surfaces, though they were more likely to be the bedding beneath a floor than the floors themselves. No impressions for tiles were noted in the chalk. Where a shallow service trench was dug to a greater depth of about 120mm, it was observed that the chalk overlay the following thin layers, from the top downwards: charcoal, brown silty loam, charcoal, chalk, and then a brown stony silty loam which was of greater but undetermined depth. These too must be layers of trample or make-up for floors. The successive layers of charcoal makes it seem likely that this was used as make-up and thus is not evidence for a fire in the church. No dating evidence was found. Since these layers butted the tomb on the south side nave, and were clearly earlier than the tower collapse, a 17th- or 18th-century date may be suggested.
- II (a) Three soft patches in the south-western part of the northern area must mark the position of graves. At the western edge of the northern area, immediately south of the tomb, there was an east-west cut with a looser fill to the north of it which probably represented another grave. These graves or features seemed to cut the floor layers and can therefore be assigned to the 17th or 18th centuries.
- III. The arches at the west end of the north and south arcades are narrower than the others. This is because when the tower was rebuilt in 1801/2, it was shifted east into the interior of the church, causing the responds to be built east of their previous positions and over the two tombs, which were dismantled as described above. The south respond has a brick base. The northern one is of stone, including a reused fragment with Early English dog tooth ornament, and the inscribed ashlar mentioned above. On the top of the block of stratigraphy on the north side, there were a few pammets (8¹/₄ x 2 inches) lying at a drunken angle. These overlay the Tudor tomb and must represent a repaving of the floor over the tomb after it had been dismantled and emptied. The nave floor must therefore have consisted largely of pammets. Pammets of the more usual thickness of 1¹/₂ inches were found in the fill of the tomb beneath the southern respond. Although evidence was not found for it, pammets must have long been used for the church floor: a payment for 150 'pammets' is recorded in 1600 (George 1963, 25).
- IV. The Revd. A.D. Stacpoole recorded that in 1869 'the galleries of the church were pulled down...The floor and joists, all which were rotten, taken out and a new floor laid, except in the chancel, which is good, over all the church. The pavement was laid in the nave and aisles with memorial stones and coloured tiles or such odd bricks as would do ... a few graves which had fallen filled up solidly. The square pews were replaced by benches of Kauri wood, and their

oaken panels made a dado round the church ...' Curiously, no evidence was observed for features associated with the galleries. As already indicated, the orangey-brown surface found beneath the pew platform on the north side may date from this time.

- IV (a) A patch of clay in the north-west corner of the southern area represents a feature later than the chalk surface which could have dated from this time.
- IV (b) In the south aisle, there was an extensive dark grey brown loamy layer containing quite a lot of stone, such that it almost looked like a metalled surface. It also contained some fragments of bone, and may well have been graveyard soil introduced into the church to level up the floor in this area. No dating evidence was found; if indeed a levelling operation, it would be logical to associate it with the relaying of the floors.
- V. The rebuilt pier of the north arcade cut the orange-brown surface and belongs to a phase of later 19th-century restoration when many of the other piers, including the corresponding one on the south side, were renewed in 1879. This work must have involved disruption to the floors.

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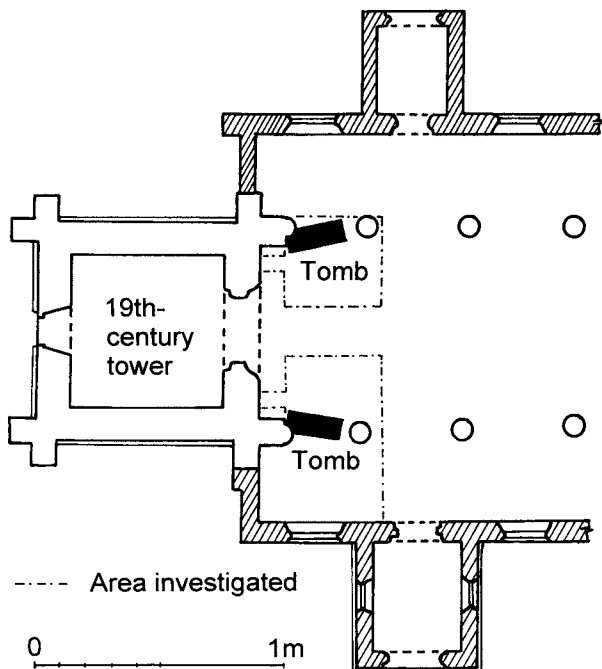


Fig. 4 Writtle All saints, the west end of the nave showing the position of the tombs.

Work of the Essex County Council Archaeological Service 2001

edited by S. Gale

This annual report reviews project-based work undertaken by members of the Essex County Council Heritage Conservation Branch (which includes the various sections of the former Archaeological Service). Please note that no aerial survey work was undertaken in 2001. Full details of all sites can be found in the Essex Heritage Conservation Record (EHCR).

Essex Mapping Project

Caroline Ingle

Work has continued throughout 2001 on the Essex Mapping Project, as part of the National Mapping Programme (NMP), co-ordinated and funded by English Heritage. The 13 sheets mapped in 2001 brings the total completed to 178 (Fig. 1). The number of records on the MORPH database now stands at 10,360, with 332 individual records being added during the year. In addition, 100 new sites have been added to the EHCR over the year. Mapping this year has been in the western part of the county, primarily within Epping Forest and Harlow districts. This area is predominantly on Boulder Clay or London Clay with only limited covering of lighter glacial sands and gravels on which cropmarks are generally better developed. As a result features are for the most part visible only as isolated features or small groups of cropmarks.

There are relatively few features identified as, or suggested to be, of prehistoric date. Neolithic monuments include a single cursus monument (EHCR 7268) on the edge of Old Harlow, on high ground overlooking the River Stort. The cursus, now a scheduled monument, appears as a cropmark of parallel ditches some 20m apart and about 200m long, with curved ditches enclosing the ends. Fieldwalking of the site in 1992 recovered worked flints, dated to the Neolithic period. One newly recorded circular enclosure near Passingford Bridge has been interpreted as a possible hengiform monument (EHCR 19338) of Neolithic date. An unusual double ditched sub-circular enclosure at Matching with widely spaced inner and outer ditches (EHCR 17064) is suggested to be of Neolithic date, possibly a causewayed enclosure. It bears

similarities in form to examples of causewayed enclosures in central southern England, e.g. that at Robin Hoods Ball, Wiltshire (Oswald *et al.* 2001, fig. 1.4).

A significant number of ring ditches, generally interpreted as barrows, have been recorded, many of them new to the EHCR. Many of these occur as isolated examples although some groups have also been identified. These include a slightly dispersed group of six (EHCR 19322) (TL50SE) at Chipping Ongar to the north of the castle and a line of four close to the Pincey Brook near Sheering (EHCR 4520), with three further rings in the adjacent field to the west. New sites include examples at Boyton Cross (EHCR 19237), Boards Farm (EHCR 19239), Spains Hall (EHCR 19232), Fyfield (EHCR 19244), Shellow Bridge (EHCR 19245), and High Laver (EHCR 19285). Other isolated sites include one interpreted as a Bronze Age barrow (EHCR 7268), and now scheduled, which lies 70m north of the eastern terminal of the cursus at Gilden Way, Harlow.

Mapping progress January - December 2001

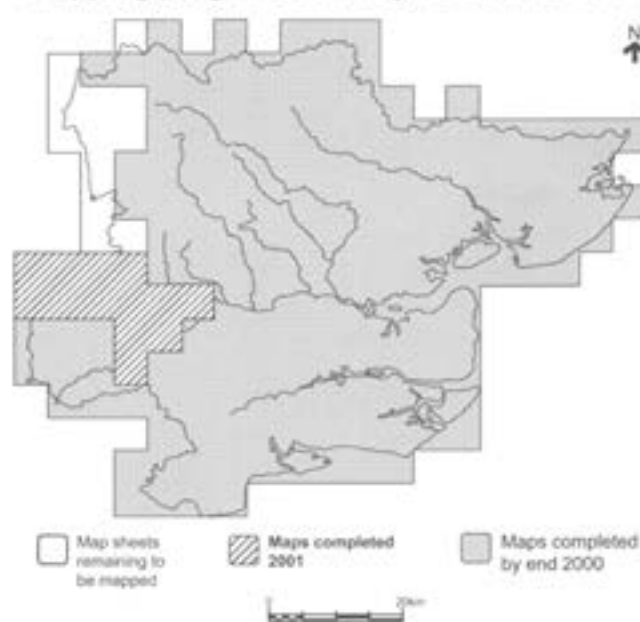


Fig. 1 Essex Mapping Project progress 2001.

