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THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

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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 of the Society and interested members of the public; to educate the wider community in the 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.

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Two Late Bronze Age hoards from south-east Essex

Ken Crowe

Two Bronze Age hoards were discovered by metal detector users in south-east Essex, at Barling in 1991 and Wakering in 1994. Both groups contained elements characteristic of the Carp's Tongue complex, while the Barling assemblage also included one half of a two-piece bronze socketed axe mould. The Wakering hoard seems to have been laid in the ground with some care.

The hoards add significantly to our knowledge of Late Bronze Age hoards in the area, and are classified, described and discussed in the context of these other finds.

Introduction

Southend Museums Service, in common with other museum services throughout the county, offers an identification service and it was through this means that the two Late Bronze Age hoards that form the subject of this paper were brought to our attention. This paper briefly describes the circumstances of their discovery, and then catalogues each of the hoards separately. This is followed by a discussion on the Late Bronze Age in south-east Essex with particular reference to metalwork hoards. We are very grateful to both Malcolm Sperring and Ray Fry, the finders of the hoards, for drawing these to our attention, and for allowing us to retain the hoards for drawing and study.

South-east Essex is rich in prehistoric sites and finds (see Fig. 1 for Bronze Age material), which have been made during the past century and a half. Whereas Barling has been the site of quite recent mineral extraction, in the form of sands and gravel, mineral extraction (of "brickearths") at Wakering, has been in progress since about 1860. This has resulted in the recovery of a very large corpus of finds, many with only the most general of provenances, dating from the Palaeolithic to the Roman period and later. Recent archaeological excavation in both parishes has resulted in further finds and, more importantly, contextual information relating to settlements and economic activity. More recently still, metal detectorists' activities in these areas have resulted in yet more finds, and it is two of these which are reported here.

The Barling Hoard

In November 1991, a group of fifteen bronze (copper-alloy) items was brought into Southend Museum for identification by their finder, Mr. Malcolm Sperring. Of these, thirteen could be positively identified as of Late Bronze Age date. They had been found, using a metal detector, in a field in Barling, 7 km north-east of Southend. Although reportedly found over a period of several days, and scattered over the field, the condition of the individual pieces at the time of initial recording would suggest that they had originally formed part of a complete hoard. The assumption was that these had been disturbed by deep ploughing. The site of discovery is c. 4m above OD, the geology being described as river brickearth, here a redeposited loess, over sand and gravel. The site also lay about 1 km to the south of a late Bronze Age settlement (excavated by the author and the South East Essex Archaeological Society in 1981).

The Bronze Age items comprise four complete and four fragmentary socketed axes, one near complete valve of a two-piece socketed axe mould, fragments of two socketed knives, a sword blade fragment and a near-complete bronze disc. No cleaning or conservation work was undertaken on the pieces (except for the surface cleaning of the mould), and no attempt was made to remove any of the "fill" of the socketed axes, apart from that undertaken by the finder prior to their arrival at the museum.

All the pieces were in a good state of preservation when first seen, with a dark green patina. No signs of active corrosion were then visible. However, subsequent examination of the items, when they were lent a second time, indicated that active corrosion had developed. The hoard remains in private ownership.

Catalogue

Socketed Axes

1. Socketed axe, rib decorated (Fig 2.1). Wt 402 g, length 105 mm, width of blade edge 57 mm. External width at mouth 45 mm, depth 41 mm. There is a thin rounded moulding to the mouth, with a narrow bead-like horizontal moulding below. The top edge of the mouth moulding is broad, with remains of the stumps of two runners. When removed from the mould this axe had two small areas of flash standing proud above the rim of the mouth, and these have been hammered flat. The sides of the axe are virtually straight, and the casting flashes have been reduced particularly below the loop.

The loop, which is parallel sided and quite small for the size of the tool, descends from the base of the lower collar, which is particularly deep, the lower edge of

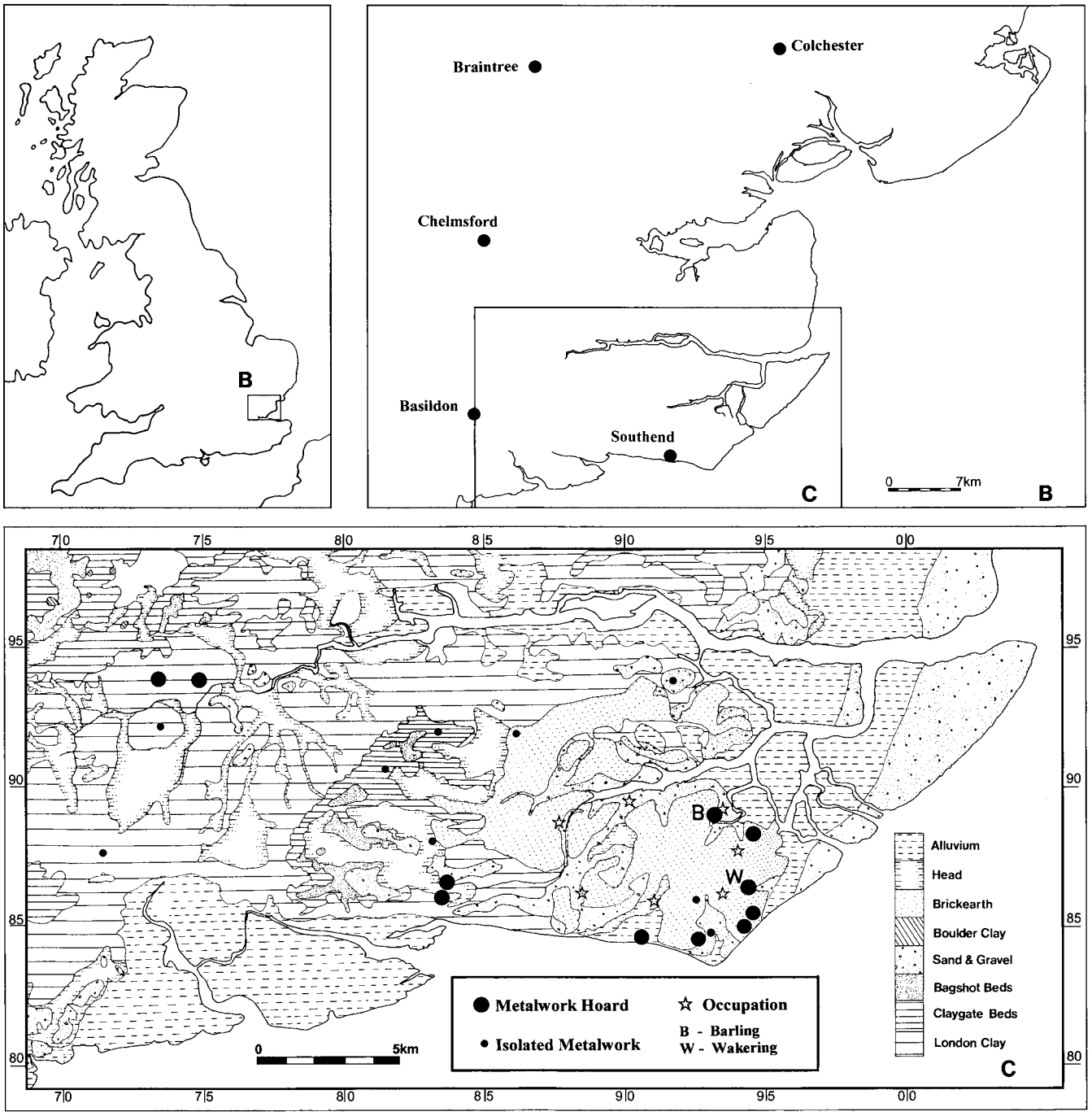

Fig. 1 Bronze Age metalwork from south-east Essex. Location map.

which is very cleanly cast and ledge-like. From this point, the five vertical ribs descend, the two outer most ribs on each face accentuating the angled body. The surface of the ribs are at the same level as the surface of the collar. Below the base of the ribs there is an area of scratching and dents, possibly caused by hammering. The lower part of the blade has been widened, the blade edge being somewhat faceted where it has been sharpened. The cutting edge has been damaged and bent, in antiquity. Into the socket of the tool has been jammed a quantity of other small bronze pieces that cannot be identified.

2. Socketed axe, rib decorated (Fig 2.2). Wt 346 g, width at cutting edge 47 mm, external dimensions at mouth 40 by 38 mm. There appears to be a single rounded mouth or collar moulding, which has been modified by hammering, masking its original appearance. The upper surface of the mouth moulding is uneven, but bears the remains of the stumps of two runners and an area of vertical casting flash. There is no discernable horizontal rib moulding below the mouth, but the ribs descend from a deep, plain collar the lower edge of which can be seen on the loop side of the tool. The loop itself, quite broad in shape, descends from the base of this collar. The casting flashes have been largely removed from the sides of the axe, but remain more prominent above the loop. On one face (illustrated) there is a large hole masking the end of the vertical ribs.

The tool is slightly waisted in appearance, flaring to

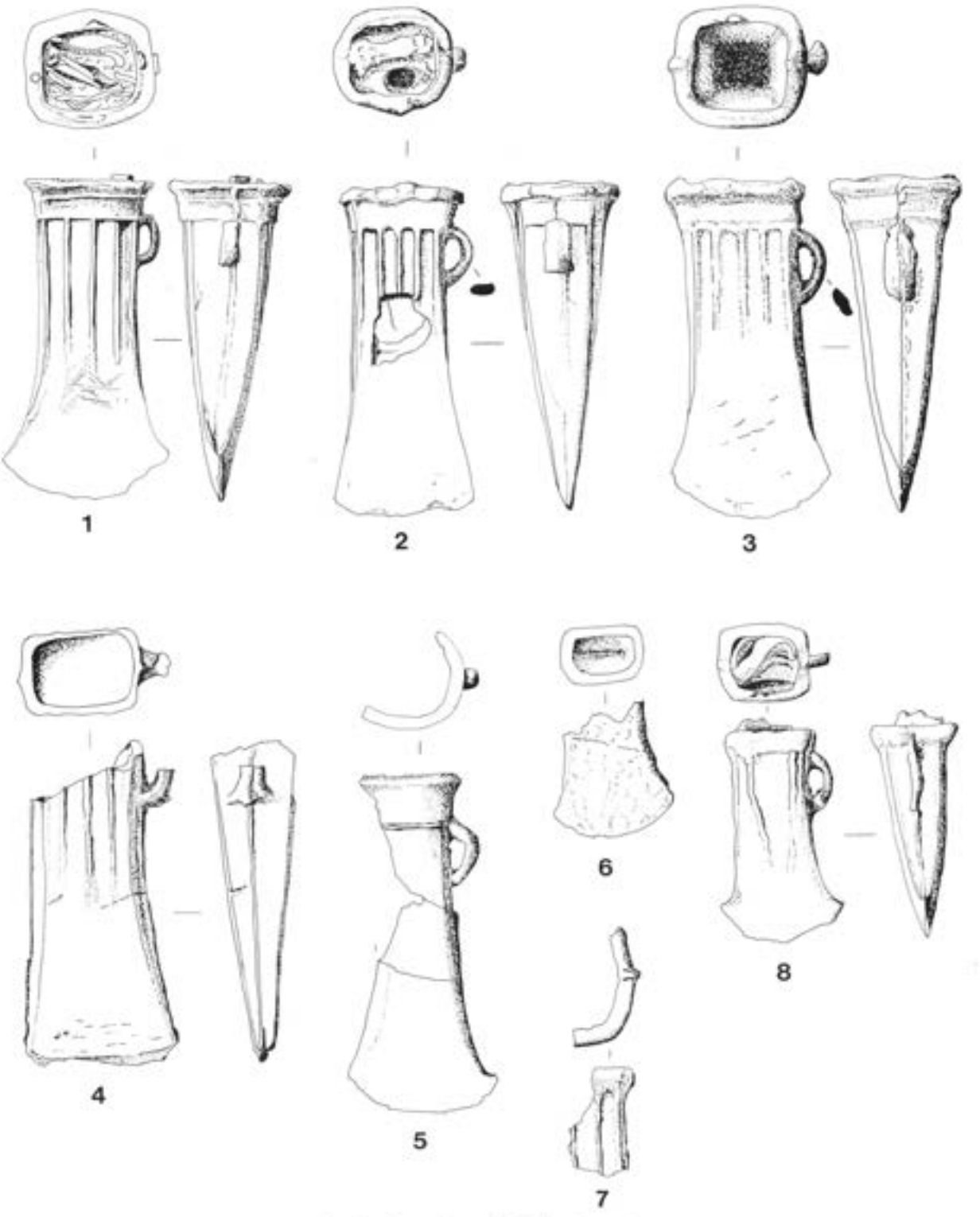

Fig. 2 Items from the Barling hoard.

a possibly as-cast cutting edge, which bears evidence of ancient damage. Some items of metal have been jammed into the socket.

3. Socketed axe, rib decorated (Fig 2.3). Wt 366 g. Length 110 mm, cutting edge 52 mm wide; external dimensions at mouth 45 by 43 mm. The axe has a rounded and prominent mouth moulding, which has an uneven upper surface. There is the stump of one runner. A horizontal bead moulding exists some way below, from which the top of the loop springs and the five ribs on each face descend. The top of the broad loop is narrowed, possibly caused by wear. The casting flashes on the sides of the tool have been reduced by hammering and possibly filing.

The body is fairly parallel sided and angular in section, with the two outer ribs accentuating the body angles. The blade edge is slightly expanded and, on the illustrated face, some dents in the blade face are possibly

caused by hammering. The cutting edge is uneven, probably caused by ancient wear or damage.

4. Socketed axe, rib decorated (Fig 2.4). Lower part only. Wt 320 g, surviving length 105 mm. Width of cutting edge 51 mm. The axe is in an as-cast condition, with untrimmed casting flash present on the sides of the tool, on the loop and on the blade edge. A little above the blade edge on the illustrated face, there is an area of denting, perhaps caused by hammering. There is a crack in the side of the tool, a little above this area of denting, perhaps part of the scrapping process.

On the break, it is evident that the thickness of the metal of the body of the tool varies, indicating a misaligned core. Another feature of this axe, not apparent in the illustration, is the colour of the metal. This is decidedly silvery, perhaps indicating a higher than normal lead content.

5. Socketed axe, faceted (Fig. 2.5). Length 110 mm; width at cutting edge 52 mm. Combined weight of surviving fragments 144.0 g. The axe has a somewhat angular bead like mouth or socket moulding, with slightly uneven upper edge. There is a simple horizontal rib moulding below, the neck between flaring trumpet-like to the rounded mouth. The top of the rounded loop descends from the lower rib moulding. The cutting edge has been widely expanded, creating a pronounced horn-like wing on the surviving blade end. There are faint traces of oblique striations near the cutting edge bevel, but corrosion masks much of this.

6. Socketed axe, lower blade only (Fig 2.6). Cutting edge width 40 mm, wt 78.4 g. Extant length 44 mm. Of subrectangular section, the blade flares to an expanded cutting edge. All traces of casting flashes appear to have been removed, but the surface of the tool is so badly corroded as to render precise examination impossible.

7. Socketed axe, rib decorated (Fig 2.7). A fragment of the upper part of a socketed axe, wt 39.0 g. Surviving length 36 mm. The mouth possesses a pronounced simple bead moulding, created by a thickening of the metal, and from which descend directly vertical ribs. On the upper surface of the moulding, which appears to have been considerably modified by hammering, is the stump of a single runner. The prominent casting flash on the side of the piece has been partially hammered over.

8. Socketed axe, rib decorated (Fig 2.8). Wt 124.4 g. Length 72 mm, width at cutting edge 41 mm. External dimensions of socket 31 by 27 mm. The mouth has a simple flaring collar moulding created by a thickening of the metal, and the upper surface of the mouth moulding has the stump of one or possibly two runners. The loop descends directly from below the mouth moulding, the lower edge of which is quite sharply defined. The loop is quite narrow, and slightly twisted down its length. Casting flashes are quite prominent; on the non-loop edge the casting flash has been hammered over, and extends the full length of the tool. On the loop side the casting flash appears to be largely unaltered. The blade edge has been expanded, creating a horn like terminal and hollow at the base of one side.

One the blade faces, there are two ribs, which converge, but do not meet, towards their lower ends. The ribs on one face are of unequal lengths, and tend to fade into the body, while on the other (unillustrated) face they are of more equal length and end more abruptly. A fragment of metal has been jammed into the socket.

This assemblage includes a minimum total of seven socketed axes, with a possible total of eight. Of these, six fall within the general class of rib-decorated axes. Each of the axes appears to be quite distinctive, with only no. 2 easily falling within the southern ribbed class. Axe no. 3 would seem to be similar to Needham's type B4 (double mouth moulding, in which the lower moulding is in the form of a horizontal rib), except that the Barling example has 5 ribs, not three (Needham 1990, 36). No. 2 would probably equate with Needham's type B2, the defining features of which are the mouth moulding comprising a single collar with a sloped top and concave underside, and lower edge defined by a slight step to the body. Axe 4 may fall within this class, as may no. 6 but not enough of these survive to be sure. Axe 1 may also belong to this class, the collar moulding may be a refined or elaborated version of the type (Needham, pers. comm.)

Ribbed axes of these general southern British types are common to many hoards of the Ewart Park phase of the lower Thames Valley (Needham 1990, 38), and particularly along in the Thames Estuary.

While not enough of axe no. 4 is present to allocate it to a class, its principal feature, not discernible from the illustration, is its colour, which, as indicated above, was a steely or lead-grey. Although no metallurgical analyses were carried out, the possibility must remain that an excessive amount of lead in the alloy is the cause of this colouration. Lead content of late Bronze Age metalwork is usually around 7%, although there are occasions when a much higher lead content has been found (Northover 1991, 67). This may indicate that lead, like copper, was added to the mix by the bronze smith (rather than using only melted down scrap), support for which is occasionally found. For example, a splash of lead was found on an implement in the Petters Late Bronze Age hoard (Needham 1990, 107); see page 15 for an alternative view.

Axe no. 8 does not fall within the southern British types, but is to be classified as a Stogursey type, characterized by a single, quite heavy, mouth moulding, high placed loop and decoration comprising (normally) three vertical, usually converging, ribs (Needham 1980, 38; 1981, 7). While concentrated in the south west (and at one time termed "south Welsh" axes), moulds for casting this type of axe have been found as far east as Surrey indicating their manufacture well outside the "core" area of distribution. Examples of this type are

found in Ewart Park phase metalwork hoards, and often particularly with the Carp's Tongue complex. This is especially the case in Northern France (Eluere 1979) and are firmly dated to Late Bronze Age III (O'Connor 1980). The presence of only two ribs on the Barling axe - a very unusual feature - perhaps may be explained by poor casting. The Barling find is the most easterly of the three known Essex examples of this type.

The fragment of socketed axe, no. 7 may also fall within this tradition, although not enough of it survives to be certain of its attribution. Distinctive casting flashes at the mouth did not seem to be present. The characteristic feature of this axe, and which suggests this possibility, is the single mouth moulding, with vertical, parallel, ribs descending directly from it. It is very similar to the fragment illustrated from West Lavington (Annable and Simpson 1964, no. 603) and would appear to be of similar form to those from, for example, Llantwit Major, Glamorgan (Savory 1980, 190, fig. 281).

Another type of axe was also present among the Barling assemblage. This axe, no 5, is a faceted type, the socket moulding being biconical, and possessing a deep collar. Needham places this type (based on the morphology of the mouth moulding) in his Class D (Needham 1980, 41), while Schmidt and Burgess (1981) referred to these as Type Meldreth (204 *et seq.*). This is an insular type, occurring in Late Bronze Age contexts throughout Britain and Ireland (O'Connor 1980, 166), and dated by association to Ewart Park (Needham 1980, 43), although there is a possibility that the type appeared in an earlier phase (O'Connor 1980, 166). There appear to be regional variations, based principally on treatment of the collar. The deep collar of the Barling specimen is a feature of faceted axes in the north (Davey (1973), Schmidt and Burgess (1981) type Meldreth), although a similar axe, with deep collar, but without the lower rib moulding of the Barling axe, comes from the Leigh II hoard. In the south, shorter collars would appear to be the norm (Needham 1980, 43).

Faceted axes are always very well finished, and stand out from the mass of the Ewart Park bronzes, as being rather elegant, with all traces of excess metal being removed. Perhaps these axes had a specialized function, their use restricted to specialist workers?

Knives

9. Socketed knife, incomplete (Fig 3.9). Wt 27.8 g, surviving length 48 mm. The socket appears to survive intact, and measures 32 mm in length. The socket is oval in section, measuring 24 by 13 mm externally. A small section of the blade survives, allowing it to be identified as two edged, and with fine grooves behind the slightly hollow blade edges.

10. Single edge socketed knife, incomplete (Fig 3.10). Wt 60.5 gm, length 93 mm, length of socket 45 mm. External diameter at socket mouth 20 mm. The socket of this knife is almost complete, part of the socket mouth and adjacent side lost. A single rivet or peg hole survives; a second hole may have been present. The socket tapers from the opening towards the junction with the blade, which has a blunted curved back. A short length of the blade edge survives, and there is a bevel parallel with the cutting edge along the surviving length of one face. There are striations parallel with the cutting edge, that may be post-depositional, and there are dents, possibly hammer marks, at the socket/blade junction. This may have been part of the scrapping process. The only evidence of a casting flash is a very short length on the underside of the junction of socket and blade.

The first of the two knives (no. 9) is a two-edged socketed knife of Thorndon type (named after the hoard of that name, Inv. Arch. GB 11,2), which has a widespread distribution in the Late Bronze Age Ewart Park phase, particularly in south-east England. The Barling example has a single pair of rivet holes or fixing holes in the socket. Locally, similar knives with one or two pairs of fixing holes have been found in the Leigh II and Southchurch hoards (Crowe, unpub. Bronze Age Catalogue, and Davies 1979, 166-71). The blade is also typical in section, with slight hollows behind the blade edges.

The other knife is much more unusual, being a rare import into England from the Continent, where they are dated to Bronze Final III, and in England to Late Bronze Age III, (O'Connor 1980, 180). Only two others were known to O'Connor from England.

Sword

11. Sword blade fragment (Fig 3.11). Wt 37.2 g, length 46 mm, width 25 mm. The sword blade fragment in section has a pronounced central midrib, which is defined on both sides by parallel grooves. Towards the blade edges (not present) are further shallow grooves. This fragment probably comes from about half way along the original blade; one end possesses a fairly clean break, which has a spongy appearance in section.

This sword is of the class known as "Carps Tongue," from the characteristic shape of the point. The type is characterized by a pronounced midrib flanked by grooves and bevelled edges. It is another exotic element in this assemblage, probably having been imported, as scrap: only three complete examples are known from England (O'Connor 1980). The greatest concentration of these swords is in north-east France, the likely source for British examples (O'Connor 1980, 188). The Barling example would probably fall into Needham's blade variant 2 (Needham 1990, 55).

Miscellaneous

12. Cast Disc (Fig 3.12). Wt 27.3 g, diameter 46 mm. Almost complete, but with about 25% of the rim lost. The disc has a central dome, with boss, rising from an encircling depression, outside which is a broad concave body and simple rim. On the underside two rod-like bars, cast in one with the body of the disc, connect the rim to the centre.

Although the writer can find no precise parallels for this piece, several similar items are known from other hoard finds. Perhaps the closest is one from the

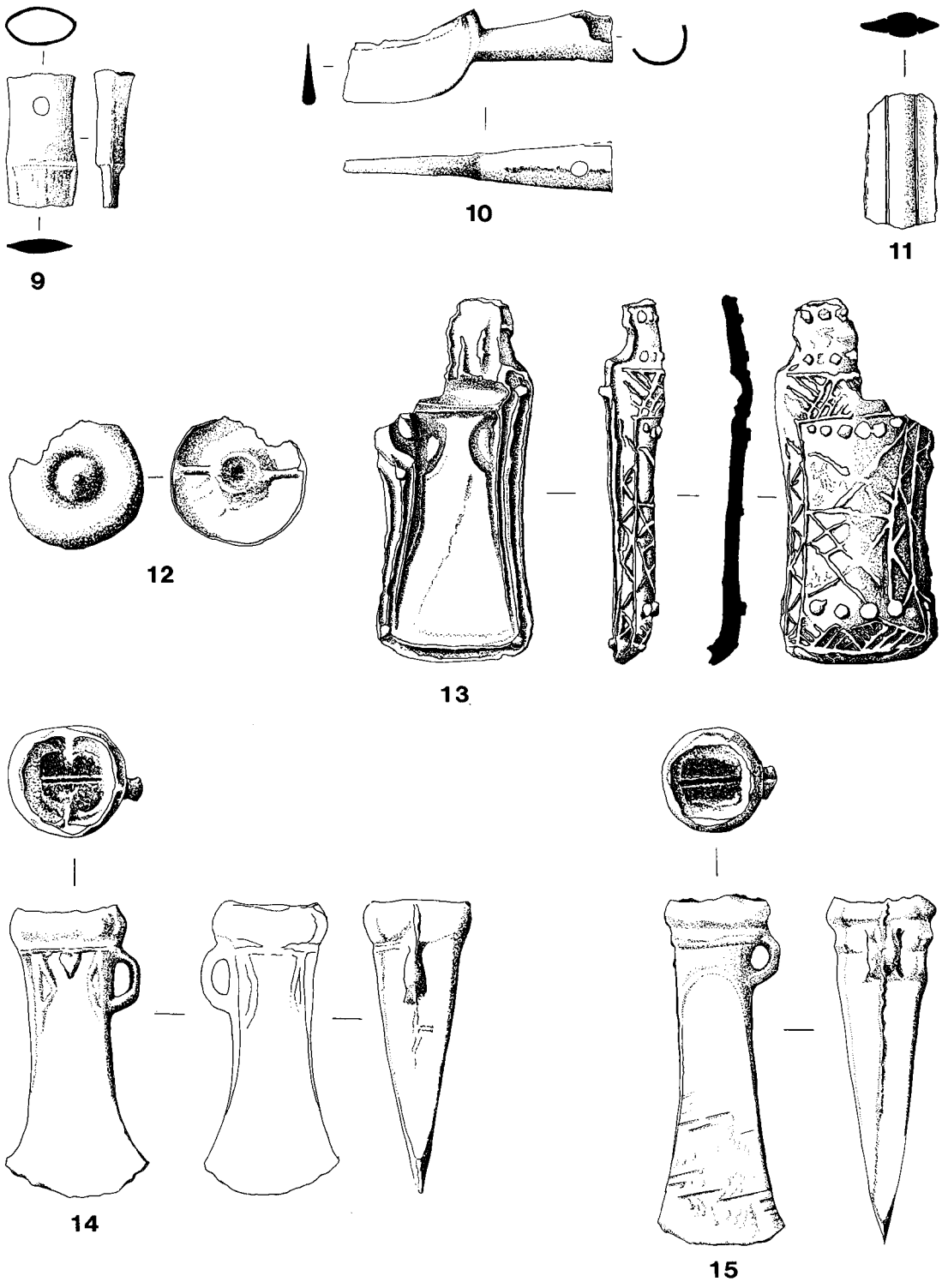

Fig. 3 9 - 13 Items from the Barling hoard. 14, 15 Items from the Wakering hoard

Cassiobridge, Watford hoard (Coombs 1979, 208, fig. 11.6, 56 and 57). These differ in the formation of the central boss, where the thickness of the metal is greatest, and in the placement of the two bars. However, the general form would appear to be very similar. Considering the rather thin (presumably fixing) bars on the back, these items were probably decorative.

Bronze Mould

13. Bronze mould (Fig 3.13). Wt 264 g, length 129 mm (including tongue or collar); maximum width at base 53 mm and, across loop, 53 mm. The interior surface of the mould is in very fine condition, apart from a single, post-depositional, scratch across the face of the "blade." This is one half of a two-piece (or bivalve) bronze mould for casting a south eastern type wing decorated socketed axe. The mould is broken across the top of the loop and vertically along the tongue or collar, across a hole. Four locating pins survive out of a total of at least five. The resulting axe (a plaster cast was taken) would

have had a blade of crinoline outline rather than tapered; the axe would have measured some 95 mm in length, and the as-cast cutting edge of the blade would have measured 40 mm in width.

Externally the mould is highly decorated. This decoration consists of a central panel defined by raised ribs, enclosing a cross-hatched design of ribs and, towards the lower end of the panel, a row of four pellets, and at the top, six pellets. The rest of the space, along the borders and at the base of the collar, is filled with zig-zag and filled triangles of ribs. The top of the collar is decorated with two rows of pellets. Tylecote (1986) lists 24 Late Bronze Age two-piece bronze moulds, of which 20 are socketed axe moulds.

It is possible that bronze moulds were used for the production of wax or lead patterns (Tylecote 1986, 92). Lead axes, regarded as "patterns" for clay moulds, have been found in several hoards (Tylecote 1986), in England and in the north of France. But it is also true that artifacts could be cast directly in bronze moulds. It will be noted from the drawing of the Barling mould that the collar of the mould has broken across a hole, and a possible interpretation of the function of this hole is that, like that on the Isle of Harty mould (Invent. Archaeol. 18) it would secure a trunnion that supported the core (Evans 1881, 446; Tylecote 1986, 92). If this interpretation is correct, this would indicate that the Barling mould would have been used for direct casting.

The external decoration is very interesting. Decoration of moulds is not unknown (e.g. on palstave mould from Wiltshire, Evans 1881, 440, fig. 528-9), but such profusion of ornamentation on the Barling mould is worthy of comment. That some elements of the decoration may be functional is very likely; the small pellets or pins on the outside of the mould would probably help to secure a binding. The rest of the decoration is surely purely ornamental, perhaps a skeuomorph of webbing that would have held the two halves of the mould together. (I am grateful to Stuart Needham for this suggestion). A similarly decorated socketed axe mould was found in the Thiais (Seine) hoard (Duval 1961). The illustrated piece has a central rectangular raised rib panel, with crossed ribs above and below. It may be worth spending a few moments to consider how this decoration was created. Considering the palstave mould from Wiltshire already mentioned, Evans suggested that the decoration was cast from actual twine that had tied the (presumably clay) 'model' or pattern to the implement. Perhaps this was the process involved in the creation of the pattern on the Barling socketed axe mould. Doubtless other suggestions will be forthcoming.

The Wakering Hoard

On 24 June 1994, a small Late Bronze Age metalwork hoard was brought into Southend Museum. It had been found by metal detector on 30 January that year, on the land of Shoebury Nurseries, at the southern end of the parish of Great Wakering (TQ 944 864). The site lay at about 4m O.D, on river brickearth over sand and gravel. According to the finder, the hoard seems to have been deposited in a shallow, flat-bottomed pit; the top of the hoard was about 2.5 feet (c. 0.75 m) below the present ground surface, and the bottom of the pit was at about three feet (c. 0.92 m) below the ground surface. The diameter of the pit was about 12 inches (c. 0.30 m). The hoard comprised, according to the finder, socketed axes that were placed on the bottom of the pit, and which were completely concealed by a layer of copper-ingot fragments placed over them. There was no apparent trace of pottery or of any organic container.

Each of the sockets of the axes was jammed with fragments of other tools, etc., which the finder had carefully removed before bringing the hoard into the museum. Although the finder was quite certain that all the fragments listed were from inside the sockets of the axes, one item would appear to be of much later manufacture. However, despite the inclusion of this doubtful piece (not reported here), the hoard would appear to be a sealed find, and therefore of great research value.

Catalogue of finds

Socketed Axes

1. Socketed axe (Fig 3.14). Wt 206.6g. Length 101 mm, external dimensions of mouth moulding, 36 by 36 mm. Width at cutting edge, 46 mm. The axe has a prominent and bulbous mouth moulding, with a narrow but well-defined horizontal rib below, from which the top of the loop springs. The loop narrows at the top and bottom, possibly indicating wear caused by the thong that secured the haft to the tool (Cuddeford and Sealey 2000). The top of the socket opening is a little uneven, and in places there is a slight lip, caused by the hammering over of the vertical casting flash. The mouth is almost circular, and has the stumps of two runners, from each of which a rib descends into the socket (Ehrenberg type 5a). The sides of the axe are slightly concave, expanding markedly towards the cutting edge. Descending from the narrow horizontal rib moulding, on both faces of the tool, is a faint wing ornament, with triangular pellet between on one face only. Casting flashes on the sides have been largely removed, particularly towards the cutting edge, which is well expanded and corroded. (SOUMS:A1995.10.2).

2. Socketed axe (Fig 3.15). Wt 254.6g; length 119 mm, and external dimensions at mouth 33 by 34 mm. Width at cutting edge 43 mm. The axe has a fairly prominent rounded mouth moulding, created by a thickening of the metal, with rounded horizontal rib moulding below, from which springs the top of the loop. The loop narrows significantly towards the top. The socket opening is almost circular and is very uneven, probably caused by differential removal of the vertical casting flash here, together with the removal of one of the two runner stumps. Casting flashes on the side of the tool are still fairly prominent, only being completely removed towards the blade edge. In section the body of

the axe is quite angular, with the tops of the blade faces creating a shouldered appearance. The sides of the axe are slightly concave, widening to a slightly expanded cutting edge. The blade edge is slightly damaged and bent, with corrosion particularly on one face. There is a series of very light and roughly parallel indentations on one face, possible hammer marks created during the scrapping phase, and on the other face some other more sharply defined indentations which appear to be post depositional. This is rather an elegant, slender axe, of graceful proportions. (SOUMS:A1995.10:4).

3. Socketed axe, plain (Fig 4.16). Wt 278.3g., length 101 mm. Dimension at mouth (back to front) 38 mm. Width at cutting edge, 43 mm. The axe has a prominent, tall, rounded mouth moulding, created by a thickening of the metal, which can be seen in section, where the tool is broken. The top of the moulding is uneven, caused by the differential removal and hammering of the vertical casting flash; the two runner stumps have been hammered over inwards, creating, on one side in particular, an internal overhang or lip. The other runner stump still stands proud. An internal vertical rib descends from each of the runner stumps, (Ehrenberg type 5a). There is a low set horizontal rib moulding, from which the top of the side loop springs. The side loop is tapered evenly slightly towards the base, but is not waisted. The sides of the axe are slightly concave, and in section the body of the axe is subrectangular, with rounded corners, and the sides taper gently outwards towards an as-cast or only slightly expanded blade edge. The casting flashes on the sides are noticeable but very fine, disappearing entirely towards the cutting edge. The blade edge is slightly asymmetrical and has a marked chamfer. On one face there are some very shallow and barely noticeable indentations which may be hammer marks, caused, probably as part of the scrapping process (SOUMS:A1995.10).

4. Socketed axe (Fig. 4.17). Wt 250.7g, length 119 mm. Dimensions at mouth, 37 by 36 mm. Width at cutting edge, 40 mm. This axe has a very pronounced bulbous mouth moulding, created by a thickening of the metal at this point. The top of the mouth moulding is slightly uneven, caused by the hammering over of the vertical casting flash. There is a narrow but quite prominent horizontal rib moulding below, from which springs the top of the side loop. The loop is markedly waisted at the top. The upper part of each blade face is decorated with a ribbed wing design, with a pair of pellets at the top. The two vertically placed ribs, forming the sides of the "wing" descend directly from the horizontal rib. There is a basal horizontal rib joining the bottom ends of the vertical wing ribs apparent on one face only. Indeed, on one face the "wings" are quite curved, while on the other face, they are virtually vertical, and defining the outer edges of that face. Casting flashes are quite prominent on the sides of the axe, disappearing only towards the blade edge. The blade edge is as-cast or only very slightly expanded; there is a zone, visible on both faces, of very fine filing marks parallel to the blade edge which appears to be undamaged. There are also areas of small dents, caused no doubt by hammering during the scrapping process. The axe is quite slender with concave or waisted sides, being narrowest at the base of the wing ornament (SOUMS:A1995.10:3).

5. Socketed axe (Fig. 4.18). Wt 394.7g. length 116 mm, dimensions at mouth 43 by 42 mm. Blade edge measures 49 mm. The axe has an angular mouth moulding, with rounded top and concave underside. The socket opening is virtually rectangular and the top of the mouth is uneven, with traces of a vertical casting flash and one (of two) runner stumps. From this stump, and on the opposite side also, a vertical internal rib descends into the socket (probably Ehrenberg type 5b but possibly type 2). The underside of the mouth moulding ends in a scarcely defined horizontal rib, which creates a step from which five parallel vertical ribs descend about half way down each, the two outer ribs accentuating the angle between the face and sides of the axe. From the base of this step projects the top of the side loop, which is markedly waisted towards the top. The casting flash has been largely removed from both sides, but is still fairly prominent on the loop and side above the loop. On the opposite side there is evidence that the two halves of the valve did not quite match perfectly, leaving a slight vertical step along the upper half of the tool. The sides of the axe taper gently outwards towards the as-cast or only slightly expanded cutting edge, which was damaged before deposition. Extensive areas of corrosion on the lower blade faces may hide signs of working, but there do not appear to be any signs of hammer marks (SOUMS:A1995.10:1).

6. Socketed axe, incomplete (Fig 4.19). Wt 166.5g, dimensions at mouth 41 by 36 mm, surviving length 70 mm. The mouth moulding is angular with a flat top and with no sign of a lower parallel moulding. From the base of the mouth moulding descend three vertical parallel ribs on each side. Also from the base of the mouth moulding the top of the loop springs; the loop is round or nearly round in section and at a slight angle to the body. Casting flash is present on the sides, but reduced to a slight ridge. Extensive corrosion on this piece prevents identification of runner stumps on the top of the mouth moulding, but an inner lip is present which may indicate remains of a horizontal flash. The tool is broken about half way down the blade, at a point where it begins to expand, leaving a somewhat jagged edge. There are no dents from hammer blows present (SOUMS:A1995.10.5).

7. Socketed axe, incomplete (Fig. 4.20). Wt 19.4g, surviving length 44 mm. Small fragment from the face of a socketed axe, comprising part of the mouth and upper blade, with a slight curve at the angle with the side. The mouth moulding is rounded, created by a

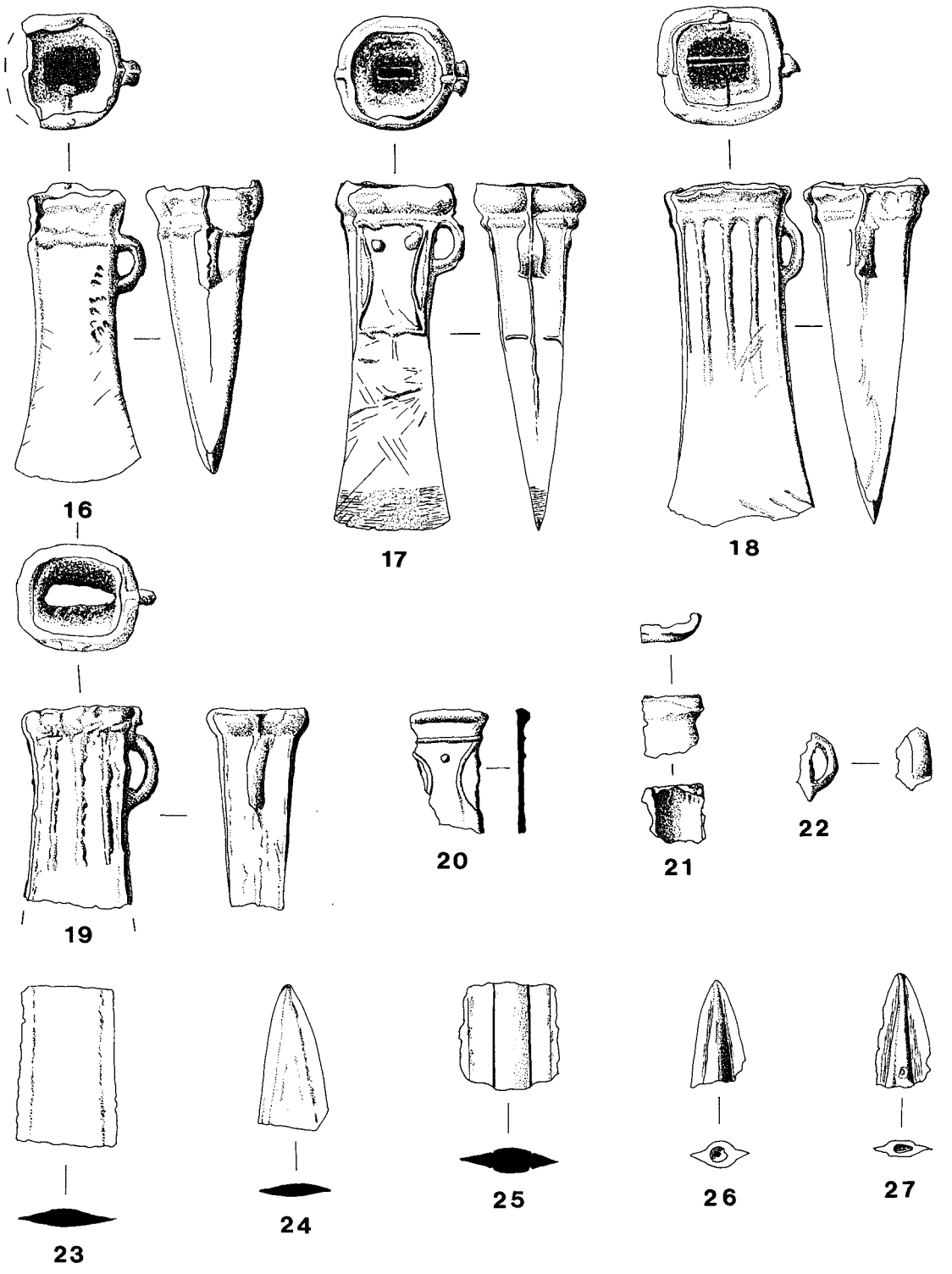

Fig. 4 Items from the Wakering hoard

thickening of the metal, with a prominent horizontal rib moulding below, from which descend a pair of "wings" in the form of curved ribs, with a single pellet at the top, between them. This piece of metal appears to have been flattened (there is a shallow indentation below one of the wings, possibly caused by a hammer blow) causing a slight vertical split to open on the "inside" face. The breaks along two of the edges are sharp and straight, while the third is rather more jagged (SOUMS:A1995.10:19).

8. Socketed axe, fragment (Fig. 4.21). Wt 14.2g, surviving dimensions, 21 by 21 mm. A fragment of the mouth and lower rib molding from a socketed axe, with a distinct curve indicating the angle between face and side of the tool. The mouth moulding is prominent and bulbous, with uneven top probably caused where the vertical casting flash has been hammered flat, creating a distinct lip and overhang on the inner face of the mouth. There is a lower horizontal rib moulding below a rather tall concave collar, the fragment being broken

immediately below this point. There are indentations on both mouth moulding and lower rib, presumably caused by a hammer during the scrapping process (SOUMS:A1995.10:6).

9. Socketed axe, fragment (Fig. 4.22). Wt 5.7g, surviving length 22 mm. The loop from a socketed axe, with portion of attached body. The loop is parallel sided, and of roughly plano-convex section. There appears to be no wear on the sides of the loop, but on the surface of the metal, on inside and outside faces, and in the break are numerous very small holes. The metal of the body is also very thin, and together these factors may indicate that this is a failed casting. (SOUMS:A1995.10:7).

The Wakering hoard contains three distinct types of axes, with a variety of design variants. The majority of the socketed axes would fall comfortably within the "south eastern" type, as originally defined by Butler (Butler 1963; Schmidt and Burgess 1981; Needham 1990). The main features were defined as a fairly slender, square to rectangular sectioned body, parallel-sided or slightly flared, and with a squarish mouth, with double mouth moulding. Since Butler's original publication, other workers have sought to subdivide the type into a number of variants (e.g. Schmidt and Burgess 1981). However, much more work needs to be done on the detail of the southern British and French material (Needham 1990, 30) before real progress can be made.

The axes from the Wakering hoard are classified here using the principal criteria outlined above. The table below sets out the classification, using 6 criteria.

It is clear that axes 1 to 4 have similar shaped mouth mouldings and socket shape, and broad loops, with an irregular oval section, and would fit comfortably within the range of south eastern types. Axes 2 and 4 stand out, however, because of their slender, rather elegant, shape. This, combined with the heavy, bulbous, mouth moulding, might place them with the Plainseau types. Butler (1987, 27-8) saw these as produced both in northern France and in southern Britain. However, O'Connor (1980, 162), would not agree, defining the true Plainseau type as of purely French origin, and with only a single example in Britain. We will only point out that the two Wakering axes are very similar to those "Plainseau" types illustrated by Butler (1987, fig. 17).

The rib-decorated axes have a very different and distinctive mouth moulding, much more angular than the typical south eastern types. It will be noticed that axe 5 has a broad loop with oval section and, as we have already described, the two outer ribs accentuate the body angles of the tool. The body section is sub-rectangular to hexagonal. These features would probably indicate that this axe should belong to the southern English ribbed series (Needham 1990, 32). Axe 6 is quite different in detail. The mouth moulding is flat topped, the body in section is a narrow rectangle, and the loop is round in section. We have already noted that the loop springs from immediately below the mouth moulding, high up on the side of the axe. These are all features that indicate a different class of axe, and all are

Axe No.	Mouth shape	Mouth moulding profile	Body shape	Mid body section	Loop form	Decoration
1	Sub-circular	Round, bulbous,with narrow rib imm. Below mouth moulding	Parallel, slender	Sub-square	Broad, irregular oval	Triangular pellet
2	Sub-circular	Round, slightly concave towards top; rib moulding below	Tapered, slender	Sub-square	Broad, irregular oval	Plain
3	Sub-circular	Rounded, concave below to horizontal rib	Tapered		Broad, irregular oval	Plain
4	Sub-circular	Round, bulbous, tending to concave at top, prominent rib moulding below	Parallel, slender	Sub-square	Broad, irregular oval	Wing ornament
5	Sub rectangular	Angular, sloping top, concave below, with slight rib-ledge below	Tapered	Sub-rectangular to hexagonal	Broad, irregular oval	Five vertical ribs
6	Sub-rectangular	Angular, flat top, underside at c. 60 degrees	Almost parallel	Narrow rectangular	Round	3 ribs
7		Round, with well-defined rib below				Wing and pellet
8		Round, bulbous. With prominent rib below				
9					Broad, irregular oval	

features that have been noted as characteristic of the Stogursey type of axe. This would seem to be confirmed by the (possible) presence of horizontal casting flash at the mouth, indicating this distinctive technology.

Swords

10. Blade fragment (Fig. 4.23). Wt 61.8g, length 57 mm, maximum width 33 mm, minimum width 30 mm. The blade is lenticular in section, with a broad central midrib. The blade edges are bevelled, with a slight hollow behind, creating a low rib at the change in angle, parallel with the blade edge. The breaks at both ends are fairly straight, and the broader end has been slightly bent (SOUMS:A1995.10:9)

11. Blade tip fragment (Fig. 4.24). Wt 19.5g, length 49 mm. Maximum width 24 mm. The blade is lenticular in section, with broad midrib and beveled edges. There is a straight break across most of the blade, but angled at one side (SOUMS:A1995.10:11).

12. Blade fragment (Fig. 4.25). Wt 40.5g, length 37 mm; maximum width, 35 mm, minimum width 34 mm. The fragment has a distinctive section, with pronounced midrib, defined on either side by a narrow groove. The blade wings are hollowed, and another groove divides this element from the blade edges, which have been lost through corrosion. (SOUMS:A1995.10:10).

The sword fragments fall into two very common classes. Fragments 10 and 11, with their lenticular section and bevelled edges, belong to the south eastern Ewart Park type (Burgess and Colquhoun 1988, 66-8), the most common of the native bronze swords of this period. The Ewart Park sword was an indigenous development from the Wilburton sword. (*ibid*, 67-8). The third fragment, no. 12, can be identified as from a Carp's Tongue sword, (Burgess and Colquhoun 1988, 108-11) the blade section equating with Needham's variant 2 (Needham 1990, 54-5).

Spearheads

13. Socketed spear, tip (Fig. 4.26). Wt 10.5g, length 40 mm. A leaf or flame shaped spearhead, with pronounced central socket rib, tending to become angular as it tapers towards the tip. One edge of the spearhead is largely undamaged, but the tip has been bent (during the scrapping process?) and the socket end has been distorted by hammering; there is a substantial indentation on the central rib just above the break on one side (SOUMS:A1995.10.12).

14. Socketed spearhead, tip (Fig. 4.27). Wt 12.2g, length 37 mm. A leaf or flame-shaped spearhead, of identical shape to no. 13. In this case, however, the central rib remains rounded to the tip, and the blade edges are undamaged. There is an indentation on the central socket rib a little distance above the break, presumably caused by a hammer blow during the scrapping process (SOUMS:A1995.10:13).

With such small fragments of spearheads we can only assign them to the general class of pegged socketed spearheads typical of the Ewart Park phase, examples of which have been found in many Late Bronze Age hoards from south-east Essex.

Bugle-Shaped Object

15. A single example of a bugle-shaped object was found in the Wakering hoard (Fig. 5.28). Wt 25.2g, length (surviving), 56 mm. A horizontal tube (assuming that this is correct orientation) narrows towards the two ends before expanding to a trumpet like termination, of which one survives intact. On the "top" of the tube is a sub-rectangular opening, bordered by a raised rim, and on the underside a tubular attachment or loop with central slit-like opening. Apart from the broken end, the piece shows no signs of wear (SOUMS:A1995.10:21).

Bugle-shaped objects have been interpreted as strap fittings (O'Connor 1980, 194), and their distribution is mainly confined to northern and western France and southern England. The Wakering specimen is an example of the one-piece type (of mainly south-eastern distribution).

Tanged Tool

16. Tanged tool fragment (Fig. 5.29). Wt 4.8g, length 14 mm. A very small fragment of what appears to be a tanged tool, possibly the junction of tang and blade, and possibly a chisel. In the orientation in which the piece has been illustrated, the vertical "tang" tapers markedly upwards. The "stop" is oval in section, with ends angled towards the top. The stump of a ?blade emerges from the underside of the "stop" (SOUMS:A1995.10:15).

With such a small fragment, the identification must remain tentative, but it may be worth pointing to possible comparative pieces from the Reach Fen hoard, Cambridgeshire, (Invent. Archaeol. GB.17 3), and Stourmouth, (O'Connor 1980, fig. 62A, 6). A tanged chisel from the latter hoard appears to have a similar central "stop" between tang and blade. There is also a similar piece in the Grays Thurrock hoard (O'Connor 1980, fig. 56, 9).

Notched tanged knife

17. Blade (Fig. 5.30). Wt 18.1g, length 64 mm. Possibly a knife blade, with almost parallel sides, maximum width 16.5 mm, and bevelled edges, the (blunted) end bent over and broken, where the width of the piece is 12 mm. Near the other end is a pair of opposing 'V'-shaped notches, where the edges of the piece have been blunted. Above the notches the metal is thinner, possibly sharpened to create a cutting end. The piece has a central thickening creating an irregular flattened midrib (SOUMS:A 1995.10:17).