There are also a significant number of other circular enclosures of undetermined function, including sites at Stanford Rivers (EHCR 19258) and Moreton (EHCR 4272), both of which have an entrance to the north. Three circular features have been provisionally interpreted as medieval windmills: EHCR 644 near Stapleford Abbots, EHCR 616 near Horseman Side, and EHCR 4253 at High Laver, a moated mill mound that is depicted on the 1825 Tithe Map. Other features of probably prehistoric date include a variety of rectangular and rectilinear enclosures. Amongst the newly recorded features is an unusual keyhole-shaped enclosure at Sabines Green (EHCR 19337), the function of which remains unclear, though it may possibly be related to control of stock. New features also include an isolated pentagonal enclosure near Moreton (EHCR 19276), and two sub-square enclosures near High Laver (EHCR 19290), neither of which contain internal features. A sub-rectangular feature at High Laver, containing a ring ditch (EHCR 17098) thought to be a hut circle, may be a prehistoric settlement enclosure.

Moated sites of medieval origin are relatively common across the area: the majority still survive as water-filled earthworks to some extent, although

a number are only cropmarks. They include EHCR 4137, to the south of Nether Hall and Upper Hall, Moreton, a small moat and associated fishponds, part of a complex of earthwork features in the vicinity of a manor-church complex which may be the remains of a shrunken village. A further complex of enclosures, including a probable moat, is recorded as a cropmark south-west of Chipping Ongar (EHCR 17099) (Plate 1). Here the moat, which has a south-east facing entrance, is contained within a larger enclosure with associated field boundaries, and there is a second small enclosure also with an entrance to the south-east. EHCR 4379, an approximately square example, with associated field boundaries, is recorded as the site of Brent or Burnt Hall. The site of Blacklands (EHCR 4349) is now visible as a cropmark of two joined enclosures; the EHCR records that large quantities of building material have been recovered from the centre of the moat.

Historic settlement surveys

Maria Medlycott

Ten historic settlements in Brentwood Borough have been assessed for their archaeological and



Plate 1 Aerial photograph of cropmark with a probable moated site near Ongar (EHCR 17099).

historic significance at the behest of Brentwood Borough Council. They are Blackmore, Fryerning, Ingatestone, Kelvedon Hatch, Great Warley, Hutton, Mountnessing, South Weald, Stondon Massey and Herongate and Ingrave. The intention of the assessment is to collate the evidence for the development of the settlement and to inform the management of future development. In addition a historic settlement assessment has been undertaken for Southminster in Maldon District as part of the Heritage Conservation Branch's commitment to the Interreg Project. A historic settlement report has also been written for Writtle by David Green.

County Council farms survey

Maria Medlycott

An archaeological desk-top survey was undertaken of 29 of the farms owned by the County Council at the request of the Rural Land Management Group. The survey comprised digital maps of the known archaeology, aerial photographic plots and written text. No field visits were made. It is probable that many of the farm estates have further archaeological sites, as yet undiscovered, on them. This is highlighted by the predominance of known sites on the farms on the Tendring peninsula where the soil conditions are conducive to cropmarks. Here it is evident that large tracts of earlier landscapes, including settlement and burial sites, still survive beneath the modern plough-soil, and there is no reason to anticipate that the situation would be notably different in other areas of the county. Current estimates regarding the density of archaeological sites on agricultural land in Essex is an average of one site for every 9 hectares (Medlycott and Germany 1994), and recent large scale fieldwork at developments like Stansted Airport suggests that the density may be considerably greater.

Greater Thames Estuary Essex Zone monitoring

E. Heppell and N. Brown

Introduction

The UK has the longest coastline of any European Union member, around 18,000km, of which 8,500km are in England, and 8% of that is in Essex. The Essex coast is of great importance for nature conservation, and consequently over 80% is designated as a series of Sites of Special Scientific Interest (SSSI). The coastal zone also contains an important legacy of historic assets, of many dates and types. They are vulnerable to a wide range of threats, resulting from development pressures and natural erosion. The latter is now thought to be accelerating as a consequence of global warming

and changes in sea level. A Regional Archaeological Research Framework for the Greater Thames, which defines the estuary zone as running from Whitstable in Kent to Clacton in Essex, and upstream to Tower Bridge, has been prepared by English Heritage, Essex County Council and Kent County Council (Williams and Brown 1999). Given its great historical and archaeological value, and the scale of the threats to its historic environment, the Greater Thames Estuary has been identified as a national priority area for coastal zone studies (Fulford *et al.* 1997). Planning in the coastal zone must balance the needs of development, including a range of major infrastructure projects, with the need to maintain a sustainable historic and natural environment.

A pioneering survey of much of the coastline, the Hullbridge Survey, was undertaken during the 1980s (Wilkinson and Murphy 1995). The present project aims to monitor selected sites recorded by the Hullbridge Survey to assess changes. The project began in 2001 and will run until 2003: this note summarises the first year's work. The results are beginning to supply data on long term changes to archaeological sites and deposits in the intertidal zone. Over the next two years further work will build on the foundations laid by the first year's fieldwork. It is anticipated that the project will make a significant contribution to informing decisions on heritage management with regard to natural erosion, development proposals, and schemes of nature conservation/enhancement.

Fieldwork

In the summer and autumn of 2001 selected sites recorded during the Hullbridge survey in the 1980s were revisited to assess changes which have occurred since initial recording. The locations were chosen to give a range of sites, submerged land-surfaces, peat deposits, wooden structures, red hills and submerged forests in a variety of estuarine conditions and tidal ranges. At one site, Rolls Farm, in the Blackwater estuary, a programme of detailed sampling and repeat planning has been instituted which will continue beyond the end of the Planarch project. The aim of the fieldwork is to provide an indication of the rate of erosion of various sites and deposits, and the occurrence of new exposures. The data will be used to inform long term conservation and recording strategies. A brief summary of each site monitored is set out below.

Fenn Creek, Crouch Site 4 The site comprises a stratigraphic sequence of submerged landsurface, peats and associated deposits, and is one of the type sequences in the Crouch estuary, first recorded in 1911. The lower palaeosol contained a flint assemblage, largely Mesolithic in date, but with some Neolithic artefacts also present. The monitoring established that the full vertical

sequence of deposits noted in the earlier studies were still present on site. However, the vertical face had retreated a maximum of 5m over a period of 19 years since the site was recorded by the Hullbridge survey. In addition shifting gravel banks had buried portions of the site. The Crouch is used for yachting, and there are a number of vessels moored on or near the site which are causing damage to palaeosols.

The Stumble, Blackwater estuary The Stumble is an area of intertidal mudflats located between Osea Island and the mainland. There is a large area of submerged prehistoric landsurface, with extensive remains of Neolithic settlement and later wooden structures. The site was first located during the 1985 season of the Hullbridge Survey, and was sampled by a series of small excavations in subsequent years. The monitoring has identified a number of areas in which active erosion is taking place. The results clearly show that there has been vertical erosion across the flats. A greater area of old land surface has been exposed in comparison to the previous studies. Dense concentrations of Neolithic finds were located; new exposures indicated that Neolithic settlement extended well to the west of the areas recorded in the 1980s. It appears that the Neolithic site is being slowly eroded, while overlying peat deposits, associated with tree stumps, noted in the 1980s, have been considerably reduced in extent. In addition there is some deposition taking place, which masks the old land surface in places. This material is coarse slightly silty sand, containing a high proportion of shells. However this deposit is unconsolidated and regularly shifts with the tide, thus providing little protection for the underlying deposits. To the north, towards the shore, wooden structures were located. Here erosion of the salt marsh is clear to see: it has retreated at least 10m since the OS maps were last updated. This erosion is likely to expose more of the wooden structures.

Lion Point, Jaywick The exposure between Jaywick and Dovercourt of a later Neolithic land surface, with a range of settlement evidence, was extensive when first recorded in the early 20th century. Substantial fragments survived when the Hullbridge Survey made records there in the mid 1980s. A walkover was carried out across the areas where deposits and features had been noted by the Hullbridge Survey. No archaeological deposits were visible at Jaywick. The whole area was the site of a major scheme by the Environment Agency in the late 1990s. New very substantial breakwaters have been constructed using large granite blocks and the beach area has been recharged. In the area towards the top of the beach, where the majority of the archaeological deposits were noted by previous surveys, beach recharge has sealed surviving archaeological deposits beneath a substantial deposit of sand.

Alresford, Colne estuary When recorded by the Hullbridge survey, saltmarsh in this area was eroding and slumped sediment overlay a firm clay beach, where a number of wooden structures were located. In 2001, access problems, due to extensive erosion and deposition of deep soft mud, meant that it was not possible to survey those features visible on the site; instead an extensive photographic record was made. The positions of the timbers were sketched onto a copy of the modern OS map. A total of five groups of timbers and a number of what appeared to be isolated posts were located during the 2001 survey. It appears that the timbers are different to those found in the 1980s. Erosion in this area is great. The edge of a former railway embankment is being actively eroded, as is the salt marsh, which has lost much of its consolidating vegetation.

Purfleet, Thames estuary The site was located during the 1986 survey season. Situated on the Thames foreshore to the west of the confluence of the Mar Dyke, it comprises a single bed of wood peat, up to 1m thick. The peat contains ash, alder, yew and other trees, both roots and trunks. Estuarine sediments underlie this deposit, containing some drifted tree trunks. Radiocarbon dates place the estuarine deposits within the Thames II transgression, c.6500-5400BP, and the peat at the end of the subsequent Tilbury III regression, c.4930-3850BP. The analysis of the evidence suggested the following sequence of events

- I. Initial sedimentation in an estuarine environment during the Thames II transgression.
- II. Tilbury III regression: a soil horizon forms, which later develops in woodland. Artefacts would suggest some human activity.
- III. Conditions became wetter, wood peat formed above the sediments.

In September 2001, the primary aim of the survey was to establish patterns of erosion at the site. In order to facilitate this, the upper and lower edge of the peat bed were planned, as was the lower part of the sea wall as its position appeared to have altered from the position shown by the Ordnance Survey. The larger exposed stools and tree trunks were also planned, this should facilitate subsequent studies.

The wood and peat deposits at this site currently stretch for some 400m. For ease of description, this has been split into three sections, west, east and central. The western section of the peat deposit has been eroded in comparison to the earlier plans. The western limit of these lay some 50m further to the west in the 1980s. This area proved to be inaccessible, as there was a thick layer of unconsolidated slime overlying it. However, height differential would suggest that the deposits do not

survive in this area. The western section of the site contains the vast majority of the tree stools and trunks in the survey area. The peat has eroded in two distinct shelves. The first is approximately 0.2m high, close to the low water mark. This deposit then gradually rises for c.6m, before there is another shelf, c.0.5m high. The top of this represents the highest level of the deposit. Concrete blocks and recent silt associated with the modern sea wall mask the area to the north. The central section of the site is the most altered. It has been almost completely covered with concrete blocks, presumably placed to reinforce the sea wall. The remains of some of the trees can be seen poking up from the blocks. The eastern section of the deposit has also been eroded. The Hullbridge Survey located the peat deposits running for c.220m in this section. Reference to the published photographs would also suggest that the deposit was much wider. The exposure of peat in this section now runs for 80m, and extends for a maximum of 8m from the base of the sea wall. This is limited to the west of the section; the rest has been eroded back to the base of the sea wall. Exposures of the paleosol were located to the south of this peat bed. There are small roots and rootlets visible in this deposit.

Coastal erosion is clearly a major threat in this area: the exposures of peat are certainly less expensive than they were in the 1980s. Comparison of photographs would also suggest that there are now more trees exposed. In the western section of the site, only 0.2m of peat remains in some areas. The tidal flow in the area is added to by the large vessels using the channel. The wash of these vessels can easily be seen and felt on site.

Rolls Farm, Blackwater Estuary Rolls Farm is the site of a multi-period complex, located on the north shore of the Blackwater. The site was first located and recorded during the Hullbridge survey in the mid 1980s. An earlier Neolithic settlement site was located at approximately -1.5mOD, on an extensive area of submerged landsurface eroding out from under the edge of the lower peat shelf close to the level of mean low water. This was examined by the means of a transect, in which finds density was logged, identifying a mean density of struck flint at 10 per m², greater than any other site studied with the exception of the Stumble. Nine Bronze Age brushwood structures, comprising sections of trackways and platforms were located 80m to the north of this occupation scatter. To the west of the main exposures of the Neolithic and Bronze Age site there is a substantial red hill, part of a line of such features spaced around 300-350m apart. The site barely rises above the salt marsh but is clearly visible from the seaward side as the southern side is being steadily eroded. To the south of this red hill a line of posts

was identified, part of a relict breached sea wall.

In 2001, as a number of different site types were present, methodologies were adapted to suit each site. As Rolls Farm is to be monitored regularly over the next three years it was important that the methodologies could be easily replicated in following visits. The Neolithic site lay close to the low water mark and as such the time available on this section of the site was limited. An area of the lower peat surface and old land surface was chosen for study, as close as possible to that examined in the earlier survey. A transect was placed north-south across this, using metal grid pegs marked with the present surface level, so that the amount of vertical erosion could be measured. The edge of the peat in relation to this grid line was planned; this should allow the degree of horizontal erosion to be measured. The old land surface was divided into 1m wide collection units, again so that relative finds densities could be compared. In the majority of the collection units no finds were recovered in contrast to the previous surveys of the site. It is possible that this year's survey missed the main concentration. To check this hypothesis the field team proposes to examine an additional area during the next visit. It could also be that the artefact scatters are being masked by a loose sand, shelly, gravel layer which has been deposited over the old land surface, in which finds are difficult to discern. The Bronze Age wooden structures and associated creek systems were located close to the marsh edge. Two areas in which wooden structures were present were planned in detail and the present surface level was marked on the grid pegs. The red hill was planned using the GPS and the grid pegs marked; it was clear that considerable erosion had taken place. The line of posts associated with a relict sea wall was planned using the GPS. There appear to be three distinct elements to these features, suggesting piecemeal reclamation in the area.

Samples of the wooden structures were taken from top and bottom surfaces, and from wood still buried in sediment. Percentage water content of the wood samples will be determined by drying for 12 hours at 105°C. Samples will be inspected macroscopically to assess induration by mineral replacement, colour (indicative of oxidation state of iron minerals), damage by boring organisms, and any algal growth. Sections will be examined microscopically, recording presence/absence of framboids and intra-cellular mineral concretions, degree of fissuring, deformation and preservation state of cellular structure. Microscopic comparison of preservation of buried and exposed wood, from the same component will also be undertaken. Aspects to be recorded include fissuring and distortion, preservation of fine structures (e.g. vessel perforation plates) and extent of oxidation of

sulphides. These studies will provide information on the destruction of the overall structure and more detailed information on degradation of cell structure. Correlation with physical parameters should indicate which are the critical factors for information loss. Both newly exposed and weathered wood samples will be taken.

Measurement of the tidal flow off the site was carried out on a spring tide and a neap tide. This measured the speed of the current in meters per second, with an average reading being recorded every ten minutes. Provisional analysis of these results would suggest that tidal flow is greater at the spring tide than neap tides and on the flow. This would mean that the greater erosion threat would occur at this time when the flow is from the south west. Thus the most vulnerable area is that of the red hill, a suggestion also supported by the observed pattern of erosion in this area.

Historic Landscape Assessment (HLA) – East of England Regional Project

Lynn Dyson-Bruce

This is an inter-regional project covering the counties of Suffolk, Hertfordshire, Essex, Bedfordshire, Cambridgeshire, and Norfolk. It forms part of a wider English Heritage initiative of applying Historic Landscape Characterisation (HLC) to the counties of England. This form of assessment started with the pioneering work in 1995 in Cornwall and has now developed into a series of paper and Geographic Information System (GIS) applications in the individual counties. Work in the East of England started in 1998 in Suffolk, with that county being completed in 1999. The project continued in Hertfordshire in 1999-2002. Work started in Essex in 2001 and is on-going. The project plans to continue into Bedfordshire and Cambridgeshire later in 2002.

This is a new approach to assess the historic dimension of the wider rural landscape and complements the Essex Heritage Conservation Record (EHCR), which is in contrast predominantly site based. The project is to assess what historic elements have survived within the current landscape, not reconstruct past landscapes. The methodology identifies areas representing either a single historic event or a series of recognisable events. These historic elements are incorporated within a database recording 'time-depth' within specific areas. This is the first attempt at assessing the landscape in this way and initial results already indicate that the landscape is extremely varied, complex and of great 'time-depth'. This reflects the complex series of actions and interactions of human activity within the landscape. The project will

support and provide added value to the EHCR. The HLA has already become a useful management tool, providing valuable information for development control work, woodland management, public inquiry, Landscape Character Assessment, and county-based strategies and policies.

The project has run seamlessly from Hertfordshire to Essex, with results so far complementing and contrasting within each area. Results so far indicate a complex landscape. For example:

- In the chalk uplands of north-west Essex, the area was predominantly former common arable with later parliamentary enclosure. However within this later field system earlier elements have been fossilised within, for example, Great Chesterford Park Farm. This farm once formed the nucleus of an earlier park, of which only the sinuous field boundaries remain within the regimented fields of later enclosure.
- The Epping Forest area is a complex series of irregular enclosed, early pre-18th-century fields, with evidence of assarting. However this ancient landscape has been modified by 20th-century impacts in the form of development and new field boundaries.
- The majority of the Essex landscape has suffered from intensive field boundary removal since the 1950s.

Charting these changes within the landscape should help inform and facilitate appropriate management of our historic landscapes for a sustainable future. In addition, this regional project has been actively involved within the HLC Review Project by English Heritage. This is to devise a series of working guidelines and issue a statement of 'best practice' for the future applications of HLC within the country.

Survey of Modern Industrial Sites and Monuments

Nigel Pratt

The project to identify, record, protect and manage the County's industrial heritage through extensive survey was begun by Shane Gould in 1994. Since its inception the project has added 1,165 'new' sites to the EHCR and a total of 13 thematic survey reports have been produced, with further surveys underway for the brick and tile industry, breweries, and road transport. The reports describe the history, technology and typological development of each thematic group which allows individual sites to be assessed and their importance graded, enabling informed decisions to be made regarding their long term conservation and management. The reports are available for public consultation at EHCR, Essex Record Office and the National Monuments Record at Swindon.