18. Blade (Fig. 5.30). Wt 6.9g, length 44.5 mm. Possibly a knife blade, and part of the previous piece, although the fragments do not make a clean join. The piece tapers towards a rounded end, the other end being thickest and bent over. In section the piece has a very shallow lenticular shape, and the edges have been

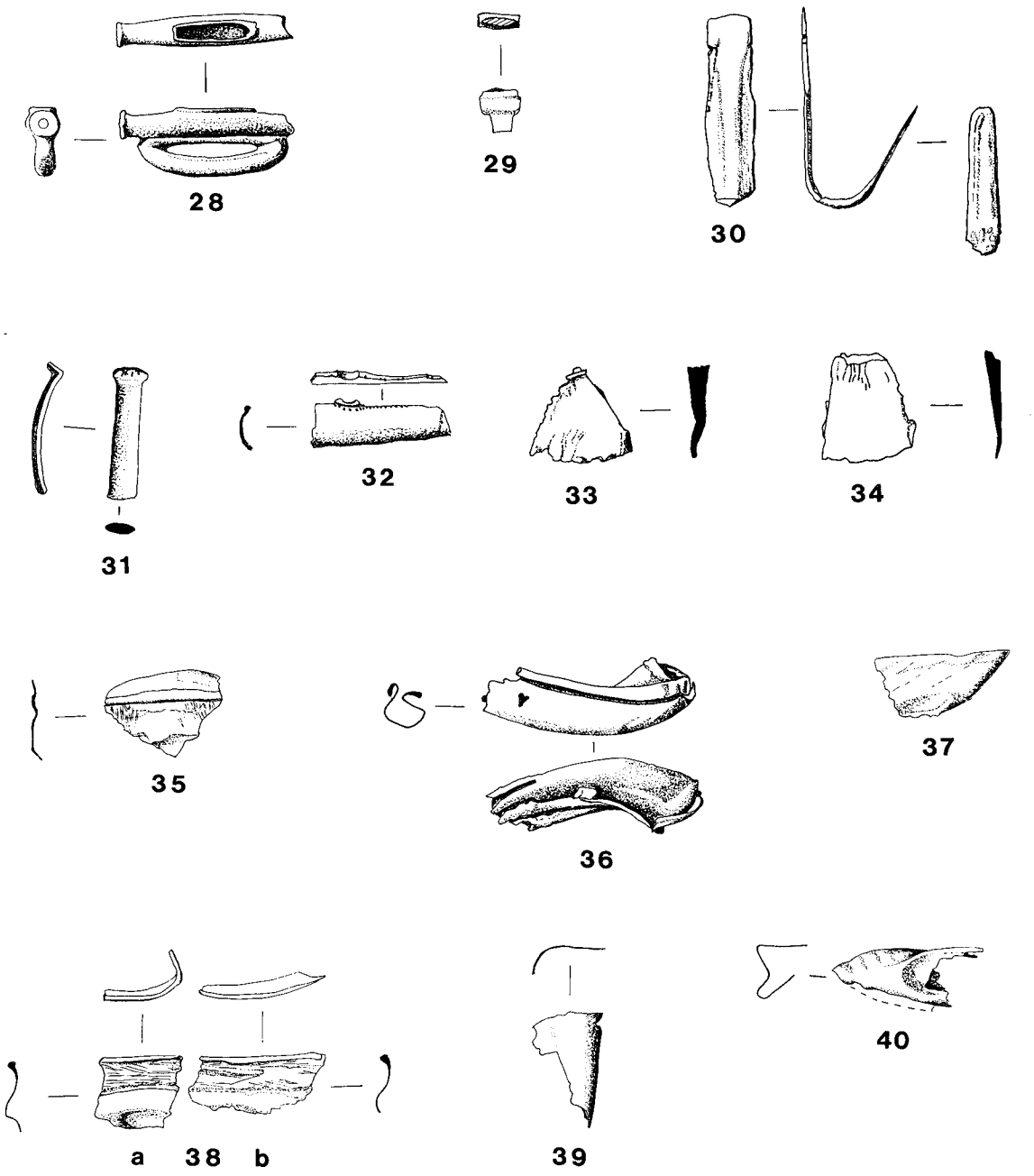

Fig. 5 Items from the Wakering hoard

bevelled. The width at the broken (bent) end is 11.5 mm (SOUMS : A 1995.10.16).

It is quite certain that these two fragments are part of the same piece. If this is the case, the complete piece would measure approximately 118 mm in length. This is, perhaps, a form of two-edged tanged knife, similar to one from the late Wilburton phase Isleham hoard (O'Connor 1980, fig.44, 30).

Ornament

19. Bracelet fragment (Fig. 5.31). Wt 8.3g, length 43 mm. Of lenticular section, maximum width at break 9.5 mm, curved along its length, and with one terminal surviving. The outward facing terminal is plain and rounded, and slightly broader than the shaft, at 11 mm (SOUMS:A1995.10:18).

Bracelet fragments are a common ingredient of Late Bronze Age hoards. These have been classified into several types (O'Connor 1980, 206-14). The Wakering example is somewhat similar to the Covesea type, but with a lenticular rather than round section, and lacking decoration. A similar (but decorated) example was found in the Leigh II hoard from south-east Essex.

Miscellaneous pieces

20. Socket fragment of tool or weapon (Fig. 5.32). Wt 7.2g, length 45.3 mm. A length of presumably socket wall, broken at both ends, and with a section of a single perforation, bordered by a raised collar. Around this collar and along the adjacent break is a line of fine punch marks. Those along the break have penetrated through the wall of the piece, and can be seen in section (SOUMS:A1995.10:14).

This piece is too small to be able to offer a confident

identification of the complete item. It is interesting to note, however, that one aspect of the scrapping process appears to have involved the use of a punch.

21. Bronze plate (Fig. 5.33). Wt 15.6g, triangular in shape, and of thin triangular section. The breaks along two (thicker) edges are quite straight, while that on the thin edge is jagged and the metal bent. There are punch or hammer marks on one side (SOUMS:A1995.10:8).

22. Bronze plate (Fig. 5.34). Wt 22.1g, triangular in section, with one straight break; the breaks along the other edges, including the thinnest side, are jagged. There are punch or hammer marks, concentrated on one side, and particularly at the thickest part of this fragment where the surface of the metal presents an uneven and spongy appearance. There is also some modern damage to the piece at this point, exposing an area of bright copper metal (SOUMS:A1995.10:20).

The two pieces of bronze plate are joining fragments; the join is not perfect, indicating that some damage was inflicted on at least one of the pieces subsequent to breakage.

23. Bronze sheet (Fig. 5.34). Wt 5.4g, maximum dimension 38mm. Thickness of plate, 1 mm. Of roughly triangular shape, with a raised rounded rib across the piece near to an irregular finished (original) edge. The other two edges are broken and fairly jagged and at the narrowest part the piece has been bent causing the metal to crack (SOUMS:A1995.10:22).

This is a rather enigmatic piece. The thickness of the sheet would suggest that it is not part of a tool, but more likely part of a vessel or of an ornament. The apparently finished uneven edge may be misleading.

The following pieces have been grouped together because of common features.

Copper-alloy sheet

24. Copper-alloy sheet (Fig. 5.36). Wt 19.4g, maximum dimension 68 mm. Heavily twisted and contorted, the piece appears to possess an original "edge" or rim in the form of a triangular bead. The "rim" appears to possess an original curve along part of its length, although whether this is simply a result of the scrapping process, and therefore deceptive, cannot be ascertained. However, the diameter that this would make is given for the sake of completeness, and measures 75 mm. Another section of this edge has been folded over on itself. The plate is very thin, measuring 0.5 mm in thickness (SOUMS:A1995.10:28).

25. Copper-alloy sheet (Fig. 5.37). Wt 3.0g, thickness of metal, 0.5 mm. Roughly triangular in shape, one edge appears to be original, being smooth and fairly straight. The piece has a curve along its width (maximum dimension) although whether this reflects its original shape, or is a result of the scrapping process cannot be determined. Also, the profile of the piece (along its minimum dimension) is sinuous; if the edge is original, the piece has a slightly everted rim, with concave underside (SOUMS:A1995.10:25).

26. Copper-alloy sheet (Fig. 5.38b). Weight 5.3g., maximum dimension (width) 46 mm. And minimum dimension (height) 21 mm. Thickness of metal 0.5 to 0.7 mm. The piece appears to possess an original edge or rim, in the form, in section, of a rounded triangular bead. The piece is curved, although not evenly, along its "width". Its profile, taken across the minimum dimension ("height") indicates a tall, slightly concave, collar and bulbous body. These are, necessarily, subjective terms, employed for the purposes of description (SOUMS :A1995.10.24).

27. Copper-alloy sheet (Fig. 5.39). Wt 3.6g, maximum dimension 36 mm. Thickness of metal 0.5 to 0.6mm. The piece is tightly curved across its minimum dimension, and all edges are jagged (SOUMS:A1995.10:26).

28. Copper-alloy sheet (Fig. 5.40). Wt 5.5g, maximum dimension 52 mm. Thickness of metal 0.5 mm. Although bent and contorted, there appears to be an original edge (measuring 0.8 mm thick at that point), which is smooth and even, all other edges being jagged. The piece adjacent to the finished edge is concave, although this may be fortuitous (SOUMS:A1995.10:27).

29. Copper-alloy sheet (Fig. 5.38a). Wt 5.0g, thickness of metal 0.5 to 0.6 mm. The piece appears to possess an original edge or rim, in the form of a rounded triangular bead, thickness 2.2 mm. There appears to be an element of original profile to the piece, with a tall, slightly concave collar above a bulbous body. The "rim" is curved along its length, but not evenly (SOUMS:A1995.10:23).

These fragments appear quite similar to each other, and may be parts of the same object. Their contorted and distorted nature and fragmentary state make positive identification of the object(s) from which they came uncertain. However, personal examination of the copper bowl from the Watford hoard (Coombs 1979) suggests to the writer that the Wakering pieces may have come from a similar vessel or vessels. The thickness of the metal is very similar, and the treatment of the "rim" on the Wakering pieces seems to be virtually identical to that on the Watford bowl. Although there is some doubt regarding the date of the Watford bowl (Coombs 1979, 218), if the Wakering pieces can be shown to be similar, this would help to support a prehistoric date for the Watford example.

Another possibility is that the Wakering fragments are part of a bucket or cauldron. Although these have not been examined by the present writer, the vessels reported by Hawkes and Smith (1957) were of metal sheet of equivalent thickness to the Wakering pieces. Although the treatment of the rims on the former vessels seems, from the descriptions and illustrations, to be

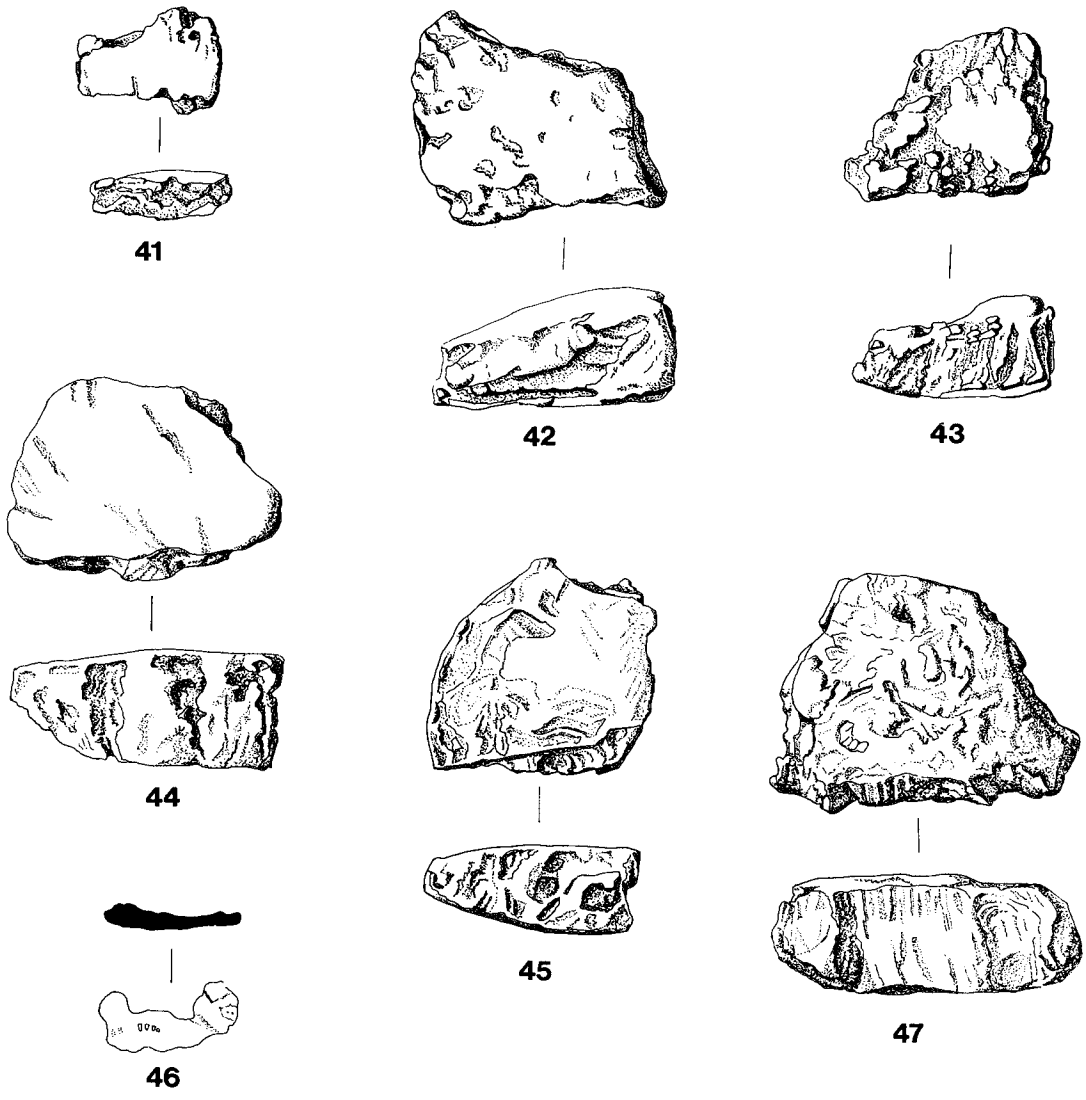

Fig. 6 Items from the Wakering hoard

rather different, such an attribution should not be dismissed out of hand.

Ingot fragments

30. Ingot fragment (Fig. 6.47). Wt 978.7g, of roughly triangular shape, 33 mm at thickest part, but not varying in thickness over the whole piece by more than 3mm. Rough on both lower and upper surfaces, and two edges in particular display columnar growth, with some ?shrinkage cavities. (SOUMS:A1995.10:34).

31. Ingot fragment (Fig. 6.42). Wt 610.1g. Section of plano-convex ingot, with clear large horizontal shrinkage cavities. Curved outer, ?original, edge (SOUMS:A1995.10:31).

32. Ingot fragment (Fig. 6.43). Wt 326.7g. Section of plano-convex ingot, with fairly smooth slightly domed surface, while other surface is very rough. Clear columnar growth and some large cavities (SOUMS:A1995.10:29).

33. Ingot fragment (Fig. 6.44). Wt 569.0g. Section of plano-convex ingot with original outer edge present. Very smooth on one face. No signs of columnar growth but some irregular cavities. Approximate diameter of ingot (based on presence of outer edge section) 15 cm (SOUMS:A1995.10:33).

34. Ingot fragment (Fig. 6.45). Wt 479.8g. Section from outer edge of ingot, with original edge present, giving possible diameter of ingot of 12 to 15 cm. Upper and lower surfaces quite smooth. Large and irregular cavities on all broken sides (SOUMS:A1995.10:32).

35. Ingot fragment (Fig. 6.41). Wt 59g; a small fragment from what appears to be a thin plano-convex ingot, and with an original edge. Irregular cavities on broken sides (SOUMS:A1995.10:30).

Analyses of ingot fragments have shown that these are normally of pure copper (Tylecote 1986, 30; 1991,67; Sealey 1987, 11; Brown 1998, 15). Several local metalwork hoards contain ingot fragments, including Wakering, Leigh II, Shoebury I, (Inventaria Archaeol. GB 38) and Vange (Brown 1998). Others, like Barling, contained no ingots. Hoards are known, however, that

comprise entirely of ingot fragments, such as that from Hanningfield/Wickford (in Southend Museum). Bronze being an alloy principally of copper and tin, with the addition of lead (in the Late Bronze Age), copper ingots were an important part of the bronzesmith's stock in trade. However, lead is a much rarer find in hoards, a fact which has been discussed by other writers, (e.g. Sealey 1987, 11, with references), and which there is no need to rehearse here. Metallurgical analyses of metalwork of this period have shown considerable variation in the proportion of lead in different objects, and recent work has suggested that while lead may have been deliberately added to the alloy in the Wilburton phase, it seems that in the succeeding Ewart Park phase the amount of lead in the alloy was principally the result of the re-use of Wilburton material combined with the addition of Carp's Tongue metalwork from the near Continent (Rohl and Needham 1998, 102, 106-9). Support for the re-use of Wilburton material is perhaps given by the presence of, for example, St. Nazaire swords in the High Easter hoard (Cuddeford and Sealey 2000) and the notched knife from Wakering.

Metalworking debris

36. Bronze lump (Fig. 6.46). Wt 16.2g. An irregular lump of bronze, presumably a solidified trail of metal from the casting operation. One side is slightly smoother than the other. Some (modern) damage to one side, where a small area of patina has been scraped, revealing the original bright metal colour beneath.

Dating

The metalwork of the Late Bronze Age in Britain has been divided into three main industrial phases - Wilburton, Ewart Park and Llyn Fawr (Burgess and Coombs 1979; Burgess 1979; Sealey 1987). Recent work has suggested a short intermediate phase between the Wilburton and Ewart park phases (Needham *et al.* 1997). The two assemblages reported here, in common with all Late Bronze Age metalwork hoards from south-east Essex, are products of the Ewart Park industrial phase. This is based on the classes of implements and weapons that comprise the hoards, including south-eastern socketed axes (Butler 1963), southern English ribbed axes, (Needham 1986, 43), Stogursey type axes (Needham 1986, 44) and the eponymous Ewart Park sword.

Both the Barling and Wakering assemblages also contain elements that securely identify them as belonging to the so-called Carp's Tongue complex of this phase (as, again, do the majority of the hoards from south-east Essex). This complex is named after the Carp's Tongue sword, a product of the close continent (probably north-west France), and which was imported as scrap into southern Britain. Burgess (1968) published a list of typical contents of a "Carp's Tongue" hoard, material that was found in hoards on both sides of the English Channel. To his original list we might also add Stogursey axes (Eluere 1979), and single-edged socketed knives (O'Connor 1980, 180).

Absolute dating of the Ewart Park phase, with the Carp's Tongue complex, is now on a firmer footing thanks to a programme of radiocarbon dating (Needham *et al.* 1997), and is now dated to between c. 1000 and 800 B.C.

The nature and content of the hoards

Owing to the circumstances of the discovery of the Barling material we cannot be confident that the material is a "hoard" (i.e. that it was originally deposited as a group), or whether, if so, it is complete. Nevertheless, it is an important assemblage, and for the purposes of analysis will be treated as if it were a hoard. The classification employed in Cuddeford and Sealey (2000, 13) is used to compare these two hoards with others from south-east Essex, below.

Barling Hoard

Artefact type	weight	pieces	av. weight
Socketed axes	1819.77g	10	181.97g
craft tools	88.25g	2	44.12g
swords	37.15g	1	37.15g
ornaments	27.32g	1	27.32g
mould	264g	1	264g
Analysis of Barling Hoard by weight			

Artefact type	pieces	minimum no.
Socketed axes		
southern ribbed	4	4
Stogursey	1	1
faceted	3	1
unclassified	2	2
Knives		
socketed, double edged	1	1
socketed, single edged	1	1
Sword		
carp's tongue	1	1
Ornament	1	1
Detailed analysis of Barling Hoard		

Artefact type	minimum no.
Socketed axes	8
Craft Tools	2
Swords	1
Ornament	1
Summary analysis of Barling Hoard	

Wakering Hoard

Artefact type	weight	pieces	av. weight
Socketed axes	1312.4g	8	164.05g
Craft tools	67.4g	3	22.46g
Swords	121.8g	3	40.6g
Spears	22.7g	2	11.35g
Ornaments	8.3g	1	8.3g
Vessel	41.8g	6	6.9g
Bugle object	25.2g	1	25.2g
Unclassified	50.3g	4	12.75g
Ingot fragments	3023.3g	6	503.88g
Analysis of Wakering Hoard by weight			

Artefact type	pieces	minimum no.
Socketed axes		
southern ribbed	1	1
S.E. type	6	5
Stogursey	1	1
Knives		
Tanged	2	1
Chisel		
Tanged	1	1
Swords		
Ewart Park	2	1
Carp's Tongue	1	1
Spears	2	2
Ornaments	1	1
Sheet vessel	6	1
Bugle object	1	1
Unclassified	4	3
Detailed analysis of Wakering Hoard		

Artefact type	minimum no.
Socketed axes	7
Craft Tools	2
Swords	2
Spears	2
Ornaments	1
Vessel	1
Bugle object	1
Unclassified	3
Summary analysis of Wakering Hoard	

The Barling hoard weighed 2236.5g, and the Wakering hoard 4673.2g. Without the ingot fragments, the Wakering hoard would be reduced to 1649.9g. The following table classifies the hoards on the basis of minimum artefact counts by category, as a percentage of the total minimum artefact count. In brackets is the calculation of the weight of that category as a percentage of the total hoard weight, excluding raw materials.

The hoards are broadly similar, and are all dominated by axeheads.

The details of the deposition of the Wakering hoard may illuminate one aspect of the hoarding process, namely the apparent care with which the hoard had been placed in the ground. The finder of the hoard reported that the axe heads were completely sealed by the ingot fragments which had been placed on top of them, (pers. comm. and Fry 1994). In addition, all the fragmentary bronze items were said to have been found jammed into the sockets of the axes. These fragments were removed from the axes, by the finder, before reporting the hoard to Southend Museum.

The Vange hoard was reportedly also found in one compact group (Brown 1998, 16) as was, apparently, the Great Wasketts II hoard (*ibid*). This latter was probably buried in a bag, with ingot fragments at the bottom and other items on top (Brown 1996, 30). The Withersfield hoard was said to have been "arranged" in the ground (Anon 1996). Many hoards appear to have been buried in containers. Three socketed axes with an ingot were buried in an urn in Shoebury and a bronze founder's hoard was found "in a decayed earthen vessel" at Southchurch (Pollitt 1935; Davies 1979, 166). The Hatfield Broad Oak hoard was also found in a pottery vessel (Davies 1979, 151). The Stourmouth hoard was associated with a potsherd decorated with finger-tip impressions, and a number of other hoards are found in pots (Coombs and Bradshaw (1979, 181,190-1). Only meticulous recording during the recovery of such hoards in the future will help illuminate the nature of their original deposition.

Hoards in which the sockets of some axes have been jammed with metal fragments are known from several discoveries. These include the Leigh II hoard (Davies 1979, 159-61). A couple of fragments were found inside the sockets of axes in the High Easter hoard (Cuddeford and Sealey 2000, 2). However, to find that the sockets of all the axes in the hoard were filled with fragmentary artifacts, and with no loose pieces, is perhaps unusual.

That many hoards consist of, or at least include, quite small fragments of metal is well known, and some hoards consist almost entirely of small fragments, such as the Southchurch hoard (Davies 1979, 166-71). This has implications for understanding the scrapping process and the value of bronze in the Late Bronze Age economy.

Category	Wakering	Barling	Leigh II[1]	Vange[2]	High Easter[3]
Axes[4]	46 (81.7)	58.3 (83.3)	41 (75.7)	60 (68.01)	52.9 (75.24)
Craft tools	13.3 (1.82)	16.6 (4.02)	7.7 (5.14)	12 (6.87)	5.8 (3.71)
Swords	13.3 (7.43)	8.3 (1.69)	8.9 (9.49)	9 (17.07)	8.8 (9.68)
Spears	13.3 (1.38)		6.4 (3.21)	9 (2.71)	8.8 (5,10)
Ornaments	6.7 (0.50)	8.3 (0.012)	10.2 (2.2)		8.8 (2.39)

Table 3. Analysis of hoards by category percentages, based of minimum artefact counts, and weight (in brackets, excluding raw materials). [1]. The Leigh II hoard is housed in Southend Museum; [2]. Taken from Brown 1998; [3]. Figures calculated from Cuddeford and Sealey 2000; [4]. Axes include palstaves.

It would certainly appear that many items were deliberately broken into small pieces, and not accidentally broken through use. Many items have hammer marks near the breaks, indicating deliberate reduction. It may even be presumed that, in the case of the Wakering hoard, the items were deliberately broken into small enough pieces to enable them to be jammed into the sockets of the axes that comprised the main part of the hoard. Perhaps the metal objects in the Southchurch hoard had been broken into small pieces to enable them to be placed easily into the pottery vessel in which the hoard was found, perhaps to ensure than none was lost. Another reason for breaking items into small pieces would be to enable them to fit into the crucible for melting down. So we may be seeing here stages in the scrapping process (Cuddeford and Sealey 2000, 14).

Brown (1996, 30) reports two hoards from Wickham Bishops, one of which consisted of ingot fragments, and the other of tools, etc. This appears to be the obvious separation of artefact types which we see also, surely, in another form, in the Great Wasketts and Wakering hoards, where the ingot fragments are separated from the rest of the hoard.

Another problem for which there is no obvious answer is that concerning the complete tools that were included in the hoards. Looking at both the Barling and Wakering material, there are several axes that would appear to be quite serviceable implements, although all would seem to have been in circulation for some time. This appears to be quite a common feature of Ewart Park/Carp's Tongue hoards in which axes, on the whole, predominate. Another feature that our two hoards exemplify is that their contents do not reflect the full range of metal items that would have been in use at any one time. They are not simply a microcosm of late Bronze Age metalwork. They must, instead, reflect a process of selection, which itself may be a cultural artefact, bearing in mind that the predominance of axes in hoards is a regional phenomenon (Rohl and Needham 1998). While there may be several explanations for the deposition of metalwork in the ground during the Late Bronze Age, it is generally agreed that, while such metalwork may have represented at one time the working stock in trade of bronze smiths, the non-recovery of the metalwork is related to the introduction of iron working (e.g. Burgess 1979, 275-6; Cuddeford and Sealey, 2000, 15-16; Brown 1998, 16; Sealey 1987, 13; Needham 1990, 130 ff.; Taylor 1993; Rohl and Needham 1998, 105), while not denying the undoubted "ritual" nature of many of the deposits. Such hoards could never have been intended for recovery (Barrett and Kinnes 1988, 137-8).

The concentration of Late Bronze Age hoards in south-east Essex and north Kent has been the subject of comment among scholars for many years (Coombs and Bradshaw 1979, 188; Burgess 1968, 17-26). Barrett and Bradley (1980, 261) explained this concentration as the stockpiling of material for transport in and out of the valley of the Thames. This may, indeed, be the case, but we should also see the concentration of hoards against the background of known contemporary settlement in the area which, not surprisingly, mirrors that of the hoards (Fig. 1). Metalwork is only rarely found in settlements. Almost all Late Bronze Age metalwork hoards were discovered by chance, through large-scale mineral extraction in this area in the past, and more recently through the activities of metal detectorists (Brown 1998, 17). Evidence for occupation either went unrecorded, or has not been looked for or perhaps ignored. However, large-scale archaeological excavations of Late Bronze Age settlements have only rarely recorded metalwork deposits. This would seem to imply a separation of activities, and the deposition of Late Bronze Age hoards is clearly just one aspect of Late Bronze Age society in the wider landscape (Bradley 1996, 43).

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A Late Bronze Age site at Springfield Park, Chelmsford

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with contributions by Wendy Carruthers, Rob Court, John Crowther, Rachel Every, Rowena Gale, Phil Harding, Richard I Macphail, Lorraine Mepham and Jacqueline I McKinley
and illustrations by S.E. James

Archaeological investigations in advance of industrial development at Springfield Park, Chelmsford located Late Bronze Age occupation remains on the edge of a plateau above the Chelmer valley. The site lies adjacent to the Late Bronze Age defended enclosure at Springfield Lyons and may be seen as an associated element.

The principal area of activity was focused on a well-preserved rectangular post-built structure, with an extensive deposit that formed as a result of cattle corralling. Finds and environmental evidence indicate that occupation was short-lived, perhaps only a few decades or less, but included domestic settlement with small-scale crop cultivation and on-site processing, as well as animal pounding. A second group of Late Bronze Age animal pens to the north of this is also probably associated.

Introduction

Wessex Archaeology was commissioned by Bermac Properties plc on behalf of Frogmore Investments Limited and Aldi Stores to undertake a programme of archaeological investigations at Springfield Park, Chelmsford, in advance of light industrial development. The site lies on the eastern edge of Chelmsford, adjacent to the Neolithic causewayed enclosure and Late Bronze Age defended enclosure at Springfield Lyons and close to a further Late Bronze Age enclosure at the Boreham Interchange (Fig. 1)

A programme of desk-based assessment, field-walking, geophysical survey and trial trenching between 1995 and 1998 identified three areas of archaeological potential in the northern half of the site, but found no definite evidence in the southern half (Wessex Archaeology 1995, 1996a-e, 1997 and 1998; Geophysical Surveys of Bradford 1995). A condition attached to planning permission required further evaluation of these areas prior to development and a watching brief over the construction of access roads in the south of the site. This watching brief was undertaken in December 1998 and an area of Late Bronze Age occupation was discovered on the western edge of the site, close to Springfield Lyons (Fig. 1 Area A). A Specification for the excavation of this newly identified site was drawn up and approved by the Archaeological Advisory Group (AAG) of Essex County Council, on behalf of the planning authority. The excavation was subsequently undertaken in two phases, December 1998-January 1999, and March-April 2001.

Further evaluation of the three areas of archaeological potential in the northern half of the site was undertaken in March 1999 (Wessex Archaeology 1999). Late Bronze Age stock enclosures were found 140m to the north of Area A and are apparently contemporary (Fig. 1, Area B). A small number of medieval ditches and pits of late 11th to 14th century date were recorded in the north-eastern part of the site, adjacent to Sheepcotes Cottages (Fig. 1, Area C). A small amount of residual Romano-British material was also found in the north-western corner (Fig. 1, Area D). No additional recording was required by the planning authority in respect of Areas B-D.

The Late Bronze Age remains recorded in Areas A and B are described below. The medieval features and pottery are not discussed further here: details can be found in the project archive.

Geology, topography and landuse

Springfield Park, centred on TL 7380 0840, is situated on the northern slopes of the valley of the River Chelmer, some 300m to the north-west of the river (Fig. 1). The development area extended to some 24ha and consisted of two roughly equally-sized arable fields, divided by an east-west running stream and bounded to the north by an industrial estate and the A12 trunk road to the east. A row of cottages in the north-eastern corner of the site, known as Sheepcotes and dating in part to the 15th century, was retained within the development.

The western edge of the site comprises a plateau bisected by the stream, c. 34m OD, commanding a clear view across the valley to the Great Baddow ridge some 3km to the south-west. From here the land slopes gently down towards the northern, southern and eastern boundaries of the site at c. 23m OD. A natural spring-line coincides with the lower slopes in the eastern extent of the site. The soils within the site are argillic brown earths and well- to moderately well-drained loamy/silty soils, overlying clayey or gravel deposits with impeded drainage (Ordnance Survey 1974, 1975).

Archaeological background

The Chelmer valley has been densely settled from early prehistoric times and was the focus for a major complex of ritual monuments during the Neolithic. Less than 100m to the south-west of the site, investigations at Springfield Lyons have identified a causewayed enclosure, formed by an arc of large pits apparently

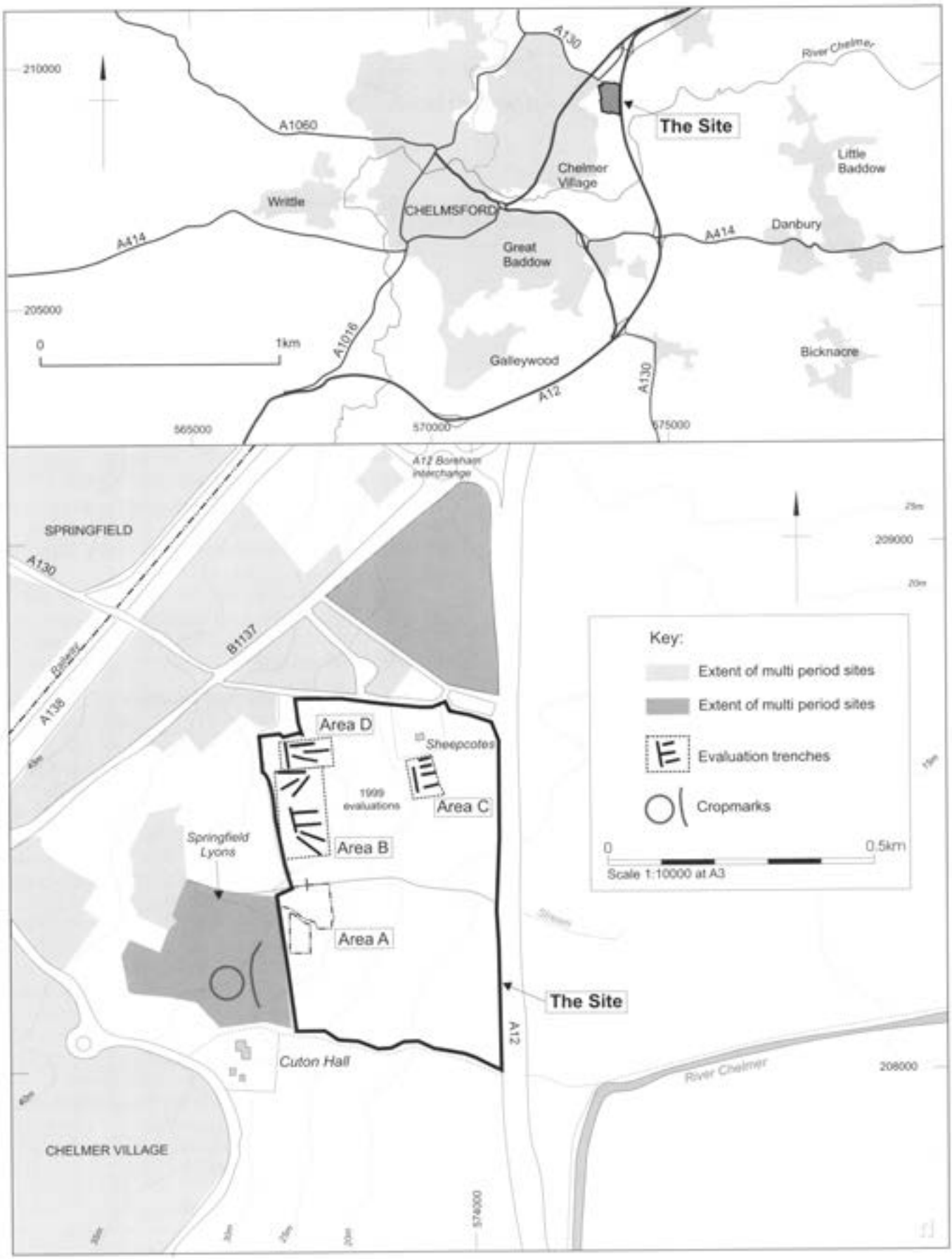

Fig. 1 General location plan. © Crown copyright Ordnance Survey. All rights reserved.

cutting off a small gravel promontory between two tributaries of the River Chelmer (Brown 1997; Buckley and Hedges 1987; Gilman 1991; Holgate 1996). While large quantities of pottery and flint were found within the enclosure and associated pits, and environmental evidence suggesting some crop production, no clear evidence of occupation was found (Buckley and Hedges 1987, 3; Murphy 1996, 171). Approximately 1.5km to the south-west, the Springfield Cursus was also a focus for prolonged activity, extending into the Early Bronze Age (Hedges and Buckley 1981, 15; Buckley, Hedges and Brown 2001).

Late Bronze Age occupation activity is well-attested in the Chelmer valley and river tributaries and on the fringes of the boulder clay plateau. At Springfield Lyons, a Late Bronze Age circular defended enclosure was situated adjacent to the earlier causewayed enclosure. Although apparently occupied for only a relatively short period, the enclosure contained at least three circular structures and a four-post structure. Significant amounts of clay mould debris were recovered, suggesting that this large and impressive defended site was of relatively high status (Buckley and Hedges 1987). A second, partly enclosed, Late Bronze Age site has also been excavated at the A12 Boreham Interchange, less than 200m to the north of the site (Allen and Lavender 1993). Evaluation at Chelmer Village, less than 100m to the south of the site, has also produced some evidence for Late Bronze Age or Early Iron Age activity, in the form of pits, postholes and stakeholes, sealed within a sequence of colluvium (Wessex Archaeology 1996a; 1996b).

Methods

In Area A, a total of approximately 1ha was stripped of topsoil and excavated in two phases (Fig. 1). All archaeological features were investigated. In general, all pits, postholes and discrete features were half-sectioned, but features considered to be of particular importance were fully excavated. Sections of all ditches, representing a sample of approximately 20% of their exposed length, were excavated. A programme of environmental sampling was also undertaken.

Results

The largest and most significant group of features was situated on the plateau at the western edge of the site (Area A, centred on TL 7365 0803; Fig. 2). A series of pits, postholes and four-post structures, focused around a well-preserved rectangular post-built structure, was apparently confined within three ditches and concentrated around the break of slope on the edge of the plateau. Less than 150m further to the north, the 1999 evaluation in the northern part of the site (Area B, centred on TL 7365 0820; Fig. 4) located a second group of Late Bronze Age features on a similar plateau-edge situation to those in Area A.

The features and finds from Areas A and B represent a single Late Bronze Age (1100-700 BC) phase of activity. Residual Middle Neolithic and Anglo-Saxon pottery recovered from Area A is likely to derive from activity associated with the adjacent Springfield Lyons site to the south-west and is not discussed further here. A linear cluster of pits 40m to the north-east of the main group in Area A, dated to the post-medieval period, is of unknown function and is also not discussed further here.

Area A (Fig. 2)

Late Bronze Age activity within Area A was represented by 150 pits, postholes, ditches and gullies, although a large proportion of the 85 undated features within the same area is also likely to date to this period. In the centre of Area A, an extensive layer (22), which also contained residual Neolithic pottery as well as Late Bronze Age material, covered an area 38m by 17m. The majority of features were sealed by or contained within this layer, and are described below accordingly: although a series of three sub-phases is tentatively suggested on stratigraphic grounds, the finds evidence indicates that this activity occurred over a comparatively short period of time.

Phase 1a: features below layer 22 (Fig. 3a)

This sub-phase in the centre of Area A consisted of thirteen postholes and pits in a linear arrangement of three clusters, each approximately 10m apart, together with two further isolated postholes. Three of the features were partly sealed below gravel surfaces belonging to a later structure. The remaining features were sealed by two sandy compacted deposits (not shown on Figure 3a), which defined a rectangular area approximately 19.40m by 7.14m. Analysis of the soil micromorphology and chemistry of one of these deposits strongly suggests soil accumulation resulting from open animal corralling. Domestic occupation material, including pottery, burnt clay or daub, crop processing waste, and traces of oak, blackthorn, hawthorn and willow charcoal from domestic fires, was also present within this deposit. Only small quantities of pottery were recovered from this phase of activity, from both cut features and the compacted deposits.

Phase 1b: features contained within layer 22 (Fig. 3b)

This sub-phase provides the vast majority of Late Bronze Age features and includes features within the central zone of Area A that are directly sealed by or contained within layer 22, together with dated features beyond this. At the heart of the central zone, a group of at least seventeen postholes formed a rectangular post-built structure (508), some 9.30m by 6.50m and orientated east-west. The eastern edge of this structure was formed by a discontinuous gully (442) that contained a number of post-settings. Two short lengths of gully defined the southern edge, although neither contained any clear evidence for post-settings. Twenty-five postholes and pits were found within it. Although some may relate to activities within it, these features are interpreted as internal partitions, dividing the structure into a larger eastern area, 5.66m in length, and a smaller western area, 3.64m in length. A series of compacted

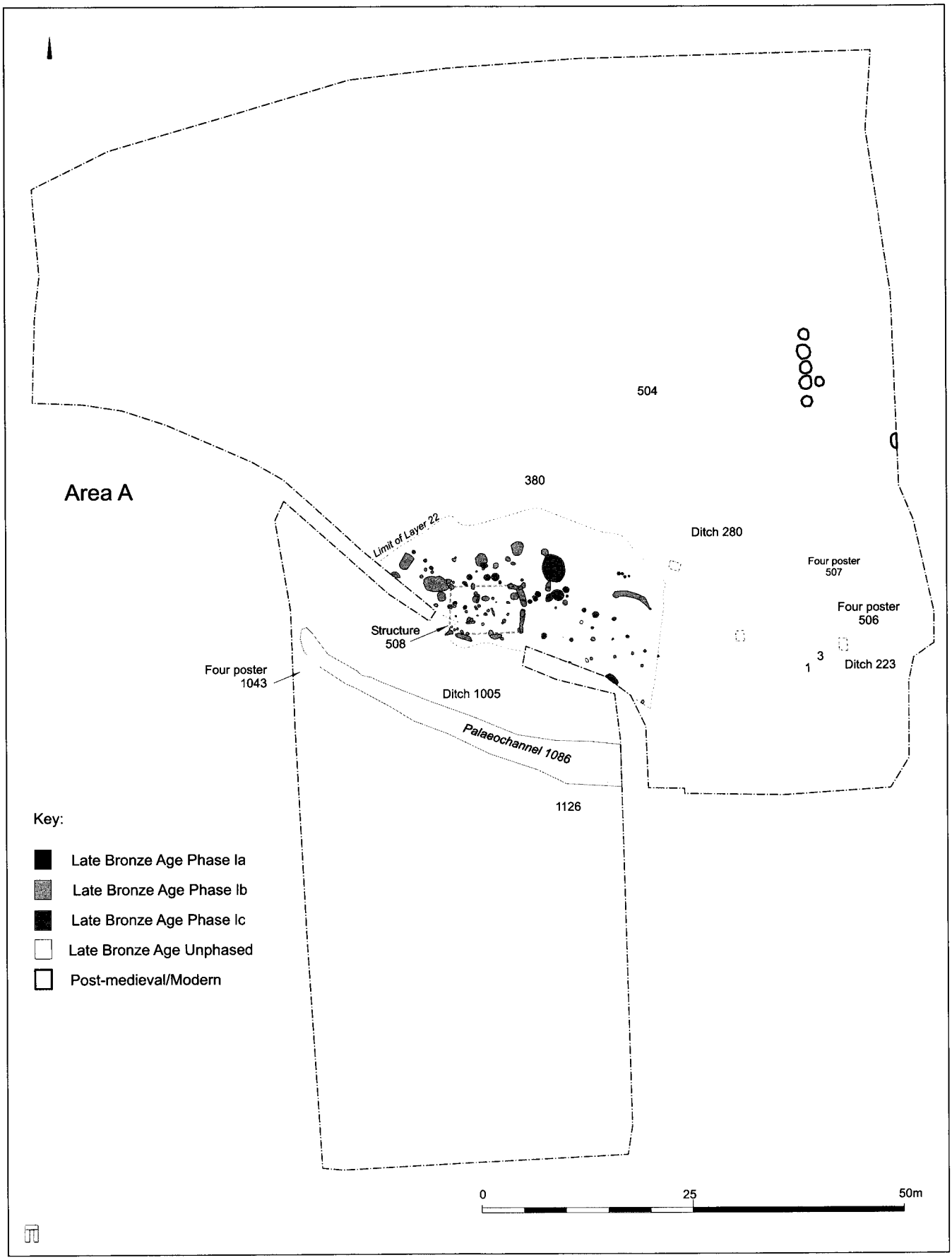

Fig. 2 Area A. Plan of all phases

Fig. 3 Area A. Detailed plan of Late Bronze Age sequence

gravel surfaces was confined to the central part of the structure, although not exclusively to either of the partitioned areas.

Structure 508 produced significant concentrations of finds, including flint, pottery, fired and burnt clay, and worked stone, mainly within the larger eastern half of the building and extending beyond the north-eastern corner of the structure. Pottery was recovered in particular from the postholes and gullies, with smaller quantities from internal features. Other finds included fired clay loomweights, a spindlewhorl and perforated slabs, from features around and beyond the eastern side of the structure. Possible daub fragments and burnt clay, perhaps associated with a kiln or hearth lining, were also recovered. A small number of internal features in the western end of structure 508 produced abundant evidence of domestic fuel debris in the form of oak and blackthorn charcoal, together with small quantities of charred pulses, grain and chaff.

The structure and associated features, and layer 22, were enclosed on the eastern side by one of three boundary ditches (280). This was orientated approximately north-south and appeared to terminate close to the edge of the plateau. Perpendicular to this, a second shallow ditch (223) was located 6.50m to the east (Fig. 2), orientated approximately east-west and extending beyond the eastern limits of the excavation area. No evidence for an accompanying bank was found for either of these two ditches. A third, more substantial ditch (1005) was also orientated east-west and terminated only a few metres to the south of structure 508. The primary fill suggests a bank was situated to the south of this ditch. All three ditches showed signs of rapid natural infilling, with no evidence of any re-cutting, and were cut later by postholes or pits, suggesting a relatively short life span.

The general arrangement of the two eastern ditches 280 and 223 suggests part of a field system, accessible through a narrow entrance. Evidence of activity in the eastern part of Area A beyond ditch 280 was sparse. Nine isolated pits or postholes and two four-post structures (506 and 507), both approximately 2m square, were identified. Two large pits (1, 3) immediately to the south of and partly cutting ditch 223 contained quantities of charred grain and chaff, with charcoal from blackthorn, hawthorn and oak. Charcoal from the four-post structures also consisted of a mixture of species, representing fuel rather than the building timbers; although one of the postholes of structure 506 produced only oak charcoal, the presence of charred grain again suggests that it was fuel residue, rather than a burnt post. A third possible four-post structure 1043, measuring *c.* 2m by 1.7m, lay on the western edge of Area A, just inside the northern edge of ditch 1005 and 23m to the south-west of structure 508.

At least 35 irregularly spaced postholes were located within a broad band some 15-20m to the north, west and south of structure 508, with a similar group some 10m to the east (Fig. 2). These features, which to the north coincide with the plateau edge, may represent fence-lines enclosing the structure. A further broad band of twenty-three larger pits and postholes lay immediately to the north, west and east of the structure 508. One of these pits produced a large quantity of burnt domestic refuse including bone, grain, pulses and oak charcoal, together with fired clay and daub. A large hearth, 380, was located 12m to the north of structure 508, at the northern limits of the plateau (Fig. 2). This produced pottery and quantities of charred grain and chaff, together with oak and hawthorn charcoal.

A rich dark brown sandy clay layer (22), up to 0.2m thick, covered the central part of Area A (Figs 2 and 3b), an area of *c.* 530m^2. The layer was bounded to the east and south by ditches 280 and 1005 and by the edge of the plateau to the north. A large quantity of worked flint and pottery, including residual Neolithic material, was recovered from this deposit. A noticeable concentration of material was apparent in and around the eastern section of the rectangular structure 508. Other finds from deposit 22 included a perforated clay slab, fragments of possible kiln or hearth lining, an unfinished spindlewhorl, and an intrusive quernstone fragment of probable Romano-British date.

Analysis of the soil micromorphology (Richard Macphail) and chemistry (John Crowther) indicates that this homogeneous deposit probably accumulated rapidly (over years rather than decades or longer), as shown by preserved earthworm burrows and textural pedofeatures. This suggests that, like the compacted deposits below it (332, 333), deposit 22 is a trampled soil resulting from domestic animal corralling. A high concentration of organic phosphates and textural pedofeatures indicate a dung and liquid animal waste input; this was apparent across the whole of the deposit and was not confined to the area of structure 508.

A pit (1126) situated 23m to the south of structure 508 (Fig. 2) contained cremated human bone, representing the remains of an adult over 30 years of age, of unknown sex, mixed with pyre debris and oak charcoal. The deposit probably represents redeposited pyre debris, rather than a burial. No other traces of human remains or pyre sites were identified on the site.

Phase 1c: features above layer 22 (Fig. 3c)

This very minor phase of activity comprised a total of 27 pits and postholes, cutting the top of deposit 22 and post-dating the rectangular structure 508. Five of the features formed a cluster of pits close to the earlier structure 508. To the south-east of this cluster, at least 10 postholes were arranged in a possible fence-line, running westwards from the boundary ditch 280; a single pit lay within the delimited area. To the north-west of the pit cluster, a second broad spread of 11 pit and posthole features extended to the north-east, along the edge of the plateau.

Area B (Fig. 4)

Four Late Bronze Age ditches were identified on the top of the plateau in Area B. They contained small quantities of undiagnostic struck flint and abraded Late Bronze

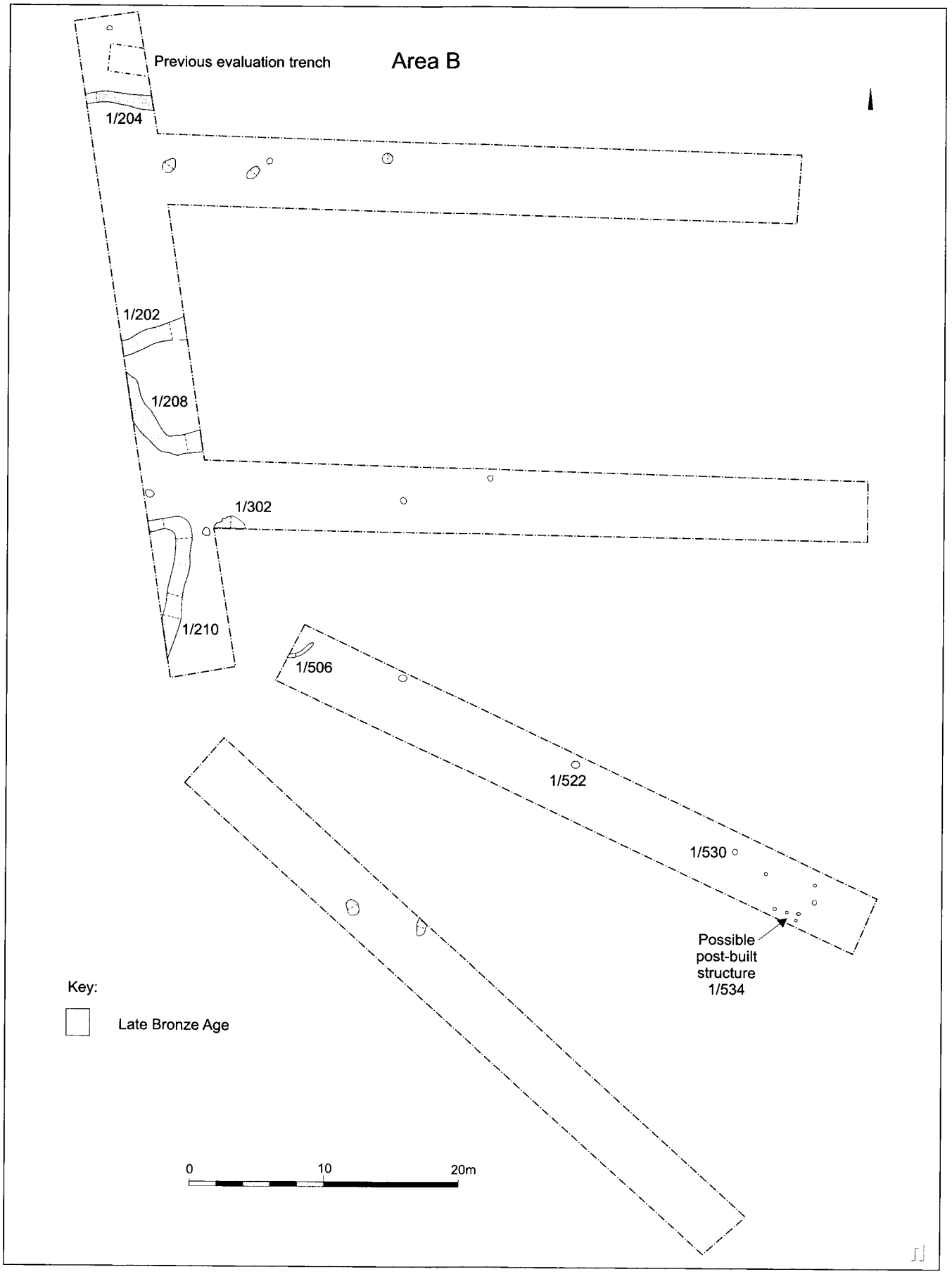

Fig. 4 Area B. Plan

Age pottery, together with a very small quantity of residual Neolithic pottery. The ditches appear to form at least two small (10m across), square enclosures (1/210 and 1/208). Environmental samples from these ditches produced only small quantities of charred cereals and weed seeds, and almost no charcoal. This corresponds to evidence from elsewhere in the Chelmer valley, which indicates a predominantly pastoral environment.

An undated group of 7 postholes with charcoal-rich fills was located 50m to the south-east, on the slopes in the south-eastern corner of Area B (1/534). These were arranged in an alternating pattern of large (*c.* 0.30 m in diameter) and small (0.10-0.15 m in diameter) postholes and appeared to form part of a circular structure, approximately 4m in diameter. Two undated charcoal-filled pits of unknown function were located to the north-west of this structure. A short, very badly truncated section of curvilinear ditch further up-slope (1/506) produced only a single grog tempered sherd, likely to be of Late Iron Age or Romano-British date.

Discussion

The excavation and evaluation at Springfield Park have together provided evidence of Late Bronze Age activity on the plateau edge overlooking the River Chelmer. This appears to have been restricted to a single, rapid phase of activity with a date range in the 10th or 9th centuries BC, broadly contemporary with the Late Bronze Age defended enclosure at Springfield Lyons, only 120m to the south-west. The investigation of Areas A and B uncovered a relatively small, well-ordered site, which on the basis of finds and environmental analysis comprised primarily stock-keeping, with some domestic activity.

Three aspects of the site are of particular interest: the rectangular structure 508; the nature and formation process of deposit 22; and the possible role of the site itself.

The structure

Rectangular structures are comparatively rare in a Late Bronze Age context, with only a small number identified in Essex. The majority of examples are post-built. However, two smaller and broadly contemporary structures, at the Boreham A12 Interchange, less than 600m to the north of Area A and at Broads Green, 6km to the north-west (Brown 1988b; 1996), also contained posts set within gullies or foundation slots similar to those of the Springfield Park structure.

A number of very broad forms of rectangular structure can be identified (Fig. 5). Simple parallel arrangements of post settings can be identified at Howell's Farm (Brown 1996), Boreham A12 Interchange (Brown 1996) and Broads Green (Brown 1988b), all in Essex. More complex irregular arrangements are seen at Lofts Farm, (Brown 1988a) and, further afield, Barleycroft Farm, Cambridgeshire (Evans and Knight 1996). Sizes vary from the largest examples at Barleycroft Farm (16.5m by 5.5m; c. 91sq. m) to only 4m by 2m (c. 8sq. m) at Broads Green: the majority of examples are between 8-18m in length and 4-6m in width.

The small sample size and variable state of preservation of such structures makes functional interpretation difficult. The small structures at Broads Green and Boreham A12 Interchange were tentatively interpreted as possible shrines, due to their association with ritual deposits and lack of clear domestic evidence (Brown 1996, 32). Elsewhere, suggested uses have included barns and byres. A natural analogy may be drawn with the longhouse form, which accommodated stables or byres and domestic living space within a single structure. Rectangular structures at Lofts Farm and elsewhere have been interpreted as such dual-function buildings, based on the identification of defined domestic or animal areas using form, concentration of domestic material and/or high phosphate readings. Structure 508 at Springfield Park would appear to fit this model. The structure is partitioned into at least two sections, with a well-defined concentration of domestic material within and immediately adjacent to the larger eastern section. There are some differences with other examples, however. High phosphate readings were present over the whole building, although this phenomenon may be the result of later cattle corralling following disuse and abandonment of the structure (see below). A further difference is the apparent absence of any additional domestic structures. However, this may be related to the immediate proximity of the defended settlement at Springfield Lyons.

The trampled soil

Deposit 22, situated at the centre of the activity and encompassing the rectangular structure discussed above, is key to the interpretation of the function of both structure and site. The incorporation of large quantities of domestic material, including flint, pottery, burnt clay, crop processing waste and charcoal from domestic fires, confirms the anthropogenic origin of the deposit. Although considerably smaller in volume, the deposit is similar in nature and formation to midden deposits identified and investigated at other prehistoric sites, such as Potterne, Wiltshire (Macphail 2000). Analysis of the soil micromorphology and chemistry indicates a trampled soil accumulation with phosphate enhancement from animal waste products, resulting from animal corralling over a relatively short period of time, probably a matter of decades or even shorter.

The absence within the deposit of signs of the crusting of bedding and faecal matter, which might be expected in a sheltered environment, suggests that it formed in the open. This implies that the corralling may post-date the occupation and use of structure 508. However, the similarity in the chemistry of the pre-structural deposits 332/333, together with the stratigraphic situation of the structure itself, suggests that the pounding of domestic livestock was a more or less continuous activity throughout the use of the site. Moreover, the form of the structure and the associated distribution of domestic finds implies an - albeit brief -

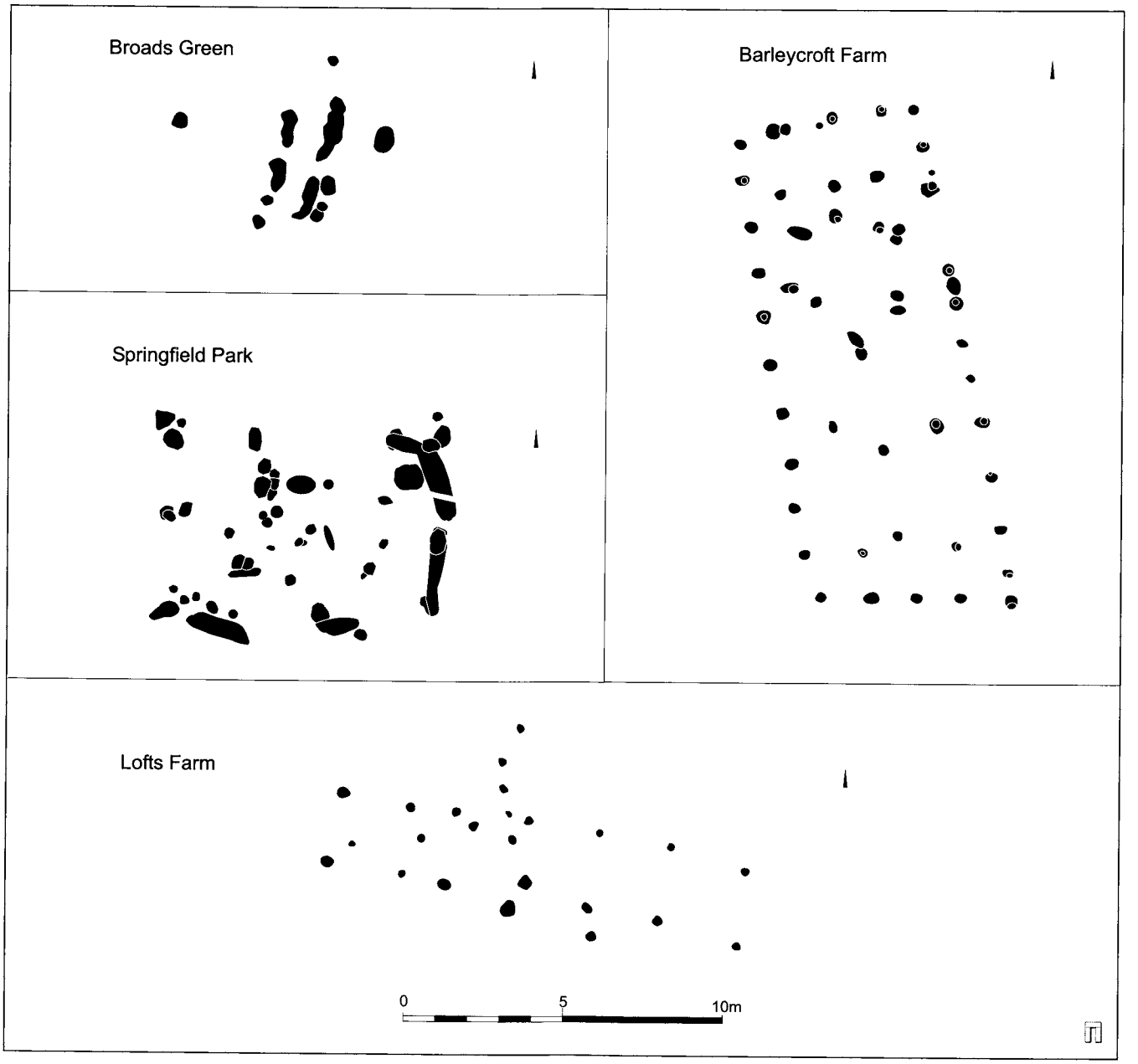

Fig. 5 Comparative plans of Late Bronze Age rectangular structures

episode of domestic occupation. This would support a dual-function interpretation for the structure.

Function of the site

The principal activity represented in Area A, therefore, appears to have been stock keeping; the probable animal pens in Area B are of the same date and must be presumed to be related. In Area A, the evidence for cattle corralling is accompanied both by domestic material and the suggestion of a field system, with four-post storage structures and environmental evidence for crop processing and domestic hearths, although finds evidence indicates that this activity occurred over a relatively short timescale. The almost complete absence of domestic material from the eastern ditches and the well-defined nature of deposit 22 indicates that both the pastoral and domestic activity were very confined in their area.

Economic and landscape evidence from the site is restricted to charred remains and is similar to that known elsewhere in the Chelmer valley, indicating a largely pastoral environment with some small-scale cultivation. Large domestic animals were evidently pounded on site, but the lack of animal bone survival does not allow further comment. The charred plant remains from the site (Table 1) indicate small-scale cultivation and processing of emmer wheat (Triticum dicoccum), with some spelt (T. spelta), bread-type wheat (T. eastivum-type) and hulled barley (Hordeum) occurring locally. The range and nature of this material is less than at Springfield Lyons (Murphy 1987) and Lofts Farm (Murphy 1988), reflecting the smaller scale of the site and activity here. The charcoal (Table 2) reflects only the burning of domestic fuel and suggests sparse woodland locally, composed predominantly of oak with some maple and hawthorn scrub; the high

frequency of hawthorn and blackthorn could also indicate the presence of hedgerows. There is no evidence of any industrial activity on site.

The presence of this pastoral and domestic settlement evidence in close proximity to Springfield Lyons implies a direct relationship between these contrasting sites. At Springfield Lyons, domestic activity and structures are concentrated within a substantial and impressive defended enclosure, with a notable lack of everyday activity immediately beyond it; metalworking debris and other finds support the impression of a high status, elite site. In contrast, the Springfield Park evidence is of basic pastoral and domestic activity focused on a rude, possibly dual-function structure. Both sites appear to have been occupied for a relatively short time and it is tempting to see the small settlement in Area A, together with the small animal enclosures in Area B, as an associated element of the Springfield Lyons site.

Table 1: Charred Plant Remains from Late Bronze Age contexts

Feature type	**Pits**		**Postholes in structure 508**			**Four-poster**	**Hearth**	**Surface in 508**	**Post-hole**	**Gully**	**Crem. pit**
Feature	**3**	**402**	**213**	**229**	**319**	**285**	**380**	**332**	**425**	**1019**	**1126**
Context	**4**	**403**	**212**	**230**	**318**	**286**	**382**	**332**	**424**	**1069**	**1127**
Sample	**1207**	**1275**	**1209**	**1212**	**1229**	**1231**	**1257**	**1264**	**1278**	**4006**	**4009**
Sample size (litres):	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
Cereals:											
Triticum aestivum-type (bread-type free threshing wheat grain)		2								1	
Triticum dicoccum/spelta (emmer/spelt wheat grain)	4	2	2	2	1	1			2		
Triticum sp. (wheat grain)	1						1				
Hordeum sp (hulled barley grain)	2		1							1	
Avena sp. (oat grain)											1
Avena/Bromus sp. (oat/chess grain)							1				
Indeterminate cereal fragments		3	10f			4f	20f	4f	6f	4f	
Chaff:											
Triticum spelta L. (spelt glume base)	3										
Triticum dicoccum (emmer glume base)	5	1	2		2						
Triticum dicoccum/spelta (emmer/spelt glume base)	3	3	20	1	3	3	7	6	8	2	
Triticum dicoccum/spelta (emmer/spelt spikelet fork)			8		1						
Avena sp. (oat awn frag.)							+				
Weeds & Other Taxa:											
Corylus avellana L. (hazel nut shell frag.) HSW					2f				6f		1f
Persicaria maculosa/lapathifolia (redshank/pale persicaria achene) CD							1				
Fallopia convolvulus (black bindweed achene) CD			1								
Rumex sp. (dock achene) CDGa											1
Vicia/Lathyrus sp. (small seeded (c.2mm) weed vetch/tare) CDG							1	1			
Vicia/Lathyrus sp. (3-4mm seeded weed vetch/tare) CDG							1	1			
Sambucus nigra L. (elder seed) HSW		1									
Bromus sect. *Bromus* (chess caryopsis) ADG	1f	5					1f				
Poaceae (small seeded grass caryopsis) CDG			1	1	1						
Indeterminate tubers/culm bases											3f
Total:	**19**	**15**	**46**	**4**	**10**	**8**	**33**	**12**	**22**	**8**	**6**

KEY: f = fragment; + = present but not quantified; Habitat Preferences : A = arable; C = cultivated; D = distubed/waste; E = heath; G = grassland; H = hedgerow; M = marsh/bog; R = rivers/ditches/ponds; S = scrub; W = woods; Y = waysides/hedgerows; * = plant of economic importance; Soil preferences: a = acidic soils; c = calcareous soils; n = nutrient-rich soils; o = open ground; d = damp soils

Table 2: Charcoal from Late Bronze Age contexts

Type	**Pits**		**Hearth**	**Postholes in structure 508**				**Surface in 508**	**4-poster 506**	**Gully**	**Crem.pit**
Feature	**3**	**402**	**380**	**213**	**229**	**319**	**425**	**-**	**285**	**1019**	**1126**
Context	**4**	**403**	**382**	**212**	**230**	**318**	**424**	**332**	**286**	**1069**	**1127**
Sample	**1207**	**1275**	**1257**	**1209**	**1212**	**1229**	**1278**	**1264**	**1231**	**4006**	**4009**
Acer	-	-	-	-	-	-	1	-	-	-	-
Pomoideae	4	-	3	-	-	4	1	1	-	1	-
Prunus	2	-	-	-	1	1	2	1	-	-	-
Quercus	8h, 3r, s	8h, 5s	3h, u, 2s	13h, u, 8s	4h, u, 5s	4h, u, 1s	6h, u	3h, u	5h, u	3h, u, 1s	4h, u
Salicaceae	-	-	-	-	-	-	-	*cf.*1	-	-	-

KEY: h = heartwood; r = roundwood (diameter <20mm); s = sapwood (diameter unknown but >20mm)
The number of fragments identified is indicated

APPENDIX 1: THE FINDS

Pottery

by Rob Court and Lorraine Mepham

The total pottery assemblage from Springfield Park comprises 3,997 sherds (32,077 grammes). The date range of the assemblage is Middle Neolithic to post-Medieval, although the majority of the assemblage is of Late Bronze Age date. Only the prehistoric pottery will be discussed here in detail. Later pottery has been quantified and recorded by pottery type and date, and this information is held in archive.

Detailed fabric and form analysis has been carried out on the prehistoric pottery, following the standard Wessex Archaeology pottery recording system (Morris 1994), which is in accordance with the nationally recommended guidelines for later prehistoric pottery (PCRG 1997).

Middle Neolithic

A small quantity of Middle Neolithic pottery was recovered from the excavation (61 sherds; 729 g), most of which came from deposit 22. All the Middle Neolithic pottery is the same coarse grog-tempered fabric, described below. Sherds are abraded, with rolled edges, although there are also some fresh breaks.

GR1 Coarse, grog tempered fabric with a soapy feel and a lumpy texture; moderate, poorly sorted grog <8mm.

The sherds from deposit 22 represent a minimum of one vessel, represented by rim, body and base sherds. Decoration and form identify this as a vessel of Fengate style (Fig. 6, 1). The vessel has a deep, collared rim with diagonal fingernail impressions in 'false cord' motifs on the exterior, and with further fingernail impressions on top of the rim. The vessel appears to have been covered, after initial forming, with a coating of slip or slurry to disguise the coarseness of the fabric; this has now partially laminated away from the surface.

Peterborough Ware is not a commonly occurring type in Essex. It was absent from the adjacent Springfield Lyons site (Brown 1997), but has been found at the nearby Springfield cursus. The latter assemblage is largely of Mortlake style, although one Fengate Ware rim was recognised in a soapy fabric assumed to be grog-tempered, as GR1 (Buckley, Hedges and Brown 2001, 123, fig. 21, 72).

Late Bronze Age

The Late Bronze Age pottery makes up the largest proportion of the assemblage (3517 sherds; 27,567 g). Sherds were recovered from a variety of features including ditches, pits and postholes, but a significant proportion (25.9% by weight of sherds) derived from two soil deposits (22, 332/333).

The condition of the pottery ranges from fair to moderate; sherds are in general fairly small, making any form characterisation difficult. Sandy sherds appear to be the most heavily abraded.

Fabrics

The fabric analysis has identified 11 fabric types, comprising eight flint-tempered fabrics and three sandy fabrics. These fabrics are described and quantified below (Table 3), and have been correlated with the fabric classification scheme used for other prehistoric assemblages in Essex (eg. Brown 1988a, 263-4). Detailed fabric descriptions are available in archive. Code FL6 has been allocated to a group of flint-tempered sherds which have been heavily burnt or overfired, and have suffered varying degrees of blistering and distortion - these sherds almost certainly represent examples of other flint-tempered fabrics as defined here, but cannot be thus assigned.

The fabrics cover a range of variation in terms of the level of preparation of the raw materials. At the coarser end of the spectrum are fabrics such as FL4 and FL5, containing large flint inclusions which protrude through the surface of the vessel, while at the other extreme fabric FL3 contains well sorted flint and represents the fineware element of the assemblage. Overall the flint-tempered fabrics dominate the assemblage - sandy fabrics make up less than 4% of the total by weight. None of these fabrics need derive from anything other than relatively local manufacture, since there is nothing amongst the clay matrices (slightly micaceous, some iron oxides) or inclusion types to indicate any non-local sources.

Vessel forms

The majority of the Late Bronze Age assemblage consists of small, undiagnostic body sherds, although sufficient rims were recovered to enable at least a broad analysis of the vessel forms present. Of the 214 rims recovered, only 24 could be assigned to specific vessel type, and these have been used to identify nine vessel forms, which have been correlated with the five vessel classes used by Barrett (1980) to categorise Late Bronze Age pottery.

1. Convex bowl with an upright or slightly inturned, thickened rim. Class III (Coarse Bowl) (Fig. 6, 2)
2. Hemispherical cup with plain, upright rim. Class V (Cup) (Fig. 6, 3)
3. Convex jar with everted rim. Class I (Coarse Jar) (Fig. 6, 4-6)
4. A bucket shaped vessel with straight sides and an upright rim. Class I (Coarse Jar) (Fig. 6, 7)
5. Bipartite jar with an inturned neck. Class I (Coarse Jar) (Fig. 6, 8-9)
6. Convex bowl with everted rim. Class III (Coarse Bowl) (Fig. 6, 10-11)
7. Jar with slightly inturned rim, profile uncertain. Class I (Coarse Jar) (Fig. 6, 12)
8. Slack shouldered jar with slightly everted rim and applied lug handle. Class I (Coarse Jar) (Fig. 6, 13)
9. Convex bowl with slightly everted rim. Class IV (Fine Bowl) (Fig. 6, 14)

Table 4 shows the vessel form by fabric type. The single example of vessel form 8 came from two separate contexts, a body sherd from pit 226, in the centre of the main area of Late Bronze Age activity, and the conjoining lug handle from gully 442 (structure 508). Coarseware jars predominate (14 examples), followed by coarseware bowls (6 examples), fineware bowls (4 examples) and cups (1 example). Fineware jars (Barrett's Class II) are absent.

Decoration and surface treatment

Decoration is restricted to fingernail and fingertip impressions, used on rims and shoulders of coarseware vessels. Only one example can be assigned to vessel form - one example of a type 3 jar with a fingernail impressed rim. There are also examples of applied cordon decoration (Fig. 6, 15). Overall, however, the incidence of decoration is very low - only 15 sherds carry any form of decoration (less than 1% by number of sherds).

Evidence for surface treatment is likewise limited in range. Many of the coarsewares show wiping (probably using fingers) on exterior and/or interior surfaces, and the finewares exhibit more careful finishing, with smoothed surfaces, but none of the sherds are burnished.

Distribution

Pottery derived from a number of contexts across the site, including both cut features (pits, postholes, ditches) and soil deposits. Detailed examination has, however, focused on the area of most intensive Late Bronze Age activity, in Area A. Here, the stratigraphic sequence has enabled the definition of three sub-phases of activity within the Late Bronze Age phase (phases 1a, 1b and 1c). Late Bronze Age pottery from these phased contexts amounts to 2195 sherds (18,895 g; 68.5% of the total assemblage by weight). A breakdown of the pottery by phased feature can be found in Table 5, and the significance of the distribution is summarised in the main text.

Chronology and affinities

This assemblage finds ready parallels within the numerous Late Bronze Age assemblages from central and south Essex. As a whole, the ceramic sequence in Essex follows the progression described by Barrett for southern England, from plainware to decorated

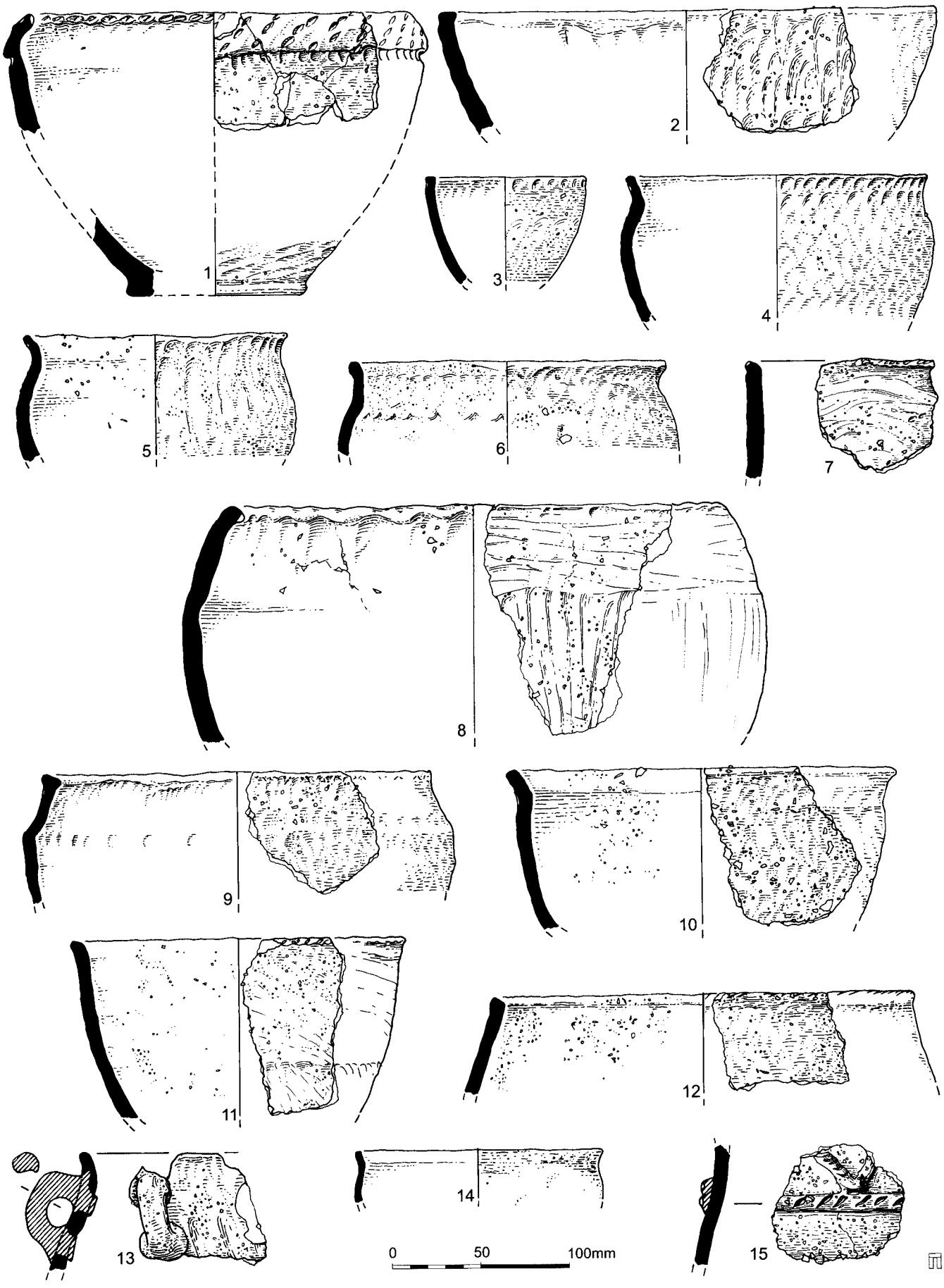

Fig. 6 Late Bronze Age pottery

assemblages (Brown 1996). The Springfield Park assemblage, with its very low incidence of decoration, would certainly fall within the earlier part of this sequence. Other aspects of the assemblage confirm this early dating. Flint-tempered wares are overwhelmingly predominant, with only a very small proportion of sandy wares. The increase in frequency of sandy wares at the expense of flint-tempered wares towards the end of the Late Bronze Age has been noted on other sites within Essex, for example at Springfield Lyons (Brown 1987). The range of vessel forms at Springfield Park is relatively restricted, comprising mostly coarseware jars (bipartite or convex) and bowls (flared, convex or convex with everted rim). Finewares constitute a small proportion of the assemblage (less than 5% by weight) and seem to be restricted to bowl forms.

Close parallels for this assemblage can be found within the pottery from the earlier phases (internal features and lower ditch silts) at Springfield Lyons (Brown 1987), from the earlier ceramic phase at Lofts Farm (Brown 1988a), and from Mucking (Barrett and Bond 1988), although the proportion of decorated vessels at the latter site is significantly higher than at Springfield Park. On analogy with these sites, then, a date range in the 10th or 9th centuries BC could be considered appropriate.

Closer examination of the pottery from the three Late Bronze Age sub-phases (1a, 1b and 1c) has revealed no obvious evidence of ceramic development within this sequence. The proportion of flint-tempered wares remains consistently high (96% or greater throughout). Any change in the range of vessel forms is less easy to assess, and the number of diagnostic vessel forms is low anyway, and only 14 were identified from phased contexts (one from phase 1a, 10 from 1b and three from 1c). All that can be said is that coarse jars occur throughout the sequence, coarse jars only in phases 1b and 1c, and a fineware vessel only in 1b (although fineware body sherds occur throughout all three phases). The overall impression is one of homogeneity throughout the stratigraphic sequence, and a relatively restricted timespan for its use and deposition on site seems most likely.

List of illustrated sherds (Fig. 6)

1. Fengate Ware vessel: rim and base sherds; fabric GR1. PRN (Pottery Record No.) 321/378, Obj Nos. 1589/1784, soil deposit 22 (phase 1b)
2. Convex bowl (type 1) with upright, internally expanded rim; fabric FL1. PRN 425, context 29, pit/posthole 30 (phase 1c)
3. Hemispherical fineware cup (type 2) with plain, upright rim; fabric FL3. PRN 493, context 94, pit 95 (unphased)
4. Convex jar (type 3) with everted rim; fabric FL1. PRN 424, context 29, pit/posthole 30 (phase 1c)
5. Convex jar (type 3) with everted rim; fabric FL1. PRN 188, Obj. No. 1131, soil deposit 22 (phase 1b)
6. Convex jar (type 3) with everted rim; fabric FL1. PRN 609, context 172, gully group 250 (unphased)
7. Bucket shaped vessel (type 4) with straight sides and plain rim; fabric FL1. PRN 657, context 212, posthole 213, structure 508 (phase 1b)
8. Convex bowl (type 1) with inturned, internally expanded rim; fabric FL5. PRN 528, context 133, posthole 131, structure 508 (phase 1b)
9. Bipartite jar (type 5) with expanded rim; fabric FL1. PRN 882, context 362, pit 363 (unphased)
10. Convex bowl (type 6) with everted rim; fabric FL5. PRN 529, context 133, posthole 131, structure 508 (phase 1b)
11. Convex bowl (type 6) with everted rim; fabric FL1. PRN 988, context 440, gully 442, structure 508 (phase 1b)
12. Jar with slightly inturned rim (type 7), profile uncertain; fabric FL1. PRN 920, context 387, pit/posthole 388 (unphased)
13. Slack shouldered jar (type 8) with slightly everted rim and applied lug handle; fabric FL1. PRNs 673/979, contexts 228 / 440, pit 226 (unphased) / gully 442, structure 508 (phase 1b)
14. Convex bowl (type 9) with slightly everted rim; fabric FL3. PRN 21, context 8, pit 7 (phase 1c)
15. Body sherd with applied, impressed cordons; fabric FL5. PRN 923, Obj. No. 5002, context 389, soil deposit 332 (phase 1a)

Flint

by Phil Harding

The flint assemblage from the site has been quantified by tool type, core type and as by-products of the flaking sequence (Table 6). Of the 732 pieces of worked flint, some 540 pieces from 59 contexts were associated with Bronze Age phases 1a, 1b or 1c. Material from phased contexts (85%) included some blades and bladelets but was predominantly composed of undiagnostic waste flakes and broken flakes from blank production and core trimming. The largest group of material, 136 pieces, was found in the trampled soil deposit 22, with low densities of material from pits and postholes across the site.

The assemblage is made using gravel-derived flint, including isolated nodules of Bullhead flint. Post-depositional edge damage is present on a large number of pieces, but is found in close association with material in mint condition.

Neolithic

Many of the blades and bladelets, which frequently have abraded striking platforms, and associated cores are likely to represent residual Neolithic or Mesolithic material. A small group of worked flint was found in association with sherds of Peterborough ware in the northern part of the site. The blades and bladelets, some of which are patinated, account for 14% of the waste material from the site and presumably reflect activity at the Neolithic Springfield Lyons causewayed enclosure. Diagnostic material also includes a fragment of a ground flint axe and two end scrapers, which may be Neolithic, from a phase 1c pit (31) and a fabricator and microdenticulate from unphased contexts. Two end scrapers, made on flakes, were also found in soil deposit 22 with two discoidal scrapers from two other contexts.

Bronze Age

The density of flint as an indicator of Bronze Age activity across the site is inconclusive and there are no diagnostic tools from the Bronze Age phases. Individual artefacts may be assigned a tentative Bronze Age date on grounds of probability, including flake cores from soil deposit 332 and pit 31, both of which have incipient cones indicative of mis-hits. There are also a number of flakes with miscellaneous retouch, including one from soil deposit 22, which also has a large number of incipient cones of percussion. These features and the prevalence of flakes with miscellaneous retouch have been regarded as characteristic of the Late Bronze Age. However, given the quantity of associated residual material it is impossible to provide accurate identifications. The most conclusive evidence of Bronze Age flint working was found in phase 1b structure 508 (pit 413) where a tested nodule was found with a refitting flake.

Miscellaneous Finds

by Rachel Every

Fired clay

A total of 1,212 fragments of fired clay (12,174g) was recovered from a variety of features on the site.

Several fragments derive from flat, perforated slabs. A minimum of three perforated slabs were recovered from pits 7 (phase 1c) and 352 (phase 1b), gully group 250 (phase 1b) and soil deposit 22 (phase 1c) in Area A. The slabs are in two fabrics; organic- and flint-tempered. A minimum of two slabs were recovered from gully group 250, in coarse flint and organic tempers, with joining flint-tempered fragments from soil deposit 22 (Fig. 7, 1). Joining fragments of a further flint-tempered slab were recovered from pits 7 and 352, immediately to the north-east of structure 508.

These perforated slabs are associated with Late Bronze Age sites across south-east England, and numerous examples are known from central and south Essex. Similar examples come from the site of Springfield Lyons immediately to the west of the site, recovered from in and around a Late Bronze Age enclosure ditch; they occurred there in similar fabrics to those identified here (Major 1987, fig. 10). Their function is unclear, although various ideas including pottery manufacture or oven plates have been suggested.

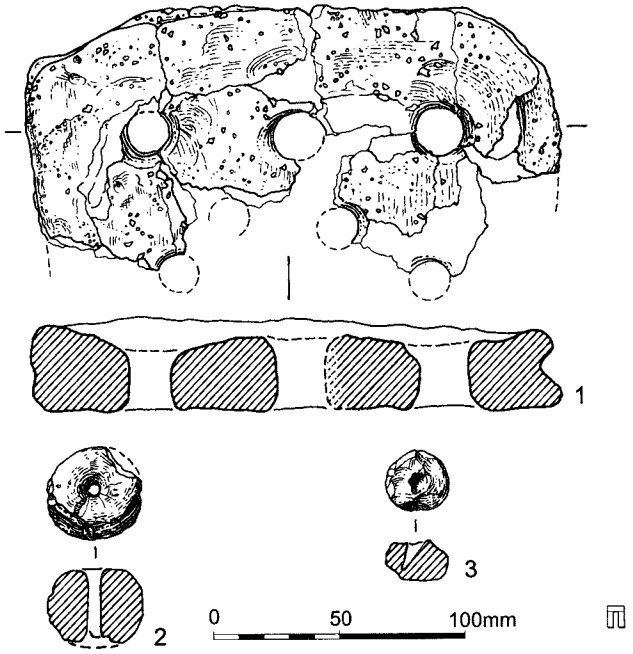

Fig. 7 Miscellaneous finds

Two cylindrical objects (probably loomweights) were recovered respectively from postholes 128 and 144 (both within phase 1b structure 508). Cylindrical loomweights are a characteristic Bronze Age type; similar loomweights have been recovered, for example, further to the east of the site in Essex at Howells Farm, Heybridge (Major 1998, fig. 112).

Three other fired clay objects were recovered, from pit 98 (phase 1c), posthole 144 (within phase 1b structure 508) and soil deposit 22 (phase 1b). Two of these are spindlewhorls (98 and 144: Fig. 7, 2) and have a central perforation. The third object (soil deposit 22) is an unfinished spindlewhorl; the central perforation does not fully penetrate the object (Fig. 7, 3).

The remainder of the assemblage consists largely of featureless and undiagnostic fragments recovered from a variety of features in small quantities, although a few have wattle impressions. These fragments are of uncertain date, although most are likely, on the basis of associated pottery, to be of Late Bronze Age date. This material was examined closely in view of the large group of clay mould debris found at Springfield Lyons (Needham 1987, 11), but no definite mould fragments were identified, although it cannot be excluded that some are present within this very fragmentary and abraded assemblage.

Worked, Utilised and Burnt Stone

Eleven fragments of stone (169 g) were recovered, including two quern fragments. The first, from soil deposit 22 (phase 1b), is in an imported lava stone, a type widely imported from the Roman period through to the medieval period. This fragment is of probable Romano-British date (a small quantity of Romano-British pottery also came from soil deposit 22, and all these artefacts are likely to be intrusive in this context). The second quern fragment is in greensand, recovered from unphased gully group 250. A quartzite whetstone was recovered from phase 1b structure 508 (posthole 402). Other pieces are less certainly worked/utilised, and include rounded pebbles, possibly used as rubbers, recovered from a variety of feature types in small quantities.

A total of 105 fragments of burnt stone (8987 g) was also recovered from similar contexts to the burnt flint and is likely to be of similar date (although unknown) and origin. These appear to be mainly quartzite pebbles that have been burnt and possibly utilised as potboilers or rubbers. These were recovered in small amounts from a variety of features, and no significant concentrations were noted.

Illustrated objects (Fig. 7)

1. Perforated clay slab. Obj No. 1462, soil deposit 22 (phase 1b) / context 172, gully group 250 (unphased).
2. Spindlewhorl. Context 145, posthole 144, structure 508 (phase 1b).
3. Unfinished spindlewhorl. Obj. No. 1497, soil deposit 22 (phase 1b).

Cremated Bone

by Jacqueline I. McKinley

Cremated bone (208.1 grammes) was recovered from a phase 1b pit (1126). The deposit was contained within a 0.70m diameter, concave sided feature *c.* 0.20m deep and comprised a mix of dense fuel ash with cremated bone mixed throughout.

Methods

Osteological analysis followed the writer's standard procedure for the examination of cremated bone (McKinley 1994a, 5-21; 2000). Age was assessed from the stage of skeletal and tooth development (Beek 1983; McMinn and Hutchings 1985) and the general degree of age-related changes to the bone. Sex was ascertained from the sexually dimorphic traits of the skeleton (Buikstra and Ubelaker 1994).

Results

The visual condition of the bone is good, with no evidence for surface erosion or abrasion. However, very little trabecular bone survived and although *c.* 50% of the bone was >10mm in size, the maximum fragment was relatively small (33mm) and many small fragments of bone remained in the unsorted 2mm sieve residue. It is known that bone porosity has a major affect on its survival (Nielsen-Marsh *et al.* 2000) and it has been demonstrated (McKinley 1997a, 245) that trabecular bone is the first to be lost in acidic soil condition - as with the clayey sand at this site - often crumbling to dust as it is excavated. The 208.1g of bone represents the remains of an adult >30yr. of unknown sex (contradictory traits). The only pathological lesions observed were slight exostoses (new bone formation) associated with the proximal-dorsal muscle attachments of the femur, probably reflective of slight muscle strain.

The surviving bone was uniformly white in colour, indicative of full oxidation of the bone (Holden *et al.* 1995a and b). The relatively low weight of bone represents a maximum of *c.* 20% of the total weight of bone expected from an adult cremation (McKinley 1993). Whilst it is known that some bone (trabecular) will have been destroyed as a result of the adverse soil conditions (see above), it is clear that not all the bone remaining at the end of cremation was included in this deposit. There are a number of factors which may affect the size of cremated bone fragments the majority of which are exclusive of any deliberate human action other than that of cremation itself (McKinley 1994b). In this instance, the burial environment will have increased the level of fragmentation, but it is such as to suggest that there may have been some deliberate fragmentation of bone prior to burial - a characteristic not commonly observed in British cremation burials of any date (*ibid.*). Alternatively, the apparent additional fragmentation may have been incidental and related to the mode of recovery of the material from the pyre site and the type of deposit represented; for example, those collecting bone for burial may have trampled across the pyre site whilst doing so causing additional fragmentation to the bone remaining amongst the debris.

The nature of the deposit is not clear. The deposit has the characteristics of redeposited pyre debris rather than a 'burial', though the possibility of a burial having being made above the deposit within the same feature cannot be excluded, the 'burial' itself subsequently having been truncated and removed (McKinley 1997b). The presence of the pyre debris indicates the occurrence of a cremation and the probable presence of a burial within the vicinity. Whilst formal burials of Late Bronze Age date are few, those by cremation appear to predominate (Bradley 1990; Brück 1995) and there are numerous examples of singletons that, as here, include formal deposits of pyre debris.

Table 3: Late Bronze Age pottery fabric totals

Fabric	Summary description	No. sherds	Weight (g)	% of total
FL1	Moderate, fairly well sorted flint <6mm; some sand (Flint, L, 2)	2234	19,294	70.0
FL2	Sparse, poorly sorted flint <3mm; some sand (Flint, L, 1)	62	411	1.5
FL3	Common, well sorted flint <2mm; some sand; fineware (Flint, M, 3)	270	1320	4.8
FL4	Rare, coarse, poorly sorted flint <3mm; some sand (Flint, L, 1)	448	2288	8.3
FL5	Very irregular fabric; sparse, very coarse flint <8mm; some sand (Flint, L, 1)	53	1116	4.0
FL6	Burnt/overfired sherds, flint-tempered (Flint, M-L, 2-3)	88	748	2.7
FL7	Common, coarse, fairly well sorted flint <6mm; some sand (Flint, L, 3)	38	960	3.5
FL8	Sparse to moderate, fairly well sorted flint <2mm; some sand (Flint, M, 1-2)	100	421	1.5
QU1	Moderate, well sorted quartz <0.5mm (Sand, S, 2)	41	185	0.7
QU2	Soft, fine fabric, rare quartz <0.5mm (Sand, S, 1)	34	89	0.3
QU3	Moderate, well sorted quartz <0.5mm with sparse flint <1mm (Sand, S, 3)	149	735	2.7
	TOTAL	**3517**	**27,567**	

Table 4: Vessel form by fabric type
(Barrett's classification in brackets)

Vessel Type	FL1	FL3	FL4	FL5	QU4	Total
1(III)	1	-	-	1	1	3
2(V)	-	1	-	-	-	1
3(I)	5	-	-	-	-	5
4(I)	2	-	-	-	-	2
5(I)	1	-	-	-	-	1
6(III)	2	-	-	1	-	3
7(I)	3	-	1	-	-	4
8(I)	2	-	-	-	-	2
9(IV)	-	3	-	-	-	3
Total	**16**	**4**	**1**	**2**	**1**	**24**

Table 5: Pottery by phase (number/weight in grammes; vessel forms in italics)

Phase/feature	FL1	FL2	FL3	FL4	FL5	FL6	FL7	FL8	QU1	QU2	QU4	TOTAL
PHASE 1a												
Pit 386	10/70		32/143 *type 9*	6/50								48/263
Pit/posthole 256											1/2	1/2
Deposit 332	111/1569	3/42	25/139 *type 9*	24/131 *type 7*	9/163	10/51	2/24				10/101	194/2220
Deposit 333	25/164 *type 3*		3/24	14/116	1/14		1/6		2/7			46/331
sub-total 1a	***146/1803***	***3/42***	***60/306***	***44/297***	***10/177***	***10/51***	***3/30***	**-**	***2/7***	**-**	***11/103***	***289/2816***
PHASE 1b												
Structure 508	325/4074 *type 3,4,6,8*	14/141	18/152	109/837	15/698 *type 1,6*	26/167	11/420	28/159	1/2	1/2	37/216 *type 1*	585/6868
Structure 508 (internal features)	81/552	15/145	14/44	9/42	1/9	3/23	3/63			3/9	9/32	138/919
Ditch 223											2/2	2/2
Ditch 280	3/45											3/45
Four-posters	28/187		3/71	2/3							3/20	36/281
Hearth 380	31/201		17/57	34/156	2/10			7/14	2/13			93/451
Gully 52	1/18			3/2		1/2						5/22
Crem. pit 1126								6/41				6/41
Deposit 22	368/2448 *type 3, 4, 7*		26/111	53/157		5/35		1/1	15/65		14/42	482/2859
sub-total 1b	***837/ 7525***	***29/286***	***78/435***	***210/ 1197***	***18/717***	***35/227***	***14/483***	***42/215***	***18/80***	***4/11***	***65/312***	***1350/ 11,488***
PHASE 1c												
Pit cluster	230/1954		10/74 *type 9*	28/169					1/1		8/50	277/2248
?Fence-line	56/487			9/31		35/423			1/2		2/16	103/959
Pit 194	5/29	1/4	5/22									11/55
Pit/phole cluster	139/1196 *type 1, 3*		2/15	2/16	2/17	1/7					19/78	165/1329
sub-total 1c	***430/3666***	***1/4***	***17/111***	***39/216***	***17***	***36/430***	**-**	**-**	***2/3***	**-**	***29/144***	***556/4591***
TOTAL	**1413/ 12,994**	**33/332**	**155/852**	**293/1710**	**30/911**	**81/708**	**17/513**	**42/215**	**22/90**	**4/11**	**105/559**	**2195/ 18,895**

Table 6: Flint totals by type

Artefact Type	Number	Group %	Total %
Scrapers	11	30.56%	1.50%
Piercers	1	2.78%	0.14%
Burins	0	0.00%	0.00%
Projectiles (arrowheads)	0	0.00%	0.00%
Denticulates (& micro den)	1	2.78%	0.14%
Fabricators	1	2.78%	0.14%
Microliths	0	0.00%	0.00%
Core tools (axes etc.)	1	2.78%	0.14%
Other tools	3	8.33%	0.41%
Misc. retouch	18	50.00%	2.46%
(Tools sub-total)	*36*		*4.92%*
Flake cores & core frags	41	59.42%	5.60%
Blade(let) cores & core frags	8	11.59%	1.09%
Rejuvenation tablets	3	4.35%	0.41%
Crested pieces	3	4.35%	0.41%
Microburins	0	0.00%	0.00%
Chips	14	20.29%	1.91%
(Production sub-total)	*69*		*9.43%*
Blades & bladelets			
(inc. no broken)	92	15.70%	12.57%
Flakes (inc. no. broken)	494	84.30%	67.49%
(Blades & flakes sub-total)	*586*		*80.05%*
Debitage	41	100.00%	5.60%
(Fragments sub-total)	*41*		*5.60%*
OVERALL TOTAL	**732**		

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A Late Iron Age and early Roman settlement at Cressing: excavations at Cressing churchyard 1975-77

by John H. Hope
(report edited and collated by M. Medlycott)

Excavations within Cressing Churchyard and in the adjacent field revealed evidence of occupation from the first half of the 1st century A.D. through the 4th century and into early Saxon times. Aerial photography confirmed that the excavated area was part of a substantial settlement extending over c. 9 hectares.

Introduction

The excavation of the Late Iron Age and Roman settlement at Cressing Churchyard in the 1970s was undertaken by the Brain Valley Archaeological Society under the direction of John H. Hope, partly as a training excavation for pupils of the Bramston School, Witham, Essex, and partly as a rescue project using volunteer staff, but with the support of the Essex County Council Archaeology Section.

The earliest reference to the village of Cressing (TL 794 205) is to be found in the Evreux Charter of 1136, where a land grant to the vicars of Witham allowed for the maintenance of a "capella" (probably a chapel-of-ease to Witham church), together with a demesne of 20 acres. No mention is made of the manor of Cressing in the Domesday Book. Though obviously of Saxon derivation, the name, variously recorded as Kirsing, Kyrsing and Kyssing, is derived from the O.E. *cerse* meaning water-cress (Reaney 1935), a definition supported by local tradition.

A Neolithic axe was recovered in 1935 in the garden of the Three Horseshoes public house, 100m north of the church (Benton 1935). The Late Iron Age and Roman settlement under the churchyard was first recognised by the appearance of Late Iron Age sherds in the back-fill of graves within the more modern, easterly part of the churchyard. Trial digging in 1973 suggested the existence of a site of archaeological potential. The cutting of open drainage trenches round the church walls gave the author the opportunity to record the existence of a preceding apsidal chapel (Hope 1974), this being confirmed by 1979 rescue work within the church building (Hope 1984), which suggested that the apsidal Saxo-Norman structure had been capped by a thatch roof.

Location and Topography

Cressing village is sited on a side-road of the main Braintree to Witham road. The site lies on the edge of the shallow valley of the Cressing Brook, with a barely perceptible gradient down to the brook on the north-east (Fig. 1). The soil-type comprises brick-earth above chalky boulder clay, capped with layers of fluvial silts deposited by the flooding of the Cressing Brook on the eastern edge of the site.

The Excavations

In 1975, trial trenching was undertaken over an area of 250 sq. m. in the south-west corner of the field between the eastern end of the then graveyard and the Cressing Brook (Hope 1978). This work was undertaken because of plans to extend the churchyard to the east across this area. The results of this work justified an excavation of the area during 1976 and 1977, in the course of which approx. 1,200 sq. m. of ground was stripped of topsoil by JCB and all archaeological features hand-excavated. For the purposes of recording, the excavated areas were designated A, B, C, D and E (Fig. 2), though these were largely linked to form a single irregularly shaped excavation area. In 1979, under the auspices of Essex County Council Archaeology Section, a further 200 sq. m. was examined within the "threatened area" of the churchyard (Area F) ahead of an extension to the burial area. Although this latter area has been previously published (Hope 1983), a summary is included in this report as an integral part of a larger archaeological landscape (Figs 1 & 2).

This report has been produced after the lapse of many years, due to events outside the excavator's control, and in the intervening period some of the archive has been lost or decayed. In particular, no section drawings survive, so that the fills of some features are uncertain. Some layers are numbered within the account of the excavation (below) to ensure a degree of internal consistency within the report, when specialist reports refer to these same layers. It must also be remember that the work was entirely excavated by a volunteer force and that all of the excavation standards and practices employed were those of the mid-1970s rather than those in use to-day.

Early Prehistoric

The only evidence is a small number of (probably) residual Mesolithic flints.

The first half of the 1st Century AD (c. 0-43 AD)

(Fig. 3)

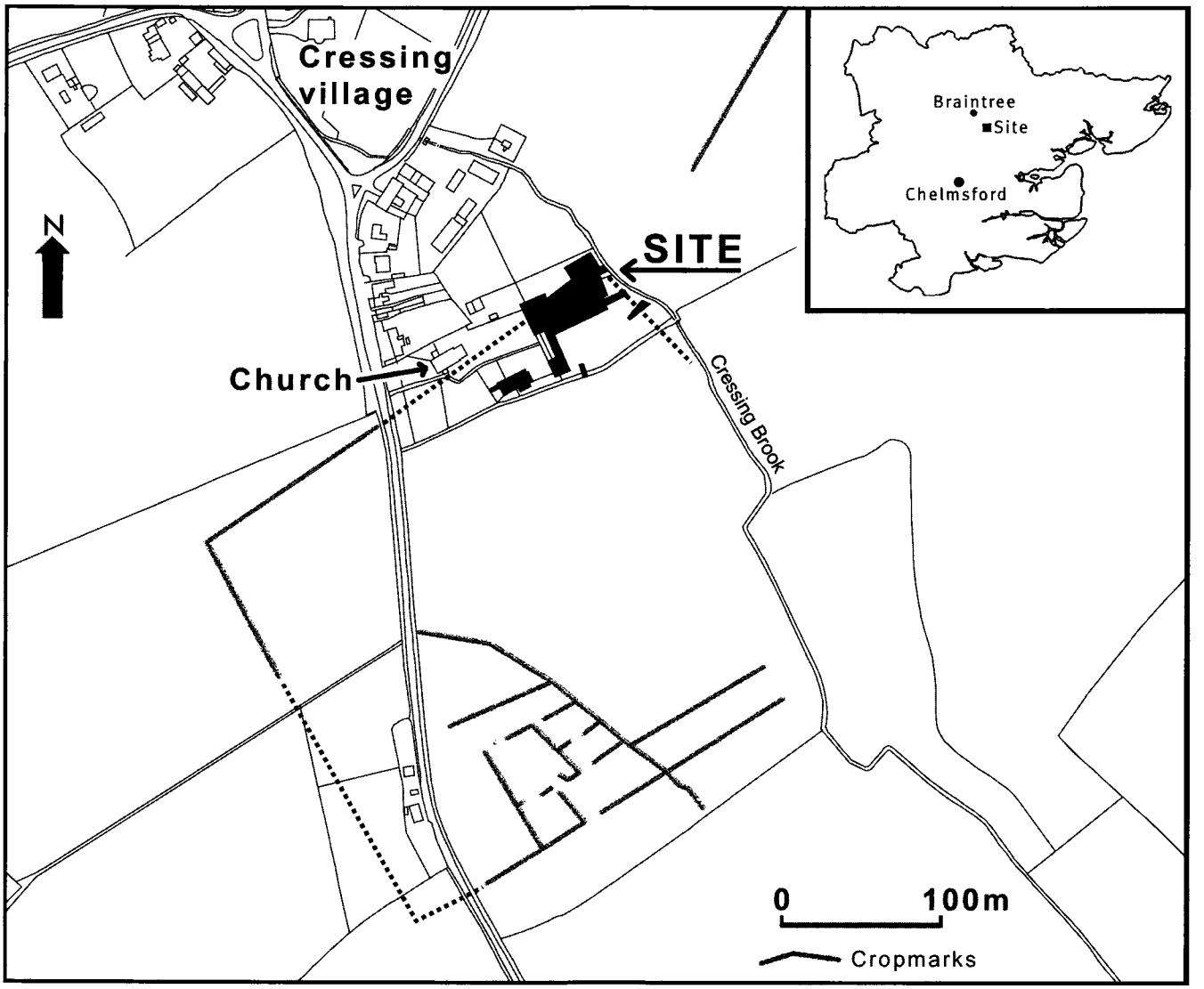

Fig. 1 Excavations at Cressing Churchyard: Location map.

Earliest features

The earliest occupation is marked by the presence of a oven or fire-pit (F136), consisting of a roughly circular bowl-shaped depression lined with fire-reddened clay and containing two fills. Fill 143 consisted of a mix of charcoal and fire-reddened clay, whilst the upper fill (142) consisted of a mass of fire-reddened clay, thought to derive the collapsed dome of the oven. The pottery from this feature was very small and abraded, but can be dated to the early-mid 1st century AD, as it is cut by ditch F40 (below), which appears to have been back-filled before AD 60.

The possible enclosure

In the early 1st century AD, a large ditch, F40, interpreted as a boundary, was dug. This gradually silted up during the following decades and appears to have been finally back-filled in the early years of the Roman occupation (before AD 60). This ran northeast-southwest along the northern edge of the excavated area. In total, a 48.75m length was excavated and observations made during the cutting of a grave in the churchyard demonstrated that it continued in a south-westerly direction. An aerial photograph appears to show its possible continuation into the field to the west, on the other side of Church Road, where it turns through 90° to run south, finally disappearing at TL 793202.

The ditch averaged 2m wide and 0.8m deep, with a U-shaped profile. There were six main fills, from primary fill upwards numbered 105, 104, 82, 101, 54 and 37. Fill 54 contained a quantity of charcoal as well as other domestic rubbish and other smaller charcoal-rich lenses (308, 316 and 320), containing bone, pot, metal slag and plentiful daub were also recorded: these were spread out along the southern side of the feature and were layered between fills 82 and 37.