Essex Textile Industry

The traditional textile industry of the county, the production of woollen cloth, was extensive but domestic in scale and by the early 19th century had been eclipsed by the more industrialised production of silk. The Essex silk industry was in turn replaced by the production of artificial fibres until this declined in the early 1980s. Tony Crosby, an independent industrial archaeologist, identified, surveyed and assessed the surviving remains of all phases of the industry (Crosby 2001), which included the production sites, workers' housing, and the public buildings associated with the philanthropic activities of the Courtauld family who were the predominant silk manufacturers in the county.

The survey identified scant physical evidence for the woollen industry as weavers' cottages have subsequently been considerably altered and fulling mills reverted to use as corn mills before falling into disuse over the intervening 200 years. Perhaps the most significant remnant of this industry is the former bay and say mill at Southfields, Dedham (EHCR 32017), which is now a grade I listed building known as 'The Flemish Houses' and divided into a number of private dwellings.

Far more evidence of the silk industry survives. In the early years of the 18th century there was a brief foray into silk throwing at Little Hallingbury Mill (EHCR 3651), but more typical are the 19th-century purpose-built silk mills at Braintree, Bocking and Halstead which have had a lasting impact on their respective townscapes. As with most of the Essex silk industry, these centres had their roots in Spitalfields, as cheaper labour from an increasing pool of unemployed skilled textile workers, the former wool spinners and weavers of Essex, tempted the industry to reduce costs by moving out from east London. The outstanding survivals in Braintree are Pound End Mill (EHCR 15836), built by Courtauld, Taylors and Courtauld in 1818 and sold to Daniel Walters in 1822, and the adjacent New Mills (EHCR 15098) erected by Walters in the 1850s. Little above ground evidence survives of the other silk mills in the town, but Courtaulds' major sites at Church Street, Bocking (EHCR 15835) and Townsford Mill, Halstead (EHCR 26109) have elements remaining.

Although the survival of textile industry manufacturing sites is variable, the immense impact of the silk industry in these centres can still be seen in the workers' housing and public structures erected by the Courtauld family in the late 19th and early 20th centuries. Unlike some other manufacturing dynasties in Britain, Courtaulds did not build model villages, preferring to integrate worker housing within the existing settlement and to donate facilities to the wider community. The impact of this is most evident in Halstead where the survey identified an exceptional collection of

workers' housing showing a range of architectural styles from utilitarian mid 19th century tenement housing at Factory Terrace (EHCR 26119), to the more ornate late 19th century 'Queen Anne' style dwellings at The Causeway (EHCR 26111). The most prevalent of the Halstead worker's housing is, however, the ubiquitous the Arts and Crafts/Garden Suburb style of the 1920s, here known as 'Courtauld Tudor', which is particularly conspicuous along Hedingham Road where the houses are named after literary works (EHCR 15840, Plate 2). Courtaulds other surviving contributions to the townscape include: Trinity Street Gardens (EHCR 18702); the Cottage Hospital (EHCR 15637) and Homes of Rest (EHCR 15873) on Hedingham Road; the drinking fountain (EHCR 26191) on Market Hill; and the Roman Catholic church, hall and presbytery (EHCR 15875) on Colchester Road. A full discussion arising out this survey on the impact of the Courtauld family on the Essex landscape has been published (Crosby and Corder-Birch 2001, 47-54).

Radio electronics industry in Essex

The history of the radio electronics industry in Essex, and in particular the association of the Marconi Company and Chelmsford, is as long as that of the industry itself. From its beginnings in the late 19th century, Marconi has dominated the radio industry and Chelmsford, as the company's main manufacturing and research centre, has benefited greatly from this success. However, a general economic slowdown in the industry during the 1970s and the end of the Cold War in 1989 has resulted in an uncertain future for the company and the subsequent loss of a number of buildings, with more under threat. In response to this Essex County Council commissioned English Heritage to carry out a survey (Cocroft and Menuge 2001) of the surviving structures relating to the industry.

The manufacture of electrical components in Chelmsford predates Marconi. Crompton's Arc works at Anchor Street (EHCR 31471) was in



Plate 2 'Sensibility' – Courtauld worker housing on Hedingham Road, Halstead.

operation by 1886 and in Broomfield Road Christy Brothers were producing electrical components soon after. This early activity may have been a factor in attracting the radio pioneer Guglielmo Marconi to Chelmsford and in 1899 he acquired the former silk mill in Hall Street (EHCR 15083) for the manufacture of wireless telegraphy equipment. Technological advances led to an expansion in production and the construction of a purpose built site at New Street in 1912 (EHCR 15671) where the public face of the company is expressed by the two-storey Edwardian Baroque style main office range by London architects William Dunn and Robert Watson (Plate 3). As the radio industry expanded the Marconi Company began to dominate the town. This growth is typified by the School of Wireless and Communication, Arbour Lane (EHCR 15732), a former Victorian villa with extensive 1930s and later additions (Garwood and Gould 2001, 276), and the greenfield sites at Waterhouse Lane (EHCR 15675) and Marconi Research Centre at Great Baddow (EHCR 15672).

Although Chelmsford is undoubtedly the centre of the radio electronics industry, the survey identified specialised sites situated in other parts of the county. With the exception of the now partly demolished Taveloc House in Witham (EHCR

15931), these all lie east and south of Chelmsford. The most historically important is Ongar Radio Station (EHCR 15929) which was established in 1919 at North Weald Redoubt, one of the highest points in Essex. When completed in 1922, with a receiver station at Brentwood (EHCR 15144), this site represented state-of-the-art technology and held the world speed record for wireless communication of 58 words per minute. The main radio station buildings north-east of the redoubt, had been demolished shortly before the survey commenced, while the last of the antenna masts was taken down in 1982. Evidence of this site's use as a radio station does, however, survive in the form of concrete mast bases and anchoring points, and in the modifications to the redoubt's surviving 19th-century buildings.

Chelmer and Blackwater Navigation Conservation Area

Running from Springfield Basin, Chelmsford, to Heybridge Basin, Maldon, with a length of 22.5km, the Chelmer and Blackwater navigation (EHCR 40000) forms one of the longest Conservation Areas in England. The river navigation, completed by Richard Coates under the direction of the noted engineer John Rennie in 1797, linked the expanding town of Chelmsford with the sea via the Blackwater estuary and directly led to the development of Springfield Basin, with its warehouses, lime kilns, maltings, iron foundry and the county's first gasworks, and Heybridge Basin where the settlement was more piecemeal and geared towards the needs of the bargemen. In common with many such waterways, this early period of expansion was relatively short lived, and with the coming of the railway in 1843, the navigation lost trade and began a long decline until commercial traffic finally ceased in 1972. Many of the structures associated with this commercial use were lost but the Chelmer and Blackwater navigation has survived as a useable waterway and has entered a new phase as an important venue for leisure activities.

Although the 12 locks and many of the bridges and lock houses along the course of the navigation are listed buildings, no systematic recording programme of the sites along its length had been undertaken. The survey by James Kemble (an independent archaeologist) and Shane Gould (Kemble *et al.* 2001) identified 234 'new' sites encompassing a range of features such as water feeders, boundary posts, gates, bridges, and sites of former wharves and boathouses. These are all vital elements in the understanding of the navigation and as a group they form an intrinsic part of its character. Falling within the Conservation Area, a degree of protection is afforded all these sites, but the survey also recommends that Springfield Basin wharf, Cuton and Stonham's weirs (EHCR 40026



Plate 3 Entrance to Marconi's New Street headquarters.



Plate 4 Bridge over the old A12 at Chelmsford.

and 40040), Langford Mill (EHCR 40154) and the 1930s concrete bridge over the old A12 at Chelmsford (EHCR 40007, Plate 4) should be considered as candidates for listing at grade II.

Monuments Protection Programme

Sue Tyler

The Additional Scheduling Project was funded for nine months during 2001. A number of sites were visited and are currently in the process of scheduling. The Programme is continuing to bear fruit with 16 new monuments added to the Essex Schedule since March of last year. Recently notified scheduled sites include several ruined medieval churches: St. Mary's, Stanway (Plate 5); St. Mary the Virgin, Virley; the Church of St. Peter, Alresford, the remains of Little Henny Church and churchyard, and the remains of the medieval parish church at Little Holland Hall. The two new categories of monument visited and assessed for scheduling during 2001 were coastal salterns (red hills) and World War II defences. So far scheduling proposals for two salterns and one stretch of WWII 'Stop Line Defence' have been drawn up and forwarded to English Heritage's Scheduling Section.