Remnants of the bank survived as layer 30, a patchy band of hard yellow clay, 5cm thick and 2m wide, running along the southern (inner) side of the ditch.

Over 85% of the pottery came from ditch F40, as did most of the other finds, largely as a consequence of the disposal of domestic rubbish.

An entrance into the area defined by boundary ditch F40 took the form of a 5m wide causeway (F315), approximately mid-way along the excavated length.

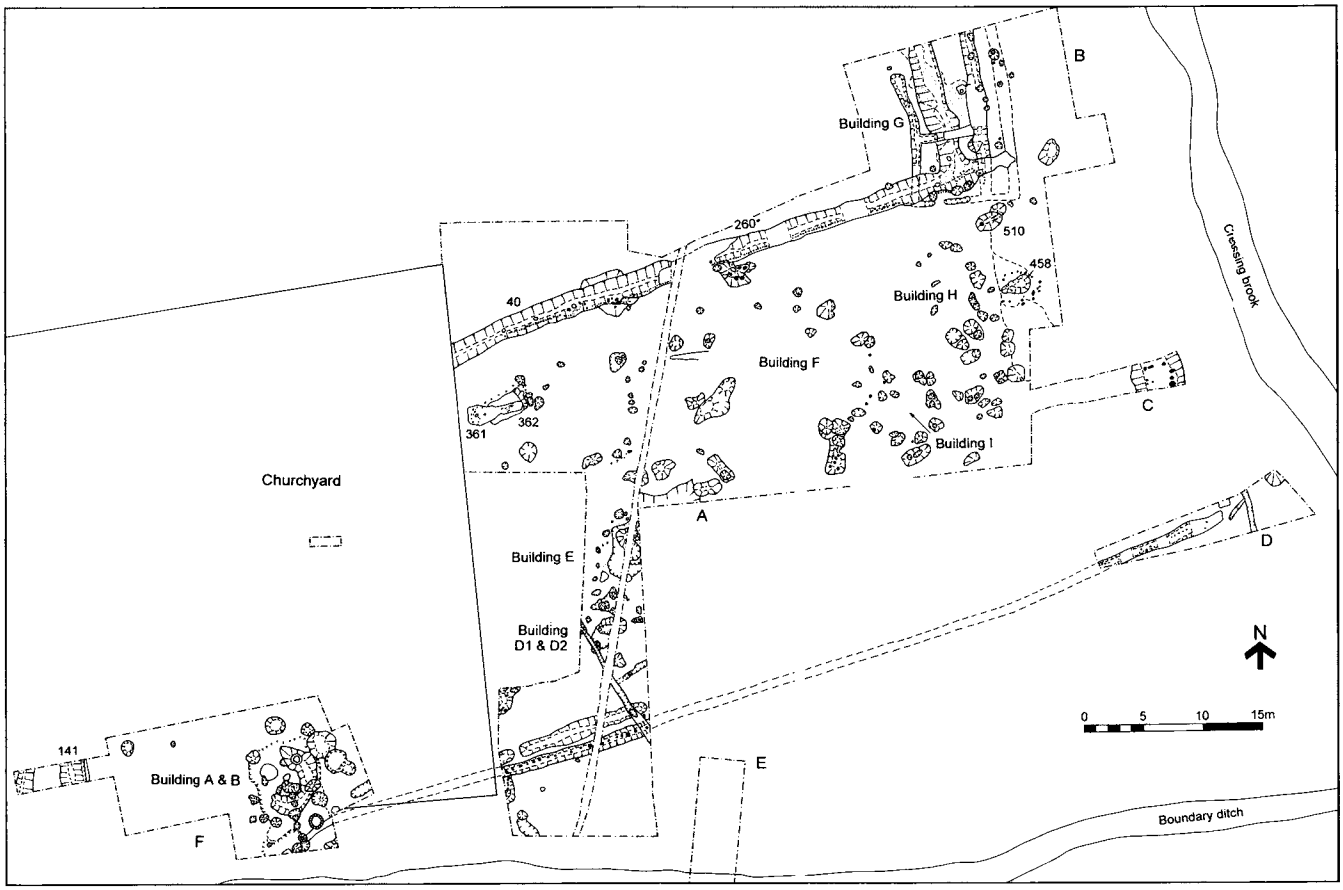

Fig. 2 Excavations at Cressing Churchyard: Site plan (all phases)

The causeway was constructed of packed flint nodules, inserted directly after the cutting of the ditch, there being no primary silting underneath. Immediately adjacent to ditch F40 and causeway F315 was a large post-hole F555, the edges of which were partially overlapped by the flint packing of the causeway. Charcoal from the post-hole suggests that the post was of oak. It is presumed that this post supported a gate giving access into the settlement area. There was considerable evidence of burning on the causeway and within the post-hole, suggesting the gate had been burnt down. The burnt evidence was largely concentrated on the northern, outer side of the boundary ditch. Following this conflagration the post-hole was re-cut (F568 in Fig. 4), in the second half of the 1st century, and a new gate erected.

Ditch F503 joins F40 at right-angles, at the latter's eastern end and its dimensions would suggest that it formed part of the same boundary complex. At its junction with F40, the sides closed in to 0.72m from its average width of 2.20m. Of the original ditch-fill, only the primary silt (105) and a small depth of 104 remained. It was apparent, however, that F503 had a U-shaped profile similar to that of F40, but shallower, with a maximum depth of 0.62m.

On the southern side of the excavated area, parallel to ditch F40, was a fence-line F6, (F11/F114/F108). This consisted of a shallow bedding-trench (maximum depth 0.43m) into which had been inserted stakes at 80cm intervals. The excavator has interpreted this as a brushwood fence with interwoven horizontal branches to make a substantial barrier: alternatively it could have been a hurdle fence. The fence-line terminated approximately 8m to the east of the present course of the Cressing Brook. Dating evidence is sparse, but what there is suggests a Late Iron Age date. Parallel to this fence-line lay an interrupted ditch F19/F90, F98/130, at a distance of 0.48m on the northern side. This ditch was wide (1.46m) but shallow (maximum depth 0.34m). Again there is very limited dating evidence but what there is suggests a Late Iron Age/1st-century AD date. If the crop-mark evidence suggesting that ditch F40 forms the northern limit of a large enclosure is accepted, then F6 may be an internal boundary within it.

Stratigraphically pre-dating fence-line F6, and set at right-angles to it, was a short length of gully (F202). This contained post-hole F209 at its southern terminus and a line of stake-holes along its length (F204-8). To the south of this feature and roughly in line with it was a second gully (F201), with post-hole 212 at its northern terminus. Insufficient of the feature was recovered to permit a definite interpretation. However, there is the possibility that it represents one side of an enclosure or structure, with the postholes marking a gate-way. It is suggested, given its relationship with F6, that although F202 was cut before the fence-line was constructed, it was actually in use at the same time as

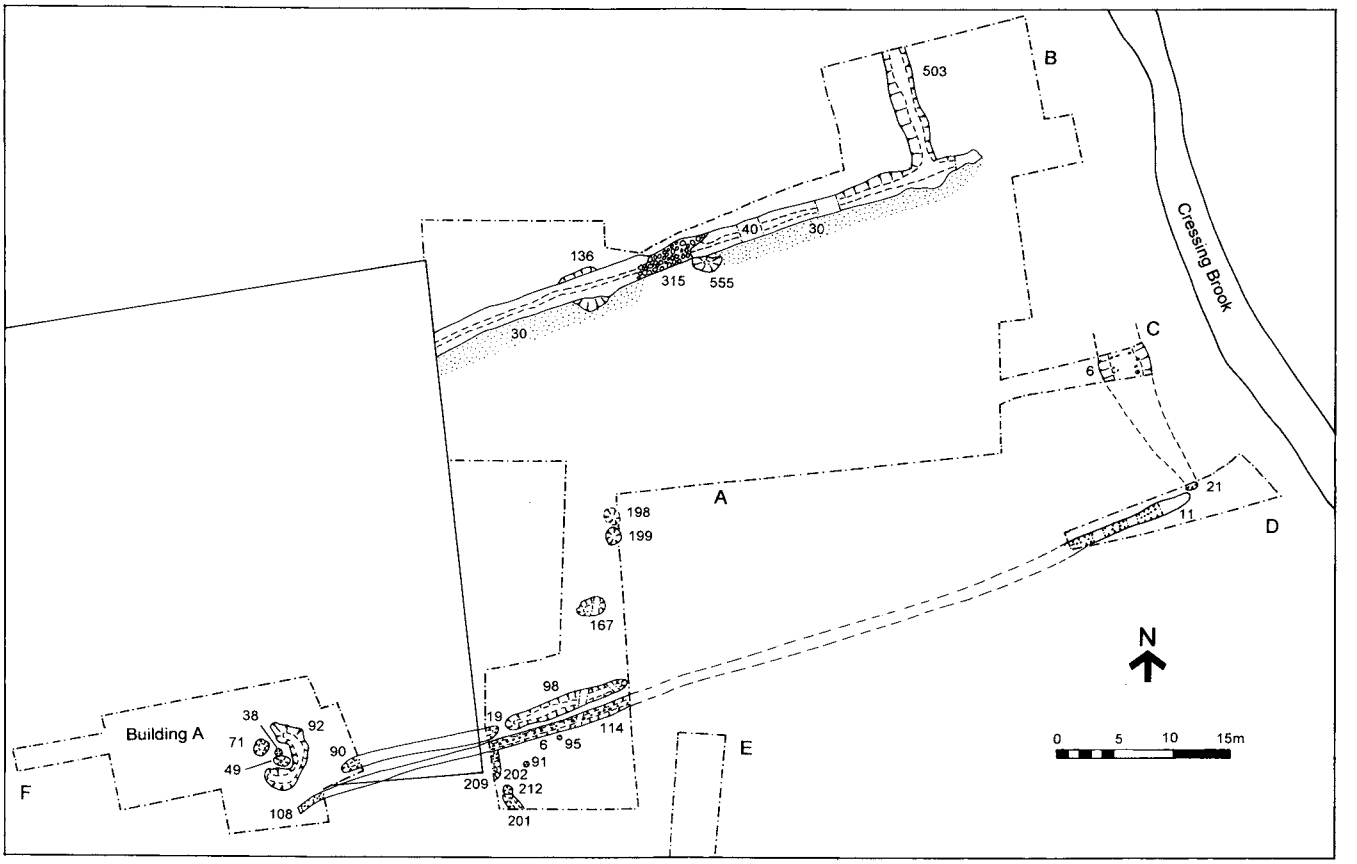

Fig. 3 Excavations at Cressing Churchyard: First half of 1st century phase plan

the fence. Postholes F91 and F95 may form part of this group.

A ditch, unfortunately also numbered F6, lay at right-angles to both ditch F40 and fenceline F6 and roughly parallel to the present course of the Cressing Brook, 6m to its east. Within the ditch was a sequence of stake-holes, spaced out along its eastern and western sides, representing either a double-thickness fenceline or the rapid replacement of one fence by another. It is just possible that feature F21 marks the tip of the southern terminus of this feature. F6 may form an eastern boundary of an enclosure of which ditch F40 forms the northern limit.

Building A (Fig. 13)

In the south-western corner of the site (Area F) was a group of features interpreted as a structure by the excavator (Building A). This consisted of a horseshoe-shaped gully F92 and two post-holes, F38 and F49 located within the arc of the gully. The structure measured a maximum of 5.4m long by 3.2m deep, and appears to have been open-fronted to the west. It may have served as a workshop or animal shelter. Semi-circular structures are common in the Later Iron Age. Examples have been excavated at the Airport Catering Site, Stansted Airport (Havis and Brooks 2004) and at Gun Hill, West Tilbury (Drury and Rodwell 1973), although at both these sites the structure is rather larger. A spread of burnt debris sealing these features was interpreted as a destruction layer.

Miscellaneous features

Pit F167 (depth 1.23m) comprised a roughly bowl-shaped depression, in the centre of which was an almost vertical rectilinear pit. Traces of stake-holes could be identified around the bottom of the pit, raising the possibility that it might have had a wicker lining. To the north of this were two smaller pits/postholes F198 and 199, also datable to the early-mid 1st century AD.

Pit F71 was a shallow circular pit immediately to the west of Building A.

Second half of the 1st Century (c. 43-100 AD)

(Fig. 4)

The possible enclosure

As discussed above, boundary ditch F40 had been gradually infilling throughout the first half of the 1st century AD, due to a combination of natural silting and deliberate rubbish disposal. The final phase of infilling (fill 37), seems to have taken place in the two decades immediately following the Roman conquest, certainly before AD 60. However, a slight depression would have remained marking the line of the ditch and it is thought that the internal bank (30) also survived to some degree. In the years following AD 60, over 174 stakes, with intermittent larger posts, were hammered into the southern lip of the ditch. These form a slightly wobbly line along most of the ditch length, with the exception of the last 5m on the western edge of the excavated area,

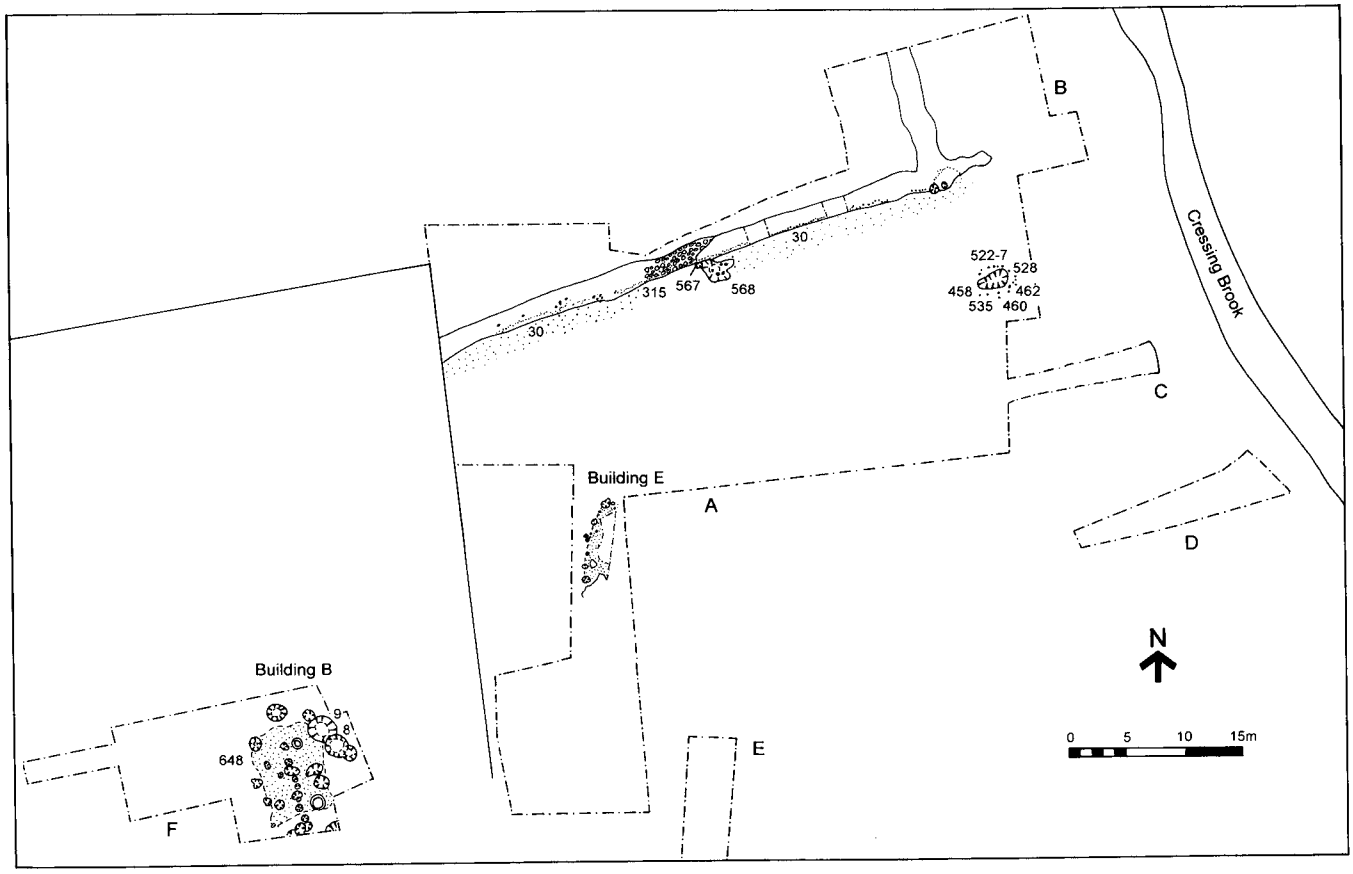

Fig. 4 Excavations at Cressing Churchyard: Second half of 1st century phase plan

where no stake or post holes were detected. It is suggested that the wobbliness of the closely-spaced fence-line followed the lines of slippage of the original bank, and that the fence served a double purpose of acting as an enclosing barrier and as a supporting revetment. Eight charcoal samples were analysed from F40, five of which were oak and the remainder hazel, alder and possibly apple.

Posthole F568 cut gate-post F555 and there is a gap in the line of stakes at that point, demonstrating that the entrance and gate occupied the same place as its predecessor. Posthole F568 was surrounded by a number of smaller stakeholes, presumably adding additional support in the form of bracing to the main posts

The southern fence-line F6 appears to have been dismantled at least partially, as structures were built over its western end.

Building B (Figs 4 & 13)

Building B replaced Building A in the south-west corner of the excavated area. Its outline is marked by occupation layer 648, comprising a rectangular area of trampled clay, measuring 8m long by 5m wide. This layer overlapped fence-line F6, demonstrating that the fence had been removed in that area. The outer walls of the structure are marked by post-holes F15, 16, 89, 40, 69/17, 31, 116, 114, 115, 109, 30 and 103. The internal space was sub-divided by a central row of posts (F116, 117, 52, 111, 13, 12, 119 and 51) which would have supported the roof ridge-pole. The main roof-support posts (F116, 111, 119 and 51) are spaced at 2m intervals, whilst the smaller posts fill in the gaps between them. The spacing of the posts suggest that the structure may have been further subdivided into bays or possibly rooms, each measuring approximately 2.5m deep by 3m long. A possible entrance is located on the western side where a grouping of flints may mark a threshold. There were two internal fire-pits (F6 and 24) both lined with burnt clay and packed with charcoal. A third possible hearth was also identified (F130), consisting of an area of burnt flints and charcoal. The finds all date to the second half of the 1st century AD.

Building B was overlain by a layer of burnt debris (607/622), the finds from this destruction layer indicate a date in the third quarter of the 1st century AD, and include a few fragments of South Gaulish Samian, spindle-whorls, a possible iron meat-hook and fragments of shears. A large quantity of burnt daub was recovered, some of which bore wattle impressions, the presence of large nails suggests that at least some of the timbers were attached by nails.

Building E (Figs 4 & 13)

This comprised a spread of cobbling of small flint nodules and pebbles (F139), 7m long and with a maximum surviving width of 2m. The western side of this spread had been cut away by pit sequence F152, 198, 199 and a modern drain. The western edge of the flint cobbling is marked by a series of post-holes: from north to south these were F175, 150, 174, 166, 156, 155, 154, 153, 151, 168, these are spaced at 1-1.5m

intervals. Postholes 148, 194 and 195 may form part of a southern edge to the structure. The positioning of two smaller post-holes (F155 and 156) combined with the slight dog-leg in the flint cobbling at the same point suggests the location of an entrance. Within the structure, in the south-western corner, was a hearth, marked by a shallow stone-lined depression filled with charcoal-rich clay (F86). The eastern side of Building E could not be defined due to the degree of later disturbance. Two interpretations are possible: either that the surviving portion of the structure represents approximately half the overall structure, with conjectural overall dimensions of 7m by 5m, or alternatively the structure was originally a long open-sided shelter about 7m long by 2.5m wide. There was no specific dating evidence for Building E. However its spatial relationship to Building D would suggest that it pre-dated the latter and had been removed prior to the third quarter of the 1st century AD.

Pits

Immediately to the east of Building B were two pits, F8 and 9. Pit F8 contained some 1st-century pottery, including a sherd of South Gaulish Samian dating to *c.* 54-80 AD.

Pit F458 (2.4m long, 1.3m wide, 0.56m deep) was sited on the eastern edge of the excavated area, just within the area prone to flooding by the Cressing Brook (Fig. 4). It comprised a pit, with a posthole at its western end. The pit had been lined with clay and set within a small enclosure or structure defined by a ring of stakes (c.2.75m diameter). The purpose of this structure is unclear, although it presumably either sheltered the contents of the pit from the elements or kept something in/out of the pit. The finds date the pit to the 1st century AD.

Building D (Figs 5 and 13)

Partially overlapping the southern half of Building E were the remains of another structure, Building D. This was a rectangular building, defined partly by posts and partly by timber-slots, built in two phases. The first phase (D1) was entirely post-built. The north-western wall consisted of postholes F192, 148, double post-hole 189/184, 187, and 215. The south-western wall was defined by corner-post 214, and posts 186 and 132. There was one internal division, marked by double post-hole 187/197, and 188. The full extent of this structure was not established. However, the excavated portion measured *c.*10.4m x 5.5m, with the main room-space measuring *c.*8.4 x 5.5m and the smaller room measuring *c.*2 x 5.5m.

The second phase (D2) appears to have closely followed the first and consisted of structural modifications to the building. The long south-western wall was replaced by a beam-slot (F85); and a new internal division was inserted (beam-slot F123). The existing post-built room division was replaced by presumed beam-slot F185. This was not visible on the surface but was observed as an anomaly on the side of F85 and in section in pit F183. The beam-slots were very shallow, reaching a maximum depth of 13 cm, and in some places considerably less. Towards the western end of F85, stone packing had been inserted, 0.40m. in length. The same phenomenon occurred in F123, and in both instances appeared to be packing to secure conjoining timber plates. Stakeholes 210, 194 and 195 are sited within the building, whilst posthole 126 may have been a supporting post for wall F85. Posthole 10 may also have been part of this structure. The second phase thus consisted of a rectangular building measuring at least 10.4 by 5.5m, with three rooms, the northernmost measuring 2m by 5.5m. The middle room was 3.7m by 5.5m and the southernmost was at least 4.5m by 5.5m. The small amount of pottery recovered from F85 included a fragment of a Dr.15-17 Samian platter, indicating a date in the third quarter of the 1st century AD. This structure cut fence-line F6, which must have been dismantled, at least at its western end, by that date.

Burials

F362 was located in the north-west corner of the site (Fig. 11). The primary burial in the grave was F362a. This was not articulated and the survival of the bone was limited suggesting extensive disturbance of the grave by the second burial, F362b.

A second burial, F362b, was later inserted into this grave. Although bone survival was still poor it was possible with this skeleton to retrieve the skull, both femurs and tibiae, fragments of the pelvis, the left radius and ulna and both humeri (Fig. 11, upper). The bone has since been lost, however initial assessment of the material (by osteologist Glynis Putnam) suggested that the bones were of a deformed adolescent female in her mid teens. The nature of the deformation was not recorded, although the excavator recollects that the suggestion was that it was dwarfism. The body had been buried on an east-west orientation, with the head turned to the north. A rectilinear stain 2.7m long was observed in the base of the grave, which was interpreted as the remnants of a wooden framed object (possibly a bed). Samples were taken from this staining which were identified as the remains of oak planking. 27 nails of varying sizes were retrieved from around the body, probably components of the wooden object on which the body had been laid.

A deep post-hole at the east end of the grave (F420) and a row of stake-holes on the eastern and northern sides suggested the possibility of a mausoleum or boundary fence. Unfortunately, no continuation of the sequence around the western and southern sides was apparent, and the idea cannot therefore be advanced with any confidence. It is possible however that this structure was erected around the primary burial and that the subsequent re-opening and widening of the grave destroyed the evidence on the west and south sides. The only find which could definitely be associated with the primary inhumation was a minute green glass bead in the fill of the feature.

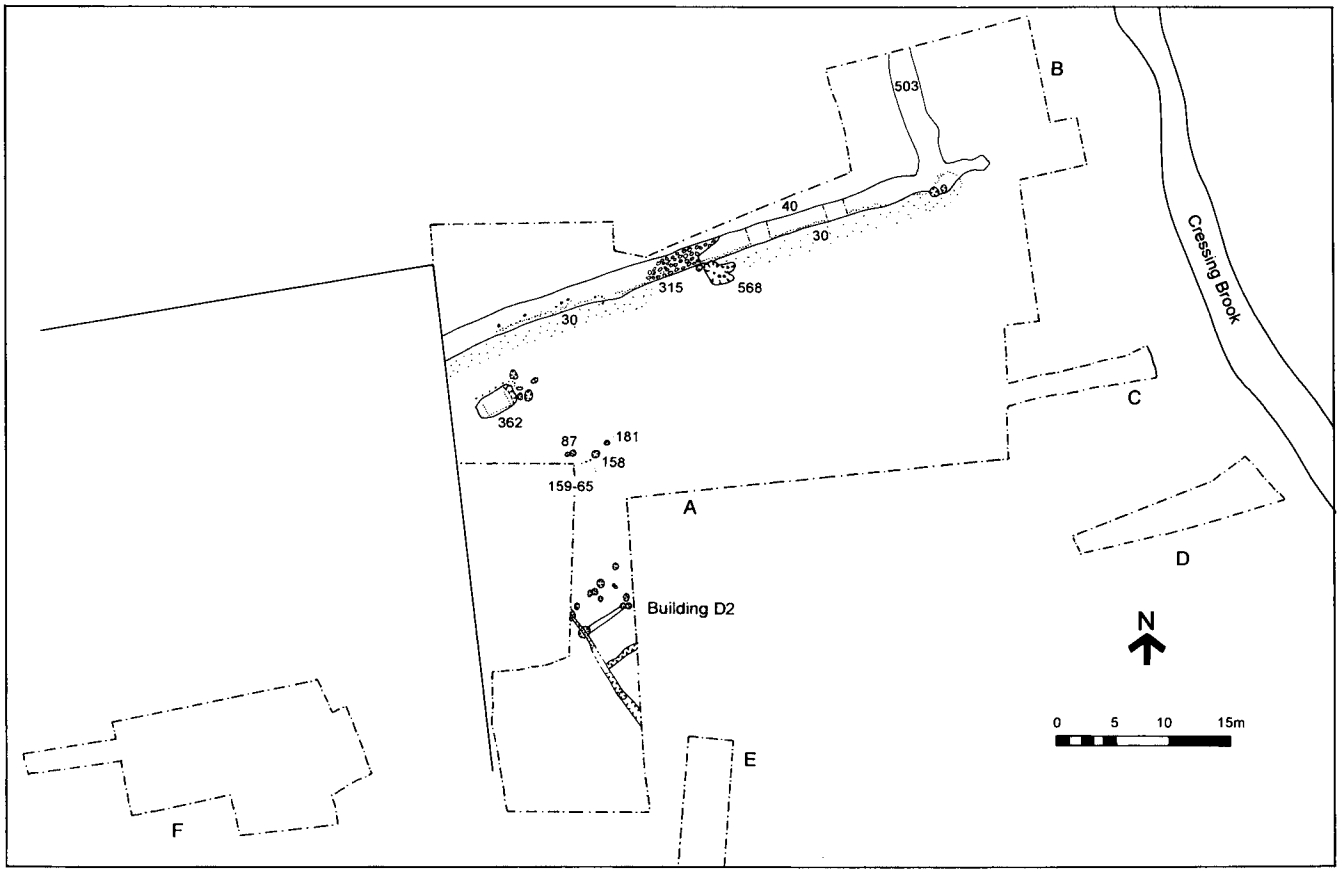

Fig. 5 Excavations at Cressing Churchyard: Late 1st century phase plan

Post-holes

Post-holes F181, 158 and 87, and stakeholes F159-65 (Fig. 5) may have formed a fence-line which would have served to demarcate the southern edge of the area used for burial.

Later Roman Period

(Fig. 6)

Early to mid 2nd century AD

Cremations

Only the base of the burial urn survived of cremation F260 (against the northern edge of the excavation), the upper parts having been shattered by post-Roman ploughing. The maximum surviving depth was only 9 cm. The pottery has been lost, but initial analysis recorded its fabric as a very hard light grey with a gritty texture, bright orange oxidised core, and wheel-thrown. This was considered to be of second-century date. The burial was located to the north of boundary ditch F40, outside the occupation area.

Cremation F365 was located to the south of boundary ditch F40 (it has not been possible to locate it more precisely). The grave was only 15cm deep and only the base and sides of shattered cremation urn, containing calcined bone fragments, survived. The urn has been lost, but on-site examination recorded it as being of a hard grey fabric, of probable second-century date.

Possible oven

F391 was a shallow pit on the eastern side of the excavated area. It was 1.31m long, 0.65m wide and 0.21m deep, with a stake-hole at the eastern end. It was filled with charcoal and burnt daub suggesting that it may have been an oven, with the daub representing a collapsed superstructure.

Mid second to early 3rd century AD

Building G (Figs 6 and 13)

This was located in the north-eastern corner of the excavated area, and not all of its ground plan was recovered. It was chiefly of beam-slot construction (F479, 511, 512, 481, 520 and 539), supplemented with post-holes (F514, 449, 478, 544, 545, 518, 563, 542, 521). Stratigraphically, it succeeded ditches F40 & F503, and the pottery in its destruction layer 444 ranged in date from the 1st to the 3rd century. There was also a very abraded coin of Valens (364-378 AD) and a Saxon bun-shaped loom-weight in this layer. It is tentatively suggested that the building was built in the 3rd century and destroyed late in the 4th century; the phasing is correspondingly tentative. The dimensions as excavated are a width of 8.6m and excavated length of 14m. It was internally sub-divided into three compartments, a small room (internal dimensions 4m by 5m), a larger room (excavated internal dimensions 4m x 8m) and a 2m wide corridor running along the length of the building on the eastern side. There was an

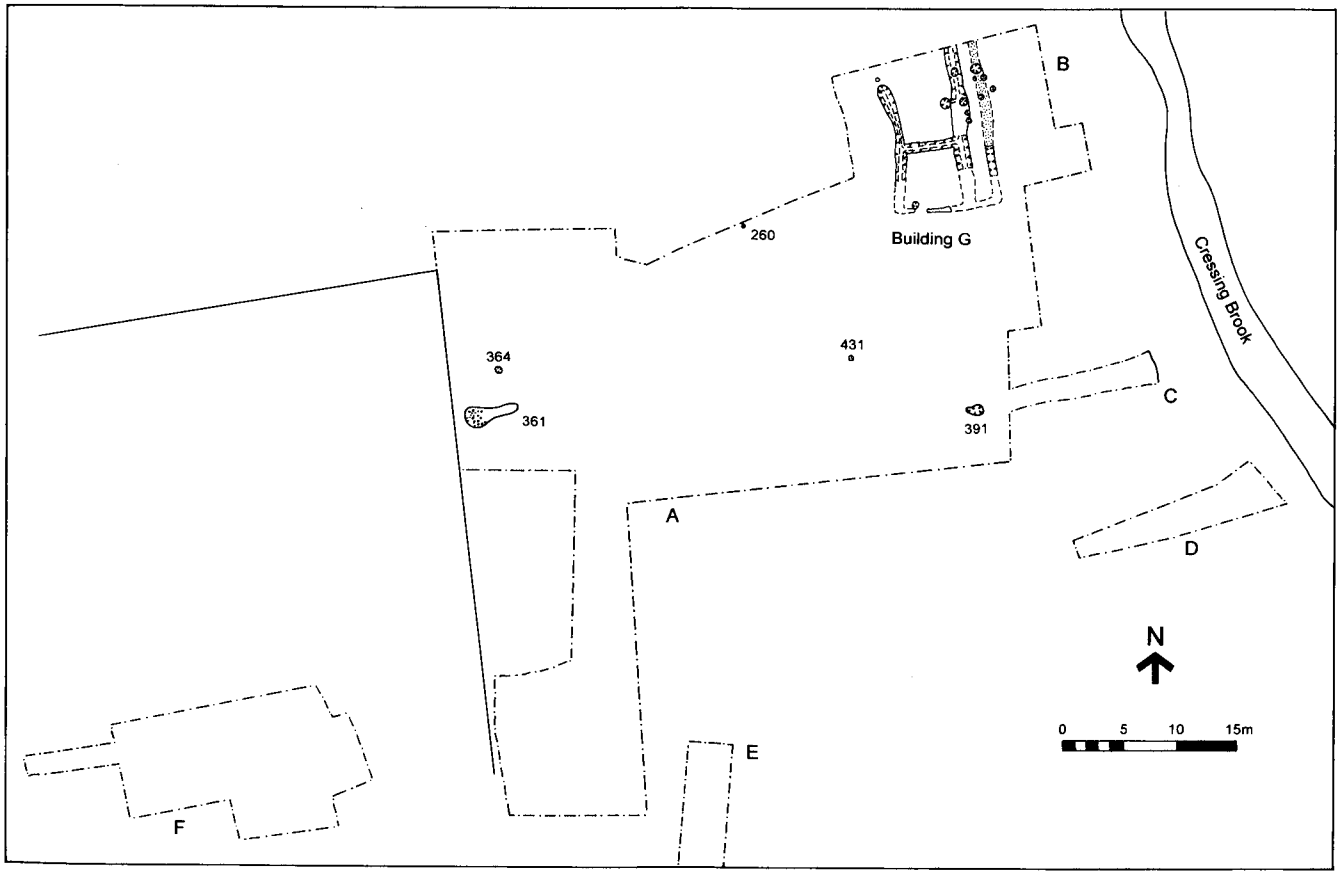

Fig. 6 Excavations at Cressing Churchyard: 2nd-4th century phase plan

external doorway at the southern end leading into the smaller room. The widening and increased depth at the northern end of F479 indicates a second doorway set with a substantial door post on the western side, giving external access to the larger room. It seems likely that F539 represented conjoining timbers laid on the shallow bedding trench. For the greater part of its length its course was marked only by a thin line of surviving packing stones, but where it did survive it was represented by a contaminated grey crumbly fill. The difference between this feature and the two parallel timber slots may be accounted for by the necessity to obtain a level base for the structure on slightly inclined ground. It is also possible that F539 was, in part at least, a post-in-slot wall, the likelihood being that post-holes F518, 521, 556 and 563 represented components of this structure. A quantity of burnt daub was recovered from the presumed destruction layer, and the charcoal from this layer suggested that the predominant wood used in the structure was oak, though ash, hazel/alder and apple also featured.

Cremation

Cremation F364 was located in the north-west of the excavated area. Pieces of shattered urn with flecks of cremated bone and charcoal were recorded in a shallow bowl-shaped depression of dark grey loam 10 cm. in depth. The urn has been dated to the mid to late 2nd century AD.

Posthole

Posthole F431 produced the only colour-coated sherd from the site - an uncertain beaker form, probably from Colchester, dating to the late 2nd or early 3rd century AD.

Late 3rd to 4th century AD

Destruction layer of Building G

Layer 444 was a widespread lens of very dense charcoal which covered much of the north-eastern corner of the site. It contained Roman pottery dating from the 1st to the 3rd century, a number of iron objects, a large quantity of burnt daub and a Roman coin (Valens AD 364 - 378). This was interpreted as representing the destruction layer of Structure G, which had evidently burnt down.

Oven

Oven F361(Fig. 6) had been badly damaged by unmethodical digging prior to formal excavation taking place; however, the remains of this feature were re-excavated. The back-fill of previous digging was removed from what was left of the stoke-hole, the east end of which had apparently been over-dug, and the feature sectioned longitudinally. Though much of the feature had been damaged, sufficient was recovered to establish the basic plan. The maximum length of the stoke-hole was 2.69m., with a breadth of 0.67. The base of the burned clay oven was 1.56m in diameter, and

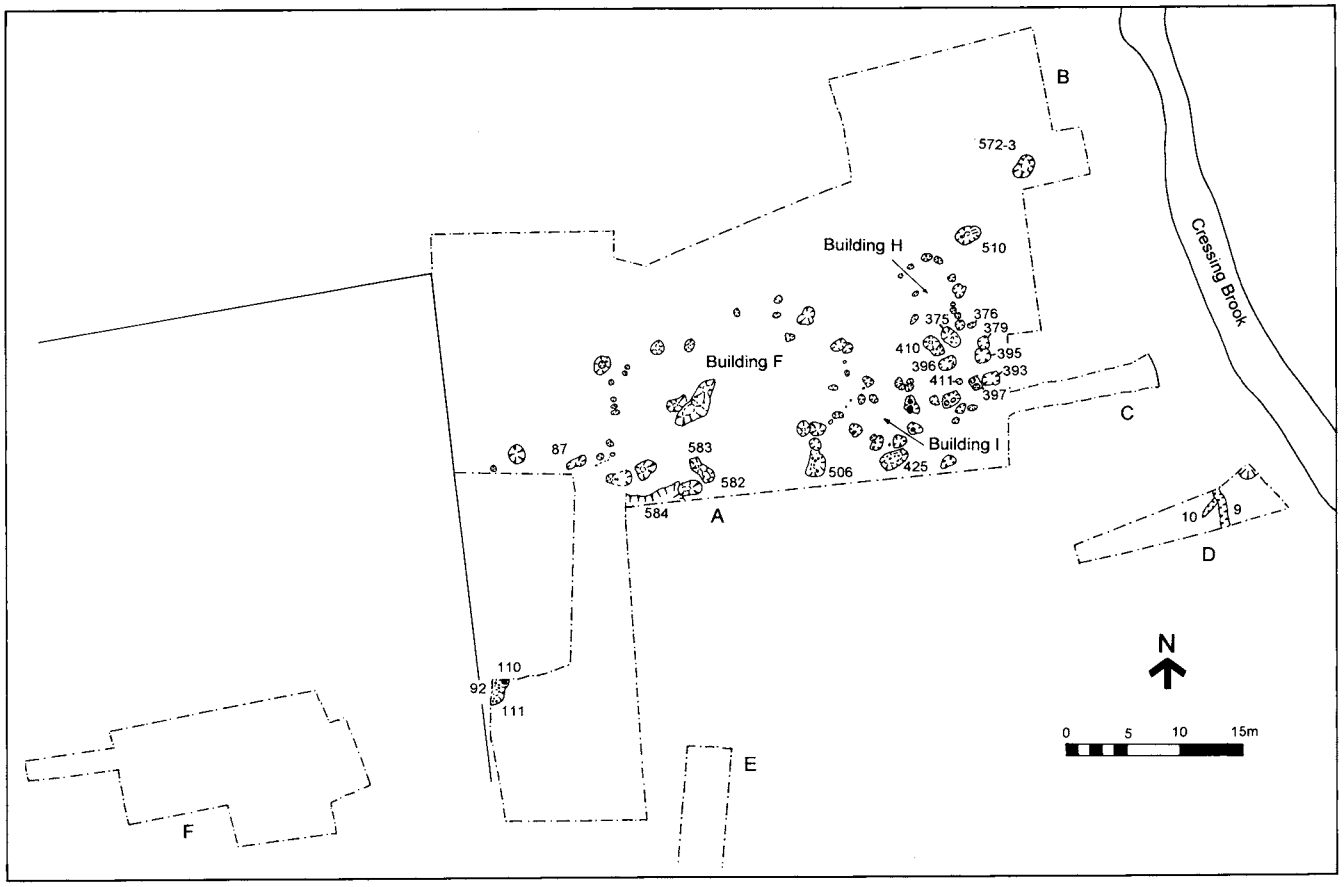

Fig. 7 Excavations at Cressing Churchyard: Undated phase plan

perforated with stake-holes and a central post-hole (surviving depth 0.62m) apparently intended to support a clay dome with a central support. The stoke-hole cut into the upper fill of 1st-century burial F362. At the western end of the stoke-hole, against the surviving base of the dome was the greater part of a flanged pie-dish indicating a mid fourth-century date. At the bottom of the surviving charcoal-rich fill was a pair of unarticulated tibia in an extremely poor state of preservation, together with other fragmentary human remains, presumably up-cast from the disturbed primary inhumation F362a (see above).

Undated (presumed Roman)

(Fig. 7)

Building F (Fig. 13)

This was a roughly rectangular post-built structure, 13.6m by 6.6m, located in the centre of the excavated area. The entire ground-plan was recovered, forming a rectangular pattern of deep-set post-holes, the gaps between uprights presumably filled with wattle and daub. The postholes were F579, 578, 96, 171, 170, 169, 172, 173, 216, 217, 562, 569, 554, 557, 559, 560, 561, 441, 430, 429 and 432. A wide door 5m across was located in the centre of the southern wall. This was supported on each side by a double post-hole (F438-440 and F582-3) either for additional bracing or possibly to support a porch. The eastern doorpost had originally been a strong triple support, (F438-440), but there was clear evidence that the most southerly component, F439b, had been removed and replaced by an inclined support for F439a, whose post-pipe was clearly visible. Within the structure existed a further complex of deep post-holes, F574-5 & F577, presumably designed to support a tie-beam, or possibly a ridge-pole. The siting of these central supports to the west of the main door and the positioning of post-holes F569 and 554 raises the possibility that there was a second, corresponding opening on the northern side, facing directly on to the entrance to the postulated enclosure. This second opening would allow a laden cart to enter the building, unload and exit through the opposite door, a methodology used in medieval threshing barns. The opposing door system also provides suitable conditions for a through draught and threshing floor in the midstrey section. The roof was probably of the ridged variety. This being so, the down-thrust of the roof would have been considerable, forcing the wall-posts outwards. It is reasonable to suppose that the thrust was absorbed by a series of tie-beams, this view being supported by the existence of the complex F574-5, serving the double purpose of providing a brace to a tie-beam and of dividing the structure into two compartments.

Structure H (Fig. 13)

To the east of Building F is a group of post-holes (F366-370; 373-381), which it is suggested form a narrow ovoid structure or enclosure 6.8m long by 3.6m wide.

The southern aspect was open. The post-holes vary in depth from 40cm to 15cm. All the deeper post-holes are located on the eastern side (F367-8; 372-380), whilst those on the west, F369, 370, 373 and 374 varied from 15 cm. to 24 cm in depth. It is thought that this probably formed a small fenced compound or animal pen, probably unroofed.

Structure I (Fig. 13)

Structure I was located at the south-west corner of Structure F. It consisted of a group of postholes (F398-401, 404, 413, 417, 421, 422, 424, 427-8, 437, 433-4, 398) which formed a roughly circular structure or enclosure 5.5m diameter, again possibly an animal pen. It is not possible to establish whether it is contemporary with Structure F.

Burial (Fig. 11)

Pit F510b (see below) was re-cut and a body placed inside the resultant shallow grave (510a), occupying the northern half of the feature. The bones have unfortunately been lost. However, initial examination by Glynis Putnam suggested that it was the body of a woman. The pelvis was at a lower level than the head and feet, the latter resting on the western edge of the pit. The skull had been shattered, and several large stones lay close to it. Otherwise the skeleton was intact, apart from the toes which had been removed by plough action. The right arm lay straight down the side of the body while the left arm crossed the body so that the bones of both hands were intermixed. The position of the hands raises the possibility that they were bound and the position of the body is suggestive of a hasty burial. No dating evidence was recovered, though it is presumed to be Roman.

Cremation

A mass of cremated human bone (F323) was found in boundary ditch F40: this had been inserted after the final filling of the ditch. Initial analysis suggested that the body of an adult male was represented. There was no surviving evidence of a container, although one of organic material such as a leather or cloth bag is of course possible.

Pits

F425 was a substantial ovoid pit (3m x 1m), oriented east-west. The feature subdivided into two components, the easterly comprising a bowl of approx, 2.05m in length and with a maximum depth 0.59m., the westerly forming a post-shaped socket of 0.72m deep. Stake-holes were also observed lining the edges of the easterly component. This division of the pit into two components was a characteristic of other pits observed on the site, such as F458 & 506.

F506 was an oval pit (2.50m x 1.30m, maximum depth 0.57m) with evidence of a post-pipe (F 507) in its southern half. The sides were clay-lined whilst the presence of six stake-holes in addition to the post-pipe suggests either a second timber or wattle lining or possibly some form of sheltering superstructure.

Only the bottom 41cm of pit F510 b. survived, as the upper 22cm had been re-cut as a grave for F510a (see above). It was evident however that the original pit appeared to consist of a pit and internal posthole, a common form on this site.

F92 was a deep feature (62cm), possibly a pit, partially revealed on the western edge of the excavation. The edges were cut by two large stake-holes, F110 and 111, and six small stake-holes.

F586 was only recorded in section. However it contained at least two types of clay not otherwise encountered on the site, and it is suggested that it may have been a storage pit for clay derived from elsewhere, presumably stored for later use.

Pit F572 appeared to cut pit F573. Its fill was a sticky wet grey clay, relatively pure in composition, and again it might have been a clay storage pit.

Miscellaneous

Cut F584 was observed as a portion of a curved gully partially under the southern baulk. The excavator has tentatively suggested that it might represent the remnants of a structure similar to Structure A, but this was impossible to prove and it is hence not included as a structural element.

Postholes F393-7, 406-7, 410-2, 415 & 419 form a group of post-holes and post pits, some of them very deep. F410 was a double post-hole, while F395 contained a brace within its own pit, and F397 was inclined east, forming a brace for F 393. F393-4 lay on the eastern edge of the excavation, and the full plan was not recovered. In most of these features the fill was of sticky contaminated yellow clay. Three metres further south lay F414, containing a similar fill, and possibly in the same sequence. It is not possible to hazard an explanation for these features, except that whatever it was that they formed part of was clearly intended to be sturdy.

F9 was a shallow gully, aligned north-south, cut by F10. It is possibly associated with the drainage of the low-lying eastern perimeter of the settlement.

The Saxon period

(Fig. 8)

Pit F502 existed below silting layer 442, and cut destruction layer 444. Its fill was of dense black charcoal with much daub content. It contained a large piece of Roman building tile and a complete Saxon bun-shaped loom-weight.

Two sherds of 6th to 7th-century Saxon pottery and a bone comb handle were recovered from the upper part of layer 444, which was interpreted as the deriving from the destruction of Building G.

The Saxon evidence, although scant, is sufficient to suggest some form of domestic occupation in the area, possibly to the north of the area excavated (all four Saxon finds came from the extreme north-east corner).

Fig. 8 Excavations at Cressing Churchyard: Saxon phase plan

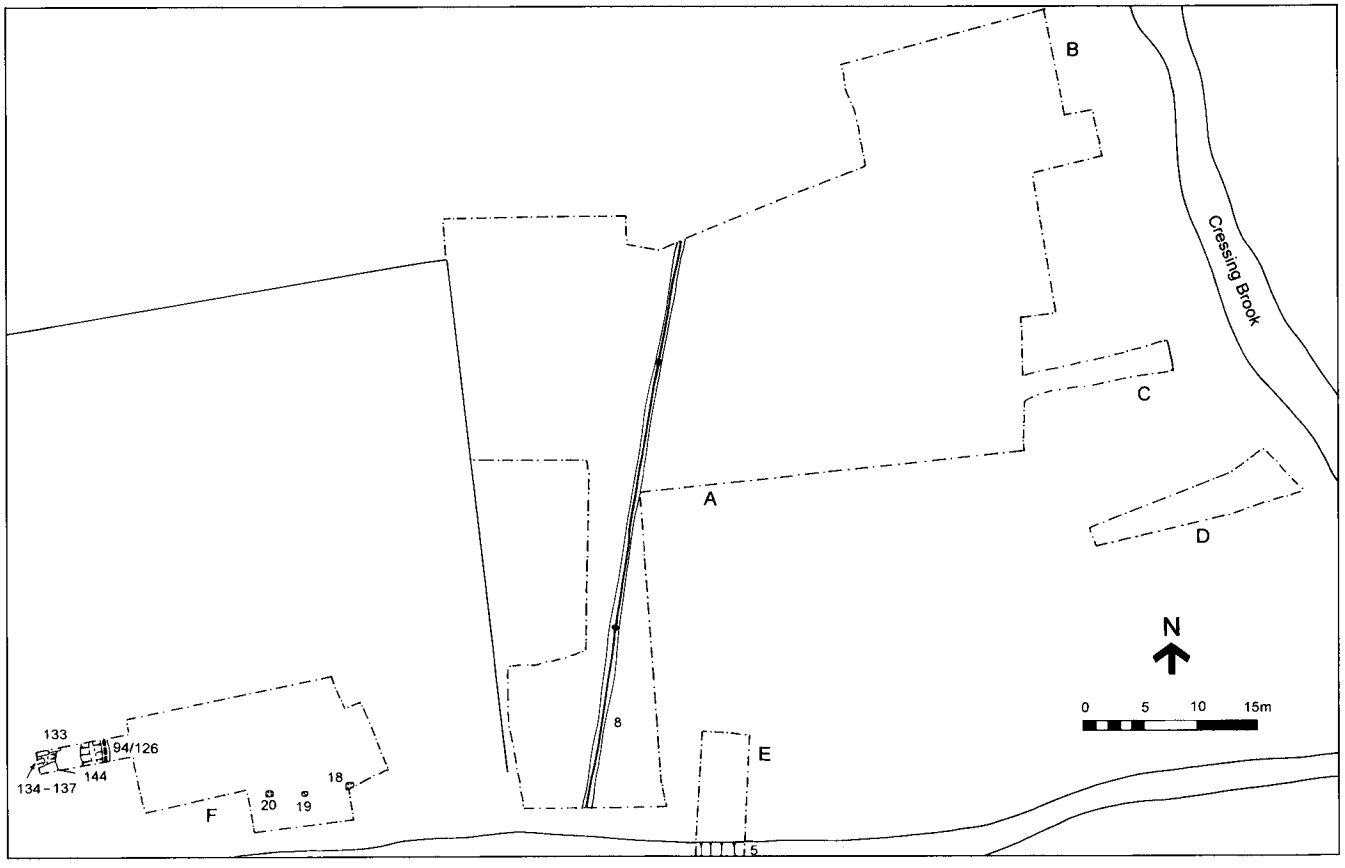

Fig. 9 Excavations at Cressing Churchyard: Medieval-modern phase plan

THE MEDIEVAL PERIOD

(Fig. 9)

At the western end of the excavation, Area F cut a bank (comprised of layers 693 732, 734, 739 and 740). This stood c. 90cm above the natural brick-earth and marked the limit of the original graveyard. Layers 693, 732, 739 and 740 indicated medieval soil accumulation, probably the up-cast from graves. A fragment of medieval floor-tile, presumably from the church, was discovered in 693, along with other medieval and Roman debris.

It appears that the excavated area was a single field in the medieval period, bounded by the churchyard to the west, the Cressing Brook to the east and possibly the field boundary excavated in Area E (below) to the south. The area was prone to intermittent flooding by the brook, and may well have been utilised as a water-meadow. Layer F443 was spread over the north-eastern corner of the site, and appeared to be derived from silt deposited by the brook. It contained occasional Roman sherds and the rim-sherd of a twelfth to thirteenth-century cooking-pot.

The Modern and Post-Medieval Period

(Fig. 9)

The westernmost part of the excavation, (Area F) was enclosed as an extension to the original medieval churchyard in 1938 and it is here that the majority of the modern and post-medieval features occur. Post-holes F18, 19 and 20 were all modern, cutting through the turf and top-soil. These marked the southern limit of the churchyard extension. F126 was a drain, within cut F94, dug in 1974. This in turn cut into uppermost layers of F141, a ditch 1.58m deep, which delimited the easternmost edge of the original graveyard. Finds from the lower levels were almost exclusively Victorian or early 20th century. It was presumably infilled in 1938 when the graveyard was enlarged.

To the west of ditch F141, six graves were identified (F133-138). Only the eastern end of each grave was excavated, and as a consequence no complete inhumation was recovered. No traces of coffin-staining or coffin nails were observed suggesting that the dead had been simply wrapped in winding-sheets. A few small bone buttons were recovered from F136, indicating an 18th-century date for that burial. F136 cuts F138, which must therefore pre-date it. All the graves cut F144, an undated ditch.

Area E was excavated in an attempt to establish a date for the cutting of the current boundary ditch between the excavated area and the field to the south. Finds within the ditch fill indicated that it began to silt up in the 18th century.

Running diagonally across Area A was a deep construction trench (F 8) for an iron water-pipe pointing in the direction of the village pumping-station. This was dated by a 1937 George VI penny at the bottom of the fill, providing a useful *terminus post quem.*

THE FINDS

LATE IRON AGE AND ROMAN POTTERY

by Cathy Tester, Suffolk County Council Archaeological Service

Introduction

Excavation produced 3120 sherds of pottery weighing 44.83kg - the bulk of which came from the Late Iron Age boundary ditch, F40. The pottery quantities are summarised in Table 1 and full quantification by context is available in the archive.

Fabric	Code	No.	Wt./g	% Wt.	Av.Wt./g
Hand-made flint-tempered	HM F	30	129	0.3	4.3
Hand-made sand-tempered	HM S	11	33	0.1	3.0
Total prehistoric wares		*41*	*162*	*0.4*	*4.0*
Amphora	AA	3	284	0.6	94.7
Black-burnished ware 1	BB1	9	774	1.7	86.0
Black-surfaced ware	BSW	248	2704	6.0	10.9
Buff wares	BUF	5	24	0.1	4.8
Early Shell-tempered ware	ESH	125	1866	4.2	14.9
Grey Fine ware	GRF	36	191	0.4	5.3
Grog-tempered ware	GROG	2103	33867	75.5	16.1
Smooth Red-surfaced ware	GROG-S	73	672	1.5	9.2
Sandy Grey ware	GRS	158	2172	4.8	13.7
Pompeian Red ware	POMP	4	55	0.1	13.8
Miscellaneous Oxidised wares	RED	9	35	0.1	3.9
Oxidised Mortarium fabric	REDM	6	241		40.2
Rettendon ware	RET	3	20	0.0	6.7
Central Gaulish samian	SA CG	4	7	0.0	1.8
Central Gaulish samian Les Martres	SA MV	3	13	0.0	4.3
South Gaulish samian	SA SG	1	1	0.0	1.0
Storage Jar fabrics	STOR	11	689	1.5	62.6
Terra Nigra	TN	11	125	0.3	11.4
Terra Rubra	TR	49	144	0.3	2.9
Hull's TR4	TR4	2	10	0.0	5.0
Unspecified Colour-coated	UCC	1	6	0.0	6.0
Unknown	UNK	5	24	0.1	4.8
Unspecified White wares	UWW	51	144	0.3	2.8
Verulamium White ware	VRW	1	23	0.1	23.0
North Gaulish White Fineware	WF	153	559	1.2	3.7
Total LIA and Roman wares		*3074*	*44650*	*99.1*	*14.5*
Post-medieval ware	pmed	5	17	0.0	3.4
Total Post-medieval wares		*5*	*17*	*0.0*	*3.4*
Total Pottery		**3120**	**44829**	**100**	**14.4**

Table 1. Pottery quantification

Methodology

The Late Iron Age and Roman pottery was classified using the type and fabric series devised for recording Roman pottery at Chelmsford (Going 1987) which is standard for recording Roman pottery in Essex. As the majority of the pottery was from an earlier period than that which is covered by the Chelmsford type series, it was often necessary to use the *Camulodunum* typology (Hawkes and Hull 1947) and Thompson's (1982) type series for Late Iron Age grog-tempered pottery. Quantification was essentially by fabric and the fabric codes used are the mnemonic versions of Going's original numeric codes but include subsequent additions and revisions. A x10 microscope was used to identify the fabrics. Rims were not quantified by EVE (estimated vessel equivalent) except for a selected group from Ditch F40, but when possible, separate 'sherd families' have been given separate records in the database table. Table 1 provides a key to the fabrics present in this assemblage, listing them by common name followed by the mnemonic codes used for this report. Observations about decoration, abrasion, wear or other notable features have been recorded, and the sherds assigned provisional spot dates. Pottery recording forms were used and the results were input onto an Access 97 database table. All percentages are by weight unless otherwise stated.

This report does not include all of the pottery recovered between 1973 and 1979 at Cressing Churchyard. Area F has been published (Hope 1983) and the pottery from Area B has been spot-dated and summarised by Going (elsewhere in this report). None of the unstratified material from surface-clearance or from the baulks in Ditch F40 removed *en bloc* has been quantified.

The pattern of pottery deposition

The pottery was collected from approximately fifty features, plus several other contexts whose status was not clear, but the bulk of it came from one feature group, a late Iron Age boundary ditch, F40, which accounts for approximately 85% of the total pottery assemblage (for stratigraphic information see Table 2). Only one other group, from Cremation A323, had more than 100 sherds of pottery and only three contexts had more than twenty-five sherds. Most other features examined contained less than ten sherds. The same small quantities were encountered in the Area B contexts examined by Going (elsewhere, this report). Although only approximately quantified (small, medium or large sherd counts and no weights), most Area F features (Table 3, Hope 1983) also appear to have produced only 'small amounts' (four or fewer sherds) of pottery with only a few features having larger quantities; most notably, the 'Destruction' layers 7 and 22.

Generally, the pottery suffered from an adverse post-depositional soil environment which made it soft and abraded, affecting much of the original surface treatment but the average sherd weight for the total assemblage was 14.4g.

Pottery by period

Prehistoric pottery

A small amount of hand-made Iron Age pottery was found but the quantity collected was negligible. Several flint-tempered sherds were identified and sand-tempered sherds typical of the later Iron Age were also recovered. They are mainly very abraded non-diagnostic body sherds, found in later-dated features and not indicative of significant activity in the immediate vicinity before the LPRIA. A flint-tempered jar was identified in the top layer of Ditch F40, layer 37 where it would have been redeposited.

Late Iron Age and Roman pottery

Introduction

Twenty-four Late Iron Age and Roman fabrics or fabric groups were identified in this collection which included local, regional and imported finewares and coarsewares but the assemblage is dominated by local coarsewares, the bulk of which were grog-tempered. The fabric quantities are summarised in Table 1 and the detailed list by context is in archive.

Imports

Imports are sparse in this collection and account for less than 3% of the assemblage, typical for a rural site of this date.

Amphora: Three amphora sherds were found in three contexts. Two were from Ditch F40 and of south Spanish origin probably dating to the 1st half of the 1st century AD. South Spanish amphorae are not unknown but rare in pre-conquest contexts. The other piece was collected from F6. It had an orange fabric with a grey core but its origin is unknown.

Mortaria: An early wall-sided mortaria (Cam 191A) in a powdery orange fabric (REDM) was found in Ditch F40, layers 54 and 82. Like the wall-sided mortaria described by Hawkes and Hull (1947), the interior is smooth with no grits. No definite source area is known for these vessels, but the Rhineland or Gallia Belgica are two possibilities. The forms are common only in the south-east and dated Tiberio-Claudian but are mostly Claudian.

Pompeian Red ware (POMP): Two Campanian Pompeian Red ware platter bases with red slip on their interiors and rough external surfaces were found in Ditch F40, layer 37. The wares are Claudio-Neronian and these vessels are probably Claudian.

Gallo-Belgic wares: Gallo-Belgic imports are usually rare in rural assemblages and their presence, however minor, indicates a high status element. Three fabric groups were identified and all are probably Tiberio-Claudian in date.

North Gaulish White fine wares (WF) which have their source in Northern Gaul or possibly the Rhineland were found mainly in Ditch F40 where they are represented by Cam 113 butt beakers from layer 54, uncertain butt beaker forms from layers 37 and 54, and an uncertain flagon form from layer 54. Butt beaker fragments were also found in other features F193, 196, 250 and 323 where they had been redeposited. Decoration consisted of bands of rouletting between the cordons on the butt beakers.

Terra Rubra (TR) was recovered from the lower and intermediate layers of Ditch F40. An uncertain butt beaker form was found in lower layer 104 and Cam 56A cups in layer 54. A tiny fragment was also found in stakehole F250 which cut Ditch F40.

Terra Nigra (TN) was collected from the top and intermediate layers of Ditch F40. Cam 2 and Cam 13 platters and a Cam 56A cup were found in layer 54 and uncertain platter forms were found in layer 37. Terra Nigra is less frequent than Terra Rubra in this assemblage and that is perhaps another sign of the earliness of the group. The production of TR is thought to have dropped during the first half of the 1st century while that of TN rose until it had completely replaced TR by the early Flavian period.

Samian: The earliest samian is South Gaulish from La Graufesenque - a single abraded bodysherd (small enough to be intrusive) from Gully F113 (layer 48). Central Gaulish samian is represented by Trajanic material from Les Martres-de-Veyre in Cremation A323 and from layer 6. Hadrianic or Antonine material was also found in A323 as well as in the top layer of Ditch F40. Samian is almost absent in the collection and this is due to the date for the bulk of the assemblage which is too early for samian on a rural site. Almost all of the samian which is present is abraded and small enough to be intrusive. Going also reports only a small amount from Area B (elsewhere in this report), but a better-stratified group of Neronian-Flavian pieces was found in Area F (Going, in Hope 1983).

Local and regional coarsewares

Local and regional coarsewares account for the largest proportion (95%) of the pottery assemblage and are dominated by Late Iron Age and early Roman wares. Grog-tempered wares are by far the most frequent (77%) and the rest of the coarsewares fall into several main grey ware groups. Most common of these are Black-surfaced wares (6%) followed by Sandy Grey wares (4.8%) and Early Shell-tempered wares (4.2%). The remaining coarseware fabric groups represent very minor components of the collection; most of them equal less than 1% of the total assemblage.

Grog-tempered 'Belgic' wares (GROG, GROG-S, TR4): Grog-tempered wares include vessels that are entirely hand-made, hand-made with wheel-finished rims or entirely wheel-made. It is difficult to tell the technique of their manufacture, but many of the jar bases looked hand-made and there did seem to be more wheel-made or wheel-finished rims than bases. This observation was not quantified, but the same thing was also noted in a similar-dated group at Burgh in Suffolk (Martin 1988). As most of the vessels appear to be wheel-made or at least wheel-finished, they most likely belong to the first half of the 1st century AD.

There is a certain amount of variation in the grog-tempered wares. The surface colour ranges from orange to brown to black to grey and the matrix ranges from very fine and silty to very sandy. The size of the grog varies from very fine to very coarse, while the ratio of grog and sand varies as well. In spite of this, most specialists will admit that there is little to be gained from the subdivision of grog fabrics by the size and frequency of their inclusions. Only Smooth Red-surfaced wares and TR4, which were deliberately fired attempts to produce the even-coloured oxidised surfaces inspired by imported

samian and Terra Rubra, have been separately classified within grog-tempered wares.

Forms identified in Ditch F40 include a range of platters, cups, bowls, jars, flasks or bottles, storage jars, beakers, and lids. Grog-tempered platters were only found in Ditch F40. There were none from the stratified group, but three forms were recognised in the unstratified group - Cam 21, 28 and 32, all copies of Gallo-Belgic forms. Cups/bowls consisted of Cam 212A carinated cups or bowls with constricted walls which came from layer 308 (fig 10, no 4) and unstratified. Bowls were Cam 230 and 230B (Fig. 10, no. 2) Going Type C33) from layers 105 and 308 respectively. Jars were the most common forms identified. 81% of the grog-tempered EVE's in the stratified group from Ditch F40 were jars. A large, plain, long-necked jar, Thompson Type B1-4, (Fig. 10, no. 3) which was entirely hand-made came from layer 82. Cordoned jars, Cam 218, were identified in layers 37, 82, 104 and 308. Neckless bead-rimmed jars, Cam 256A, 257, 259 and 260 and Sealey 11-13, were the most common jar forms identified, accounting for nearly half of the EVE's by themselves. (Cam 257/256A Fig. 10, no. 6) and Sealey 11-13 (Fig. 10, no. 5). High-shouldered flasks or bottles included Cam 231 from layer 316, a Cam 231 or 232 from layers 37, 82 and 320 and uncertain flask forms from layers 37 and 54. Type G44 storage jars were found in layer 82. Beakers included Cam 112BA, a Gallo-Belgic form, and a tall barrel jar with a bead rim, Cam 117 (Fig. 10, no. 7) from layer 308. A plain ovoid butt beaker, Cam 118 (Fig. 10, no. 8), from layer 37 and a Cam 119 with burnished vertical lines in the lower panel came from layer 82. Cam 92, a copy of a Gallo-Belgic ovoid beaker form, was identified in layer 320. A campanulate pedestal beaker form, Cam 74, and a pedestal jar with a dished base, Cam 203 or Thompson's A4 were also from Ditch F40 but unstratified. A campanulate lid, Thompson type L1 was found in layer 54. GROG forms from other features were sparse. Single examples of bead rim jars Sealey 11-13, Cam 256A and Cam 257 were identified in features A17, 136 and 199 respectively. Uncertain storage jar forms included a hand-made jar from layer 6 and uncertain wheel-made forms from F236 and 361 and F5. Uncertain butt beaker forms were found in F16 and 17.

Decoration consisted mainly of overall burnish which was not always apparent due to post-depositional soil conditions, otherwise it was scarce but some jars had rilled shoulders, cordoned jars had bands of burnished lattice, butt beakers had vertical combing, rouletting or burnished line decoration and storage jars were combed.

Smooth Red-surfaced wares (GROG-S) accounted for a small but significant proportion of the grog-tempered wares and also came mainly from Ditch F40. Forms identified were Cam 246A bowls from layers 54 and 82, uncertain butt beaker forms from layers 37 and 54 and a possible girth beaker also from Ditch F40 but unstratified. A Cam 115D butt beaker came from Gully 130.

Two sherds of TR4 were found in layer 37. One was from an uncertain butt beaker form.

Early Shell-tempered wares (ESH): A small amount of wheel-made Early Shell-tempered wares was recovered (4.2%) and it all came from Ditch F40, including its lower layer (104). These wares are contemporary with the grog-tempered wares but are never as common except along the coast. The forms identified were variations of a Cam 254 club-rimmed jar or 'saucepan pot' whose range is best illustrated by examples from Billericay Secondary School (from Rudling 1988 nos 17-19) as selected by Sealey (1996, nos 11-13). There is some evidence to indicate that the Cam 254 is a pre-conquest form. Lid-seated jars (Type G5.1) which are regarded as a post-conquest introduction are entirely absent in this collection, even from the top layer of the ditch. At Orsett, analysis of the relationship between these types suggested that they tended to be mutually exclusive (Cheer 1998, 93) which would be another point to support the 'earliness' of Ditch F40's assemblage.

Black-surfaced wares (BSW): This is a broad fabric category with origins in the potting traditions of the LPRIA. Except for a few later pieces, it is a 'romanising' fabric and most of the BSW in this collection still contains some grog which indicates its earliness. The presence of these fabrics points towards a slightly later date than the grog-tempered wares, starting from about the second quarter of the 1st century AD, and it is notable that BSW was only frequent in the top layer of Ditch F40. It equalled 8.3% of the weight and 31.5% of the EVE's in layer 37. It was not present at all in the lower ditch layers 82, 104 and 105 and was barely present in three of the 'charcoal layers' - 54, 308 and 320, which were immediately below the top layer and had only eight sherds between them.

BSW forms identified in layer 37 were mainly jars - Cam 221, Cam 221A, Cam 266 and other uncertain concave-necked jar forms. A Type C16 bowl and uncertain flask, storage jar and butt beaker forms were also found. Forms identified in the 'charcoal layers' below 37 were a Cam 28 platter and Cam 231 flask from layer 54 and a platter copying samian form Dr 17 (Fig. 10, no. 1) from 'charcoal layer' 308. Also found in Ditch F40 but not stratified were a Cam 212-216 type cup, uncertain necked jar forms, a Cam 119 butt beaker and a pedestal beaker. BSW from features other than Ditch F40 consisted of a reed-rimmed bowl (Type C16) from Posthole A363 and dish Types B1 and B2 from Oven A391 and plough disturbance 371. The dish forms are 2nd century or later, and are an example of a local greyware industry copying black-burnished type wares. Decoration is scarce, but when apparent, consisted of burnishing most often on necks and rims but some overall. There was also one instance of barbotine dots on a globular beaker in layer 37 and burnished line decoration on a cordoned jar.

Grey sandy wares (GRS): This is another broad fabric category and includes sandy grey wares from a variety of sources that are presumed to be local. Only just over a quarter of the total GRS by weight came from Ditch F40 and was only present in its top fill, layer 37 where it accounted for much smaller proportions of the weight and EVE's than BSW. This would be expected since GRS is generally regarded as a later, 'fully-romanised' fabric. Even so, GRS may still be over-represented because some of the sherds are so abraded that they could actually be BSW which has lost its black surface in adverse soil conditions. Two of the only forms identified, a Cam 221 jar and a Cam 231 flask were both noted as having 'romanising' fabrics and it now seems more likely that these vessels were probably abraded BSW. One other vessel, an uncertain globular beaker form, was identified in layer 37.

GRS from other Area A features is represented by an uncertain flask or bottle in Cremation A323, a 'Braughing' jar or Cam 260 in Cremation A364 and uncertain jar forms in several other features. Area C produced only an uncertain jar form and non-diagnostic sherds and Area D produced an uncertain jar form and a jar base that had been trimmed round for re-use perhaps as a counter (layer 5) GRS from all areas consisted mainly of single non-diagnostic sherds. Decoration is rare and consists of incised horizontal lines on a Cam 221 and rilling on the shoulders of 'Braughing jars.' The high level of abradedness and the scarcity of identifiable GRS forms implies that there was a decline in the level of activity in this part of the site in the later part of the 1st century AD which should have been the time for fully-romanised fabrics to become more common.

Other grey ware groups: Romanised Storage jar fabrics (STOR) were collected from five contexts. None of them were from Ditch F40. Only one rim was found and its form was uncertain, and the rest were non-diagnostic body sherds and bases. This is another indication of a decline in activity after the 1st century.

The only Fine Sandy Grey wares (GRF) identified in Ditch F40 were uncertain butt beaker forms which may actually be abraded BSW. An uncertain globular beaker form was identified in Cremation A323 and a type H6 beaker from Posthole 390 may be North Kent grey ware.

A large proportion of a single Black-burnished ware 1 (BB1) vessel, a deep straight-sided flanged bowl (Type B6) with a late 3rd or 4th-century date was found in Oven A361.

A rim and body sherd from an uncertain necked jar form in Rettendon-type ware (RET) was also found. Conventionally, these wares are dated from the late 3rd century onwards. Unfortunately, the context information was uncertain (layer 6).

White, buff and oxidised wares: Unspecified white ware (UWW) was found in four contexts. An uncertain mortarium form, probably East

Anglian and 2nd century, was found in Area D, layer 6. The other sherds were non-diagnostic bodysherds.

Never common outside of London, one sherd of Verulamium region white ware (VRW) was found in Posthole 319 which cut the top of Ditch F40. It was a large reed-rimmed bowl (Type C16) with a late 1st to early 2nd-century date.

Miscellaneous Buff wares (BUF) were collected from three contexts in Areas A and C. None of the sherds were diagnostic but one was decorated with horizontal combing.

Miscellaneous oxidised wares (RED) were collected from three contexts included an uncertain jar rim from layer 104 in Ditch F40. The rest were small and abraded.

Pottery from Ditch F40

In total, 2527 sherds of pottery weighing 38.18kg were collected from Ditch F40 (85% of the total assemblage). During the 1975 season finds were not recorded from different layers of the ditch but as a 'single fill' so they lack stratigraphic significance. In 1976 the finds were collected and recorded from a sequence of layers, and it is therefore possible for observations to be made about the assemblage composition and the dating of the feature.

Layer	*Description*	**No.**	**Wt./g**	**%Wt**	**Eve**	**% Eve**	**Av. Wt./g**
37	Top fill	568	8563	35.0	829	27.2	15.1
54	Charcoal lens below 37	540	7179	29.3	1148	37.7	13.3
308	Charcoal lens below 37	97	2250	9.2	290	9.5	23.2
316	Charcoal lens below 37	6	35	0.1	29	1.0	5.8
320	Charcoal lens below 37	29	359	1.5	88	2.9	12.4
82	Intermediate fill	147	5557	22.7	556	18.2	37.8
104	Secondary fill	80	465	1.9	91	3.0	5.8
105	Primary	4	60	0.2	18	0.6	15.0
	Total	**1471**	**24468**	100.0	**3049**	100.0	**16.6**

Table 2 Stratified group from Ditch F40: Pattern of distribution of pottery

Pottery distribution by layer shows that the bulk of the pottery (75% of the weight and 78% of the EVE's) came from the top layer 37 and the four 'charcoal layers' which were immediately below. These charcoal layers are probably all the same layer given separate numbers in separately excavated segments of Ditch F40. The section numbers which were recorded from the (surviving) original finds labels seem to bear this out - i.e. that layer 54 was found in 'Section 2', layer 308 in 'Section 3', layer 320 in 'Section 4' and 316 in 'Section 1'. Together, these burnt layers below the top fill accounted for 40% of the weight and 51% of the total EVES in the stratified group. This concentration of finds in the top layers represents the final backfilling of the ditch.

Examination of the forms and fabrics present in the Ditch F40 assemblage suggest that the ditch may only have been used within a narrow date range, possibly a matter of decades. None of the pottery in the Ditch F40 sequence has to date much beyond the Conquest and there are a number of factors that would support an early date for the assemblage. Mainly, there is the dominance of locally-made grog-tempered wares with a fairly wide range of forms that belong to the first half of the 1st century AD. Also notable is the fact that the early shell-tempered jars consist exclusively of Cam 254 variants which are regarded as pre-conquest forms, while lid-seated forms, which are a post-conquest development, are totally absent. Another factor is the ratio of Terra Nigra to Terra Rubra. Terra Nigra is less frequent than Terra Rubra in this assemblage and the production of TR is thought to have dropped during the first half of the 1st century while that of TN rose until it had completely replaced TR by the early Flavian period. And although they are never as common on rural sites anyway, the near absence of platters, which were not common until the Flavian Period, may also indicate an early date for the assemblage.

A notable feature of the grog-tempered pottery in Ditch F40 is the presence of vessels with holes drilled in their bases or walls *post-cocturam*. The practice was widespread throughout the late Iron Age and Roman periods and can have various interpretations. Most of the bases were missing their rims but on fabric grounds they all date to the first half of the 1st century AD.

Four vessels had 'multiple' holes drilled in their bases. Two of them from 'unstratified' Ditch F40 were identifiable forms, both complete profiles of Thompson's type E1-1 bowls with rim diameters of 160mm and 190mm. Fragments of two other bases of uncertain jar forms were found in layers 308 and 320. Three vessels had single holes drilled in their bases. One base from layer 37 had a hole in its centre, another from layer 308 had an irregular hole c. 20mm wide and the third base from 'unstratified' Ditch F40 had a hole in the centre but the vessel had also been very obviously trimmed down evenly for subsequent re-use. Sherds from three vessels had holes drilled through their walls . A jar base from layer 308 had a hole drilled in its wall 80mm above the base and a cordoned jar from layer 82 had a hole drilled in its lower half as well. The third vessel was only a body sherd so its position on the vessel could not be determined.

The vessels with multiple holes in their bases have a clear utilitarian function - they had been modified for use as strainers. Those with single holes are often thought to have some ritual significance such as the deliberate 'killing' of the vessel, but their purpose, even in walls, may also be utilitarian especially when there is nothing else to associate them with 'ritual'. Basically, they could mean that some sort of drainage was needed for the contents of the vessels. Flower pots, cheese presses or even clumsy funnels are a few suggestions.

Catalogue of illustrated vessels (Fig. 10)

The following selection of vessels from Ditch F40 were chosen for illustration:

1.	Platter-sized copy of Ritterling 9 or 11 or Dr 17. BSW. layer 308 [archive no. 8]
2.	Cam 230B C33. GROG. layer 308. [archive no. 7]
3.	Thompson B1-4 long-necked jar, entirely handmade. GROG. layer 82 [archive no. 2]
4.	Cam 212A cup. GROG. layer 308 [archive no. 3]
5.	Sealey 11-13, entirely hand-made. GROG. layer 308 [archive no. 5]
6.	Cam 257/256A jar. GROG. layer 308 [archive no. 6]
7.	Cam 117/Thompson B5-3 tall barrel jar. GROG. layer 308 [archive no. 4]
8.	Cam 119a/Thompson G5-5 , vertical burnished lines. GROG. layer 82, also found in layers 308, 54, 37

ROMANO-BRITISH POTTERY FROM AREA B

by C. Going (prepared 1979)

INTRODUCTION.

The site assemblage was not large (less than 10 kg). It was "spot dated", the notes forming the pottery archive. Without any guide to the stratigraphic relationships between the various contexts from which the pottery derived, the dating is wholly internal. It must also be regarded as fairly tentative, as few contexts contained more than a handful of sherds. This material is no longer available for study and hence it was not possible to include this group within the main pottery report.

DATING EVIDENCE:

1st Century: F451, 458, 459, 466, Layer 461.

The pottery from these contexts, while fragmentary, all appears to be of 1st century date; the contexts from which they derive are the earliest of the sequence unless some contain wholly residual groups - quite possible in view of the small quantities involved. The commonest fabric is Romanising grey ware (fabric 45), with a grey-black surface, pinkish margins and a grey core, tempered with quartz and sparse-moderate inclusions of grog. The fabric probably derives from a variety of local sources. Also local is a soft, oxidised fabric which mainly occurs in closed forms, probably flagons (e.g. from F451). Only one context contained Samian: a chip of a Dr. 27.

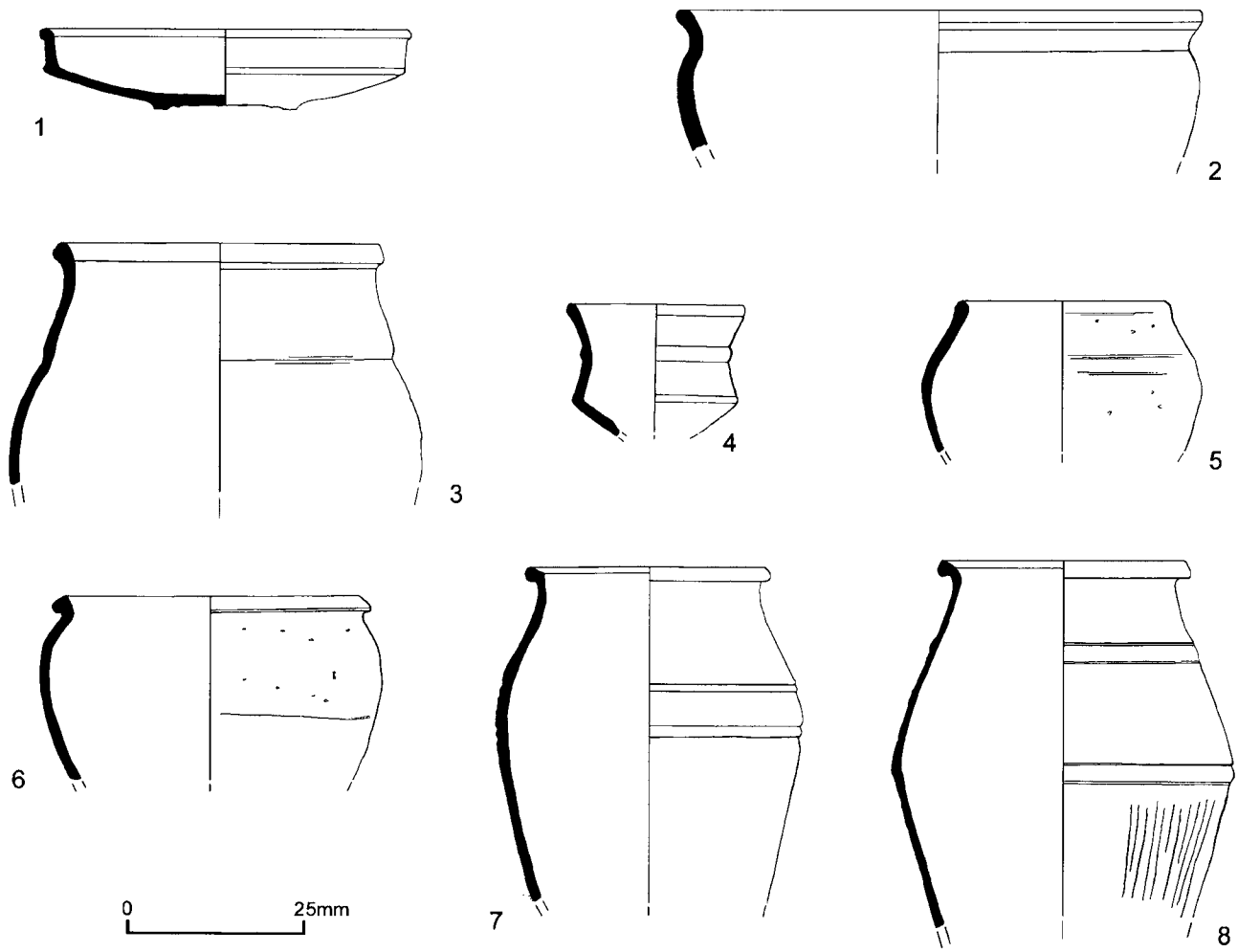

Fig. 10 Excavations at Cressing Churchyard: Pottery

Late 1st Century - Hadrianic: Layer 444, F445 (= 446), F540
Again, pottery from contexts dated to this period was very scant (less than 1 kg.). The commonest forms were high-shouldered jars (in fabric 45) resembling early versions of the Cam. 268. The bulk of the 268's, however, were in a grey sandy fabric (fabric 47), which takes a slightly higher portion of the assemblage (by sherd count) than in the 1st Century contexts. Among the forms present was the rim of a neckless bead-rimmed jar in a heavily grog-tempered variant of fabric 45, more common in Claudio-Neronian contexts in S. Essex and the London area. Other sherds include a ?carinated beaker rim (possibly Cam. 120) in a fine grey ware (from the same context as the jar). Layer 444 contained a substantial portion of a flagon (of uncertain form) in a soft, brownish-buff fabric. No Samian was found in these contexts.

Antonine - Later 2nd century: Layer 444, F428
Datable material from Layer 444 included a plain-rimmed dish, datable to the Antonine period or later, miscellaneous jar fragments and a sherd of a Dr. 37 CG, by *Cinnamus*, or in his style, and datable to c. AD 150-180. The same context also produced a rim-sherd of a flange-rimmed, ?hemispherical bowl in fine grey ware, possibly from N. Kent or the London area. F428 contained an ?early Antonine (angular) bead-rimmed dish (probably Cam. 38), but there was no other closely datable material.

Late 2nd - 3rd Centuries: F431: Layers 442, 444, 477
Layers 442 and 444 both contained incipient flange-rimmed dishes, which have a terminus post quem in this area of *c.* 230/250 AD. Layer 442 also produced a (residual) rim sherd of a Dr. 37 CG (2nd century).

Unphased:
While Layer 443 contained abraded 1st-century material, it also produced a 12th-13th century jar rim. F468 contained a single sherd, an abraded body sherd from an uncertain closed form, effectively undatable.

Discussion of the pottery evidence
by Cathy Tester
The pottery consists mainly of late Iron Age and early Roman material, particularly from the 1st half of the 1st century AD, which is represented most notably by Ditch F40. A small amount of late 1st and early 2nd-century material came from posthole F363 and pottery dating from the period from the mid 2nd to early /mid 3rd century was found in cremations F323 and F364, and oven F391. Only two isolated examples of late Roman pottery were found in oven F361 and another uncertain context.

The range of fabrics and forms is typical of rural sites in the county that were occupied during the first half of the 1st century AD. The composition of the pottery assemblage shows that this community relied mainly on local workshops for their pottery supply which was notably dominated by grog-tempered wares. These fabrics account for 77% of the total assemblage weight. With the same date range but much less frequent, were early shell-tempered wares (4.2%) and Gallo-Belgic and other continental imports, which indicate a certain high status element to the settlement, were (3%).

Transitional 'romanising' black-surfaced wares account for 6% and in the stratified group from Ditch F40 they only appeared in the top final backfill layers - none were found in the intermediate and lower layers. Fully-romanised fine and coarse sandy wares, storage jar fabrics and other coarsewares were only minor elements of the pottery

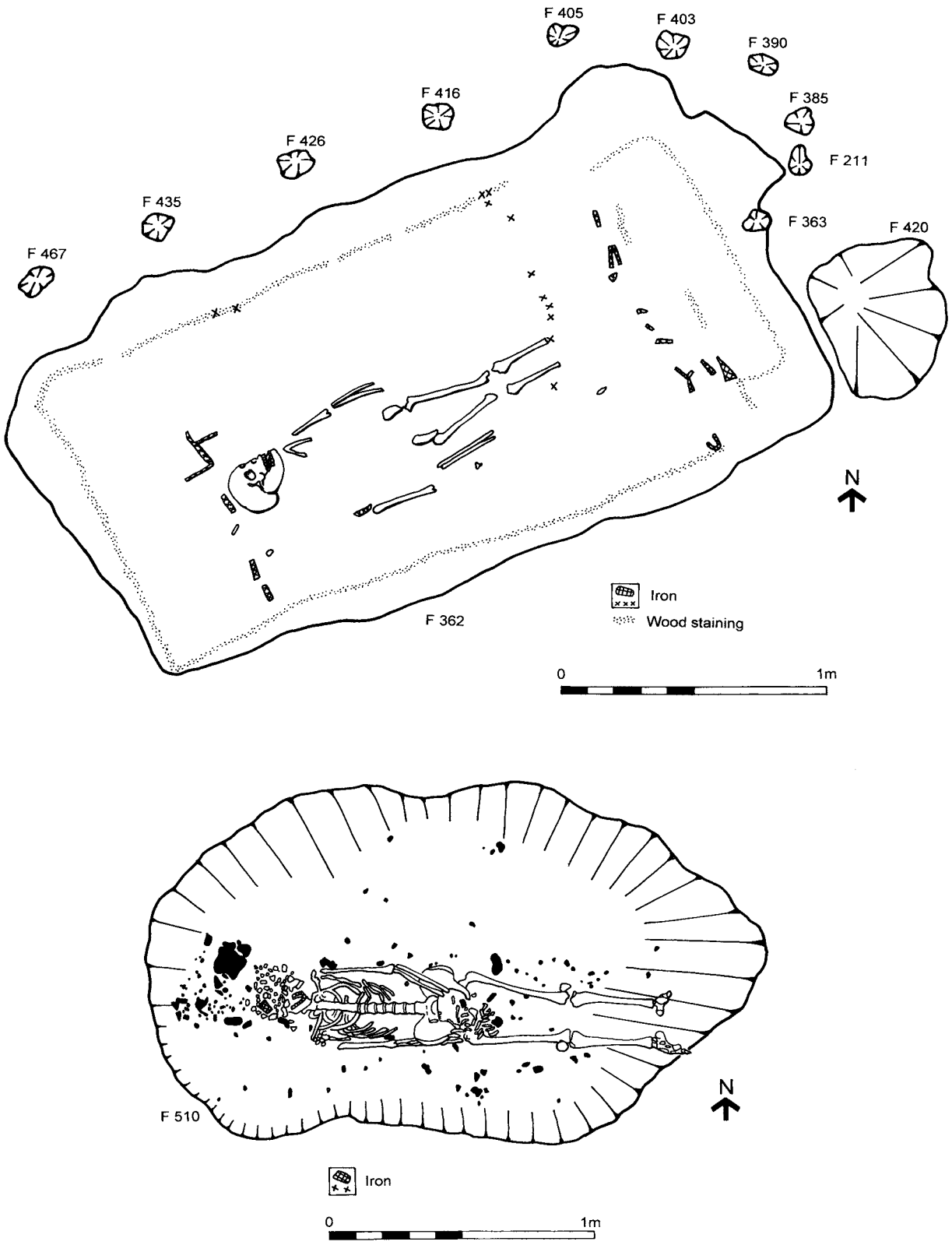

Fig. 11 Excavations at Cressing Churchyard: Burial plans

assemblage. The low incidence of transitional and fully-romanised fabrics is an indication of the early date range of the material and must indicate a decline in activity soon after the conquest.

Taken together with the pottery from Areas B and F, the pottery evidence would indicate limited activity before the LPRIA and continuous activity of some sort on this site from the Late Iron Age throughout the Roman Period. The bulk of it seems to have fallen within the 1st century AD but the subsequent (implied) reduced activity may also have been the result of different discard processes.

SAXON POTTERY

By Sue Tyler

Layer 444. Two rim sherds from a large jar or bowl
Most probably of hollow-necked form with slightly inturned rim. Hard fabric with abundant organic temper; chaff burnt out of surfaces giving vesiculated appearance. Surfaces patchy black-brown to reddish brown; outer smoothed and part burnished. Core black.

Discussion
The abundance of organic temper giving characteristic large voids in the vessel surfaces suggests a date towards the end of the Early Saxon period. The fabric equates to Hamerow's Fabric 2 from excavations at the Saxon settlement at Mucking, Thurrock; analysis of the distribution of Fabric 2 in the grubenhäuser fills at Mucking showed a marked increase in the use of organic tempering in the sixth and seventh centuries (Hamerow 1993, 31-2). Although it is not possible to date the Cressing Churchyard pot closely, a date of manufacture during the late sixth to seventh centuries is most likely.

IRON OBJECTS

by Hilary Major

The iron catalogue was initially prepared in 1980. It was revised in December 2001, prior to publication, by which time some objects had been lost, and others had disintegrated. It was therefore not possible to illustrate many objects. The ironwork was not X-rayed, and many pieces had been coated with a waxy material, over the corrosion products, which made identification difficult in some cases. The report is arranged primarily by context, excluding unknown and post-Roman contexts, which produced only unidentifiable scraps.

Ditch F40 The other finds from F40 comprised two incomplete nails, a small plate fragment, a leaf-shaped plate and a curved, broken, bar.

1. *F40.* Two split rings with overlapped ends, with a nail or bolt shaft through centre. External diam. 28mm and 25mm, internal diam. 9mm. (Not ill.)

2. *F40.* Flat-topped staple with one arm missing and the second arm incomplete. Width *c.*78mm. (Not ill.)

3. *Destruction layer 444/444a, structure G* the layer produced a bar, a spike with a circular section, fragments of iron plate, and twenty-two nails, only two of them complete. (Not ill.)

4. *Double Inhumation F 362* A group of 28 nails was recovered, consisting predominantly of fairly large, stout nails with round or oval heads and square shafts (22 examples). A complete example would have been 70-75mm long, with a flat or slightly domed head 17-20mm in diameter. Most of the nails were straight or only slightly bent, often with mineralised wood on the shaft. There are five incomplete examples of smaller nails, *c.* 50mm long, two of which are very bent, with their heads flattened against the shaft. One nail shaft (SF20) comes from a large nail at least 97mm long. (Not ill.)

5. *Silting Layer 442* Eight nail fragments were found. (Not ill.)

6. *SF29, layer 442.* Fragment, probably part of the coil and pin of an iron brooch. If it is a brooch fragment, it is unlikely to be later than 1st century AD, and therefore residual in its context. L. 56mm. (Not ill.)

7. *Late Roman context 474* In addition to the projectile point, three nail fragments were recovered. (Not ill.)

8. *SF7, 474* A small socketed projectile point with a thickened head. The head probably had a square cross-section, but this is uncertain due to corrosion. This is probably a catapult bolt-head of Manning's Type I (Manning 1985, 170). The type occurs throughout the Roman period, mainly on military sites. L. 65mm. (Fig. 12.8).

9. *Beam slot 481*, Building G A single nail was catalogued. (Not ill.)

10. *Area F, surface finds.* As well as the two objects below, there were three nails and a bolt with a round head. Double-spiked loops were used for a number of purposes within a Roman household, such as hinge fittings, carriers for handles, etc. (Not ill.)

11. *SF1, surface find.* Double-spiked loop. The tip of one point is turned over; the other was broken in antiquity. L. *c.* 40mm. (Not ill.)

12. *Surface find.* Blade and tang fragment. The blade was probably triangular rather than parallel-sided, and the tang has a rectangular section, with the short axis in the plane of the blade. This is most likely to be part of a pair of shears, rather than a knife. Another fragment in the same box also has a rectangular section, wider than the tang, and could be part of the spring of the shears. (Not ill.)

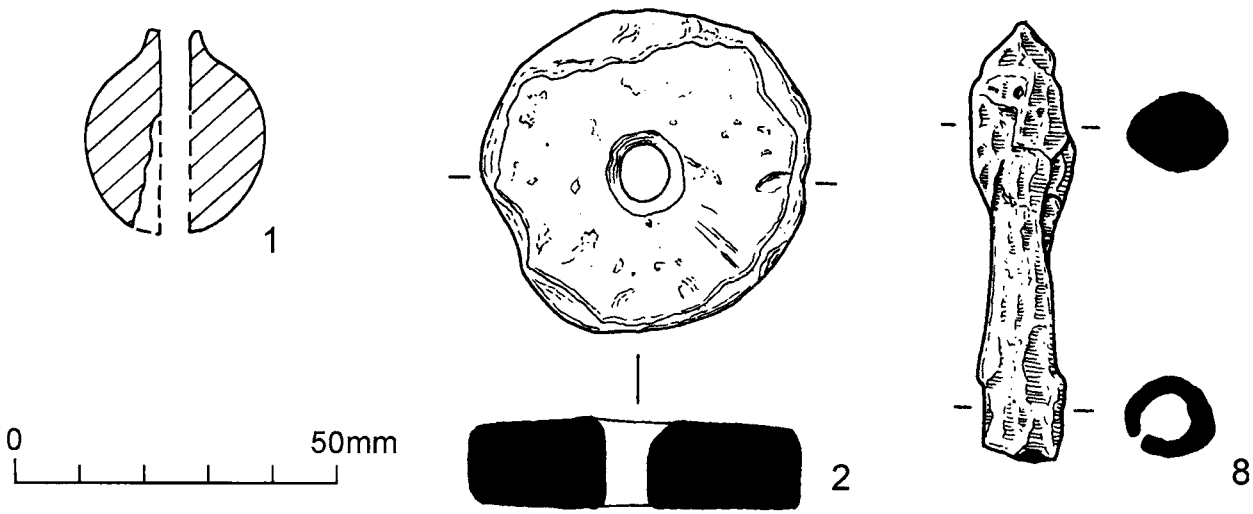

Fig. 12 Excavations at Cressing Churchyard: Small Finds - 1. Late Iron Age spindle-whorl 2. Saxon bun-shaped loom-weight 8. Roman projectile point

SPINDLE WHORLS

by Hilary Major

1. *SF8, no context.* Purpose-made ceramic spindle whorl, *c.* 20% present. Fairly sandy brown fabric with a fairly well smoothed surface. This was a sub-globular spindle-whorl with a slight collar at the surviving end. The original height would have been *c.* 35mm, with a diameter of *c.* 36mm. It is probably late Iron Age, comparable to some of the large collection of late Iron Age spindle-whorls from Stansted (site ACS; Major 2004). Wt. 8g. (Fig. 12.1).

2. *F40.* Spindle whorl made from a wall sherd of late Iron Age grog-tempered pot. Diam. 52mm, T. 14mm, diam. of hole 10mm. Wt. 41g.

COPPER-ALLOY OBJECTS

By John Hope, with amendments by Hilary Major

1. *SF2, from charcoal lens layer 54 in ditch F40.* Brooch, lacking coil spring and pin. Catch-plate damaged. Evidence of vertical ribbing along the bow. Missing coil spring and catch cast separately from bow and catch plate. Cam. Type 4 (Hawkes & Hull 1947), dated to *c.* AD 50-65.

2. *SF6, charcoal lens layer 304 in ditch F40.* Brooch, lacking pin. Catch plate damaged. Spring with 7 turns in one piece with bow. Semi-cylindrical side-wings on head at right angles to spring coil. Cam. Type 3 a (Hawkes & Hull 1947), dated to 1st century AD, persisting until Boudiccan revolt (*ibid.* p. 309).

3. *SF2, From charcoal lens layer 54 in ditch F 40.* Brooch, lacking pin and catch plate. Bow damaged. Flattened reeded bow; cylindrical spring-cover, moulding behind head. Cam. Type 12 (Hawkes & Hull 1947). British examples date from pre-Conquest period to *c.*60 AD (*ibid.* p 317).

4. *SF7, layer 82 of ditch F40.* Brooch, lacking most of pin; catch plate damaged, but probably cast with perforations. Tinned surfaces, cylindrical spring-cover, slender "trumpet" bow-head, double waist moulding, triangular foot slightly damaged. Cam. Type 14 (Hawkes & Hull 1947) dated to early 60's AD.

5. *SF4, from layer 82 of F40.* Brooch, cast in one piece; catch plate damaged. Four-spring turn with internal chord; flat bow. Cam. Type 7 (Hawkes & Hull 1947), dated to early 60's.

6. *SF7, from final silting level layer 442.* Tweezers, 69 mm. in length. Legs joined below eye, and splaying at extremity. Wide eye for suspension. No evidence of decoration.

7. *SF5, ditch F40.* Fragment of mirror, 2.1 cm x 1.9 cm. Edge slightly curved, indicating diameter of *c.* 8 cm. to the complete article and possibly a simple disc mirror. Slightly concave. Front silvered and polished: reverse a smooth matt finish. Second smaller fragment not illustrated. (Lloyd-Morgan 1977, 252).

8. *SF3, from ditch F40.* Rectangular plate, 3.8 cm x 2.2 cm, 0.5 mm thick. Ground and polished on both sides. No rivet holes. No evidence of honing on any edge. Function uncertain, but possibly a copper-alloy scraper.

9. *SF1, F40* Ligula, in two joining pieces. Flat, oval bowl, other end pointed. L. 99mm.

10. *SF8, F40 II (54)* Rectangular sheet fragment. 8x7mm.

THE SAXON SMALL FINDS

by Sue Tyler

Of the four pagan Saxon artefacts recovered, three of them, the two rim-sherds and the bone comb handle, are provenanced in Layer 444, the destruction level of Structure G. The bun-shaped loom-weight was found in F502, together with a large piece of Roman building tile.

The Comb Handle (Fig. 12.3)

The handle was made of carved and polished bone, a maximum length of 6.2 cm surviving the base with a diameter of 1.70 cm, tapering to 1.3 cm at its extremity. A groove 0.5 cm wide had been cut into the top to a depth of 2.6 cm, into which had been inserted a bone tang. No rivets connecting handle with tang survived, but discoloration at the point of fracture indicated that the comb had broken at the point of the lowest rivet. Around the base, 6 shallow horizontal grooves had been etched, while 4.4 cm. from the base four other parallel grooves had been cut. These, however, did not extend the full circumference of the handle. Occupying only the front of the handle was a design of vertical lines and dots interrupted by a double inverted chevron.

Bone combs have appeared on many Saxon sites - at Winnall, Hants (Meaney & Hawkes 1970, 23, 25-6), at Shakenoak, where they are associated with weaving (Brodribb, Hands & Walker 1972, 118), and Mucking, Essex (M.U. Jones, pers. comm.). The more usual type of Saxon comb appears to be of a flat plane, frequently double-edged and with triangular-shaped heads found on habitation sites such as Mucking and Sutton Courtenay, Berks (Leeds 1968, 26) in inhumations as at High Down, Sussex (V C H Sussex, I. 344) and in cremations as at Caister-by-Norwich and Markshall, Norfolk (Myres & Green 1973, 91-7). A close parallel to the Cressing example exists in the Prittlewell Museum, Southend, from Great Wakering, Essex, where a cylindrical handle is ringed at the bottom and at the junction with the tang with a series of grooves, and the tang, bearing a head with a single row of teeth, is inserted into the handle and held by iron rivets. Handled combs of this type have been found in the late seventh to early tenth century excavated deposits at *Hamwih* (Southampton) and may be Frisian imports (Tyler 1986a, 170-2, fig.1-3).

The Loom-weight (Fig. 12.2)

This was the only Saxon bun-shaped loom-weight found on the site. Made of fired clay with chalk and flint inclusions, it had a diameter of 10.2 cm, and a maximum thickness of 4.6 cm. The centre hole had a diameter of 2.7 cm on one surface, expanding to 3.1 cm on the other surface, where it bore marks of abrasion where the various threads of the warp had been gathered to pass through, thereby causing smooth wear on this face before passing through to be tied in a knot on the lower surface. The clay on this surface had been slightly broken away on one side of the hole. The opposite edge of the weight was heavily discoloured by having been exposed to fire, possibly when Building G was destroyed.

Bun loom-weights are common on later Saxon sites as, for instance, at Carfax, Oxford (Jope 1956, 244), Waltham Abbey, Essex (Huggins 1973, 178 & fig. 15), and Danbury, Essex (Morris & Buckley 1978, 18 & fig. 7), though on this last site the context was too uncertain to allow for definite dating. Loom-weights of this type have long been believed to be of Late Saxon dating (Wheeler 1935), a view reiterated by J E Hurst (Dunning, Hurst, Myres & Tischler 1959, 1-78). Eight loomweights of 'bun' and intermediate' type were recovered from a pit of middle Saxon date at Chigborough Farm, Essex (Tyler 1986b, 147-8). Some 110m to the north-east was a bow-sided building dated by the excavators to the eighth-tenth centuries (Wallis and Waughman 1998, 106-8). More recently it has been shown that bun-shaped loom-weights also exist in Pagan Saxon contexts (Drury & Rodwell, *op. cit.*, 87-9) on the evidence of a grubenhaus excavated at Gun Hill, Essex. From this it follows that no date closer than the Saxon period generally can be ascribed to the Cressing example, though its association with the comb handle in the context of destruction levels of Building G, suggests that the middle part of the Saxon period is more likely.

THE COINS

by Keith Cullum

1. L3 - Victorian farthing, dated 1890.
2. Coin in Area B, L444 - Roman, poor condition, 15mm, 1gm. Ae 4. House of Valentinian; possibly Valens AD 364 - 378 AD.

O. Diademed head, right.
R. ? Victory (SECURITAS REIPUBLICASE) type.
(NB. D R Rudling holds that the reverse is GLORIA ROMANORUM type, showing Emperor dragging captive and holding labarum. He concurs with Dr Cullum regarding the date).

Metal detector finds from nearby fields.

3. Copper alloy, 30 mm 20.8 gm. Poor condition. Sestertius, late 2nd century.
   O. Vague portrait, possibly Marcus Aurelius 161 - 180 AD. R. Unreadable.
4. Constantine I 307 - 337 AD Ae Follis. 25 mm. 6.65 gm. Fine.
   O. FL VAL CONSTANTINUS NOB C. Laureate head R.
   R. PRINCIPI IVVENTVTIS. Emperor standing between two standards. Mint mark PTR (Treveri - Trier, Germany)
5. Copper alloy 16 mm. 0.82 gm. Ragged flan in poor condition. An Antoninianus.
   O. No inscription remaining, but radiate head R. resembling Victorinus AD 268-270 A.
   R. No inscription. ? Salus standing L.
6. Broken half of Ae 16 mm. 0.68 gm. Poor condition. Antoninianus. O. No inscription. Radiate head of Victorinus right. AD 268-270 AD. R. Unreadable.
7. Ae 16 mm. 1.74 gm. Poor condition. Unreadable. ?diademed head *c.* AD 350
8. Ae 35 mm. 1.34 gm. Poor condition. Unreadable. Mid-4th century AD.

AERIAL PHOTOGRAPHY

by Barry Foster

An aerial survey was undertaken which disclosed a feature in the field directly to the south of the excavation (Hope 1978). Further aerial photography in subsequent years showed another crop-mark in the field to the west of the road. This feature is purely linear, running in a southwest direction from the road for approx. 130 m., where it turns 90o to the south-east for approx. 100m to the field boundary. At first inspection the feature appeared a little unconvincing, however further sightings during subsequent flights verified its validity. This feature appears to be a continuation of boundary ditch F40. The medieval and post-medieval field boundaries in Cressing parish run in orderly fashion in a northwest/southeast direction at a fairly regular spacing of 300 yards or multiples (or sub-divisions) of this, apart from a few places (i.e. Cressing Temple and Cressing Church), where the line deviates.

THE GEOLOGY

by Alan Clewlow

The excavated area has been built upon deposits which are fluvial in origin and post-glacial in age, having been deposited by the stream which now flows in a south-easterly direction along the boundary of the site. Although the stream is quite small at present (approx. 1m wide), various climatic changes since glacial times will have caused variations in the volume and speed of the stream, and the course of the stream itself would have altered with the flood plain. The present course has been artificially straightened, but this must have occurred after the deposition of the sediments.