World War Two Defences in Essex Project

Fred Nash

Sometime last summer, probably on the sea front at Thorpe Bay, the World War Two Defences in Essex project passed the 1,500 point. One and a half thousand defences, from an estimated county total of around 2,800, have been located, visited and added to the EHCR. Before 1992 virtually no World War Two defence sites had been recorded across the country, other than by private enthusiasts. There were no county records of them, and wartime



Plate 5 St. Mary's, Stanway.

records, such as they were, still lay deep within impenetrable archives. In 1993, Essex was one of the first counties to attempt to record its World War Two sites.

Nationally, the vast majority of wartime documentation, which once detailed the precise location of the pillboxes, anti-tank obstacles and minefields, has either been destroyed or still lies hidden. Essex is, seemingly, the only county in Britain to have retained the archive, War Time Contraventions, or its equivalent. These volumes, compiled during the war, contain 800 foolscap pages of Essex defences, all listed parish by parish. The discovery of this immensely valuable record, which came to light within a few months of the start of the project, reconfigured all previous estimates. With most counties measuring their traceable WWII heritage in tens or low hundreds it was recognised that the Essex project provided perhaps the only opportunity in the country to record a county in its entirety, almost every road block, pillbox and Home Guard site, whether extant or long demolished. With the historical record as a guide would come the ability to track down the surviving sites, wherever they may be hidden. Once a significant number had been recorded it would be possible to evaluate and assess these survivors, culminating, it was hoped, with at least a representative sample being protected for future generations. However, until recently there has been only limited opportunity for statutorily preserving Britain's World War Two structures. Protection, where it was possible, came of necessity through the planning process.

This year saw a defining moment in the protection of WWII sites with the first two categories of sites assessed nationally for scheduling as part of the Monuments Protection Programme (MPP) - Heavy Anti-Aircraft Gun sites and Decoy Bombing sites. Both site types have been covered in



Plate 6 In early 1942 the Home Guard was issued with its first anti-tank gun, the 29mm spigot mortar. Here, the Colchester Home Guard are pictured manning the weapon on exercise 'Crack', in August 1942.

recent Essex thematic surveys within the World War Two Defences in Essex project, which has helped in the identification and recognition of the nationally important sites within the county. MPP assessment and submission of scheduling proposals for Essex sites took place during the first half the year. Notification of designation as Scheduled Monuments for many of these sites has now been received. These are five Heavy Anti-Aircraft Gun sites, at Butlers Farm in Rochford, Lippitts Hill in Epping Forest, Little Oakley, and Northwick and Furtherwick on Canvey Island, and three bombing decoys at Kirby-le-Soken, Spinnels Farm, Wix, and Nazeing. Notifications are still awaited for one HAA and one decoy. In the near future it is anticipated that further categories will follow.

It is also hoped that in the future it will be possible to move away from looking at sites solely in isolation, to consider protection of sites, through various means, in areas where survival of a range of defence types is particularly good. As a forerunner to this, talks have been held on just such a site at Chappel Viaduct, outside Colchester. This was an important junction on the wartime Eastern Command Line with an impressive array of defences most of which still survive. They include four types of pillbox, two spigot mortar emplacements (cf. Plate 6), three anti-tank cylinders and twenty-eight anti-tank blocks. The results which have been achieved by the project so far have enabled Essex to be among the first to benefit from the protection of World War Two sites through MPP and, looking back to its early objectives, it is particularly rewarding to see one of the major aims of the work come to such satisfying fruition.

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Book reviews

The Victoria County History of Essex. Bibliography: second supplement. Edited by Beryl A. Board. Pp. xxiv + 204. Published for the University of London Institute of Historical Research by Oxford University Press. 2000. Price £70.

The Victoria County History is being modernised. It now has a Director and General Editor (formerly a professor at the University of Essex) and an Executive Editor, and has received Heritage Lottery funding to devise a strategy for making its work more widely and readily available, both by electronic means and through a new range of publications. Sadly, one aspect of the VCH unique to Essex, the three volumes of Bibliography, have no place in these plans and this is the last such volume which will appear. In an age seduced by computerised databases, bibliography can seem old-fashioned and be overlooked. It remains, however, an essential research tool. The VCH Essex Bibliography should be the first port of call for those engaged on whatever kind of historical or antiquarian research on the county. As well as sections devoted to biography and parishes and places, invaluable respectively to family and local historians, the range of subjects in the general county section is vast, including industry, archaeology, natural history, military history, weather, planning and local government.

Originally prompted by a suggestion of Francis Steer, the first volume of the Bibliography edited by Ray Powell was published in 1959. A supplement, also edited by Ray Powell, followed in 1987. The second supplement, published thirteen years later, covers 'book, articles, pamphlets, and other printed and typescript material produced between the mid 1980s and the end of 1995', as well as material omitted from previous volumes. Unpublished works are limited to those deposited and catalogued in public libraries. That most of the 5513 items listed were indeed produced in the defined time span is a sobering thought, and possibly raises questions that fall outside the scope of a review. The most abundant category of the earlier material are Acts of Parliament, some dating back to Tudor times, and constituting a most valuable addition. In no way

does this volume consist simply of dry lists: succinct notes are often provided on the books and articles, and to browse through it is both a fascinating and informative experience. It will also uncover omissions, and at times the limited bibliographical information on individual items can be frustrating. However, in view of the scale of the undertaking and its enormous value to all interested in both Essex past and the present, it is unreasonable to carp about matters of detail. What is a pity is that its price will preclude it from being at everybody's elbow and that, in the interests of empowerment and inclusion, it could not have been reduced by a subsidy or grant. The Bibliography can be found in most larger public libraries, but in my experience it may be necessary to persuade the librarian to unlock a cupboard to get access to it.

David Andrews

The Victoria History of the County of Essex, Volume X, Lexden Hundred (Part). Edited by Janet Cooper assisted by Shirley Durgan and C.C. Thornton. Pp.xxiv + 330, 53 plates and 46 maps and text figures. Oxford University Press for University of London Institute of Historical Research, 2001. ISBN 0 19 722795 3. Price £85.

The publication of Volume X is a welcome addition to the *Victoria History of the County of Essex*. In contrast to Volume IX on Colchester, this volume is mainly concerned with rural parishes, although Earls Colne and Dedham developed as market towns for at least part of their history, and Wivenhoe comprised an important constituent of the port of Colchester between the 16th and 19th centuries. In addition to these three places, the volume covers the parishes of Aldham, West Bergholt, Birch, Boxted, Mount Bures, Chappel, Colne Engaine, Wakes Colne, White Colne, Copford, East Donyland, Easthorpe, Fordham, Great and Little Horkesley, Langham, Stanway and Wormingford.

The volume opens with an eight-page Introduction on Lexden Hundred, highlighting a number of themes which emerge from the parish histories, such as lordship and jurisdiction,

ecclesiastical and domestic building, and communications. The settlement pattern was very much one of hamlets and scattered farms. The parish histories examine each place from prehistoric times until the late 20th century, and show that there has been substantial change within the hundred over the past 150 years.

The principal occupation of the area until recent times has been farming, and where records survive it is possible to trace major changes over the centuries. Many parishes saw extensive clearance of woodland for farming after the Norman Conquest, as at Wakes Colne and Copford. Technical progress in agriculture became marked from the early 19th century, leading to arson attacks in Langham. The agricultural depression from c.1875 hit parishes hard, causing widespread poverty and an exodus from the land. The National Agricultural Labourers' Union was active in a number of places in the late 19th and early 20th centuries, and occasionally was able to get better terms for the labourers, as at Fordham in 1892. Farming problems, linked as they are to world trade and politics, were too deep-rooted to be overcome except in the short term, and have continued until the present day.

There was relatively little industry in the hundred, thus minimising the prospects for alternative employment. Cloth-workers are mentioned in several places, but it was only in Dedham that the industry saw major development from the late Middle Ages until the 18th century. During this time, the industry provided substantial employment, the names of forty clothiers being known for the 16th century. Other places which benefited from industry were West Bergholt and Earls Colne. The Daniell Brewery in West Bergholt grew during the 19th century, employing over forty people by 1900, and it had 150 tied houses in 1958. After takeovers, the West Bergholt depot closed in the 1980s. Hunt's Atlas Works at Earls Colne also developed in the 19th century, employing 290 men in 1898 and exporting machinery all over the world. It provided employment for men in the surrounding villages as well as in Earls Colne itself, and closed in 1988. In some rural parishes, outwork from the Colchester clothing factories provided employment in the late 19th and early 20th centuries.

There was considerable variety of Christian religious practice after the Reformation. Puritanism flourished in some parishes, notably at Dedham from the 1560s, and also at Earls Colne where Ralph Josselin was vicar between 1641 and 1683, and where iconoclasm is known to have occurred. There was some emigration to New England in the 17th century, and John Haynes of Copford became Governor of Massachusetts and then of Connecticut. Congregations of Independents, Baptists and Quakers are found in many parishes, and Methodism was popular in the

18th and 19th centuries; at Langham, the Primitive Methodist chapel was reported to have had a congregation of 150 in 1841. The development of elementary schooling in the 19th century is marked in most parishes, and was often associated with the Anglican Church.