The sediments found consist of broadly two types:- Firstly, there are deposits of pebbly material generally thicker nearer the stream and petering out further away, these were deposited during periods of flooding. Secondly, there are deposits of much finer grained material (silty clay) which would also have been deposited during times of flood but carried much further from the stream and only laid down when the water had lost its energy. It is evident that the eastern edge of the site was prone to intermittent flooding

CHARCOAL IDENTIFICATION

by Helen Taylor

F40	Pomoideae (possibly apple) (Pomoideae can be apple/pear/rowan or one of several rosaceous fruiting trees). *Quercus* sp (Oak) *Corylus avellana*/ *Alnus glutinosa* (Hazel/Alder)
F40, layer 308	*Quercus* (Oak)
F362	*Quercus* sp (Oak)
Layer 442	*Betula* sp (Birch)
Layer 444	*Quercus* sp (Oak) *Fraxinus excelsior* (Ash) Pomoideae (Pomoideae can be apple/pear/rowan or one of several rosaceous fruiting trees).
Layer 444B	*Quercus* sp (Oak)
Layer 474	*Betula* sp (Birch) *Quercus* sp (Oak)
F481	*Corylus avellana*/ *Alnus glutinosa* (Hazel/Alder) *Quercus* sp (Oak)
F500	*Corylus avellana*/ *Alnus glutinosa* (Hazel/Alder)
F502	*Quercus* sp (Oak)
F520	*Corylus avellana*/ *Alnus glutinosa* (Hazel/Alder)
F 521	*Quercus* sp (Oak)
L 548	Probably *Quercus* sp (Oak)
F 551	*Corylus avellana*/ *Alnus glutinosa* (Hazel/Alder)
F555	Probably *Quercus* (Oak)

Though 23 charcoal samples were taken in all, they were associated with only five areas of the site. These were i) the silting levels, ii) grave F362, iii) the causeway and gate-post on the causeway over F40, iv) Ditch F40 and v) Structure G.

i) The silting levels

Environmental information was provided from two of the silting levels. Unfortunately, it was only the two topmost levels that provided charcoal, and there is no evidence of any time-gap between the deposition of the two layers. Both provided evidence of birch, with the lower layer (L474) showing the presence of oak also. As these occurred in silting levels, it is reasonable to suppose the presence of birch and oak in the neighbouring environment.

ii) The grave F362

The sample was taken from the dark staining around the secondary inhumation. It proved to be oak, and if the supposition of a timber bed is correct, this might suggest the material of which it was constructed.

iii) The causeway F315 and gatepost F555

Samples were taken from the whole area of the causeway where evidence of heavy burning was apparent. There was possibly some oak present, but the socket of the gate-post and the adjacent stake-hole F 500 gave evidence of hazel/alder. As hazel is a well-known material for fence construction, it could well be that the fence replacing the ditch F40 was largely of hazel construction.

iv) The ditch F40

Of the 8 charcoal samples analysed from F40, 5 proved to be of oak. The rest were hazel/alder, with evidence of (possibly) apple.

v) Structure G

If, as seems likely, Layer 444 is the destruction level of Structure G, with Layer 548 a lens between Layer 444 and Layer 443, it is possible to make some deductions regarding the composition of Structure G, especially as four of the samples were taken from component features of this structure. By far the most predominant material used in the structure was oak, though ash, hazel/alder and apple also featured.

Discussion
It can be certainly assumed that all woods used in a community of this nature would be of local origin, and therefore there is some indication of the environment as probably existed in the first centuries of the first millennium AD. From the 23 samples examined, 26 incidences of wood type occurred, these falling in the following ratios:

Oak	16
Hazel/Alder	5
Birch	2
Pomoideae	*2*
Ash	1

It is conceded that more extensive sampling might alter these ratios. However, on the existing evidence it would appear that by far the most abundant growth was of oak, with a significant presence of hazel/alder. Other woods were present in far smaller proportions.

FAUNAL REMAINS SUMMARY

By Alec Wade

This is a composite report that draws on archive material produced by the three authors who originally examined the faunal remains from the Cressing Churchyard excavations. These were E Dracup, G Putnam and J Thurgood. The animal bone assemblage is no longer available for study so their original records have been taken at face value.

Over 585 pieces of animal bone were recorded from the excavation, representing the domestic species of cattle, pig, dog, sheep or goat and horse. The only wild species identified was rabbit/hare and perhaps bird. The largest quantity of bone was recovered from the 3rd-4th century AD destruction layer 444B. The other most prolific feature was the Late Iron Age/Early Romano-British boundary ditch F40.

Cattle were the most common identified species, accounting for just under half of the assemblage. Pig was the next most numerous species. All of the butchered bone was from these two species. The high amount of dog bone found (the third most numerous species by fragment count) is partly attributable to a presumably articulated dog skeleton recovered from the boundary ditch F40 (1st half of the 1st century AD). Later fills of this ditch (2nd half of the 1st century AD) produced more dog bone from at least 2 individuals. Sheep or goat bone (no distinction being made) was present in all of the main periods. Horse was identified in contexts from the1st half of the 1st century AD and the Roman period. Bird bone (species not identified) was found only in the early 1st century AD deposits.

Name of Bone	Weight in grams	Wt as proportion of total
Cranium	143.0	30.6
Long bones	175.9	37.7
Unidentified fragments	113.0	24.2
Femur (head & 2 pieces)	25.2	5.0
Ischium	11.5	2.5
TOTAL	466.6	

HUMAN REMAINS

A preliminary report was prepared by Glynis Putnam in 1980

Cremation 260
Cremated bone was recovered from inside the base of the burial urn. No analysis was undertaken of this material, which is now lost.

Cremation 365
Cremated bone was recovered from inside the burial urn. No analysis was undertaken of this material, which is now lost.

Cremation F323 in fill 54 of ditch F40
This cremation shows no duplication of bones and is therefore probably that of a single individual. The cremated bones, however, are approximately half the expected weight and probably represent only partial retrieval of the cremated remains from the pyre prior to deposition. The individual was a mature male.

Colour of fragments: Light brownish-white.
Remains in cremation: Only partial.

Identifiable bones:

Post-cranial skeleton	Cranium
Ischium (robust)	1 mastoid process
Femur head	Part foramen magnum
2 pieces femur shaft	2 pieces orbit
1 piece tibia	

Inhumation 362a
F362a was the primary burial in grave F362, this was unarticulated and the survival of the bone was extremely poor suggesting extensive disturbance of the grave during by second burial, F362b.

Inhumation 362b
Grave 362 was re-opened at a later date and burial F362b inserted. Bone survival was poor, but the skull, both femurs and tibiae, fragments of the pelvis, the left radius and ulna and both humerus were retrieved. The bones were of a deformed adolescent female in her mid teens , the nature of the deformation was unfortunately not recorded, however J. Hope retains a recollection that it was a type of dwarfism (pers. comm.). The body had been buried on an east-west orientation, with the head turned to the north, lying on a wooden framed object, possibly a bed.

Cremation 364
Cremation F364 was badly disturbed. No analysis was undertaken of the small amount of cremated bone.

Inhumation 510a
The bone survival of inhumation 510a was good. A single adult female was represented. The body was placed in a shallow re-cut of pit 510b, with the pelvis at a lower level than the head and feet. The feet rested on the lip of the western edge of the pit and the phalanges had been removed (presumably by ploughing). The right arm lay straight down the side of the body while the left arm crossed the body so that the bones of both hands were intermixed. In contrast to the remainder of the body, the skull had been totally shattered. Several large stones which lay around the head may have been used for crushing the skull.

DISCUSSION

The cropmark complex

The cropmark evidence suggests that the archaeological features within Cressing Churchyard are a part of a much wider contemporary landscape, of presumed Late Iron Age/Roman date (Fig. 1). Boundary ditch F40 appears to have formed a northern limit to the occupation area and the Cressing Brook marked the eastern limits. To the west, in the field on the other side of Church Road there is cropmark evidence for a 90° return of a large ditch, on the same alignment as F40. 300m to the south-west of the excavation is the cropmark of a double enclosure on the same alignment as the principal ditches in the excavated area (Fig. 1). The inner enclosure measured 50m square, with an entrance on the southern side. Two (possibly three) sides of an outer enclosure can be traced, measuring approximately 100m square. Between the inner and the outer enclosure are some indications of further sub-divisions, forming fields or paddocks. There is a possible track or droveway leading to the gate of the inner enclosure from the east. Fieldwalking of the area by the Brain Valley Archaeological Society in the 1970s and in 2002 produced only a few sherds of Roman

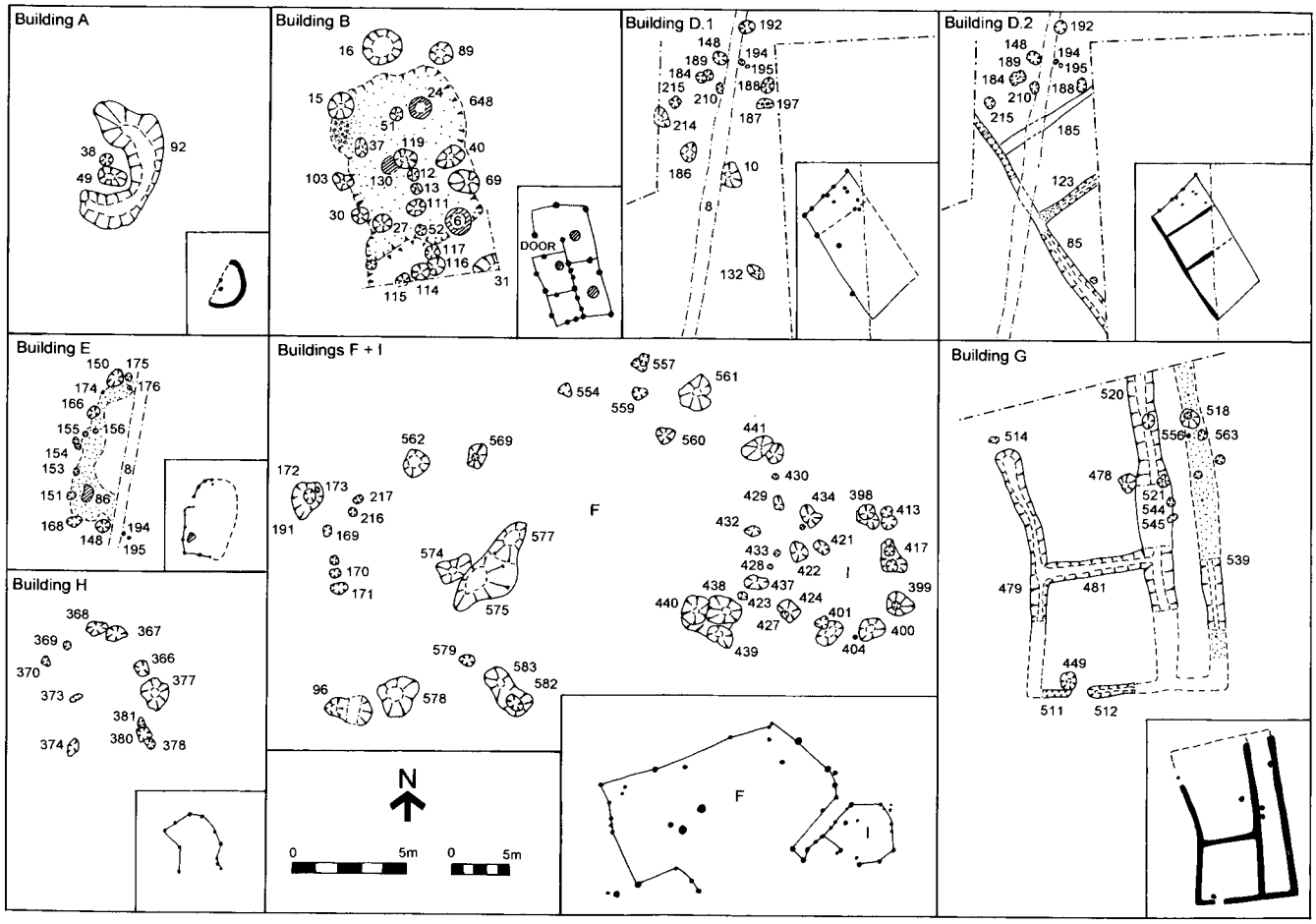

Fig. 13 Excavations at Cressing Churchyard: Plan of the structures

pottery which would suggest that it is unlikely that this enclosure was used for any form of intensive human habitation

The excavated area (Fig. 14)

The earliest occupation was in the first half of the 1st century AD, in the decades preceding the Roman conquest. The site at that point consisted of an enclosed rectangular area, demarcated by ditch F40 and its internal bank F30 to the north, the Cressing Brook and possibly ditch F6 to the east, and fence-line F6 and its accompanying interrupted gullies F98 and F19/F90 to the south. No western limit was found. Access to this area was across a causeway and through a gateway in the bank from the north. There was also possible access along a trackway between ditch F503 and the Cressing Brook. There was at least one possible structure at this time, Building A, which is interpreted as a semi-circular shed or shelter, and it is possible that the undated, roughly circular post-built structures H and I also belong to this phase. The presence of large amounts of domestic debris, including ash, food waste and broken pottery within ditch F40 would suggest some occupation nearby.

The site appears to have suffered from a severe fire at least once, with the causeway and gate area showing evidence for heavy burning. Building A is also thought to have burnt down. It is possible that the undated burial F510, which appears to have been the victim of violence, may date to this period of disturbance. It is tempting to link the presence of a projectile point of a Roman military style to this period, but it is of a form only datable to the Roman period in general.

Boundary ditch F40 was infilled in the decades immediately after the Roman conquest, and replaced by a fence of closely-set stakes along the edge of bank F30. The causeway remained in use and the damaged gate-post was replaced. The fence-line to the south appears to have gone out of use at this date, and was certainly built over at its western end. Building A was replaced on the same site by rectangular Building B, which contained a number of hearths, a trampled earthen floor and was possibly sub-divided into small rooms or bays. A second structure, Building E, was built 30m to the north-east of this. Although badly damaged by later activity, sufficient survived to suggest that Building E was also a roughly rectangular structure, about two-thirds the size of Building B, with a gravelled floor and internal hearth. On the western edge of the site was cut a pit, which was surrounded, or possibly surmounted, by a stakehole structure.

In the third quarter of the 1st century AD, Building E was replaced by Building D.1. This was a rectangular building, subdivided into one large room with a smaller room at the north-western end of the building. Building

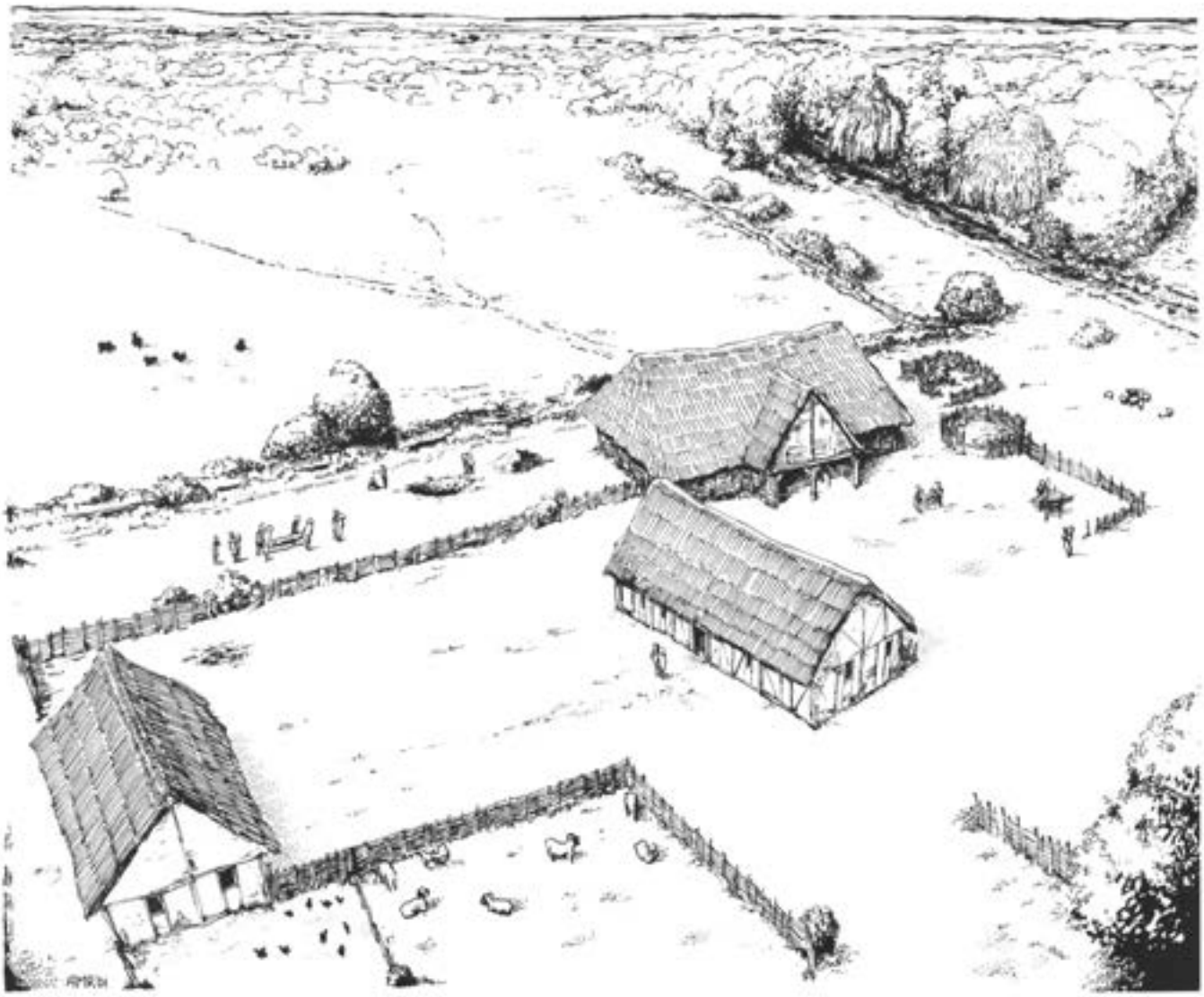

Fig. 14 Excavations at Cressing Churchyard: Reconstruction drawing

D.1 was in turn re-built (Building D.2) on exactly the same ground-plan but using a timber-framed building technique instead of earthfast posts. The interior of D was also remodelled with the main large room subdivided to form two smaller rooms.

Also in the third quarter of the 1st century AD two burials, F362a and b, were placed in the north-western corner of the excavated area. Little can be said of the primary burial except that it existed, as the grave was almost entirely re-cut to accommodate a large rectangular wooden structure, possibly a bed or funerary byre, on which apparently lay the body of a deformed adolescent female (it has not been possible to verify this identification). The grave was marked by a row of stakeholes along the eastern and northern edge of the grave-cut and a large posthole at its eastern end. These may have supported some form of structure or fence marking the burials. The juxtaposition of the burials would suggest that the occupants may have been related.

The burial area seems to have been set aside specifically for that purpose as no other features appear nearby. The southern limits of the cemetery area may have been marked by a fence-line of post and stake-holes (F87, 158-65), and the eastern limits by the eastern end wall of the undated Building F, which has been interpreted as a very large, rectangular post-built structure, with a wide porched door opening to the south and a possible corresponding opening on the northern side The explanation proffered for this structure is that it was an agricultural building. The opposed doors would allow it to function as a threshing barn as well as facilitating easy access and egress with carts. If Building F did exist at that same time as the boundary ditch/fence-line, its position directly in front of the entranceway would have forced all traffic entering that way either to turn west into the burial area or eastwards to circumnavigate the structure before they could proceed into the principal compound area. Alternatively if the opposed door proposal is valid, traffic could proceed straight through the barn.

In the first half of the 2nd century AD, one cremation was placed outside the northern boundary

fence-line and a second cremation was placed to the south of the boundary within the compound area (it has not been possible to locate this more precisely). In the south-eastern corner of the site an oven was built, consisting of a shallow pit with a domed superstructure formed from clay. It is possible that many or all of the structures from the later 1st century were still in use during this period.

By the mid-second to early 3rd century, the eastern end of the northern boundary fence was built over by the construction of a new structure, Building G, in the north-eastern corner and the entire northern boundary may have become redundant by this date. Building G was a corridor house, rectangular in plan with at least two rooms, and a narrow corridor running along its eastern side facing the Cressing Brook. It is a form common in Roman Britain and appears in both domestic contexts (Hingley 1989, 45-6) and as military barracks (Barrett, Freeman and Woodward 2000, 174-5). Cremation F364 also dates to this period.

The late 3rd to 4th century was a period of change. Building G was burnt down and for the first time there were no buildings of any kind in the excavated area. Also at this time the area that had been previously exclusively set aside for burials was used as the location for a large oven.

The Saxon period is represented by two sherds of sixth to seventh-century pottery, a bone comb handle recovered from the upper levels of the destruction of Building G, and a pit in the immediate vicinity containing a Saxon bun-shaped loom-weight. It is clear that some form of activity was going on in the area in the early Saxon period, and the finds would suggest that this was of a domestic nature. The Saxon occupation may have been located to the north of the excavated area, as all the Saxon finds are clustered together in its extreme north-eastern corner.

There is a gap in the archaeological record until the Saxo-Norman period. Excavations within the church in 1979 (Hope 1984), established the presence of two timber structures attributed by the excavator to the Late Saxon period. This was followed by an apsidal church dating to the 11th century AD. This in turn was rebuilt in the 12th century as a two-celled church with a small chancel. This structure was perhaps the capella founded by Elphelmus de Gore and his wife Lenelek in Cressing at some date prior to 1136. The churchyard excavation cut at its western limit what appears to have been the original medieval churchyard boundary, which consisted of a bank formed from upcast from grave-digging operations. This boundary was subsequently demarcated by ditch F141 and infilled in 1938 when the graveyard was enlarged. Six graves of post-medieval date were identified during the excavation within the original graveyard limits.

Economy

It is clear that the excavated area was used for a variety of different purposes, and indeed formed only one portion of a much larger complex. The structures appear to consist of both agricultural structures, including a possible barn and animal pens, as well as a number of buildings containing hearths, which may have had a domestic or workshop function. The presence of a number of ovens possibly for the parching of grain or smoking of meat further emphasises the agricultural nature of the area. Burials, both cremated and inhumed were located in or adjacent to the northern boundary

It is not possible to establish the nature of the agricultural economy practised, although a mix of both arable and pastoral agriculture can perhaps be presumed. Analysis of the faunal remains suggest that cattle formed the primary source of meat, followed by pig.

The landscape of the Brain Valley in the Late Iron Age and Roman period (Fig. 15)

The landscape of the Brain Valley area has been the subject of a number of studies, the most notable of which are the landscape analysis in the Rivenhall volume (Rodwell and Rodwell 1985) and also analysis of the Cressing Parish landscape (Hunter 1993 and 1995). The archaeology of the area between Braintree and Witham is extremely rich.

Braintree itself is the site of a Late Iron Age enclosure and settlement, although firm evidence for the postulated oppidum is lacking (Havis 1993). This was followed by a Roman small town at the junction of Stane Street with the Chelmsford-to-Sudbury Road. Excavations over the past 25 years in the Roman town area, particularly those undertaken by the Brain Valley Archaeological Society and Braintree District Council along the length of Pierrfitte Way (Drury 1976; Havis 1993), have demonstrated the presence of a dense built-up area, with lanes and alley-ways on the south-western side of the main road junction with a possible market-place/green at the junction itself. There is some evidence for Saxon settlement within the town itself, in the form of two sunken-featured buildings inserted within Roman structures (J. Hope pers. comm.).

At Witham, the Ivy Chimneys site (Turner 1999) revealed a Romano-British temple site which appears to have had its origin as a Late Iron Age shrine, later adopted by the Romans and further developed, culminating in the building of an 4th-century octagonal Christian baptistry. More recent excavations at Maltings Lane, Witham, show that Ivy Chimneys formed one part of a wider Roman settlement (N. Lavender pers. comm.).

The Brain valley links Braintree and Witham. The Brain itself is not very wide at this point, although crossing it on foot would be problematic in winter. The valley sides are quite steep at the northern end before widening out at the southern end. The river is bordered by areas of water-meadow which are prone to seasonal flooding. On either side of the valley is a string of Roman sites, which have been subdivided into villas and

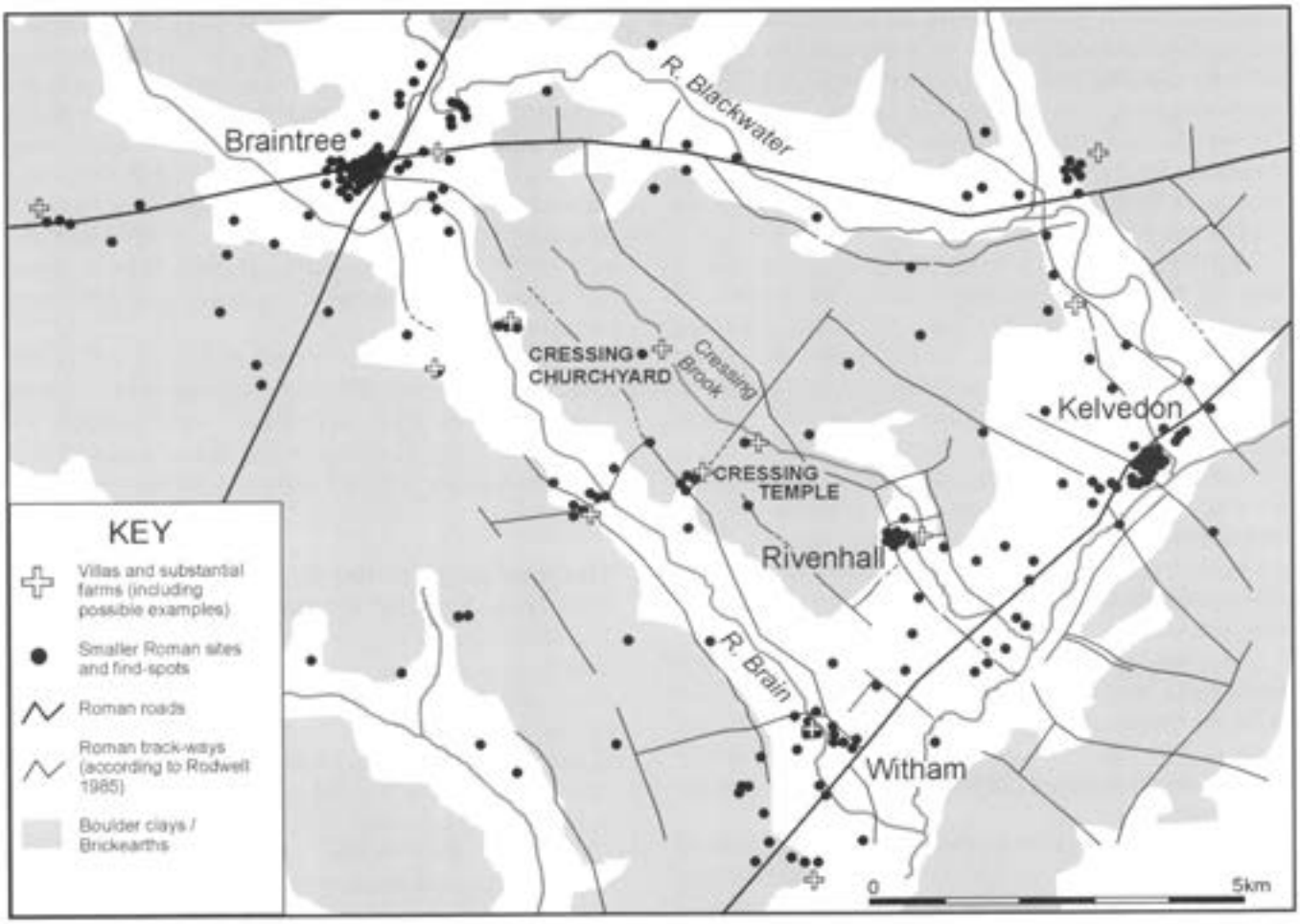

Fig. 15 Map of the Roman landscape of the Brain Valley.

other substantial farms and smaller sites. The evidence for the villas and other substantial farms consists of either excavated evidence as at Rivenhall or circumstantial, thus at White Notley the presence of an elaborate columbarium (Powell 1963) and extensive scatter of Roman building material and pottery is taken to mark the site of a substantial building, probably of villa status. The smaller sites comprise individual burials, small scatters of Roman finds or building materials, or individual finds-spots. It is thought that some at least of these mark smaller farms, whilst others are just chance losses. The more substantial sites 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. This siting preference is very evident in the area, and indeed extends further along the Blackwater valley from Witham up to Coggeshall. The spacing of the 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. Analysis by Rodwell and Rodwell (1985) and subsequently by Hunter (1993) has identified a pattern of long sinuous routeways (now frequently incorporated into the modern country lanes) and land divisions running parallel to the Brain Valley linking the Roman A12 to Stane Street (A120). The settlement at Cressing Churchyard is unusual in that it is sited centrally in the boulder-clay plateau bordered by the Brain and Blackwater valleys. However, its position on the Cressing Brook does suggest that it may form part of a second group of settlements strung out along the Cressing Brook, including the villa at Rivenhall (Rodwell and Rodwell 1985) and a probable settlement site comprising of a large scatter of pottery to the north of the Old Sewer Works at Silver End, and a Late Iron Age-later Roman farm at Cressing Temple (Bennett 2001). Again these are spaced at 2 - 2.8km intervals. In between these large sites are the smaller settlements and chance find-spots. Their distribution is more widespread across the landscape, although again there is a preference for a siting along the edges of the valleys.

The end of the Roman period appears to have been marked by a gradual decline. The evidence for Saxon occupation on the site comprises a single pit and a few finds in the destruction debris of a late Roman building. It is however of interest that of the excavated sites in the area, Cressing Temple is the only one that shows no evidence at all of some form of Saxon occupation on or adjacent to the Roman settlement. At Braintree, at least two sunken-floored buildings of Anglo-Saxon type were inserted inside the ruins of Roman townhouses. Whilst the religious complex at Ivy Chimneys was abandoned by the early fifth century, the excavations at the nearby Maltings Lane

site, Witham have revealed a scatter of sunken-floored buildings of fifth to sixth-century date. The fifth to sixth-century occupation at Rivenhall has been interpreted as the employment and housing of Germanic settlers within the declining villa estate, with the gradual disappearance of the trappings of Roman life.

In summary it is clear that the site at Cressing Churchyard forms one portion of a much larger, settled Roman landscape comprising large farms spaced at regular intervals along the river valleys and linked by trackways, interspersed with smaller settlements. Those sites which have been excavated (as at Braintree, Witham, Cressing Temple, Rivenhall and Cressing Churchyard) have all had Late Iron Age origins, and it is considered that the settlement pattern that is so evident in the Roman period may well have been largely in place by the end of the Iron Age. The end of the Roman period into the sixth century AD seems to have been characterised by a continuation of settlement of a sort on the established sites, gradually declining as the centuries pass.

Acknowledgements

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Late Iron Age/early Roman and early medieval activity in the Lea valley at Chingford

Barry Bishop

Introduction

An archaeological investigation was conducted at 3 Lea Valley Road in the London Borough of Waltham Forest (NGR TQ 3755 9500) prior to the redevelopment of the site (Fig. 1). Three trenches were examined archaeologically. Trenches A and B were examined during the evaluation phase of the project. The main excavation, Trench C, was located in the footprint of the proposed building. A watching brief was conducted on all subsequent ground works. Trench A revealed a sequence of alluvial flood deposits although no evidence of cultural activity. Trenches B and C revealed a comparable sequence of alluvial activity but in addition two main phases of cultural activity were present, and these are discussed below.

The work was conducted between 2 June and 22 September 1997 by Pre-Construct Archaeology under the supervision of Andrew Daykin and the management of Peter Moore. Nick Truckle of the Greater London Archaeology Advisory Service monitored the work on behalf of the London Borough of Waltham Forest and Rialto Homes Plc. generously funded all stages of the investigation.

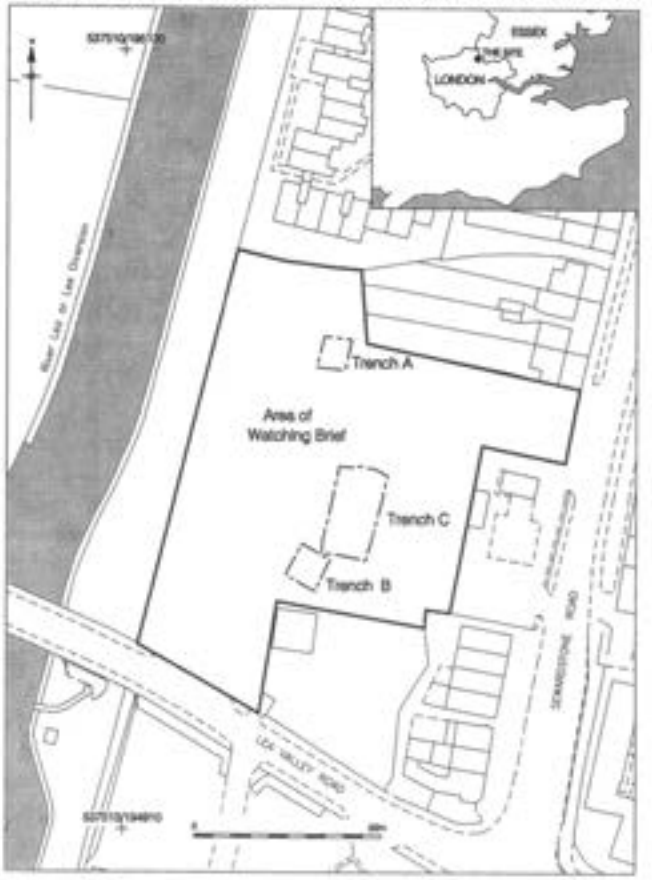

Figure 1 Site location. © Crown copyright Ordnance Survey. All rights reserved.

Location

The site lies on the eastern edge of the Lea valley floodplain c. 14km north of its confluence with the Thames at Canning Town. In the Waltham Forest area the River Lea appears to have experienced an eastward migration, resulting in extensive Pleistocene alluvium being deposited on its western bank but forming a steeper valley side with predominantly London Clay exposed on the eastern side. The site sits on a narrow strip of gravels, no more than 200m wide, sandwiched between the low-lying floodplain of the Lea to the west and London Clay to the east, which rises up rapidly towards Pole Hill and Chingford Green c. 750m away.

Archaeological sequence

Natural deposits

The earliest deposits recorded consisted of sands and gravels which were likely to represent part of the Leyton Gravels, a Lea equivalent of the lower Thames East Tilbury Gravels and middle Thames Kempton Park Gravels (Gibbard 1994). Overlying the sands and gravels was a sequence of at least four alluvial silt-clay deposits, representing a series of flooding events.

Bronze Age

Although no dating could be established for the timing or duration of these flood events, the surface of the sequence ultimately stabilized sufficiently for soil formation to begin. From within this soil a few pieces of pottery, mostly undiagnostic prehistoric sherds but including a possible handle from a Bronze Age lugged bowl, a flint flake compatible with a Bronze Age date and a small quantity of burnt flint were recovered.

The earliest stratigraphic evidence consisted of two intercutting pits in the south of the site in Trench B (Fig. 2). Both appeared to have been deliberately backfilled shortly after they had been dug and as neither contained any cultural evidence or dating material it was uncertain whether they were associated with the Bronze Age pottery recovered from the soil horizon or only marginally pre-dated the Late Iron Age ditch that truncated them.

Late Iron Age

Oriented northeast-southwest and truncating the pits (see above) was a ditch that continued into Trench C. Here it was interrupted by a 1.6m wide causeway, and the northern segment of the ditch showing evidence of recutting. The ditch was paralleled about 1m away to the west by a further ditch that terminated to the north. All of these appeared to have silted naturally and, although all of the fills contained burnt flint, pottery was only recovered from the fill of the eastern ditch. This consisted of fifteen sherds of 'Belgic' grog tempered ware, dateable to the Late Iron Age. In addition, three fragments of Iron Age ceramic building material, or 'Belgic brick' were recovered from the same ditch. Although relatively rare, Late Iron Age bricks have been found elsewhere in Essex (Hawkes and Hull 1947; Greenwood 1982 & 1997).

Truncating the double ditches was a further ditch, oriented nearer towards north-south. It consisted of a single ditch throughout most of the trench although in the south two ditches were traceable, which due to a later intrusion could not be related directly to the main ditch. These again appeared to have silted naturally. The only finds recovered comprised a few fragments of burnt flint and two sherds of Late Iron Age pottery, one possibly from a 'Belgic' grog tempered storage jar.

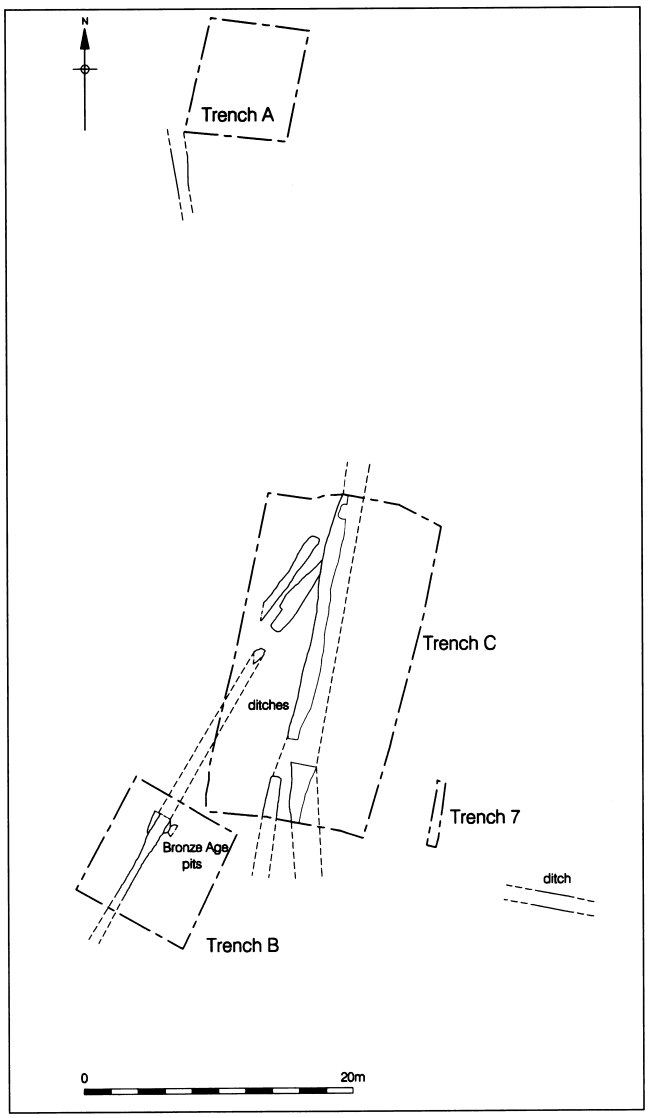

Fig. 2 Plan of Late Iron Age features

Two other short stretches of ditch which may be associated with this phase were observed during the watching brief. An east-west ditch in the southeast corner of the site appeared to be aligned perpendicular to the second phase of ditches discussed above, and to the north of Trench C a further north-south aligned ditch was recorded. Neither produced any dating evidence and can only be tentatively associated with this period of activity.

The limited extent of the excavations and the high degree of later truncation prevents any convincing reconstructions of the layout of either phase of ditch construction, suffice to say that most likely both represented systems of bounded enclosure, most closely compatible with later prehistoric field systems identified elsewhere. The earliest was double ditched; a feature frequently recognized and often interpreted as representing a hedged boundary, although elsewhere similar features have been suggested as 'sheep races' (Guttman and Last 2000, 332). Many later prehistoric field boundaries were also segmented, possibly supporting the interpretation that they were hedged, although it was possible that the causeway here represented a narrow entranceway. The second phase of ditching had less diagnostic elements, although if the two elements identified during the watching brief were associated then a rectilinear field system may be indicated.

Pottery recovered from both phases could not be chronologically separated and although continuation in land use is indicated, the realignment would suggest significant remodelling. The highest quantities of pottery as well as the fragments of 'Belgic brick' were recovered from the earlier phase, with only two pottery sherds recovered from the second phase, possibly indicating that settlement initially had been located closer-by. Although little direct evidence is available, it is initially tempting, however tentatively, to suggest that the earlier system represented a Late Iron Age field system remodelled around the period of the Roman conquest. Such realignments in field boundaries have been identified elsewhere, both in the London region (Bishop 2002) and further upstream in the Lea valley (Huggins 1988). The recovery of residual building material dateable to the first two centuries of occupation support the notion of some form of activity continued at the site during the Roman period.

Renewed flooding

Sealing all features in both Trenches B and C were deposits of alluvial silt-clays, indicating at least two episodes of flooding. Both deposits were approximately 0.20m thick, contained charcoal and burnt daub flecks although the only dateable material was further Late Iron Age 'Belgic' pottery similar to that recovered from the earlier ditches. It would appear that as well as the deposition of alluvium, the flooding may have scoured

the original land surface incorporating cultural material and accounting for the often-shallow nature of the earlier features. The first episode of flood deposits were relatively 'clean' suggesting little biological activity had time to occur, although in Trench B a small pit or posthole had been dug, indicating that the deposit had stabilized sufficiently to allow some form of activity before the second episode commenced. Unfortunately, although the pit contained frequent charcoal and burnt daub, no dateable finds were recovered.

No firm dating was available to indicate the date or duration of these episodes, although the lack of material later than that contained within the earlier ditches would suggest that it may have happened shortly after, possibly even causing, the abandonment of those field systems. Following the flooding, ground conditions once again stabilized, with mottling of the deposit and evidence of root and/or worm action suggesting an extended period of consolidation and the formation of a soil horizon.

Late Saxon/early medieval activity

The next period of cultural activity was indicated by a line of three circular postholes, two 0.24m and one 0.56m in diameter, which ran east-west across Trench B (Fig. 3). The only dating evidence that these produced consisted of a single sherd of Early Medieval sandy ware, dateable to AD 900-1050.

Running at a slight angle to the postholes was a shallow gully, approximately 0.60m wide and terminating to the east. It appeared to have silted up naturally, the fill producing thirteen sherds of pottery comprising Early Medieval shelly wares, Harlow wares and South Hertfordshire grey wares, their date ranges suggesting the ditch silted up during the mid to late 12th century. To the east of the gully was a pit. This appeared to have been deliberately backfilled, although only a small quantity of burnt flint and a single sherd of South Hertfordshire Grey ware were contained within it.

Although it is not certain when ground conditions stabilized after the flooding, it would appear that some form of activity had commenced at the site by the Late

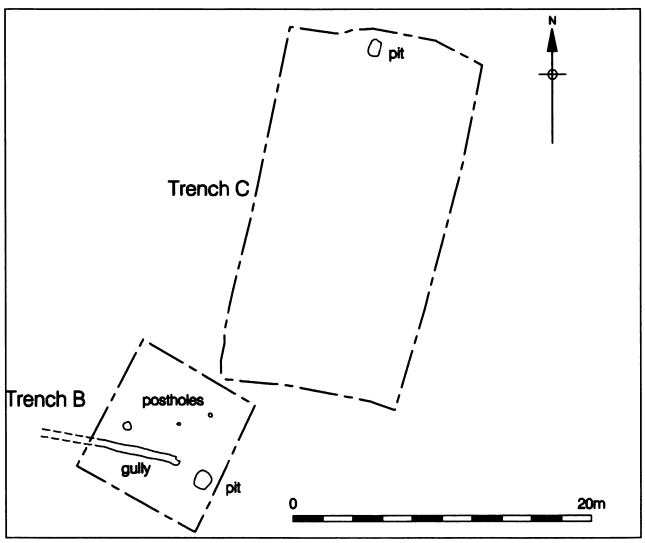

Fig. 3 Plan of Saxon and medieval features

Saxon period, although this pottery may have been residually deposited into the posthole. The filling of the gully, and to a lesser extent the pit, can be reliably dated to the second half of the 12th century. What kind of activity this small set of features represents is, however, less certain. The gully may have had some drainage function, or as with the postholes, formed an element of some sort of structure, and the reasonable quantities of pottery recovered indicating it was possibly associated with domestic occupation.

Late medieval activity

In the north of Trench C a sub-rectangular pit, measuring 1.10m by 0.70m and 0.47m deep was recorded. It appeared to have been deliberately backfilled and its fill produced the base of a Late London ware jug, dateable to AD 1400-1500. Other than indicating a presence during this period little else can be said.

Sealing all of the above features were various deposits, some possibly indicating natural soil accumulation whilst others are almost certainly the result of dumping, possibly to raise ground level during the late 19th and 20th centuries.

The site its local and regional context

This site has produced evidence for sporadic occupation from the later prehistoric period through to the present. Its location on a thin strip of gravel terrace may have been significant, as there has long been noticed a preference for settlement on the brickearth and gravel terraces, from the Neolithic through to the historic periods. It is noticeable that the evidence for later prehistoric activity in the lower Lea valley is predominantly confined to these terraces (cf Bird 1996, 220). The claylands that dominate most of Chingford are traditionally regarded as having been thickly wooded, impenetrable and, even if cleared, unproductive and difficult to till. Some impact into the claylands may been made during the Iron Age, (Hawkins and Leaver 1999; Saunders 2000), and Drury and Rodwell (1980, 68) noted that Roman rural settlements, often with prehistoric antecedents, were not lacking on the London Clay and boulder clays of Essex. It remains to be seen whether this apparent avoidance of claylands for settlement throughout the London region will be maintained by future fieldwork.

The nature of this investigation, especially the restricted size of the areas of excavations and high degree of later truncation, precludes precise or in-depth interpretation of the activities represented at the site. The importance of these findings is that Chingford, along with other areas that border the lower Lea valley, have witnessed very little archaeological investigation, and consequently little is known of its prehistoric or early historic development. Until recently, virtually the only evidence for Bronze Age and Iron Age activity in the lower Lea valley consisted of the recovery of many items of prestigious metalwork; mostly dredged from the river or recovered from marshy areas alongside it, these finds almost certainly indicate the continuance of

a tradition of ritual or votive deposition that can be traced back at least as far the Neolithic. Although evidently an important focus for ritual activity, the only evidence of actual settlement with which to put this activity into context consisted of enigmatic wooden structures originally interpreted as crannog-style dwellings. These were destroyed during the construction of the reservoirs that now occupy much of the Lea's original floodplain and consequently are poorly understood, although it would seem unlikely that they represented the normal form of domestic settlement.

Recent archaeological investigations, both large and small scale, are beginning to indicate that later prehistoric settlement and agricultural activity within the lower Lea valley may have been more extensive than previously thought. This investigation demonstrated that cultural activity was occurring at the site from at least the Bronze Age, which although only consisting of a few fragments of pottery, struck flint and possibly two pits, is consistent with mounting evidence for Bronze Age activity in the lower Lea valley. Across the Lea at Kingsway, excavations have identified Bronze Age settlement (Maloney and Gostick 1998, 84), and slightly further south, beside the Lea floodplain at Edmonton, excavations have revealed traces of settlement set within a field system (Bishop submitted). Similar evidence is recorded further north in Enfield at Ramney Marsh, where Late Bronze Age field systems are associated with settlement and specialized ceremonial activity adjacent to the Lea (Maloney and Holroyd 1999, 11). A Late Bronze Age / Early Iron Age settlement close-by at Aylands Allotment (Filer 1991, 302) suggests this pattern of activity was widespread in that area. Downstream at Leyton, on the eastern side of the Lea, later prehistoric settlement in the form of pits, post and stakeholes has been recorded at Oliver Close (Sabel 1993), and at George Mitchell School (Truckle *et al.* 1995). Although the precise dating of these sites is problematic, fairly intensive settlement during the 1st millennium BC does seem to be indicated. Further downstream at Bow, Late Bronze Age activity associated with field boundaries has also been recorded (Taylor-Wilson 2000; Bishop in prep.).

Although it has long been recognized that during the later prehistoric period the Lea valley would have formed an important routeway linking the Thames valley with East Anglia, succeeding Early Iron Age activity along the lower Lea valley, as with the rest of the lower Thames valley, has been a lot harder to quantify and a genuine decline, at least in archaeologically visible settlement and agricultural organisation, seems likely. A modest revival during the Middle Iron Age may have occurred but evidence for archaeologically visible settlement and economic activities again diminishes by the Late Iron Age (Greenwood 1997). Although Late Iron Age and early Roman rural settlement evidence is still elusive and agricultural land-use patterns poorly understood (Bird 1996; Greenwood 1997), recent investigations throughout the lower Thames valley are slowly beginning to reveal Late Iron Age settlements, mostly in the form of dispersed small farmsteads which are usually located on the river terraces (eg Greenwood 1982; Drummond-Murray et al. 1994; Lakin 1994; Heard 1996; Howe 1998; Barrett et al. 2001). Similarly, recent excavations in the lower Lea valley are also beginning to reveal more extensive settlement than may have been previously thought. Some of the clearest evidence comes from Nazeingbury, upstream of Chingford, where a 'Belgic' farmstead has been recorded (Huggins 1978). Closer to Chingford, the settlements and field systems recorded at Edmonton appear to have been abandoned at some point during the Iron Age, although at Kingsway the recovery of Iron Age pottery and identification of a Roman field system may indicate a degree of continuity of settlement. Further south at Bow the Late Bronze Age field systems were succeeded during the Late Iron Age by a small enclosure and post-built structure (Taylor-Wilson 2000; Bishop in prep.).

At some point during the Late Iron Age the field boundaries recorded here were realigned, possibly around the conquest period. If so, this would be consistent with a pattern frequently noted throughout the London region where, despite an apparent continuity in landuse and location, a fundamental realignment of property boundaries and field systems occurred in the decades around the Roman conquest. Such changes in field alignments have been recorded both at Bow and Brentford, although their proximity to newly constructed major roads may have necessitated this alteration. Elsewhere, however, less easily explained changes have been recorded. At Nazeingbury, the 'Belgic' enclosed farmstead was overlain by a series of Roman fields, and a similar situation has been recorded at Great Sunnings Farm and Hunts Hill Farm, both in Upminster on the east London terraces (Bird 1996, fig 25.2). Other sites where field systems were apparently reorganized around the conquest period include Ickenham and Perry Oaks, on the west London terraces (Lakin 1994; Barrett *et al.* 2001).

Flood episodes both preceded and succeeded the late Prehistoric activity at the site, and the low-lying position of the site is likely to have had a considerable influence on its development throughout both prehistoric and historic periods. Worsening climatic conditions and possibly increased alluviation may have partly instigated the widespread abandonment of agricultural systems after the Late Bronze Age, although it is uncertain whether the earliest phase of flooding recorded here occurred prior to or after the Bronze Age. Localized developments in the drainage regimes would have been the decisive factor on an individual site basis and it would appear the earlier alluvial activity had sufficiently subsided by the Late Iron Age to allow the digging of ditches to commence. It is quite possible that these served as a drainage system in an attempt to keep the land dry; an attempt that ultimately failed.

Throughout much of the historic period Chingford has been closely associated with Epping Forest, and its

predominantly clayey geology has resulted in it being considered largely forested (Huggins 1998, 241). Chingford is recorded as a Domesday settlement, probably originally located to the south of the site near the confluence of the rivers Lea and Ching, and migrating to the north and east, possibly following forest clearance. Following renewed flooding, possibly even causing its apparent abandonment during the Roman period, no further evidence of activity was recorded until the Late Saxon / Early Medieval period. Again, the evidence recorded here is limited but does demonstrate activity, possibly of an agricultural or even of a domestic nature, was occurring, intermittently from the late Saxon to the end of the Medieval period. Other indications of early activity in Chingford include residual late Saxon pottery which preceded a phase of occupation represented by a posthole and timber slot building associated with ridge and furrow agriculture dated to c.AD 1150-1400, found at Chingford Hospital, some 2km to the southeast (Truckle 1993). Similarly dated pottery has been recovered from Heathcote Lodge (Hodgins 1994) and further evidence of ridge and furrow, although undated, has been recorded to the south at Ainslie Wood and at other sites in Waltham Forest (Divers 1996). Although the evidence is not extensive, it would appear from the few archaeological investigations conducted that Medieval settlement and agricultural activity, even on the more intractable clay soils, was more important than may have been previously thought, and although large parts of Chingford may have remained wooded until recently, agriculture could still have played a significant role in its development.

After the late Medieval period, there is no evidence of further activity at the site until its industrial redevelopment during the late 19th and 20th centuries. However, excavations immediately to the east of the site at Drysdale Avenue have recorded activity spanning the 16th to 19th centuries, including the digging of drainage ditches, (Chew 1991; Jarrett 1991), and certainly by 1738 Jared Hill's map shows that houses had been constructed very close to the site.