The factual and referenced parish histories will be of great use to local historians, enabling them to take their research further and to investigate particular aspects in greater detail. The parish histories will also enable historians to make regional linkages. In this connection, it would be helpful to have a longer Introduction to the volume, so as to place more emphasis on regional themes. Inevitably in the future, fresh questions will be asked and new approaches opened up, but the volume will continue to provide a basis for historical work. The price of the volume means that its use will mainly be confined to libraries, but the issue of histories of individual places and the Victoria County History's use of the Internet are making the information much more widely available. All who are involved in Essex history will find Volume X valuable for many years to come.

Jennifer C. Ward

The Essex landscape: in search of its history. The 1996 Cressing Conference. Edited by L S Green. Pp iv + 76. 57 illustrations, mostly in colour. Size A4. Card covers. Essex County Council, Planning Division. 1999. Price £10.

The 1996 Cressing Conference was sponsored by Essex County Council in a series of annual conferences relating to the work of its Planning Division. The book contains all except one of the conference papers, revised by their authors, together with one new paper. Six of the eleven authors came from Essex, and five from Cambridge, Exeter, Norwich, Peterborough and Yorkshire. The book covers many topics, from prehistory to the 21st century, presented in chronological order. The book is beautifully designed and enriched by excellent colour plates.

In her preface, the editor, Sarah Green, discusses some of the themes in the conference papers, and mentions elements of the landscape surviving from different periods. Noting that it had been impossible to publish Chris Going's paper 'From Iron Age Britain to Saxon England: perception of the Roman Legacy', she gives a summary of it. She emphasises the importance of landscape history for the work of Essex County Council's Planning Division, and draws attention to the *Countryside Character Map* launched in 1996 by the Countryside Commission and English Nature, and English Heritage's Historic Landscape Character Project in East Anglia.

The first paper in the book, John Hunter's 'Regions and subregions of Essex', is a shorter version of the section so titled in his book *The Essex Landscape* (1999), which was reviewed in E.A.H. 32. The second paper, on 'The archaeology of the coastal region' is by Peter Murphy (U.E.A.) and Nigel Brown (E.C.C.). It concentrates on the prehistoric, Roman and Saxon periods, providing valuable information on such topics as fish-traps, oyster-beds, salt production, marshland grazing, coastal trading, sea-walls, and iron-working. The medieval and later periods, treated briefly, include references to defensive works and recent industrial development.

Chapter 3, by Stephen Rippon (Exeter University) is entitled 'The Rayleigh Hills in south-east Essex, patterns in exploitation of a woodland.' The Rayleigh Hills is defined in the area extending south from Hockley through Rayleigh, Thundersley and Hadleigh to South Benfleet. It is compared with the adjoining areas, geologically different, to east and west, and two points are emphasised. More woodland has survived in the Rayleigh Hills; and it has been exploited in different ways by great landowners and smallholders.

Chapter 4, 'Woods, parks and forests: the Cressing Temple story' (Oliver Rackham, Corpus Christi College, Cambridge), describes the ancient limewoods found in and around Cressing. It may be worth pointing out that S. T. Jermyn's *Flora of Essex* (1974), p.76, contains an annotated list and map of these limewoods, including some not mentioned here. Dr Rackham is not concerned with planted limewoods. He says that these are less prominent in Essex than in most countries. But they are (or have been) fairly common in the county, especially in fine avenues leading to country mansions (*V.C.H. Essex*, ii, 626).

In Chapter 5, 'Medieval and later rural settlement', Stuart Wrathmell (West Yorkshire Archaeological Service), having mapped regional variations of rural settlement, reports that dispersed settlements are most common in areas where woodland survived longest, while nucleated settlements occur mainly in sparsely wooded areas. If these conclusions were predictable, it is good to see them confirmed in detail.

Chapter 6, 'The 16th and 17th centuries: manors, parks and fields' (David Andrews, E.C.C. and Pat Ryan, Danbury), discusses the 'great rebuilding' of houses during this period. It draws on recent research on many manors and sites, particularly at Cressing. The new buildings, often of brick, provided internal privacy, and greater space for leisure in galleries and gardens. By 1650 many smaller houses, as well as great ones, were being built or rebuilt. Domestic gardens, at first comprising small enclosures, became more 'outward

looking' in the 17th century. New building often produced claypits and brickworks, but large scale changes to the landscape, such as the removal of Woodham Walter church to a new site (1563) were rare before the 18th century. Parks sometimes underwent cycles of enlargement or reduction. The evidence of tree-rings shows that by c.1600 rebuilding had caused a shortage of good timber, leading to the use of elm as well as oak, and the reuse of timber from older buildings. This is a well-constructed and elegantly written paper.

Chapter 7, 'The designed landscape' (Fiona Cowell, Hatfield Peverel), deals with landscape gardening in the 18th century, including the work of Charles Bridgman, William Kent, Richard Woods, 'Capability' Brown and Humphrey Repton. Robert Petre, 8th Lord Petre (d. 1742) is also mentioned for his plantations at Thorndon Park. He was the central figure in Hilda Grieve's excellent booklet *A transatlantic gardening friendship* (Historical Association, Essex Branch, 1981), of which there is no mention here.

Chapter 8, 'Essex in the 21st century' (Robert Tregay, Landscape Design Associates, Peterborough), discusses the use of landscape history to ensure 'that historic features are not only conserved but are also interpreted and incorporated into a new landscape pattern, the character and richness of which stems from the many layers of history that can be discovered within it.' The writer describes two 'landscape assessments' carried out by his firm: for Thames Chase, in south Essex, and Dedham Vale, in the north. This interesting paper raises one of the fundamental problems facing landscape planners: how far should they try to recreate the past?

Chapter 9 'Change in the Essex Landscape': a postscript' (Martin Wakelin, E.C.C.), was written after the Conference. It summarises landscape changes since the 18th century, and describes the measures that have been taken during the past 30 years to protect ancient features, especially hedges and trees, and to limit the proliferation of urban development, new roads, overhead pylons, and the intrusive spread of farm buildings. The writer emphasises the need 'to work with, rather than dictate to, farmers and landowners', and 'to replace the 19th-century landscape system, combining food and timber production and meeting the needs of recreation in a 21st-century landscape'. 'Some hedgerow loss was ... inevitable but equivalent areas of new woodland should be encouraged'.

The bibliography in the book shows that it contains much original research as well as summaries of printed works. It is, however, surprising to see Benton's *History of Rochford Hundred* listed in the 1978 edition rather than the excellent 1991 edition. *Reaney's Place Names of*

Essex is said to be '2nd edn. 1969', but that is only a reprint, and not the latest. *Feet of Fines for Essex* (vols. II and III), though bearing no editors' names, were in fact the work of R.C. Fowler and (in volume III) also S.C. Ratcliff and A.C. Wood. It is regrettable that Domesday Book is not listed in J. Horace's Round's fine edition. Rawreth, which is not named in Domesday, is 'assumed to have been in Wickford' (p. 23), but it seems more likely to have been represented by 'Runewella' (DB 31b), alias Saunders Farm (formerly Sandon), in Rawreth, because that manor was held in 1086 and in the early 13th century by the Merc family (Morant, *Essex*, ii. 42; P.N. *Essex*, 193; W. R. Powell, *Essex in Domesday Book*, 21.) But we must not end on a critical note. This is a scholarly and well-written book, which makes an important contribution to its subject.

W.R. Powell

Essex from the air. Archaeology and history from aerial photographs. By David Strachan. Pp ii + 104. 89 illustrations, mostly in colour. Size A4. Card covers. Essex County Council, Planning Division. 1998. Price £15.

This attractive book covers the 5000 years from Neolithic times to the present. Most of the photographs were taken by the archaeologists of the County Planning Division, while others came from the collections at Cambridge University, the Royal Commission on Historical Monuments, and the Royal Air Force.

The introduction describes the development of aerial photography, and particularly the value of cropmarks in revealing hidden landscapes. Then follow four chronological chapters, each with a preface, a clear explanation of the photographs in it, and a note on further reading. In some cases a photograph is accompanied by an artist's reconstruction of the feature illustrated. The book also includes a glossary of technical terms. The following summary mentions a few of the many fascinating items in the book.

Chapter 1, 'The first farmers and prehistoric burial', includes the Bronze Age settlement at Springfield, first revealed by a cropmark and later excavated. Chapter 2, 'The Trinovantes, the Romans, and Saxon Essex', shows Red Hills at Tolleshunt d'Arcy and Peldon, and the foundations of a Roman villa at Chignall St. James.

Chapter 3, 'The Middle Ages' depicts not only castles and abbeys, but marks left by the moated farm at Beaumont Otes, Chignall, along with John Walker's map of the site (1599); Hatfield forest; an excavated windmill at Boreham; duck-decoy ponds in Old Hall marshes, Tollesbury; and the port of Harwich.