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Richard Lord Rich's mansion at Rochford Hall

by D. D. Andrews, with a pottery report by Helen Walker

Introduction

Rochford Hall is today an E-shaped building comprising a north range with three ranges aligned north-south leading off it. These enclose three sides of two courtyards. At the north-east and north-west angles of the north range there are octagonal corner towers, and in the corresponding corners of the courtyards, there are polygonal stair turrets. Originally the Hall was about twice its present size, about 59m square, with at least five courtyards. Today, the east range and the east half of the north range are occupied by Rochford Hundred Golf Club, whilst the west half of the north range, the central range, and the west range were

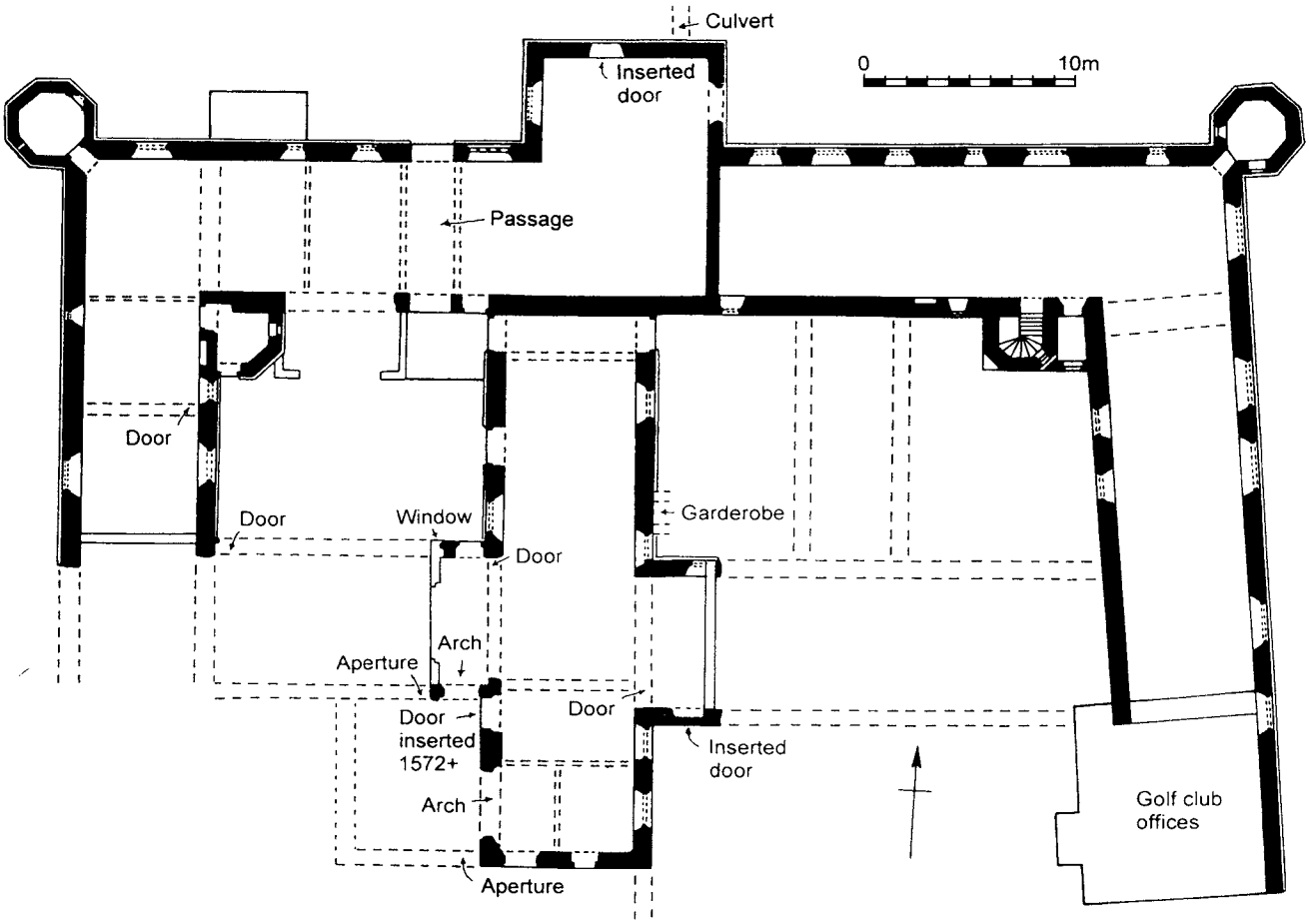

Fig. 1 Rochford Hall, plan of the surviving building before the residential conversion.

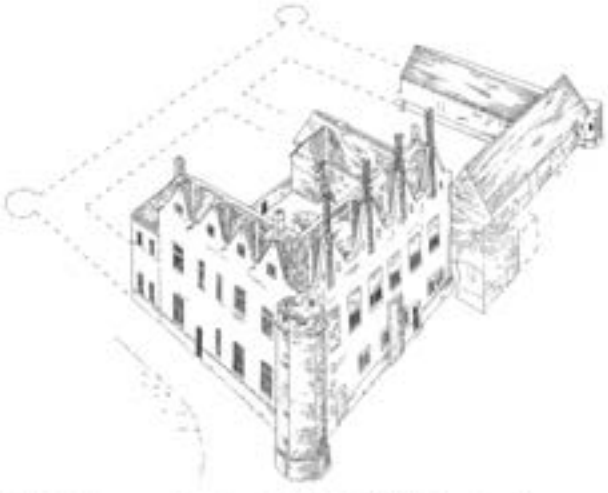

Fig. 2 Perspective view of Rochford Hall before the Barns were converted to residential use.

formerly used as barns and are now converted to residential use (Fig. 1 and 2).

The Hall is built of a mixture of stone and brick, all of which was originally plastered. The stone is mostly Kentish Rag with some freestone, mainly Caen and Reigate. The latter is re-used, as is probably also true of the Rag. The stone is used for general walling, and the brick for dressings. At the base of the walls there is a shallow plinth with a simple chamfered moulding. The Golf Club building is of two storeys, with an attic, which is timber-framed and brick-clad (Plate 1). When the part known as the Barns was abandoned after a fire *c.*1760 (Benton 1888, 794), it was reduced in height to just above the level of the first floor (about 5m). This was presumably because the roof and attic were completely destroyed as a result of the large proportion of timber in their fabric.

The stone and brick built ruin represented by the Barns (Plate 2) has been the object of fanciful speculation. The 1st edition OS map labels the Hall as '12th century'. The entry in the Essex Heritage Conservation Record (16322) says: 'House possibly of 12th/13th century origin. Inspection in 1974 showed the presence of reused older materials and a "building of great age" of stone in the NW area. It was noted that the W tower could possibly have been built C12/13, lowered later and built up again using old materials.' The RCHM(E) (1923, 127-9) put the building to *c.*1540-50. Barnes and Newman (1973) thought it to be slightly later and to have been built by Richard Lord Rich. Norman Barnes did a well informed reconstruction painting of the Hall which now hangs in the Golf Club. He also made a plan of the site which is a valuable record of it before the Barns were remodelled. These ideas were tested when the fabric was recorded in 1984 and 1985, subsequent to permission being obtained to convert the Barns, which are a scheduled ancient monument, to residential use. Trial trenching was also carried out, archaeological investigation extending to the Golf Club side where a new building was erected. This work was done on limited resources, inadequate to the scale of the problem presented by the Hall, and much of it in the depth of a severe winter. In brief, it will be shown that the existing building was constructed by Richard Lord Rich probably in the 1550s, making extensive use of recycled materials which explains why the Hall has sometimes been thought to be of much greater antiquity. More detailed reports can be found in the excavation archive.

Historical background[1]

The light easily cultivated sand, gravel and brickearth derived soils of the Southend peninsula have since earliest times commended themselves for human settlement. Archaeological evidence for prehistoric and Roman occupation is correspondingly very rich. The medieval settlement pattern was mainly one of scattered farmsteads and hamlets, the most substantial nuclei being Prittlewell and Rochford. The latter gave its name to the hundred. Like many Essex towns, Rochford was a medieval foundation and lies distant from what was presumably the primary settlement centre at or near the Hall and the adjacent church. The town grew up round a market established by Guy de Rochford in 1247 to the east of the Hall, close to the lowest bridgehead on the Roach estuary (Fig. 3). To date, very little evidence of Roman or Saxon settlement is known from the area of the town and the Hall, though allegedly a Roman building was found when the hospital was built in the 1930s (Eddy 1984/5, 21).

Plate 1 Rochford Hall from the north-west (1986). Note the intact Tudor plaster on the exterior of the west wing. In the background, the gables and chimneys of the Golf Club.

Plate 2 Rochford Hall Barns from the south (1985).

The excavations reported upon here have added nothing to our knowledge of the Roman and Saxon periods, the earliest finds being datable to the 12th century.

At Domesday, Rochford was held of Swein of Essex as a single manor valued at 2 1/2 hides. It was later held by the de Rochford family. In 1340, Rochford was granted to William de Bohun, earl of Northampton, passing to his son Humphrey de Bohun. After his death, it remained part of the extensive landholding of his widow Joan de Bohun who died in 1419 (cf. Ward 2001, 148). It was later in the possession of her niece, Joan Fitzalan, wife of William Beauchamp, lord Abergavenny, another wealthy widow who refurbished the manor and died in 1435. Her eldest daughter Joan married James Boteler, earl of Ormond, and on her death the manor passed to that family. The fifth earl was beheaded after the Lancastrian defeat at Towton in 1461. The manor was confiscated and given to the duchess of Exeter, the Woodvilles, and then the Greys, but was recovered by Thomas Boteler in the reign of Henry VII. He probably built the handsome brick tower of the church as the Boteler arms are over the west door. His daughter Margaret married Sir William Boleyn: their son Thomas was created viscount Rochford and was father to Ann Boleyn, the most famous personage associated with the Hall though it is unclear how much time she spent there. Ann's sister Mary and her second husband Sir William Stafford resided at the Hall. Sir Henry Carey, Mary's son by her first marriage, sold the manor with other property to Richard lord Rich in 1550 (Essex Feet of Fines V, 18) for £2000. The lands acquired by Rich included 2000 acres of arable, 500 acres of meadow, 3000 acres of pasture, 1000 acres of wood, and 2000 acres of furze and heath.

In terms of the standing building, Rich is the most significant owner of the manor, as it will be argued below that what remains today was built by him. He is also the most notorious, reviled for betraying archbishop Fisher's and Sir Thomas More's views on Henry VIII's supremacy of the church, thereby leading them to the scaffold. A London lawyer and MP for Colchester, his real opportunity came with the appointment in 1536 as the first chancellor of the Court of Augmentations, which oversaw the distribution of the property of the dissolved monasteries. He acquired great wealth and extensive property throughout Essex, where he held over fifty manors. In 1548, he was made baron Rich of Leez (i.e., Leighs Priory in Little Leighs) and appointed Lord Chancellor. A survivor, he supported the restoration of Catholicism in Mary's reign and remained in enjoyment of his substantial wealth in Elizabeth's, dying at Rochford in 1567. Rich's grandson Robert was made earl of Warwick in 1618. The second earl, also Robert, was a notable promoter of the Puritan cause, an investor in American plantations, and commander of the navy for Parliament. On the death of the fourth earl in 1673, the estate was divided between the female heirs of the second and third earls. The manor of Rochford and other property passed to Sir Henry St. John. His son, viscount Bolingbroke, sold it to Sir Richard Child, later created earl Tylney. He built Wanstead which became his family seat. Rochford Hall was leased and entered upon a process of deterioration which was no doubt accelerated by the fire of *c.*1760. The Tylney estates passed through female succession to the Wellesley Pole family. On their sale in 1867, Rochford Hall was bought by James Tabor, whose family still farms the land today (Clark 1990).

At the time of the 1671 Hearth Tax, the Hall had 32 hearths (ERO Q/R Th 5). By 1768 (though he was writing somewhat before this date), Morant could describe it as 'a large and stately building' even if 'now much decayed'. By the time of the first estate map of 1796 (ERO D/DCw P13; Fig. 4), the Hall was reduced to its present size. Round it were walled and fenced enclosures and to the north outbuildings. A building to the south looks like a former gatehouse and was reconstructed as such by Barnes and Newman (1973).

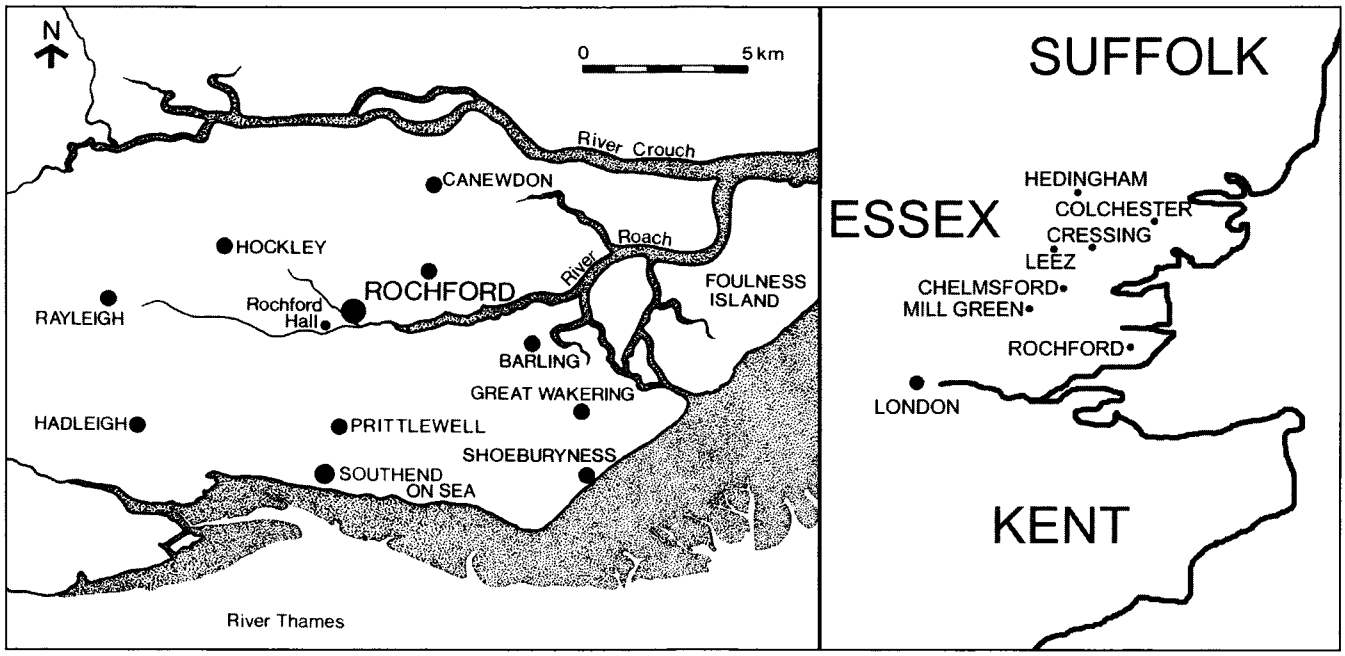

Fig. 3 Map to show the location of the places mentioned in the text.

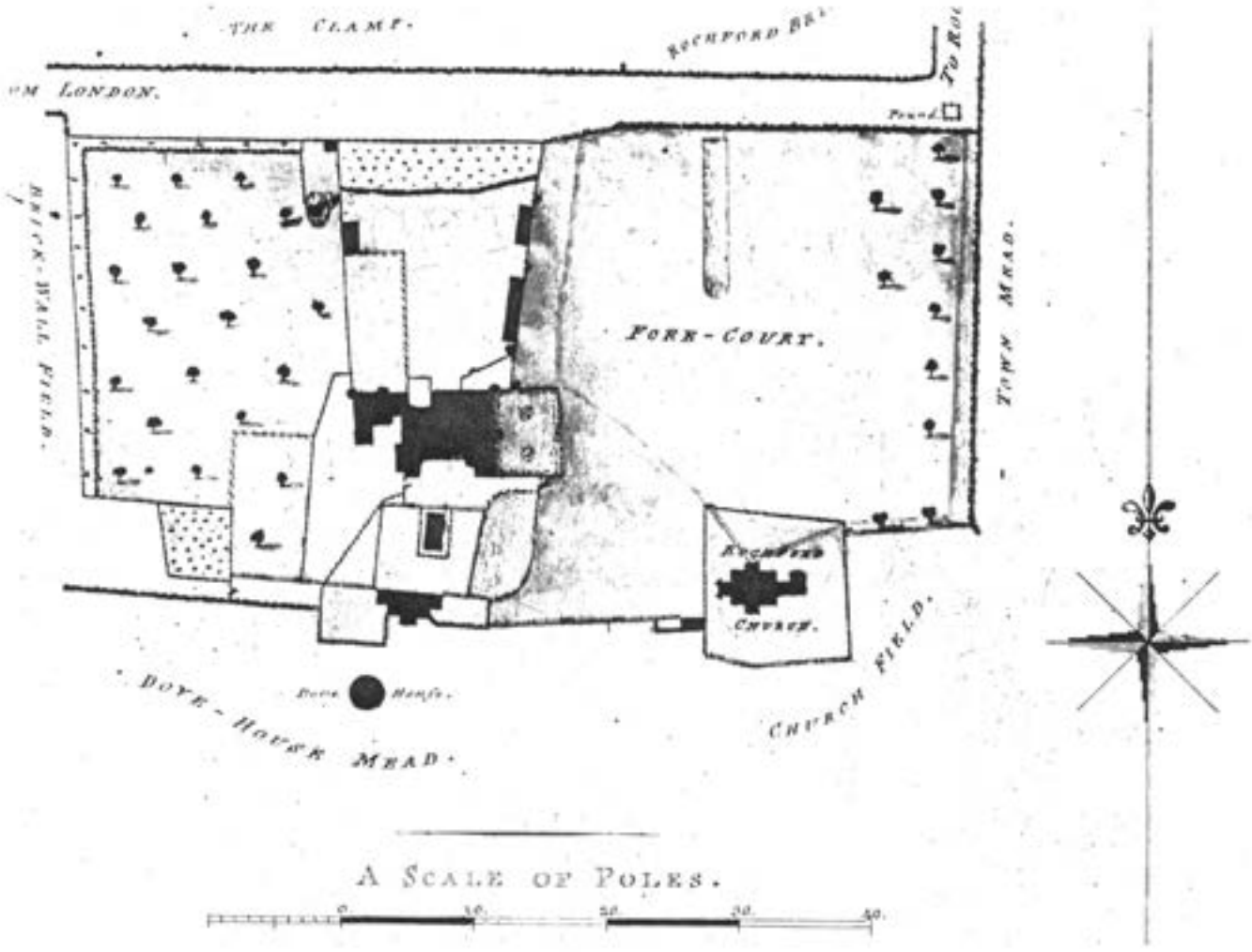

Fig. 4 Rochford Hall, 1796 estate plan (courtesy of Essex Record Office).

The red brick walls are mostly of 16th century date and reflect the layout of the grounds in Richard Rich's time or soon after. The tithe map of *c.*1840 shows the Hall being surrounded by more extensive farm buildings, both to north and south. By the end of the 19th century, if not before, the east wing was the residence of the tenant farmer. The Rochford Hundred Golf Club, founded in 1893, had a presence at the Hall from 1896. The course was remodelled in 1924. During the Second World War, the Hall was requisitioned, defence works were erected on the greens, and much of the course ploughed. The Club took over the whole of the east wing when the farmer moved out in the mid 1970s. The circumstances of the residential conversion of the Barns is minutely detailed by Clark (1990).

The late medieval manor

A building account for the refurbishment of the manor by Joan Beauchamp, lady of Abergavenny, in 1430-1433 is preserved in the British Library (Eg. Roll 8347). This building programme included a vaulted cellar under the chapel, the chapel itself, the parlour, other buildings near the moat and the gate, a barn, garden walls and a sheepfold over towards Rochford town. Although none of these structures survives above ground, the details are of interest, in part for their own sake and in part because they give a picture of what existed before the 16th century and reveal how much change and earth moving must have occurred.

The main elements in the topography of the manor are identified in the account: their layout in relation to each other is less clear. There were two wards or enclosures, surrounded by moats. In the inner ward, there was the chapel and the adjacent parlour and great chamber, and the hall. The cellar and the chapel were made of bricks fired in the manorial brick kiln. There was also a lime kiln. These kilns did not provide all that was required, as bricks were also acquired from elsewhere and quick lime was obtained from Prittlewell. Fuel was brought from the manorial woods to fire the kilns. This is an interesting and relatively early instance of the use of brick. (There are extensive local deposits of brickearth, and until recently bricks were still made nearby). The principal bricklayer seems to have been Matheus Brykemason or Brikeman. Contracts with him were arranged through Robert Darcy, who at about the same time built the Darcy tower in Maldon, probably the oldest surviving brick building in Essex. 26 lb. of *Redearthe* bought at Billingsgate served probably to

ruddle the new brickwork. Some work, however, was done in stone, and the principal older buildings, such as the parlour and chamber, were probably of stone. References to carting away earth may indicate that the cellar was a subterranean rather than an above ground structure. The chapel had a vestry. The parlour was close to the moat. It had a boarded ceiling, probably made of Baltic oak (*Estrychborde*). The great chamber had a chimney which seems to have been rebuilt, presumably in brick. There was a minstrels' oriel, probably in the *Grenechambre*, which had a window which was tiled and therefore probably an oriel. The posts (*boteraces*) in the hall were painted to resemble marble by a London painter. This was presumably an aisled hall like Harlowbury or Fyfield Hall, and therefore already old by this date. There was a *domus aquarie* served by stone gutters, presumably a wellhouse. New rooms, possibly lodgings, were refurbished or built at the lower gate, no doubt the gate to the inner ward. The rooms over the gate to the outer entrance were rebuilt: these were timber-framed and this must have been a substantial gatehouse with accommodation. In the outer ward was the new barn, which was adjacent to the moat and had brick plinths and a tiled roof. There was a thatched stable, probably near the barn. A timber bridge was built between the manor and the great garden which had vines and was enclosed by earth walls with tiled copings. There was also the west garden, next to the outer ward, the earth walls of which were thatched. A lodge in the park was repaired or rebuilt. Timber from the old chapel, and stone and other materials from the old chimney of the great chamber, were reused in the sheepfold, a timber-framed building with a thatched roof.

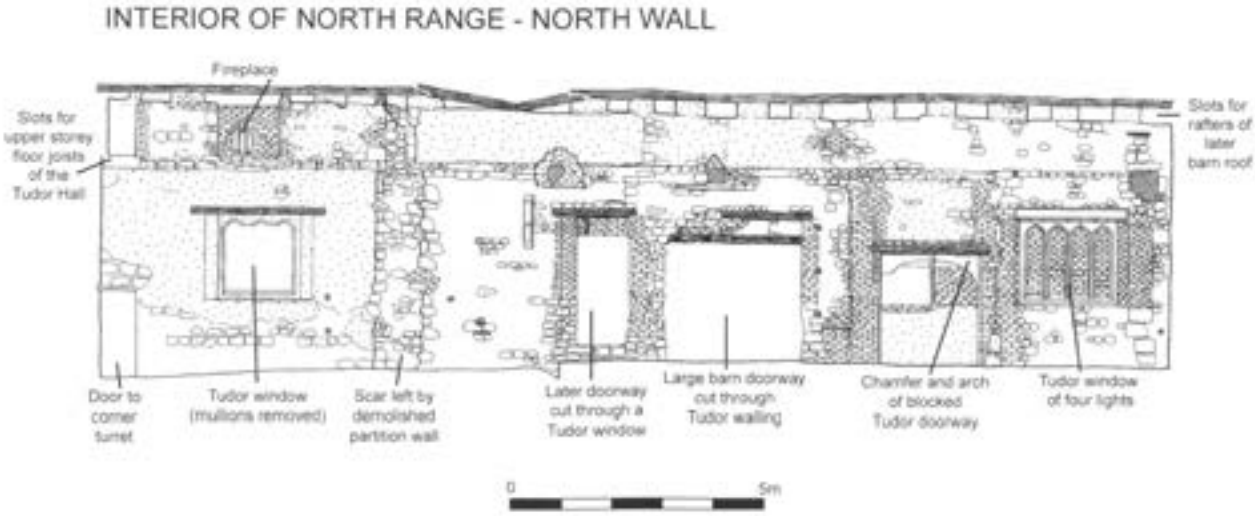

Fig. 5 Rochford Hall, elevation of the interior of the north wall of the north range, from a complete survey of the Barns made in 1985.

Plate 3 Rochford Hall Barns, interior of the west wing, looking north (1985). Note first-floor fireplace, sockets for common joists, doors into north-west corner tower, and scar for wall dividing west and north wings.

Plate 4 Rochford Hall Barns, interior of the west wing, north end of the east wall, showing original plaster, joist hole for first floor, niche, and blocked door to stair turret (1985).

A summary description of the Barns

This account of the Barns represents their condition in 1984. The exterior of the west wall of the west range had its original plaster exceptionally well preserved as a result of the protection afforded by a lean-to agricultural building (Plate 1). The plaster was thin, single-coat work only about 5mm thick. Around the windows, the outline of ashlar quoining was scratched in the plaster. Plaster of this type, with ashlar lining-out, was a feature of the building, only limited traces, however, being preserved elsewhere. The windows are brick built, with narrow lights, from one to four in number, with depressed two-centred heads. Inside they have massive oak lintels. A few windows still had saddle bars, to which the leaded lights would have been attached. Inside, pieces of wood set in the masonry at the ground floor suggest that the walls were panelled up to about the height of the window cills (1.5m-2.0m). Several niches or recesses with oak lintels and cills occur in the ground-floor walls. This floor seems to have been unheated.

The ground floor ceiling was 4.0-4.5m high. The first floor was made of narrow section common joists about 300mm apart jointed to binding joists at least 300mm square and set into holes with timber cills. They occur at intervals of about 2m. Since the ground floor plaster stopped at the bottom of the joist holes, there must have been a ceiling. In the north-west corner tower, it could be seen that there were two sets of common joists, one above the other, the lower for the attachment of the ceiling. Not being of narrow section, these must have been of reused timber.

Internally, the west range (Plates 3 and 4, Fig. 7) was separated from the north one by a masonry wall continuing the line of its east wall, and was divided into three rooms. The most northerly of these was about 6.5m by 5.5m, and bounded to the south by a stud partition wall about 100mm thick, evident from a slight scar in the plaster. To the south, there were two rooms of similar size separated by masonry walls. The south wall of this range was rebuilt, but there seemed always to have been a wall in approximately this position. These rooms were not very well lit (the north room in particular had only a three-light window), and the only known means of access to them was from the staircase tower in the courtyard to the middle room. At the first floor, in the north-west corner, there was a panelled room with a fireplace. To the south of it, and separated from it by a stud partition as at the ground floor, there was a large room about 11m long.

The north-west corner tower (and the north-east one in the Golf Club) was not for stairs, but simply enclosed small octagonal rooms. (There was no evidence that these towers were used as garderobes). The polygonal turrets in the corners of the courtyards housed spiral stairs made of solid oak treads (still surviving in the Golf Club). There was no trace of plaster inside the stair tower in the Barns: most of the interior was in brick, and the mortar pointing was downstruck and usually scored.

The north range had had a porch or midstrey formed in its south side, giving access to a brick threshing floor. Wall scars indicate that the ground floor of this range was divided into a room about 8.5m long, to the east of which there was a through passage, beyond which there was another room. It is possible that the main large room was divided by a stud partition. In contrast with the west wing, there were no traces of plaster or evidence for panelling at the ground floor. The passage walls were 370mm thick and must have been of brick. The doors in the north and south walls were 2m wide. Beyond the passage, to the east, there was another room which extended into the projecting bay on the north side. (The wall at the east end of this range shown on the RCHM plan was a modern brick insertion). Adjacent to the passage door, there was another smaller door giving access to this room from the outside. At the first floor, there seems to have been a room to the west measuring about 4.5m by 6.0m which was plastered, and then a single room occupying the rest of the range and extending into the projecting north bay.

The projecting tower-like north bay is no more than stump of its former self, its walls being reduced to only about 2m in height. It is stone built, apart from the use of brick for dressings. In both the east and west walls, there were three-light windows. Just to the east of a modern inserted door in the north wall, there was evidence for a blocked aperture. If a doorway, this cannot have been very wide, for no more than pedestrian use. In the plinth to the east of this aperture, and just appearing above ground level, there is a blocked arch for a culvert or drain. If its line is projected directly to the south, it lines up with the former garderobe turret adjoining the east wall of the central range (see below).

About half way along its length, the central range has the stubs of ranges leading off to east and west: these had been demolished, sufficient being left to form barn midstreys or porches, doubtless enclosing a threshing floor. The entire ground floor of this range was plastered. The timber window lintels in this range have laths on their soffits for plaster. The door lintels, in contrast, seem to have been simply limewashed. The floor in this area was probably made of brick (see watching briefs).

At the northern end of the central range, there was a cross-passage separated by a wall. To the south of this wall, there was a large ground-floor room about 15m long, there having originally been a masonry partition continuing the line the south wall of the west midstrey. There was an entrance into this room from the courtyard to the west. This doorway, and indeed those to the passage, had twin-leaf doors. There was also evidence that there were doors into the adjacent ranges to the east and west where the midstreys are. There seems to have been a room of equivalent size at the first floor, which was panelled. In the east wall at the first floor, there was a small fireplace with plastered surrounds, and a doorway for a garderobe. The scars left by the walls for the garderobe tower are visible on the exterior of this wall in the Golf Club property.

South of the masonry dividing wall, the windows are set at a higher level, implying a rise in floor level by at

least 300mm. The southern end of the central range was separated off by an east-west stud partition, and then divided in two by a north-south partition. It is possible that this arrangement is not original. The space between the masonry wall and the stud partition south of it was only about 3m wide. A new access to it was later formed in the west wall, suggesting that the ground plan in this area had been modified. The masonry round this door left no doubt as to its later date, and dendrochronology gave a felling date of 1572 plus a likely sapwood estimate of 10-50 years for the timber lintel. Externally, this doorway had a low pediment formed in plaster round its arch.

In the south wall there are two doors both of which were single leaf. The western door is the larger and grander. Unlike the eastern one, it has no exposed wooden lintel. It has a chamfered rectangular surround rendered in superior quality plaster. In the spandrels there are plaster shields set in a grey plaster background probably made with the addition of ash. In the area in the south-west corner of the range enclosed by the stud partitions, the walls are covered with a whiter and thicker plaster than that used elsewhere. This plaster just overlaps the fine plaster of the west door and seems to butt up against the partition walls, whereas outside this area the plaster seems to be contemporary with, or earlier than, the partitions. The plaster may not therefore be original, but its presence does reinforce the impression given by the doorway, and the large brick Tudor arch at the south end of the west wall (Plate 5), that this part of the Hall was special and of relatively high status. This arch is 3.1m wide. The voussoirs are made of three courses of rubbed bricks laid on edge, the mouldings comprising two ogees separated by a quarter-circle hollow. The capitals have a pronounced bell-shaped profile, and the responds are octagonal. The bases are eroded, but they were delineated by two thin astragals. This arch was originally plastered and it is possible that elements of it, such as the capitals, were enriched by moulding. This grand arch led into a building adjacent to both the central range and the east-west range joining it, and which binding joist holes on the side of the central range show to have run north-south.

There is a similar but slightly smaller arch in the south wall of the east-west range (Plate 6). Very little of this range is still standing. Chamfered brickwork shows that there was an aperture of some sort next to the large arch. Opposite it, in the north wall, there is a door with a window next to it. The range on the east side of the central range was little better preserved. The window lintels on the south side of it are at a higher level than those on the north side, a situation similar to that at the south end of the Hall which implies either that there was a longitudinal division in this range at this point, possibly for a corridor, or that the windows were set at these heights to match those to north and south of them and to create a harmonious exterior.

Beyond the two inserted doors mentioned above, the Hall showed little sign of later alteration. Floors were inserted at the north end of the central range and at the south end of the west range, at a level that suggested that they post-dated the fire and the removal of the upper storey. A first-floor sash window in the rebuilt south wall of the west range wall indicated that the floor here had served for residential accommodation rather than, for instance, a hay loft. Lean-to timber-framed outbuildings had been erected against the north side of the north range and the west side of the central range. These were presumably erected soon after the fire as they are depicted on the 1796 estate map.

Tree-ring dating

Of three samples from the Barns analysed by Ruth Morgan of the University of Sheffield, a quarter-

Plate 5 Rochford Hall Barns, arch in the south wall of the wing that formerly adjoined the central wing (1985).

Plate 6 Rochford Hall Barns, arch in the west wall of the central wing (1985). In the background, the tower of the parish church.

sawn baton for the attachment of panelling, and two half-sawn lintels from a window and a door, only that for the door, a feature inserted in the west side of the central range, proved to be datable. It gave a result of 1572 + 10-50 years (Fig. 1).

The Golf Club

The north and east walls of the east wing have been cement rendered and provided with sash windows, whilst the west wall is largely obscured by later additions. The original masonry is only visible on the south elevation of the north range: here there are wall scars for a narrow range leading off to the south, dividing the north-east courtyard into two, with a fireplace at the first floor. Although much altered, this part of the Hall preserves important original features, notably the floor construction represented by joist holes in the Barns. In an unpublished note, Cecil Hewett drew attention to these floors and the attics (Fig. 6). The floors are made with narrow section (290 x 55mm) common joists, many of them quarter-sawn timbers, which have pairs of tenons with diminished haunches. He compared the floor construction to the Queen's House within the Tower of London dated to *c.*1528 (Hewett 1980, fig. 196). The joists there have single tenons. The earliest dated example of double tenons as at Rochford seems to be Queen Elizabeth's Hunting Lodge, Chingford, built in 1543 (Hewett 1980, 282). There was abundant evidence for similarly built floors in the Barns. This is an early example of the use of narrow section joists. Rather than simply a technological advance, it should be seen as something made possible by the existence of ceilings, for all the floor construction was hidden from view.

Quite the best preserved part of the Hall are the attics in the Golf Club. The floors are constructed with bridging joists which run longitudinally between tie-beams. Common joists run from these to the outer wall plates. An inner wall plate is set over the joists and supports ashlar pieces which in turn support the lower of two butt purlins per pitch. The lower purlins are reinforced with cranked windbraces. The gables are of similar construction, and framed upon valley rafters. The original oak rebated floorboards survive. Another notable survival is a timber spiral stair in the north-east courtyard tower. The brickwork inside this tower is only limewashed, not plastered.

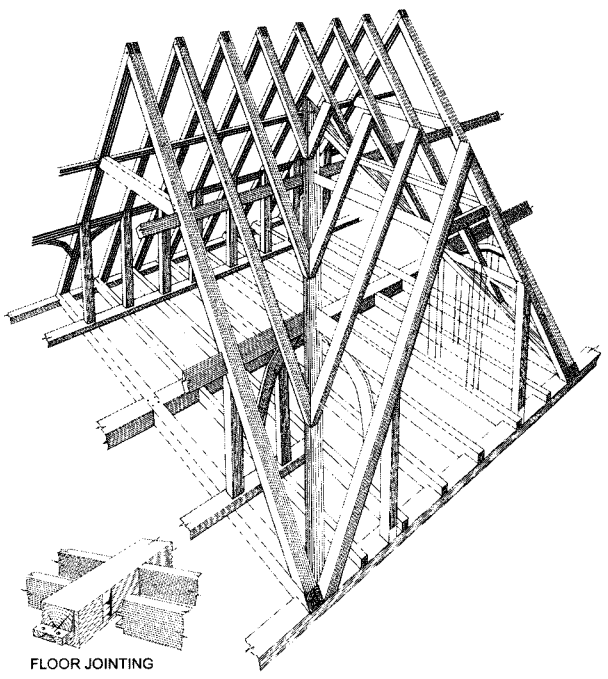

Fig. 6 Rochford Hall, roof construction in the Golf Club attics (Cecil Hewett).

Excavations in the Golf Club area (RF7)

A beer store was built in the courtyard in 1982. Although arrangements were put in place to monitor this work, no records have survived beyond a survey drawing of the south wall of the north range of the clubhouse. In 1984, a brick building 28 x 5m housing a professional's shop and trolley store, and replacing a smaller timber structure, was built just to the south and west of the east wing, in the Club car park. A trial trench was dug to evaluate the area before the building was constructed. A watching brief was maintained as it was erected, and then two further trenches were dug to try and clarify the results (Fig. 7).

Trench 1

This was dug just to the north of the new building. The natural, a light reddish brown brickearth with gravel inclusions, was found at a depth of 200mm on the west side of the trench, but cut to the east by an apparently substantial north-south feature (RF7 7), at least 700mm deep, at which level waterlogging occurred. An upper fill (RF7 4) produced a small quantity of medieval pottery, including a sherd of Mill Green ware dating from the mid 13th to the mid 14th centuries, as well as some fragments of 18th-century wine bottles. Since the location of the feature indicates it cannot be later than the Hall, it must have been of late medieval date, and the wine bottles intrusive. The feature was overlain by rough gravel, hardcore and tarmac surfacing (RF7 2), which produced a large quantity of modern china.

The watching brief

Observations made on the sides of the trenches excavated to a depth of about 1.2m for the strip foundations for the trolley store showed that the feature in trench 1 was a moat. It was, however, but one of a number of features (Fig. 8), including another possible moat, the older and more significant of which can be arranged into the following approximate sequence:

- a wide (?4.6m) shallow (0.6m) cut (72) of uncertain character and extent was found in the southern part of the eastern foundation trench. Its grey-brown silty fill suggested it had been water-filled. Since its topmost fill contained brick and tile, the feature must have been late medieval; it was cut by chalk foundation 75 (see below).

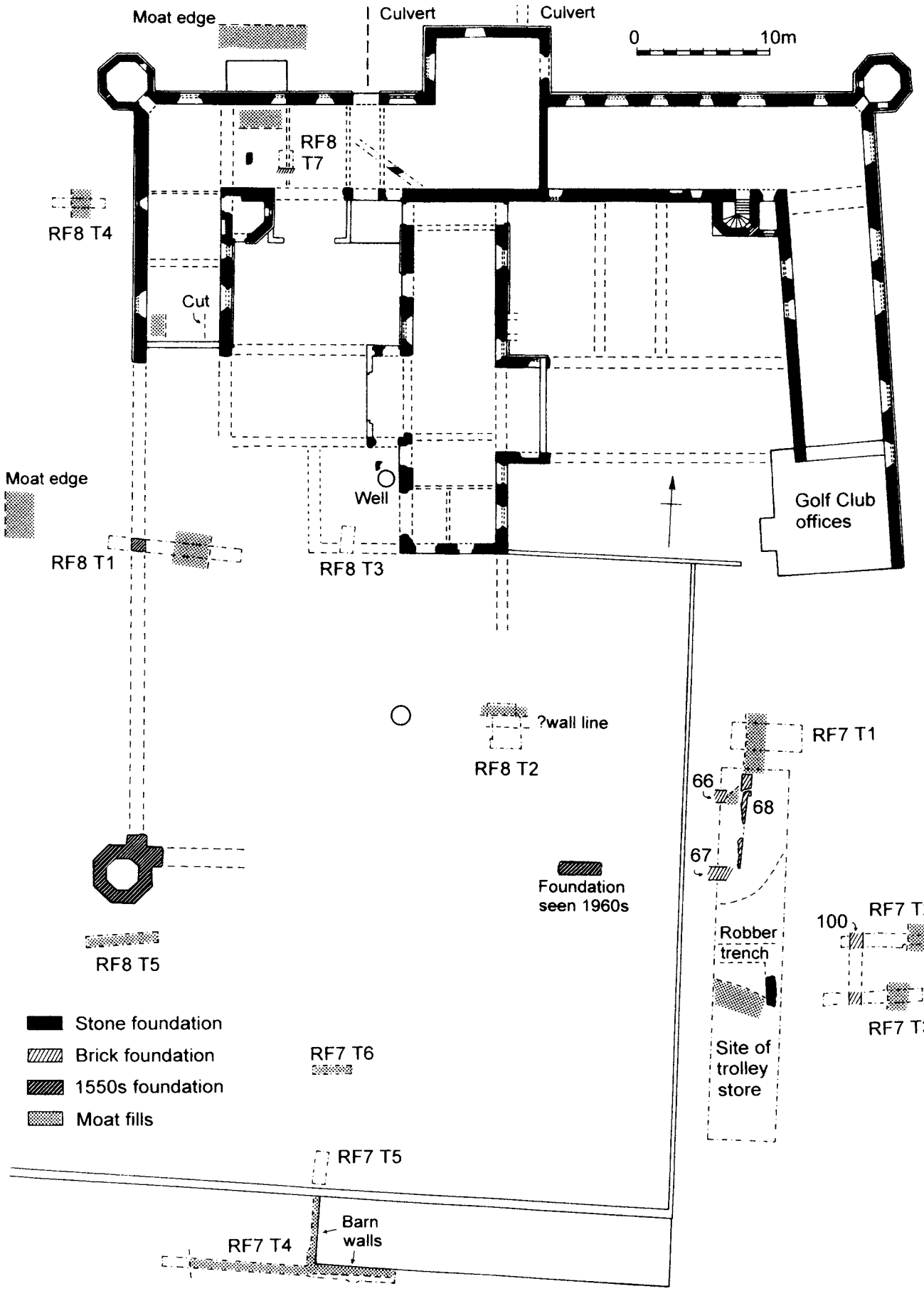

Fig. 7 Rochford Hall, site plan showing the excavations and watching briefs.

- the large feature in trench 1 was found to be a moat (50) which ran east-west across the site of the new building and then turned northwards. It was about 7.5m wide and in excess of 1.2m deep, gleyed silts being found in a hole dug into the bottom of the trench. Waterlogging occurred in the deepest part of the foundation trenches. Above the level of two possible recuts, or slumping from a bank, it was filled with a single uniform deposit of yellowish-brown to grey-brown silty clay, from which a shell-tempered sherd was recovered.

- a north-south wall foundation (75), about 1m wide, made of roughly shaped chalk blocks with tile packing & thick mortar bedding. It was 700mm deep, stepping down to more than 1200mm to the south where it extended to the edge of feature 70 (below). It seemed to have been cut by 70; that the wall foundation stepped down in this area suggests there had previously been a change in ground level. The wall was traced for about 3.5m, and seemed to be associated with a robber trench which suggested that, at its northern end, it turned to the west.

- in the side of the western foundation trench, two Tudor brick walls (66, 67) were found running east-west, about 5m apart. The southern wall (67) was found to return to the north (68), terminating beyond them, just before the north foundation trench for the new building, where it was stone-faced, presumably indicating an aperture such as a doorway. The north wall was located right on the edge of moat 50 and the south one in the moat fill near the southern bank.

- towards the southern end of the new building, there was an east-west aligned cut forming the north edge of a large feature (70). It was at least 10m wide, perhaps in excess of 13m, and 1.8m or more deep. Only the north edge of the feature, which had a north-west to south-east orientation, was found; its southern edge lay outside the new building. Black organic silt was found at a depth of 600mm below the bottom of the foundation trenches. At the south end of the foundation trenches, a silty deposit seemed to be rising upwards, suggesting that the southern edge of the feature was not very far distant. It had been filled with a uniform unconsolidated grey-brown silty loam containing abundant tile and mortar. This feature is recognisable as a pond on the 1796 estate map and a later map of *c.*1840 (ERO D/DCw/P52).

Trench 2

This east-west trench measuring approximately 6m by 1m was situated to the east of the new trolley store, with a view to locating the southern part of the east wing of the Hall, (i.e. to demonstrate that it continued southward on the alignment of the standing building), though in fact it was located too far south to achieve this.

At the west end of the trench, a wall foundation (100) about 1m wide was found (Fig. 9). It was made of irregular blocks of Ragstone, with the occasional piece of Reigate, chalk and Tudor brick, bonded with large quantities of yellow brown mortar. A sampled brick from the wall was very rough and distorted, and only 42-52mm thick, characteristics which suggest a possibly early 15th-century date. To the east, the layers dipped down, the trench filled with water, and the natural was not identified, suggesting that there was a moat in this area. This initial phase was thus characterised by a moat

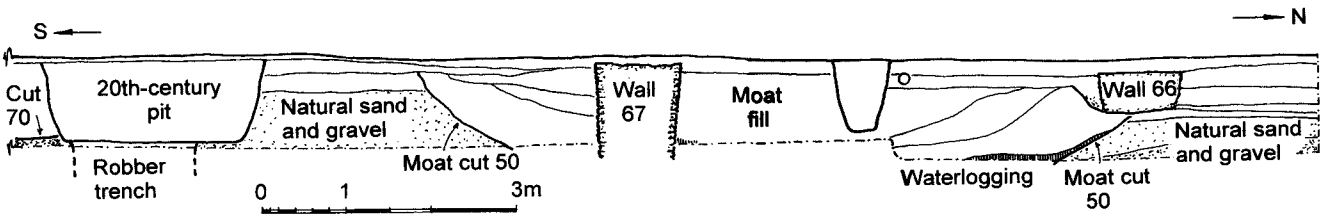

Fig. 8 The northern part of the section exposed in the foundation trench for the west wall of the new trolley store for the Golf Club.

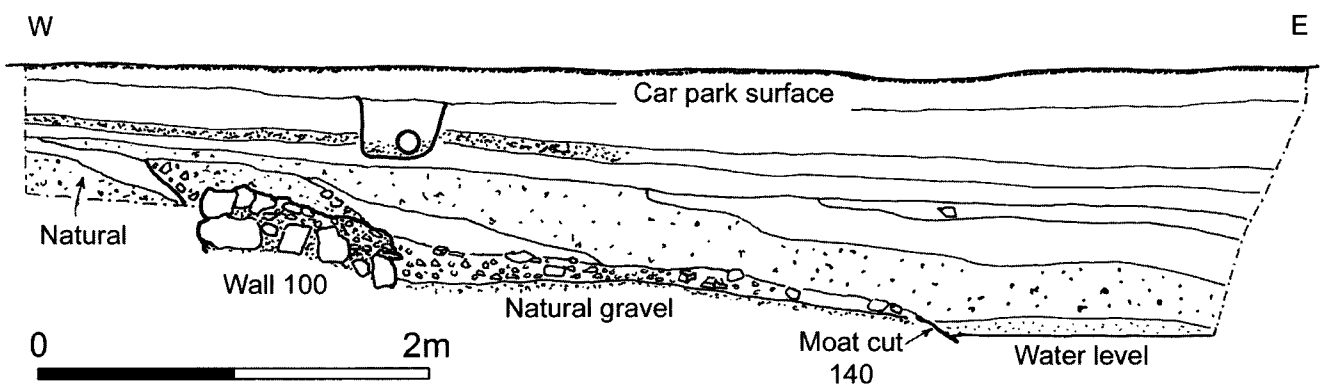

Fig. 9 Golf Club area, trench 2, north section.

with a wall at its edge, both features probably being contemporary.

The wall was robbed, and it and the moat were covered with layers of sandy clay loam. A stakehole cut into these layers contained 19th/early 20th-century bottle glass. This was sealed by modern surfaces associated with the Golf Club.

Trench 3

This east-west trench measuring was opened to the south of trench 2 to trace the southward continuation of the features found it. Evidence for a moat (RF7 141) was found at the east side of the trench in the form of a cut which filled with water. Again, it was impossible to say anything precise about its depth or width. An upper fill of the moat (RF7 120) produced single sherds of Mill Green-type ware and early type post-medieval red earthenware, datable to the late 15th or 16th centuries, as well as some fragments, doubtless intrusive, of 18th-century wine bottle.

To the west of the moat, there were two rubble filled cuts and two rubbly layers which may have represented wall robbing. There thus seems to have been a wall at the western edge of the trench, separated from the moat by a distance of about 2-3m, similar to the situation in trench 2. The probable wall robbing and the moat fills were covered by extensive layers of orange-brown and grey-brown sandy clay loam which ran the full length of the trench. These were sealed by modern surfaces.

Discussion of the excavations in the Golf Club area

The foundations of the professional's shop were located to the west of the east wing of the Hall, if this is projected southward on its existing orientation, and across the line of the former south wing if this is reconstructed to run east from the south-west corner tower found in the Barns area. Walls 66 and 67 were in the right position to form part of the south wing, and like other parts of the Hall in the Barns area, had been built into an earlier moat. Wall 67 lines up with both a foundation found in the 1960s and marked on Barnes' site plan, and the southern return wall leading off from the south-west corner tower found in the Barns area. However, wall 68, apparently a north-south return to these walls, continued to the north of them but did not line up with the existing west wing. It is also curious that no eastward continuation of these walls was found in the eastern foundation trench, though if the foundations were shallow, they might have been removed by ground level reduction. It was also anomalous that they were constructed largely of brick, in contrast to much of the standing building. But in the absence of any other foundations or features which might represent the south range, this interpretation of the two walls as forming part of the existing Hall seems reasonable.

Because of the material of which it was constructed, the chalk foundation (75) found further south within the footprint of the professional's shop seemed to be late medieval in date. Both it and the wall line with a moat to the east of it, found to the east in trenches 2 and 3, were too far south to form part of the existing building, and therefore should belong to a previous phase. The relationship between the moat in trenches 2 and 3, and that found in the watching brief and trench 1, is uncertain.

A large cut feature (70) towards the south end of the professional's shop had been filled relatively recently, and was identifiable with a north-south aligned pond indicated on 18th- and 19th-century estate maps. This may have had its origin in a former moat system.

Excavations to the south of the Barns (RF7)

Trench 4

This trench was excavated to the south of the east-west boundary wall delimiting the Barns area to investigate the site of the possible gatehouse as suggested by the structure indicated on the 1796 estate map (Fig. 4). The western part of the boundary wall, being built of Tudor brick and 600mm wide, is contemporary with the Hall, but the eastern part, including the area where the building was located, has been extensively rebuilt in the 19th and 20th centuries. The building on the 1796 map is shown on the 1st and 2nd edition OS maps, but had been superseded probably at some time early in the 20th century by a rectangular barn. This had been demolished 7-8 years previously after a fire fuelled by potato pallets. A narrow east-west strip trench was dug along the line of the west end of the southern footings of this barn. It was then extended westwards. A further extension was then made at right angles to the north, to establish the width of the moat found in the excavation, making a T-shaped trench overall.

Cut into the natural gravel at the west end of the trench, there was a gully (168) 4-500mm wide and up to 150mm deep. Its red-brown loamy fill contained a retouched flint blade, and the feature was therefore considered Neolithic in date.

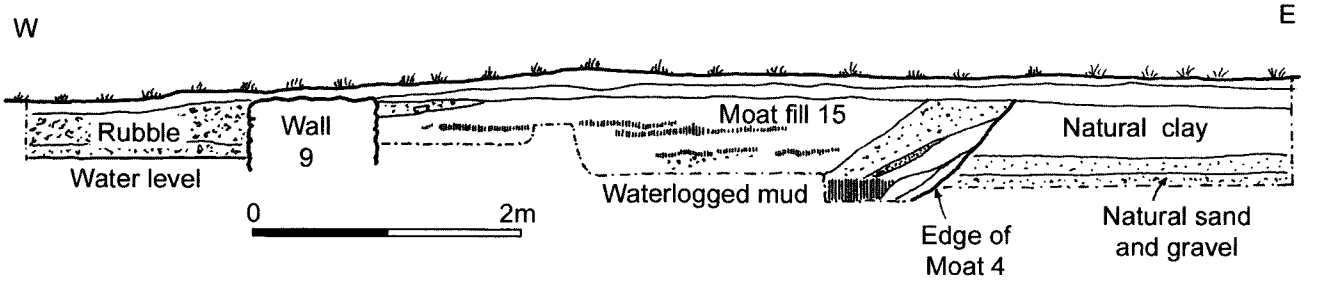

Fig. 10 Barns area, trench 1, north section.

The excavation was mainly filled with substantial deposits of orange-brown or grey-brown sandy clay loam containing stones, brick/tile, and in places abundant oyster shell. These deposits have been interpreted as the fills of an east-west moat (175), the north side of which corresponded with the boundary wall, and the south side of which lay just outside trench 4, giving a width of 7-8m. It was about 2m deep. A north-south edge to the moat was identified 1-2m from the west end of the trench. The dimensions of this feature leave little doubt that it was a moat, but waterlogged deposits characteristic of a moat were not found. 13th- and 14th-century pottery was found at the bottom of the moat. Succeeding fills however, contained a mixture of medieval and late medieval pottery, including Mill Green-type ware dating to the 15th to 16th centuries. These finds suggest the feature was filled before or at the time of the construction of the Tudor mansion.