Chapter 4, 'The recent past and the changing nature of the modern landscape', summarises the changes since the 18th century, and their causes. Military defences are illustrated by views of Coalhouse fort on the Thames, Harwich redoubt, a Martello tower at Clacton-on-Sea, the fighter airfield at Stow Maries (1916), and the bomber base at Earls Colne (1943). Other views show Silver End model village (1926-30), the town and pier of Southend-on-Sea, Essex University, coastal erosion at Walton-on-the-Naze, the M11/M25 junction near Epping, and the Queen Elizabeth II bridge at Thurrock.

The author acknowledges his debts to many other archaeologists, in the Planning Division and elsewhere. The wide range of subjects illustrated, especially in Chapters 3 and 4, is impressive. The illustrations themselves are excellent, and benefit from the A4 size of the book. The notes on further reading are of limited value. But *Essex from the air* contains much to fire the imagination and to delight the eye. While providing an admirable introduction to landscape history for beginners, it will also be read with pleasure and profit by the specialist.

W. R. Powell

The visibility of imported wine and its associated accoutrements in Later Iron Age Britain. By Emma R. Carver. British Archaeological Reports, British Series No. 325. 2001. 110 pp, 3 plates, 50 figures. £23.

For those of use who enjoy their Chianti or Soave, it is interesting to reflect that a few lucky residents of Essex enjoyed Italian wines at least as early as the start of the 1st century BC. Of course wine arrived then not in glass bottles but in large pottery jars called amphoras. The survival of these amphoras – sometimes more or less complete in graves, more usually as sherds on settlement sites – allows us to build up a picture of a trade of which we would otherwise be oblivious. Wine was consumed in Essex in what were for prehistoric times quite exceptional quantities: Carver quite rightly singles out for attention the Elms Farm excavations at Heybridge, which produced the largest assemblage of Dressel 1 amphoras in Britain since the last war.

It is odd therefore that Carver has so little to say about the amphoras themselves. There is a brief characterisation of Dressel 1, but with no real indication of the actual crus that were bottled in the form. Carver accepts the sub-division of the form into the 1a and 1b types, but without any reference to the current debate on their precise definition. The Spanish form Pascual 1 receives little more than a passing mention. Haltern 70 (although it occasionally features in the gazetteer) is ignored. This is odd because most continental scholars treat

the form as a wine jar (although my own view is that it was bottled with grape syrups and preserved olives). Nowhere does the main body of the text discuss the rare Dressel 6 amphora. The only reference to the form is found in the gazetteer for the entry on the Braughing (Hertfordshire) complex. Carver also claims that Dressel 7-11 amphoras were used for wine as well as salted-fish and fish-sauces, an assertion for which this reviewer for one would dearly like to know the evidence. The real possibility of wine reaching late Iron Age Britain in barrels is nowhere discussed.

On the question of wine services Carver could usefully have read the fundamental study by Hilgers on the Latin names for utensils where she would have found an invaluable compilation of the ancient documentary evidence for their function. One also looks in vain for any reference to the monumental study by Nuber of the sets of bronze jugs and handled pans found widely throughout the Roman world and beyond. Nuber showed conclusively that they were sets of vessels used for hand-washing at meal-times and in ritual. They are sometimes found in the same contexts as wine amphoras because wine was served at a meal in Roman antiquity, but that does not make them part of a wine service. In view of this, the space devoted to them by Carver seems misjudged. Nor is any evidence adduced to show that the handled perforated bronze cups found widely across temperate Europe in the late Iron Age had any connection with wine. It is inexcusable that the silver cups used for drinking wine (and present in Iron Age graves with wine jars) receive such cursory treatment, without so much as a plate or line drawing. Nor is there any mention of wine-related images on Iron Age coins, such as the amphoras on issues of Tasciovanus and Cunobelinus or the vine leaf on coins of Verica.

The gazetteers with the accompanying distribution maps are useful. The concentration of early Dressel 1 amphoras in the Isle of Wight and adjacent parts of the mainland coast suggests that Hengistbury Head (where there is a major concentration of these pots) was not a port of entry for Italian wine but rather a major coastal settlement with access to seaborne goods. But confidence in the gazetteers is undermined by simple errors of fact: for instance, there is no Rhodian wine amphora in the Lexden tumulus, and the thirteen amphoras from the Berry-Bouy grave (Indre) are Pascual 1 not Dressel 1. Some of the gazetteer entries are Roman period, rather than Iron Age in date: the rich grave from Mount Bures in Essex belongs to the Claudio-Neronian period, and this makes it unlikely any of the amphoras were Dressel 1. A significant omission that could have been rectified by a more thorough search of the

published literature is the Dressel 1 amphora from Stonea in Cambridgeshire.

Scholarship has not been well-served by this monograph. The author repeatedly drifts into areas of marginal significance: whole sections - such as the discussion of wine amphoras in the mining regions of Gaul - are simply irrelevant to the declared intentions and the title of the book. It is not enough to say that this puts the scene in Britain in context. Data and research on the wine trade with Iron Age Britain continue to accumulate and there is a need now for a thorough review of the evidence, but one will turn to this work in vain for any fresh insights.

Paul R. Sealey

The Journal of William Dowsing. Iconoclasm in East Anglia during the Civil War. Edited by Trevor Cooper. 2001. Pp. xxiv + 551. 22 maps. 64 illustrations. £50.00. Boydell Press, Woodbridge, in association with The Ecclesiological Society.

The name of William Dowsing has long been a byword for Puritan iconoclasm. Until now the unique record of his activities could be found only in unsatisfactory piecemeal form, published in out-of-the-way places. Trevor Cooper's collaborative book at last provides the much needed critical edition of the whole of Dowsing's surviving Journal for 1643-44. The text, which reassembles the 18th-century transcriptions of the lost original journal, is arranged by numbered entries, each of which contains not only Dowsing's report but also full comments on the circumstances, named individuals and structure of each visited church. One of the great merits of this edition is that it so amply contextualizes the journal, not only in telling perhaps all that can be told about Dowsing himself and his motivation and the working methods of his purgative tours, but also by sifting churchwardens' accounts and carefully inspecting church fabrics to assess details of damages. Two-thirds of the book consists of this invaluable supplementary apparatus (including 64 plates and a series of county maps, three of them of Essex) which enables us, for the first time, properly to estimate the nature and extent of Dowsing's iconoclasm. It is hard to imagine so thorough an edition being overtaken in the foreseeable future.

Dowsing was unique in his commission as well as his journal of iconoclastic enforcement. He was appointed on 19 December 1643, seemingly on the personal initiative of the Earl of Manchester, to implement parliament's order of August 1643 for the demolition and removal of objects of superstition and idolatry from places of worship in the counties of the Eastern Association. Earlier that month Manchester had been given command over

this group of counties, which included Essex along with Hertfordshire, Cambridgeshire, Suffolk, Norfolk, Huntingdonshire and (marginally) Lincolnshire. The churches of Essex therefore, were as much at risk from this secular visitation as those of the other counties, and at the end of December 1643, when Manchester gave Dowsing a fresh commission, it was clear that the chancel steps of this county were under appraisal along with the rest. In fact, however, Essex may have been more forward than elsewhere, in 1640-41, in anticipating parliament's iconoclastic orders, though Dowsing's journal indicates that the 'Puritan workover' of 1643-44 (p. 129) had eagle eyes for offending details.

Not a great deal is known about how Essex was affected by this iconoclastic commission, but the book does its best to explore this question. The surviving journal covers Cambridgeshire and Suffolk, and it seems unlikely that the original text was arranged county by county, the Essex portion of which has gone missing. More probably it was a chronological record, and the hypothesis is put forward here that the gap between Dowsing's visits to Sudbury on 9 January 1644 and Stoke by Nayland ten days later might conceivably have been filled by a sortie into northern Essex. But we should probably reject this. That however, by no means indicates that this county was not systematically visited in 1643-44. The editors' investigation of parochial records has yielded evidence of actions taken by twelve Essex churches in 1643-44 in response to the parliamentary orders. These actions included taking down crosses from steeples, reglazing windows (with white glass in place of the stained glass pictures that were deemed popish), defacing inscriptions on brasses and removing imagery (as on the font at Chelmsford). It is clear that this iconoclasm was supervised by parliamentary visitors - though none (despite talk) had been provided for in the official published orders. Saffron Walden paid 10s. 'to the man that came to view the Church from the Parliament'; the Nevendon windows were later reported to have been broken by parliament's visitors; and at both Hornchurch and Waltham Holy Cross it was the Earl of Manchester whose order was cited. In the latter case one William Aymes came with Manchester's commission to demolish idolatrous pictures.

The reach of the Earl of Manchester's writ, implemented by others besides Dowsing and his deputies, extended into Essex together with the other counties of the Eastern Association. Churches suffered accordingly, particularly in loss of stained glass, mutilation of memorial brasses and the removal of gable crosses. The damages of the 1640s associated with William Dowsing are spelt out here more clearly than ever before. Everyone with an interest in this celebrated iconoclast, the civil war

and its destruction, and the fate of church furnishings, will be grateful for so richly informative a book.

Margaret Aston

John Horace Round. Historian and gentleman of Essex. By W. Raymond Powell. Essex Record Office Publication No. 145, 2001. xii+276pp. ISBN 1 898529 19 1. £20.

John Horace Round (1854-1928) held no official academic post, but he played a central role in developing the modern study of feudal institutions. His work has continued to exert a significant influence on Anglo-Norman studies in general and Domesday scholarship in particular. Although he lived in Brighton all his life, Round was a member of one of Essex's most important county families and inherited the manor of West Bergholt. He also served as a Deputy Lieutenant for the County, and was a long-time member and eventually President of the Essex Archaeological Society. Those associations led him to write extensively and influentially about many aspects of the county's history.

Round's life, character, and works have been subjected to some notable explorations among them James Tait's obituary of Round for the *English Historical Review* (1928); William Page's memoir in a collection of Round's unpublished papers (*Family Origins and other Studies*, 1930); Sir Frank Stenton's entry for Round in the *Dictionary of National Biography* (1937), and a set of conference papers by David Stephenson, Peter Boyden and Ray Powell published in *Essex Archaeology and History* (1980). Nonetheless, Ray Powell's long awaited new biography must be regarded as the definitive appraisal of a man who has provoked enduring interest among historians. The task of his biographer cannot have been an easy one. The scale of Round's output was so vast that its full extent was not known until a new and much extended bibliography was compiled by Powell and published in *Essex Archaeology and History*, 29 (1998). That list contains some 960 items, including nine important books or collections of essays, and publications in 45 periodicals or works of reference. Although many items were smaller notes or reviews, Round was a formidable force on the academic stage of his time, publishing 60 articles and 40 reviews in the *English Historical Review* between 1887 and 1923.

Consideration of other aspects of Round's life, however, is hampered by the opposite problem for his executors destroyed nearly all of his personal papers. Fortunately a few important collections of Round's letters have survived and his biographer has been able to combine these with other source material to explore important aspects of his life such

as his studies at Oxford University. Powell acknowledges, nonetheless, that there is much that remains obscure or can only be guessed at, especially in the field of personal relationships. The reason why he never married, for example, remains unclear, although it may have been connected to his financial situation, apparently weaker than his social status and family background had led him to expect. Round also did not have a robust constitution and partly for that reason did not go up to Balliol until he was nearly 21, where he succeeded against expectations in gaining first class honours in history. He returned to Brighton where he cared for his mentally ill father, having already lost his mother when young, and was later plagued by ill health which probably increased his solitary tendencies. After an operation in 1915 he became an invalid for the rest of his life.

The core of the book really rests on Powell's assessment of the significance of Round's historical work and how and why it came to be written. From the 1890s Round published a series of works, *Geoffrey of Mandeville* (1892), *Feudal England* (1895) and the *Commune of London* (1899), which established him as a leading expert on the Anglo-Norman baronage and as a specialist in the use of charters as historical evidence. His research also demonstrated the value of genealogy for the study of national history. It is notable that many of his publications took the form of collected papers, notes, and reviews, and he perhaps preferred analysis of individual problems to broader works of synthesis. He also wrote forthright reviews of a multitude of books, 120 being known from the period 1882-90 alone. Yet his biographer also emphasises the significance that should be attached to Round's contribution as either supporter, prime mover, co-ordinator, or editor, to many of the great historical projects launched in the late Victorian period. In a succession of projects like the *The Victoria County History*, *The History of Parliament*, *The Complete Peerage*, and the Pipe Roll Society, Round forged effective collaborative relationships with other historians, editors, and publishers, albeit on his own terms. Of particular note was his work on Domesday Book, much of it for the Victoria County History. In all he contributed to 42 VCH volumes for 27 counties.

Due recognition of Round's collaborative work is important for he is perhaps better known for his venomous disputes with other leading historians of the time, being fairly characterised by his biographer as addicted to controversy. Powell devotes a whole chapter to Round's notorious clash with Professor E.A. Freeman, Regius Professor of History at Oxford and a prominent liberal politician. Powell describes in detail how Round, who was an arch-conservative holding reactionary views, felt unable to ignore the combination of carelessness

and inaccuracy in Freeman's work with his own prejudice against Freeman's political stance. Round's political views, and how they became intertwined with his historical work and interests, provide some fascinating passages. Round campaigned for his third cousin James Round, MP for East Essex, in four elections between 1885 and 1895, but perhaps more notable was his involvement in the movement to reform the baronetage. From 1901 he was involved in politically sensitive work vetting claims for membership of the peerage, partly building on the important historical work he published in *Studies in Peerage and Family History* (1901) and *Peerage and Pedigree* (1910). In 1914 he was appointed to the post of Honorary Adviser to the Crown in peerage cases.

Round did not stop with Freeman and his biographer catalogues a range of other victims who Round savaged in reviews or privately printed papers. Some of the attacks were deserved, and, as Powell comments, they helped to sweep away a lot of poor historical scholarship, but it did little credit to Round to fall out with some great contemporaries. Maitland's verdict that Round indulged in 'too much controversy and too little history' seems undeniable, but it was interesting to read Powell's view that Round's reviews were 'more sympathetic than his reputation for controversy might suggest'.

It is also possible to end on a positive note by turning to Round's extensive contributions to Essex history which Powell's book recounts in full. He undertook important work for the VCH, not only acting as the local editor for Essex but also producing an exceptional study of Domesday Book for Essex in which he deployed his genealogical and topographical knowledge of the county to great effect. That study remains an invaluable starting point for any analysis of the county in the late 11th century. Round published many articles in *The Essex Standard* and *Essex Review*, but soon after his election to the council of the Essex Archaeology Society in 1885 he began contributing articles to the Society's *Transactions*. Between 1887 and 1937 some 175 pieces by Round were published in the *Transactions*, those in the 1930s being published posthumously. This corpus of work included significant contributions to the history of the county on many subjects including place-names, family history, monastic houses, the English Civil War, and parishes and their churches. Furthermore, since 1993 the Society's Publications Development Fund has enabled more articles to be published, all of them introduced and revised where necessary by Ray Powell. John Horace Round clearly deserved a magnificent biography and in this volume he has one. The book is hardback, attractively produced with dust jacket, endnotes, illustrations, and index,

and is a credit to the continuing Essex Record Office publication series.

Chris Thornton

Essex bibliography. A bibliography of Essex archaeology and history at April 2002

compiled by A. Phillips and P. Sealey

Monograph and periodical literature are included; articles published in journals devoted exclusively to Essex (e.g *Essex Journal*) are not. Items overlooked in earlier bibliographies are added for completeness of coverage.

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| <p>Archibald, M. & Cook, B. J. 2001 <i>English Medieval Coin Hoards: I. Cross and Crosslets, Short Cross and Long Cross Hoards</i> (British Museum Occasional Paper No. 87) London [publishes the Southminster 1986 and the Colchester 1969 hoards]</p> | <p>de Jersey, P. 2001 Cunobelin's silver, <i>Britannia</i>, 32, 1-44 [describes the silver coins issued by king Cunobelinus at Colchester c.AD 10-40]</p> |
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| <p>Cooper, J. M., Durgan, S. & Thornton, C. C. (eds) 2001 <i>A History of the County of Essex. Vol.10. Lexden Hundred (Part)</i> (The Victoria History of the Counties of England), Oxford</p> | <p>Morris, E. L. & Champion, T. C. 2001 Seven thousand collections - on the web, <i>Antiquity</i>, 75, 253-4 [A register has been compiled of all late Bronze Age and Iron Age pottery collections from England, including Essex. The database is available on the internet at http://www.arch.soton.ac.uk/Research/Pottery Gazetteer/]</p> |
| <p>Crosby, T. and Gould, S. 2000 Surveying the public water supply industry in Essex, <i>Industrial Archaeology News</i> 113, 45</p> | <p>Murray, S. 2002 Military gravestones in south-east Essex: classification and an analysis of a neglected source, <i>Local Historian</i> 32, 4-21</p> |
| | <p>Potter, J. F. 2001 The occurrence of Roman brick and tile in churches of the London basin, <i>Britannia</i>, 32, 119-42 [the frequent re-use of Roman brick in Essex churches suggests we may have underestimated the population of the county in the Roman period; the paper has a gazetteer of Essex churches with re-used Roman brick]</p> |
| | <p>Raven, N. 2001 Trade Directories and business size: evidence from the small towns of north Essex 1851, <i>Local Historian</i> 31, 83-95</p> |
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- Smith, A. 2001 *The Differential use of Constructed Sacred Space in Southern Britain, from the late Iron Age to the 4th Century AD* (British Archaeological Reports, British Series No.318), Oxford [the gazetteer includes Essex sites]
- Wise, P. J. 2001 Longinus finds his face, *Minerva*, 12 (3), 43-4 [the discovery of the missing face from the tombstone of a Roman auxiliary cavalry officer at Colchester when the find-spot was re-excavated]

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