A layer of dark grey loam above the moat fills was interpreted as a buried soil. It was cut by the foundation trench for the brick plinth for the timber-framed barn about 5.4m wide which had been destroyed by fire. The plinth was up to 800mm high and made of Tudor bricks laid to no particular bond. It butted up against, and was therefore later than, the boundary wall to the north. A layer of debris left by the demolition of the barn was sealed by the existing topsoil.

Although the possibility cannot be excluded, nothing was found to suggest the existence of a Tudor gatehouse. Indeed, the plan of the building found on the 1796 map is not characteristic of a gatehouse, and is more typical of a barn, though it has to be admitted that its location on the central axis of the Hall is suggestive of an entrance function.

Trench 5

This trench was located to the north of the east-west boundary wall. It measured 1 x 2.5m and was aligned north-south. The sequence here consisted solely of a post hole cut into the natural brickearth, and sealed by an orange sand and gravel interpreted as a farmyard surface, overlain by the topsoil. This seems to represent evidence of considerable ground level reduction and truncation of archaeological deposits.

Trench 6

This trench was situated to the north of trench 5, and measured 0.5 x 3.0m, being aligned east-west. As in trench 5, the topsoil overlay an orange pebbly sandy layer which probably represented a farmyard surface. In this case, however, the natural was not found below this layer. Instead, there were layers of grey-brown and orange-brown silty clay and silty clay loam which were excavated to a depth of 1.1m, at which point the trench began to fill with water. These layers were interpreted as the fill of a substantial cut feature such as a moat.

Excavations in the Barns area (RF8)

Trench 1

This trench measuring 10m by 1m was located about 14m south of the west range of the Barns, to check that it continued in this direction. At the west end of the trench, a wall was found. To the east, there was a farmyard surface formed of compact rubble. A sondage was dug in the central part of the trench, revealing a deep layer of waterlogged silt overlying a blackish organic silt. At this point, the trench filled rapidly with water from the east, as if a drain had been severed. As a result, only limited investigation proved possible, restricted mainly to recording of the sections (Fig. 10).

At the east end of the trench, below the rubble surface, there was a yellow silty clay overlying orange-brown sand and gravel, both natural deposits. The waterlogged deposits represented a moat (4) cut into the natural, at least 5m wide and 1.2m deep. A layer of black silt on the bottom of it was rich in vegetable matter, bone and oyster and other shells. Layers of gravel were tipped down the eastern side of the moat, above this silt, and possibly indicate the existence of a bank on that side. The main moat fill was a massive deposit of brown silty clay with lenses of dark grey silt. Both its position underlying the west wing, and medieval pottery from its fill, show that this moat was of medieval origin and earlier than the existing Hall buildings. The moat (4) produced an early medieval ware rim of a type datable to *c.*1200. Later pottery occurred in the third moat fill, comprising a sandy orange ware jug rim datable to the 13th to 14th century. A layer above this produced a residual sherd of Roman pottery. The top fill (15) contained the most pottery, with fine wares comprising Hedingham ware, London-type ware and Mill Green ware. All these fine wares would have been current during the mid 13th century, although both Mill Green ware and sandy orange ware continued into the 14th century.

The wall (9) at the west end of the trench formed a continuation of the west wall of the west range. Just over 1m wide, and built of roughly shaped Ragstone and some knapped flint bonded with a pale yellow mortar which extended on to its face to form a render, this wall was cut into the earlier moat fills. Layers interpreted as associated with the construction of the wall, which would have involved clearance of earlier structures and levelling, contained sherds of late medieval Mill Green-type ware, including a cistern rim datable to the 15th or 16th centuries, and a sherd of Raeren stoneware, belonging to the late 15th to mid 16th century, as well as building debris, including medieval brick, glazed peg tile and window came. The level from which the wall was built had been truncated, and all surfaces contemporary with it had been removed.

The wall and moat were sealed by a farmyard surface which incorporated a better laid track leading to the former threshing floor in the central midstrey of the barn.

Trench 2

This was opened to the south of the central range to check whether it extended further south. Initially a trench 2 x 1m was dug by hand. When waterlogging occurred at a depth of 0.8m, a second trench was excavated by machine 1.8m to the south. As this revealed a different sequence, the gap between the trenches was hand excavated to link them up.

Natural sand and gravel were found at the south end of the trench. This had been cut into by a feature, the blackish waterlogged fill of which was found above the gravel. The south edge of this probably lay just outside the excavation. The other edges were not found. The feature may not have been very extensive, but it could equally well have represented another moat edge. A medieval coarse ware jug handle datable to the 13th to 14th centuries was recovered from it.

Above this feature, in the south half of the trench, there was a very distinctive whitish layer consisting of crushed stone, sand and tile or tile fragments in a lime matrix about 100mm thick. No finds were associated with it. Over it was a layer of tiles lying flat, a few of which were glazed, apparently the remains of a collapsed roof, mixed with other building debris, including wall plaster and a cream-slipped floor tile. To the north, this layer was covered by further building debris at least 500mm deep, below which waterlogging occurred. This material contained Tudor and 20th-century bricks, some of which had been used for flooring, and modern as well as 15th/16th-century pottery. It was cut by an east-west trench, vertical sided, and filled with rubble, including Ragstone, brick and modern white china. Its depth was not determined, nor was the position of its north edge, though its width was estimated to be at least about 7-800mm. This feature was sealed by farmyard metalling.

A possible interpretation of this trench is as follows. The early cut feature, if extensive, may have been a moat. A wall was then built on the edge of it. To the south of it was a surface comprising a compacted area of building debris, possibly a floor, overlain by debris from a roof which indicated the demolition of a building. Building debris was deposited to the north to level up the ground and form a surface, which incorporated 19th/20th-century finds. The east-west wall was grubbed out, the fill of the robber trench containing 19th/20th-century finds.

The surface seemed at too low a level to be associated with the Tudor mansion. The wall cannot readily be fitted into the ground plan of the mansion, and may therefore have belonged to an earlier phase of construction, even it was not finally robbed until fairly recently. No evidence was found for the southward continuation of the east wall of the central range. However, the keyed brickwork and the doors in its south wall show that such a wall must have existed.

Trench 3

A trench measuring 2 x 1m was opened at the south-west corner of the central range to check whether a wall ran off to the west as indicated by keyed brickwork in the standing building. In contrast with elsewhere, the natural was yellowish brown clay. Since it was only 200mm down, it was clear that there had been ground level reduction. This may explain why no trace was found of a wall leading off to the west. The only discovery was a drain made out of reused Tudor bricks sealed by modern farmyard surfaces.

Trench 4

To check for the existence of a moat round the standing building, a trench was dug at the north-west corner, 2.3m from the west wall and 7m south of the octagonal tower. Waterlogged silts were found at a depth of 800mm. The trench was excavated down to 1.8m, at which level it filled with water, with the result that only a hurried assessment could be made of the stratigraphy.

At the bottom of the trench, there was black organic silt overlying blue silty clay, rising up at the west end, presumably indicating the edge of the moat on that side. Three roundwood posts were found lying on the bottom of the trench in the silt. They might have come from a revetment which had collapsed or been dismantled. Above the silts, there was a deep fill containing wood, including boards, charcoal and brick and tile. This was later covered by a layer of yellow clay 500mm deep. The moat was subsequently recut, being reduced in width by about 2m and in depth by about 800mm. This moat was filled with a series of relatively clean yellow-brown silts, and was sealed by various layers of surfacing material which were not examined in detail. Datable finds were not recovered from the excavation, except for brick and tile which was noted in all but the lowest silt, of which very little was seen.

Trench 5 and the south-west corner tower

Trench 5 was opened where Mr C. Hurst, the former tenant farmer, indicated that the south-west corner tower was located. However, the site initially selected was erroneous, as beneath rubble farmyard surfaces, waterlogged moat silts were encountered. In the deepest (1.14m) parts of the trench, at which level it filled with water, there was grey silt, overlain by yellow or orange brown sandy silty fills interleaved with thinner organic or gritty layers. These fills contained pottery dating from the 12th to the 16th centuries, comprising shell-tempered ware, medieval coarse ware, Mill Green ware, Mill green-type ware, and slip-painted and internally glazed sandy orange ware. The date range of this assemblage implies that when the moat was filled, the ground level was reduced, and earth containing artefacts associated with earlier phases of occupation was dumped in it.

The site of the corner tower was subsequently found to the north (trench 6), and its perimeter cleared by hand, only the topsoil being removed (though the foundations were subsequently completely exposed by Michael Clark M.P.). The tower is a regular octagon with sides measuring about 1.8m. It is built mainly of Ragstone, the blocks being for the most part rough-

faced. A few blocks of clunch and Reigate stone are also present. One of these has a mason's mark which looks 12th- or 13th-century in character, confirming the impression that these stones were reused from elsewhere. The adjoining wall foundations are about 1.4m thick, originally reducing in thickness above an offset to about 1m. The base of the north wall is set on the natural gravel at a depth of only about 300mm, showing that where the subsoil is firm, the walls have only shallow foundations.

Trench 7

A test pit (1.3 x 1.0m) was excavated in the midstrey area of the north range, primarily to investigate floor levels. The sequence was very complex for so small an area. The earliest feature was an east-west Tudor brick wall (187), the top of which was found at a depth of 900mm below ground level, running along the south edge of the trench. The wall was itself nine courses high and continued below the excavated level: it must therefore represent a deep foundation, possibly set into made ground such as the fill of a moat. The depth at which this wall was found, and its orientation, suggest that it was not associated with the standing building but rather with an earlier phase of construction.

Another brick wall (184) aligned north-south and fifteen courses high ran over the top four courses of 187. It was made of Tudor bricks which measured 220 x 105 x 65mm, and it had traces of render on it. It was found almost immediately below the existing ground surface, and was probably the base of the partition wall for which evidence existed in the sides of the north range. A brick floor (183) made of bricks 240 x 110 x 65mm, which sealed wall 187 and was found 550mm below the existing ground level, was probably the original floor in the Barns. A pinkish gritty mortar 15-35mm in thickness adhering to the surface of the bricks may have been the remains of a mortar floor laid over them. (Remains of brick paving were also found in the central range, see below).

Above the brick floor, there were two layers of brown clay loam, and then a herringbone brick threshing floor which occupied the midstrey area. The bricks were yellowish, measured 217 x 100 x 54mm, and were probably mid 19th century in date.

The watching briefs

From 1986-1988, as conversion work proceeded, watching briefs were carried out as discoveries were made. The observations made are set out below (and Fig. 7).

The north side of the Hall

A hole 1.3m deep was dug against the north wall of the tower-like bay projecting from the north range for an electricity cable. The foundations were at least this deep and were dug into made ground, consisting of yellow-brown to grey-brown silty clay loam with oyster shell, which probably represented the fill of a moat.

No features were seen in the initial ground level reduction when a new moat was created on the north side of the Barns, apart from a culvert apparently aligned on the door in the north wall and extending at least 13m north from that wall. A change was, however, noted in the character of the deposits. To the south of a line about 5m from the Hall, there was a grey-brown clay with oyster shell, brick/tile, mortar, and pebbles. To the north of this line, there were cleaner deposits of yellow-brown silty clay and brickearth. This suggests that the change corresponded to the edge of a moat, and that the north wall is built into its fill.

In 1987, a service trench about 1m deep was dug from the north range out to the Tudor brick boundary wall on Hall Road. About 58m from the Hall, a Tudor brick structure of uncertain character, perhaps 2m wide and aligned east-west, was seen on the bottom of the trench. This seemed to be the base of a sunken brick-lined feature. It is assumed that it was of Tudor date, but the bricks may have been reused. From this point to within 10m of the boundary wall, the trench filled with water. The boundary wall was observed to have a deep Ragstone rubble foundation.

Inside the north range

In 1986, a wall footing of flint with some pieces of chalk and peg tile, bonded with a hard yellow to orange mortar, was found in a north-west to south-east aligned service trench in the north range, located in the area of the former cross-passage. The construction materials of this wall suggest that it was medieval and pre-dates the standing building. It seemed not to be quite parallel with the walls of the standing building, but instead to run slightly north-east to south-west.

A hole about 2.5m deep was dug inside the range as a foundation for a new fireplace. The masonry north-south wall, which formerly divided the north range from the west range and which formed the west side of this trench, had a deep foundation made of reused bricks and chalk set in the moat fill. The hole filled with 600mm of water. Black waterlogged deposits were noted at the bottom of the trench, overlying gravel, and 1.5-1.8m behind the north wall. The silts were not very deep and the moat seems to have been kept fairly clean. At the east edge of the trench, there was a wall foundation 0.9m deep made of brick on a base course of stone. It did not correspond to any wall scar evident in the sides of the standing building, and seems therefore to be earlier or later than it. It may have been associated with wall 187 found in RF8 trench 7.

Inside the west range

The wall at the south end of this range was taken down and rebuilt. In the new foundation trench, the edge of a cut feature was found 1.2m from the east wall. It had been rapidly filled with redeposited brickearth. At 1.4m from the west wall, there was a deep cut, with water-logged silts and organic material at the bottom of it. This was the eastern edge of the moat found in trench 4. The west wall, which has foundations 2.1m deep, was built

into its fill. In contrast, the east wall has foundations only about 0.6m deep.

A north-south trench in the middle of the west range cut a brick culvert 1.8m deep and 0.66m wide running east-west. It had a brick base and its sides were one brick thick. The top had been largely broken through in recent times, to judge from the presence of modern debris. A large stone slab looked like the remains of an original capping. If so, then the line of the culvert was visible in the floor.

To the south-west of the west range

In 1988, the stables to the south-west of the west range were rebuilt as garages. In the course of digging foundations, the west edge of a moat was found about 10m to the west of the line of the west wall of the west range if this is projected southwards. At a depth of 1.6m below existing ground level, there was a layer of grey gleyed clay about 1.5m deep, overlying about 0.3m of black silt.

Inside the central range

Here the remains of a Tudor brick floor were found beneath a layer of crushed brick sealed by the existing concrete floor. The floor overlay clean yellow-brown brickearth, probably a bedding layer put down for it. Below the brickearth were natural deposits, consisting of alternating layers of sandy silty clay, silty sand and sandy gravel. A soil test 1.5m deep revealed this pattern of alternating layers to continue to that depth. The bricks in the floor were very worn and probably represent the original floor.

Discoveries outside the south-west corner of the central range

In 1988, a well was discovered just to the west of the central range, south of the midstrey, and cut in half by the foundations of a new building. 1.07m in diameter, it was built of excellently squared chalk blocks measuring typically 100mm in height by 130mm long. Its fill was loose and unconsolidated and there was no evidence of it having been securely capped off (though a capping could have been removed by ground level reduction). The construction method, and its location, imply that it predated the Tudor building. Its existence was unknown to Mr C. Hurst, the former tenant farmer: the farm had used another well further south, the approximate position of which is marked on Fig. 7. It is 1.5m in diameter, and made of red bricks laid stretcherwise. It had been sealed off with a domed capping with a round stone over the top. Its date was not ascertained, but it was probably Tudor and the capping would be typically 19th or 20th century.

A chalk wall was found in the side of a north-south trench opened to the west of the central range, just to the north of the wide brick arch, and to the north of the well found in 1988. The full width and alignment of the wall were not determined. As seen in the corner of the trench, it presented finished faces on its north and west sides. Other groundworks indicated that it continued eastwards. Either it butt-ended or represented the corner of a structure. The foundation extended almost 2m below ground level, at which point vertical timbers were observed beneath it. These were not examined as the trench filled with water, but presumably they were piles or shuttering. Foundation trenches 300mm wide for the chalk structure were noted in the sections. The natural here consisted of a reddish brown brickearth.

Work in 1988 uncovered a north-south drain about 7m from the south-west corner of the central range. It was cut through in two places and could be traced for about 6m. It was 640mm wide by 940mm deep, but its vault had been rebuilt in stock bricks. It contained silt about 300 mm deep. It may have been associated with, or an extension of, the culvert found running north-south to the north of the north range.

In a north-south trench dug parallel to the west wall of the central range, the remains of four cooking pots (Fig. 11, nos. 1-4) datable to the early 13th century were found below the north wall of the midstrey. This trench seemed to be cut through natural, but where the pots were found, the brickearth was interrupted and replaced by brown loam, evidently the fill of a feature.

The 18th green

When two trees were blown down in the 1987 gale, Eric Hills, a local archaeologist and golf club member, noted Tudor brickwork amongst their roots. The trees were about 120m to the east of the Hall, and 80m south of the road. The bricks measured 230 x 110-120 x 50-54mm, and had relatively smooth faces and square arrises, but very rough bases. Small areas of turf were removed and the holes left by the roots partially cleared out. This revealed brickearth overlain by a charcoal deposit, sealed by a hard scorched layer covered by brickbats. The extensiveness of these deposits, and the degree of burning associated with them, suggests that they were associated with brick kilns or clamps. Whether these were for the church tower, or for the existing Hall, is difficult to say, as bricks of this type are present in both. The 1796 estate map indicates that there was another kiln over the road to the north where there was a field called The Clamp (Fig. 4)

The medieval and later pottery

by Helen Walker

Introduction

A small quantity of pottery (369 sherds, weighing 5.6kg) was excavated from thirty-eight contexts. The assemblage has been catalogued according to Cunningham's typology for post-Roman pottery in Essex (Cunningham 1985, 1-16), and Cunningham's fabric numbers are quoted in this report. The cooking pots have been dated according to Drury's typology of cooking pot rims in central Essex (Drury *et al.* 1993, 81-4) and the cooking pot rim codes are also quoted in the report. Nearly all the stratified pottery is either medieval or late medieval in date, and about half of the pottery excavated is modern, coming mainly from surface contexts. No large stratified groups were present, but the remains of four cooking pots were found in a builders' trench.

The fabrics
All the wares present have been described in previous pottery reports published by the author in *Essex Archaeology and History.* Further descriptions of them can also be found in Drury *et al.*1993, 78-95 and Cotter 2000. The fabrics are listed in approximate chronological order.

Shelly wares
Early medieval shell-tempered wares span the 10th to 13th centuries, with some evidence of shell only wares (Fabric 12A) being the earliest type (Drury *et al.* 1993, 80). In south Essex, shell-tempered wares are particularly common and shelly ware cooking pots with developed rims show that these wares were being produced well into the 13th century (for example at North Shoebury, see Walker 1995, 114).

Shell only tempered ware (Fabric 12A) appears to be particularly common, 44 sherds accounting for 12% of the total pottery found, but nearly all of these sherds belong to semi-complete cooking pot no. 1 found in the watching brief on a builders' trench. No. 1 (Fig. 11) has an upright neck and a thickened down-curving rim, which does not fit into Drury's typology, but does appear to be a developed type most likely belonging to the 13th century. This rim type is comparable to other shelly ware cooking pot rims found in south Essex, for example at North Shoebury (Walker 1995, fig. 76.31, 44-5) and at Horndon-on-the-Hill (HH3, Walker forthcoming a, nos. 25-26). The remaining examples of shell-tempered ware (Fabric 12A) are all sherds occurring in RF7 watching brief context 51, fill of moat 50, and in moat fills 204 and 207 of RF8 trench 5, where they are residual. As well as crushed bivalve shell (probably oyster), the single sherd from moat RF7 50 (context 51) also contains fragments of tiny gastropod shell.

Shell-with-sand-tempered ware (Fabric 12B) is much less common, amounting to five sherds or 1.5% of the total. Forms comprise a cooking pot rim from the builders' trench (no. 2, Fig. 11). This has a slightly turned-down thickened rim and again can be paralleled by examples from North Shoebury (Walker 1995, fig. 75.19 and fig. 76.39). Otherwise, examples of this ware comprise body sherds from RF7 trench 1, moat fill 4, and RF8 trench 1, moat 4 (fill 15), where they occur with pottery spanning the 13th to 14th century. The sherd in RF7 (4) also contains gastropod shell (in common with the Fabric12A example). Only one example has been classified as sand-with-shell-tempered ware (Fabric 12C, 0.25% of the total), a residual sherd from RF7 trench 4, moat 175 (fill 146).

Early medieval ware This (Fabric 13) is a coarse sand-tempered ware, with a date range of the 10th-13th centuries. Only one sherd (0.25% of total) of this ware is present, the rim of a large cooking pot or possible bowl of Drury's rim type B4 datable to *c.*1200 (no. 5, Fig. 11) from the bottom of moat 4 in RF8 trench 1.

Medieval coarse ware
The successor of early medieval ware, this ware (Fabric 20) is a typically grey-firing sand-tempered coarse ware produced from the later 12th to 14th centuries. It is relatively common (46 sherds or 12.5% of total) here, especially in the moat fills, although in some moat fills, for example moat RF7 trench 4, 175, it occurs with late medieval pottery and is residual. It also occurs residually in demolition and farmyard contexts. The remains of two cooking pots were amongst the pottery found in the builders' trench, one with a B4 rim, datable to *c.*1200 (Fig. 11, no. 3), and one with a slightly more developed H2 rim datable to the early to mid 13th century (no. 4). In addition, the sagging base of a cooking pot with a partial internal glaze occurred in RF8 trench 5, moat fill 204. The remaining forms comprise a jug rim and handle from the waterlogged feature (61) in RF8 trench 2 (Fig. 11, no. 6), and part of a strap handle from a jug in moat 175, RF7 trench 4 (fill 143). Both jug handles are decorated with incised lines. There is some variation in the fabrics of the medieval coarse wares, and one sherd (RF8, trench 1, context 8) shows calcareous inclusions as well as sand. In addition, two sherds (RF8, trench 1, contexts 5 and 15) have an unusually coarse sand-tempering and pale margins. These examples may be the products of local industries. Also worth noting is that two medieval coarse ware sherds, both from RF7, trench 4, moat 175, including the jug handle described above, show deposits of limescale, consistent with deposition of limescale from boiling water. On one example, a body sherd from the shoulder of a vessel, the limescale is deposited on the external surface. The jug handle shows limescale on both surfaces and on the breaks showing that the limescale was deposited after breakage, perhaps indicating some sort of secondary use.

Hedingham ware
This (Fabric 22) is a fine ware manufactured in the area of Sible Hedingham in north Essex. It supplied East Anglia but was also traded down the Essex coast. It was produced from the mid 12th to mid 14th centuries, but in Essex appears to be commonest during the later 12th to 13th centuries. Only two sherds were found (0.5% of total), both body sherds showing the typical mottled green glaze. One is residual in a modern surface in RF7 trench 1. The second occurs in the top fill (15) of the moat in RF8 trench 1.

London-type ware
This is another fine ware (Fabric 36), made in London and widely traded during the late 12th to mid 13th-centuries (cf. Pearce *et al.* 1985). It tends to be widely but sparsely distributed throughout Essex but is perhaps most common near to major route-ways into London such as the River Thames (as at Horndon-on-the-Hill, Walker, forthcoming a) and the Roding valley (as at Chipping Ongar, Walker forthcoming b). London-type ware was also traded along the North Sea coast (Pearce *et al.* 1985, 6). Three small sherds from these excavations (1% of total) have been tentatively identified as London-type ware, comprising two green glazed sherds residual in RF7 trench 4, moat 175 (fill 154), and a sherd showing an applied white strip under a mottled green glaze. The latter was found in the upper fill (15) of the moat in RF8 trench 1, and appears to be an example of either a North French Style or a Highly Decorated Style jug dating to the early to mid 13th century (Pearce *et al.* 1985, 19, 29-31).

Sandy orange ware
This (Fabric 21) is a general category comprising sand-tempered oxidised wares spanning the 13th to 16th centuries; 17 sherds representing 4.5% of the total were found. The only stratified medieval example is a fragment of jug rim and handle from RF8 trench 1, moat 4 (Fig. 11, no. 7). It is sparsely glazed but still appears to be medieval, most likely 13th to 14th century in date, and has an unusual fabric which may indicate local manufacture. A number of sandy orange ware sherds were found in RF7 trench 4, moat 175 (fill 146), most are unglazed and probably late medieval. Here finds include a fragment from a large unglazed bowl with straight out-flaring sides and a slightly everted flanged rim (diameter *c.*400mm, Fig. 11, no. 8), and a plain sherd showing internal limescale, indicating the vessel may have be used to contain or boil water. RF8 trench 5, moat fill 204, produced a late medieval flatware sherd, which is slip-painted and glazed on the internal surface.

Mill Green ware
Mill Green ware (Fabric 35) is the second major medieval fine ware pottery industry in Essex, centred at Mill Green near Ingatestone in south Essex. Described by Pearce *et al.* 1982, and Meddens and Redknap 1992, it has been dated by its occurrence in Thames waterfront deposits to the late 13th to mid 14th century, although evidence from excavations in Essex indicates production was underway by the mid 13th century (Walker 1995, 114, and Walker 1996, 130). Evidence is now accruing for further production centres on the Claygate/Bagshot beds of south Essex, for example at Noak Hill, near Romford, and at Rayleigh (Walker 1990, 92-102).

At Rochford Hall, nine sherds of Mill Green ware were excavated from the moat fills (2.5% of total). Most of the sherds are very small, weighing 4g or less, so identification is somewhat tentative, although several show the cream slip-coating under a mottled green glaze, which is characteristic, but not diagnostic, of Mill Green ware. A large fragment of Mill Green ware from RF7 moat 175 (fill 146), showing bands of incised lines around the body, has been identified as part of a rounded jug (cf. Pearce *et al.* 1982, fig. 10.24). The glaze is rather decomposed, which may be due to burial conditions, or indicate that the jug was under-fired. The rim is fire-blackened internally suggesting it had been heated.

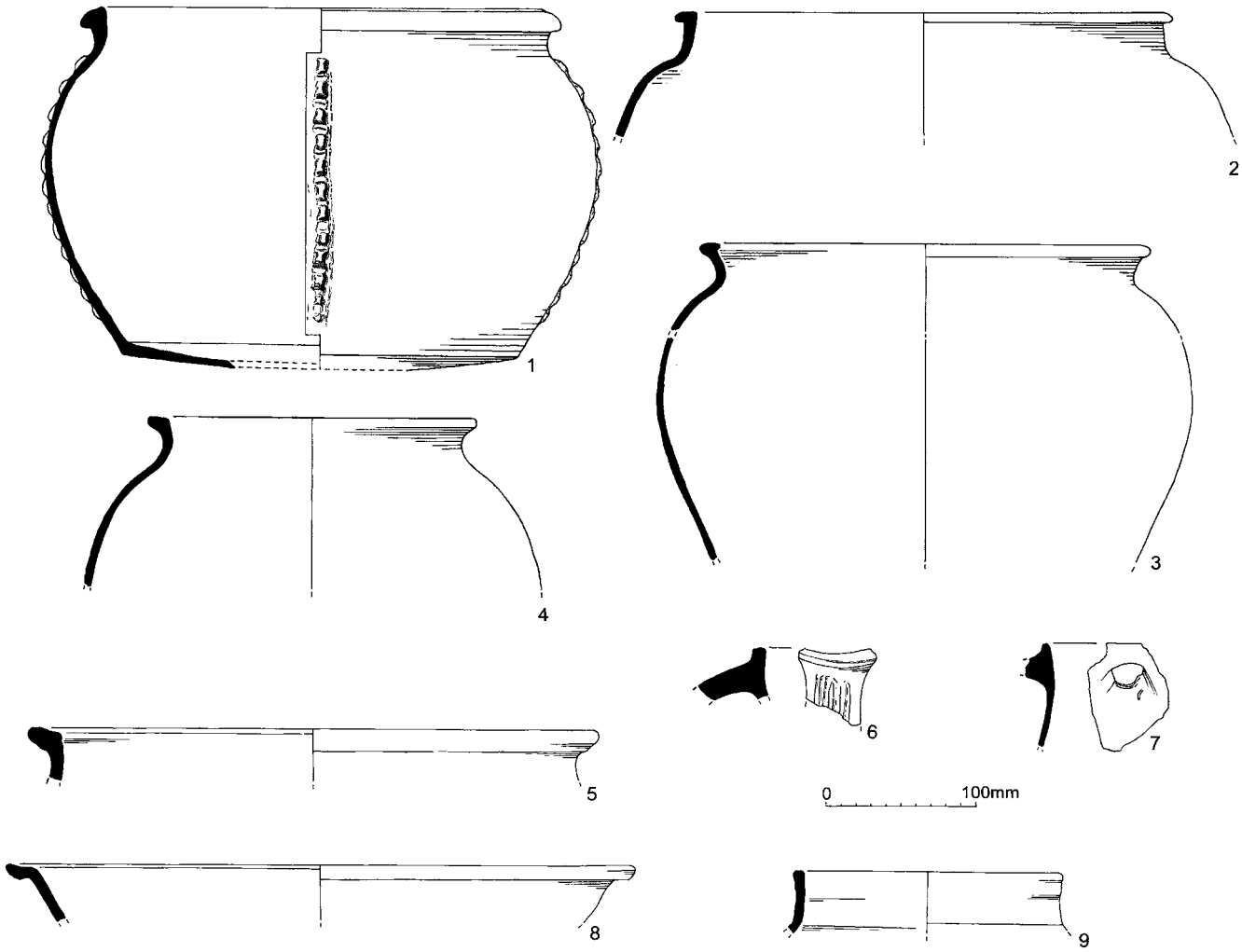

Fig. 11 Medieval pottery.

Mill Green-type ware
Pottery with a fabric visually identical to Mill Green ware, but whose forms and surface treatment are untypical, is classified as Mill Green-type ware (Fabric 35B). This classification is often applied to a type of late medieval pottery, which is slightly harder than true Mill Green ware, and tends to be unglazed or sparsely glazed with decoration confined to thin cream slip-painting, as is typical of pottery of the later 14th to 16th centuries. It is possible that at least some of this Mill Green-type ware originates from the production site at High Road, Rayleigh, where pottery with a Mill Green fabric but stylistically later, perhaps dating to the 14th to 15th centuries, was excavated (Walker 1990). This ware is relatively common at Rochford Hall, occurring in the moat fills and elsewhere (42 sherds or 11.5% of the total). Forms comprise fragments from large jugs and/or cisterns datable to the 15th to 16th century. One cistern rim is illustrated (Fig. 11, no. 9). Most sherds are unglazed and some are slip-painted.

Post-medieval red earthenware
This ware (Fabric 40), which normally predominates in post-medieval assemblages, is relatively uncommon here (eight sherds or 2% of the total). All could be of early type, which is normally unglazed or sparsely glazed, often with reduced surfaces and dates from the late 15th to 16th centuries. It is sometimes little different from Mill Green-type ware. Examples of this ware were found in some of the moat fills and in modern contexts in RF8 T1 and T2. Forms comprise a thumbed base from either a large jug or a cistern (RF8 T2 62), and a shallow form with an all-over external glaze which may be from a lid (RF8 T1 11), though the latter may be early type post-medieval red earthenware in spite of its glaze coating.

Raeren stoneware
One tiny sherd (0.25% of the total) of this German stoneware (Fabric 45C) was found in RF8 trench 1, context 12. It is most likely to be from a squat bulbous drinking jug imported into this country in vast quantities from the late 15th to mid 16th centuries, and a common find on inland sites as well as at coastal sites and ports (Hurst *et al.* 1986, 64).

Cologne/Frechen stoneware
One sherd (0.25% of the total) of salt-glazed German stoneware (Fabric 45D/E) decorated with a moulded acanthus leaf was found unstratified. This motif is found on both Cologne and Frechen stoneware (e.g. Hurst *et al.* 1986, figs 103-5) and may be assigned a 16th century date.

Modern pottery
A total of 189 sherds, or 51% of the pottery found, is modern. It mainly comprises ironstone and other modern white earthenwares, with sherds of modern porcelain and modern stoneware (Fabrics 48, 48B, 48D and 45M). None of the pottery appears to be earlier than Victorian, so a mid 19th to 20th century date can be assigned. A few sherds of such pottery were found in RF7 moat 50 (the watching brief on the trolley store)and RF8 trench 2, moat fill 200; in robbing and modern features in RF8 trench 2; and in the farmyard surfaces in RF8, trenches 2 and 3. At least some sherds in the above feature groups were found to be burnt as if they had been in a fire. Most of the modern pottery was found in surface 2 at the top of RF7 trench 1, where 141 sherds, weighing 1.5kg, were recovered. One of the sherds is datable to the very late 19th or early 20th century; the rest of the pottery in this context could also be of this date range

Illustrated pottery (Fig. 11)

The four cooking pots found below the north wall of the midstrey have all been illustrated (nos. 1-4). Also in the trench was a body sherd of shell-tempered ware and a body sherd of medieval coarse ware showing a thumbed, applied strip. The cooking pots can be dated by their rim types, and all could be current during the early 13th century.

1. Cooking pot rim: shell-tempered ware (Fabric 12A); grey core, orange buff surfaces; neatly executed thumbed applied strips; fire-blackened and sooted on sides and around rim, consistent with being placed in or near a wood-burning fire; no evidence of use on internal surface; see fabric section for discussion of rim type. The rim and neck appear wheel-thrown, but dimple marks on the internal surface below the neck, indicate that the body has been coil-built and joined to the rim. This composite method of manufacture is described by Cotter (2000, 94) and was used on cooking pots until a change in manufacture lead to fully wheel-thrown vessels around the mid 13th century (Cotter 2000, 106). The vessel is well-made with walls of even thickness even though it is coil-built.

2. Rim and shoulder of cooking pot: shell-and-sand-tempered ware (Fabric 12B); grey core, red-brown surfaces; composite manufacture (see No. 1); sooting on rim and shoulder; see fabrics section for discussion of rim type.

3. Large fragments from rim and body of cooking pot: medieval coarse ware (Fabric 20); pale grey fabric; probably also of composite manufacture; horizontal break-line above basal angle also indicating it was made in sections; sooting on sides and rim; also a greenish deposit on the side, probably cess.

4. Large fragment from top half of cooking pot and base sherd medieval coarse ware (Fabric 20); grey core, reddish margins, brown-grey external surface and grey-buff internal surface; probably also of composite manufacture; sooting on rim and sides, patch of sooting on internal surface, also traces of cess.

5. Rim of large cooking pot or bowl: early medieval ware (Fabric 13); pale grey-buff fabric with slightly darker ill-defined core. RF8 T1, moat 4.

6. Jug rim: medieval coarse ware (Fabric 20); grey with paler grey interior; incised grooves down length of handle; plug of clay visible on inside of neck where handle was inserted through the vessel wall. RF8 T2, waterlogged feature 61 (fill 70).

7. Jug rim: sandy orange ware (fabric 21); orange-buff surfaces, orange-red interior with grey core where vessel walls are at their thickest; occasional spots of apparent dark green glaze; fabric is fine and well-sorted for a sandy orange ware; horizontal striations on internal surface, not throwing lines. RF8 T1, moat 4 (fills 15, 16).

8. Bowl rim, sandy orange ware (Fabric 21), unglazed pinky orange surfaces with darker patches; orange-brown interior. RF7 T4, moat fill 146.

9. Cistern rim: Mill Green-type ware; uniform orange fabric, very little different from early type post-medieval red earthenware; unglazed and undecorated. RF8 T1, context 13.

Discussion

The earliest pottery is the group of cooking pots from the builders' trench datable to the earlier 13th century. The shell-tempered cooking pots are of interest because they show similarities with other cooking pots from south Essex and may all be products of the same industry. Shelly fabrics are far more common in areas bordering the River Thames than they are elsewhere in the county, probably due to a ready supply of estuarine shell.

The medieval and late medieval pottery only occurs in small quantities and sherd size is often small, indicating that the pottery could be residual and should be used to date the features with caution. The pottery supply is typical of an assemblage from south-east Essex, with south Essex shelly wares, London-type ware which was traded along the nearby Thames and North Sea coast, and Hedingham ware

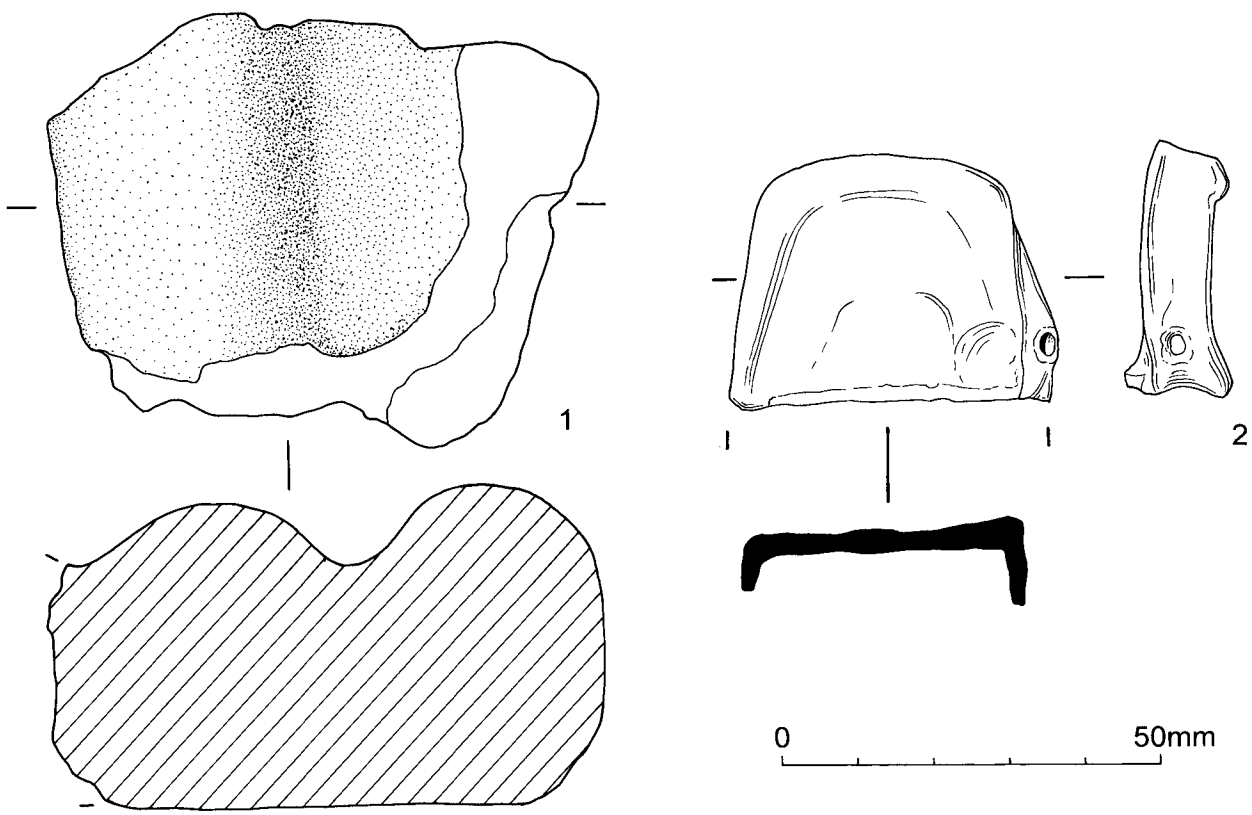

Fig. 12 Piece of moulded plaster and fragmentary lead object.

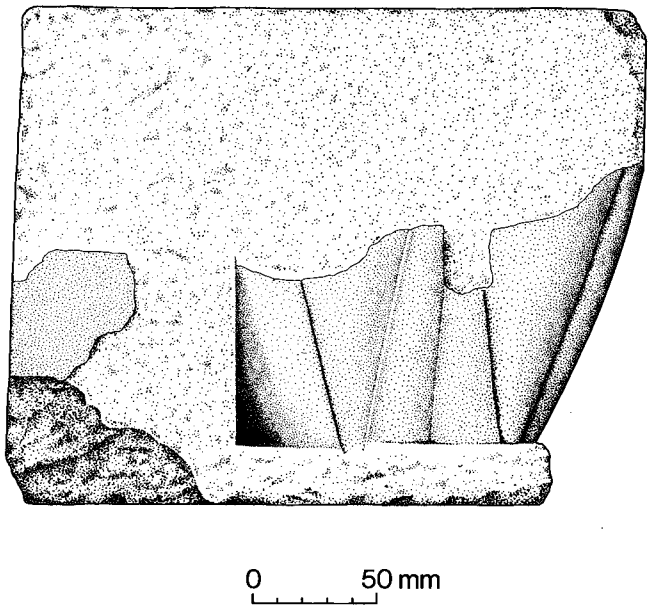

Fig. 13 Reused romanesque capital.

which was traded down the Essex coast. Also present are Mill Green ware and Mill Green-type wares which are common in south Essex; some of these wares could have been manufactured at Rayleigh.

There is not enough pottery to say much about function or status; certainly for such an important manor, there is nothing to indicate high status. There is no evidence from the pottery of specialised use, although amongst the stratified medieval material jugs seem to be more common than cooking pots, which is unusual. The sooting patterns on the cooking pots from the builders' trench are quite typical, and indicate they were indeed used for cooking (or other domestic process requiring heating), as in spite of their name, cooking pots were general purpose vessels.

Finds other than pottery

Artefacts were not numerous, and were mostly not of any inherent interest. They mainly comprised 19th- and 20th-century iron and glass. The building material was of some significance in the context of the Hall and its predecessors. In view of the status of the site, it is unfortunate that a larger assemblage of animal bone was not recovered.

Building material

Nine tile fragments from RF7 180 can be reconstructed to make a nibbed tile 210mm wide and 14mm thick. Large module nibbed tiles of this size can be paralleled at Cressing Temple and date from the 12th and 13th centuries (cf. Ryan and Andrews 1993). Pieces of ridge tile were relatively numerous in RF7 T 4 and RF8 T5 (south of the south-west tower). These are not normally a common find, and they can probably be related to the earth walls capped with tiles mentioned in the 1433/34 building accounts. The distribution of these ridge tiles, and the nibbed tile, which was from the same area (RF7 T4), suggest that the 15th-century garden and farmyard lay to the south of the Tudor mansion. A few fragments of glazed peg tile raise the possibility that these were used decoratively on the pre-Tudor buildings.

Three small (200 x 200 x 50mm) white or cream-coloured bricks of the sort believed imported from the Low Countries (cf. Ryan 1999) were found in RF7 trenches 1 and 2. Their bases were not grass-marked. A larger (255 x 110 x 52mm) pinkish cream brick from the moat fills in RF7 T4 (146) was probably also an import. These bricks must have come from the buildings which pre-existed the Hall. Such bricks date from the first half of the 14th-century, but reuse gives them an almost indefinite life. They were used for dressings in stone buildings.

A sample of a small (104 x 42-52mm) and crudely made fragmentary Tudor brick was taken from wall 100 in RF7 T2. This wall pre-dated the Hall, and the character of the brick, very rough and distorted with very creased surfaces, may indicate a late 14th- or early 15th-century date (cf. Andrews 2000a and 2000b). Another small (98 x 46mm) and crudely made brick was found in RF7 T1. Otherwise the sampled Tudor bricks (almost entirely fragments) had dimensions which fell into the range 110-120 x 50-57mm, and seem to be typical of the later 15th and earlier 16th century. Bricks in the Hall have dimensions 230-45 x 110-15 x 53-60mm, and as such are relatively large Tudors. However, bricks of this size occur in the church tower, which had been built by Thomas Boteler at the close of the 15th century, and were also found in the remains of the kiln or clamp discovered on the 18th green. Either local bricks stayed fairly uniform in size or most of those in lord Rich's building were reused. New bricks must, however, have been used for the windows and arches. As with most Tudor brickwork, these were rubbed or cut, not moulded. A lump of mortar from RF8 203 (moat fill) was ruddled and lined out in white, giving a hint as to the treatment of the brickwork of the buildings pre-dating the Hall.

A small amount of wall plaster was collected in the excavations. Two pieces from RF8 T1 13 seem to have had lath impressions. In RF8 T2 63, there were two pieces 13mm thick, one-coat work, and a fragment of stucco. This is hard, with an off-white fine-textured matrix containing a moderate quantity of sub-angular grits. It has what looks like fluted moulding, which is painted and now dark red in colour (Fig. 12).

Much of the building material from the excavations was associated with the farmyard buildings which were derelict by 1984. Many of the bricks found had been used for paving in stables and animal sheds. They included two Dutch clinkerts (RF8 53).

Architectural stone

Two items of interest were recovered from the south wall of the west range which was dismantled and rebuilt during the residential conversion. One was a jamb or reveal in Reigate stone, with a polygonal shaft with two rectangular holes for ferramenta. The other was a Romanesque scalloped capital in Caen stone (Fig. 13). The

capital only has two faces, which suggests that it was set at the end of a row of blind arcading. In the top, there is a slot 25mm wide and a vertical hole for an iron cramp. It is assumed that this capital came from a monastic building such as Prittlewell Priory.

Lead object

A fragmentary low-sided and flat-bottomed lead vessel or tray 40mm wide (Fig. 12) was found in RF7 146, a moat fill datable probably to the early or mid 16th century. There is a perforation in one side. It seems to be an offcut from a larger object which has been reworked.

Animal bone

by Joyce Compton

A small assemblage of animal bone, 125 fragments weighing 2621g, was recovered from the excavations. The bone has been counted and weighed, in grams, by context. The assemblage was scanned for condition and completeness, and for evidence of butchery or secondary utilisation. Identification of the taxa and skeletal elements present was carried out using Schmid (1972) and Cornwall (1956), although more than half of the assemblage is too fragmentary for precise classification.

The bones were recovered mainly from the moat fills, contexts datable to the early or mid 16th century, though probably containing residual material. A range of food animals is present, though large mammals, mainly cattle but also including deer, sheep/goat and pig, are dominant. Although largely fragmentary, the bone assemblage is in good condition with unabraded surfaces. Many of the bones exhibit marks made by knives and cleavers during the butchery process. Most of the scapulae present had been chopped, and the proximal end of a deer tibia in moat fill 147 had been sliced off. Several cattle long bones had been split lengthways, probably for extraction of marrow. Few foot bones are present, indicating that the processing of hides was probably not taking place in the vicinity. The assemblage has all the characteristics associated with the preparation of already skinned carcasses into joints of meat for domestic consumption.

The sole exception is the animal bone from context RF8 201 (upper moat fill). All five fragments are from the skull area; three are mandibles, one a maxilla and one a cranium fragment, three of which are probably from the same animal (pig). Two cattle mandibles are from different animals, but, in both cases, the teeth are very worn, indicating older animals. The teeth of the pig mandible are also worn. The bones are all discoloured, consistent with long-term burial in a waterlogged environment. There is no evidence of butchery.

Although the overall assemblage is small, there are many points of interest, and further study might provide more identifications, particularly of the bird and deer bones. The deer bones are a reminder that hunting would have played a part in the diet of those resident at the Hall; the park is believed to have been situated to the south of the mansion.

Discussion

The excavations uncovered a bewildering palimpsest of old walls and moats, as well as other features. They were intended to evaluate the site in advance of the conversion work rather than to explore it fully. They did show there was little well preserved superficial stratigraphy: ground level reduction, occasioned by the infilling of the moats, and farmyard activity, had removed most surface deposits. The investigation of the moats and cut features was impeded by the high water table, whilst the large size and extent of these features meant that small trenches could not be expected to elucidate their layout.

Evidence for occupation before the Middle Ages was confined to some flints from RF7 T4 at the south end of the site, one or two fragments of Roman tile in the walls of the Hall (though these, in common with all the materials of which it is constructed, could have been brought from elsewhere), and a single Roman sherd from a moat fill (RF8 T1). Nor was there anything to show conclusively that this was the site of the Domesday manor, even if the assumption is that it was: late Saxon pottery was absent, and the shelly wares and the single sherd of early medieval ware all seemed to be 12th- or 13th-century types.

Wall foundations considered earlier than the Tudor mansion, because they failed to conform with, or lay outside, its ground plan, were found inside the north range, to the west and possibly to the south of the central range, in the area of the new professional's shop in the Golf Club, and to the east of the professional's shop. These foundations were built of stone, or stone and brick. Stone foundations were discovered in the north range, outside the central range, and in the area of the professional's shop. They were largely of chalk and could have been relatively early in date, say 13th or 14th century. The foundations incorporating brick (those to the east of the professional's shop) must have post-dated *c.*1400. Together, these foundations imply a suite of substantial buildings occupying an area greater than the footprint of the Tudor mansion. Waterlogged deposits indicate that these buildings were surrounded by moats.

All this is consistent with the 1430s building accounts, which make it clear that the manorial complex was extensive and occupied by substantial buildings, with at least two moated enclosures. However, it is unthinkable that there had been no changes since that time and the acquisition of the manor by Richard lord Rich in 1550. The 1430s work had consisted of a refurbishment, not a total rebuilding. The hall, for instance, was an aisled building which may well have been already 100 years old or more in 1433. It is probable that at that time the manor comprised a disparate group of buildings arranged around the moated enclosure. Thomas Boteler, earl of Ormonde, is unlikely to have confined his building activities to the church tower. At his other main Essex property, New Hall, Boreham, he obtained a licence to crenellate in 1491. Thomas Boleyn, his successor as owner of Rochford Hall and New Hall, was a man of substance who may well engaged in building work. By the opening decades of the 16th century, the manor is likely to have resembled Nether Hall, Roydon, or Oxburgh Hall in Norfolk, with a gate-tower and buildings flanking the sides of the moat, possibly with corner towers.

Although no doubt impressive in its way, it was inadequate to satisfy the requirements of Rich, a former Lord Chancellor and probably the greatest landowner in the county at the time. There can be little doubt that the Hall was the work of Rich. The surviving elements are of uniform build, some of the architectural features (notably the gables and the carpentry) could not date from much before 1550, and the presence of reused ecclesiastical stonework (cf. Fig. 13), some of it probably from Prittlewell Priory which was owned by Rich, put its construction to after the dissolution of the monasteries. Other buildings in Rich's possession, such as Hadleigh Castle which he had from 1552, may have

been quarried for Rochford Hall, but some of the reused stone probably came from the site itself, in view of the stone foundations revealed in the excavations.

Rich's programme was to create a mansion which was a unified symmetrical whole. Most if not all the old buildings were swept away. His approach seems to have been more thorough-going than at his other major seat at Leez Priory where the footprint and part of the fabric of the monastic buildings was retained (cf. Clapham 1915). The moat was infilled. Moats have their uses, but as open drains they became fetid and stank. The two culverts found in the watching briefs, and that recognisable in the north wall of the northern tower-like bay, doubtless represent part of a programme of drain building, as at Ingatestone Hall (Emmison 1961, 36). The footprint of the new building was then laid out, on the west and north sides at least, so that it projected out into the former moat. This interpretation is supported by pottery datable to the 16th or 17th centuries in the moat fills excavated in RF7 T3, RF7 T4, and RF8 T5. (Earlier pottery, of the 12th-14th centuries, in the other trenches cut into the moats, must be residual, the result of ground level reduction carried out to fill the moats).

The mansion was largely stone, with brick dressings, and plastered. It was about 200ft (60m) square, with octagonal corner towers. The evidence of the surviving full-height walls suggests that there was a total of eight gables on each elevation, four either side of a central square tower-like projection. The base of this survives on the north side. It is no accident that, on the east side of the building, the Golf Club range consists of four gables and then a rebuilt southern end, now offices, which probably corresponds to another tower-like feature. It may be that structural weaknesses encouraged these 'towers' to collapse. The main problem in the reconstruction of Rich's mansion is the alignment of the east range, which is at more than 90° to the north one. There are slight differences between the north and east ranges: the north one has chimneys rising through the gables, whereas the east one does not, but instead has finials at the apex of the gables. However, there is nothing to suggest that they are not part of essentially the same building programme. The misalignment is most simply explained by the desirability of avoiding, or lining up with, some pre-existing element in the ground plan. It looks as if it has been set to the east of the moat found in RF7 T1 and in the watching brief on the trolley store. It is possible, too, that the southern part of the Hall incorporated structures retained from the early manor, and to that extent it may not be entirely predictable, though the pattern of the main elevations must have remained fairly constant. In the centre of the south elevation, there must have been a gateway, as it seems the original approach to the Hall was on that side (Benton 1888, 793-4). This gateway may not have taken the form of a substantial tower as at Leez Priory, as otherwise elements of it might have been expected to survive. The internal layout of the Hall clearly did not have the same regularity as the external envelope. There were at least five courtyards, those in the north-east quarter being narrow and cramped. Again, it is the south part of the complex which is most difficult to reconstruct. Here more spacious courtyards might be expected, especially in the area of the entrance. To the south of the Hall there would have been an outer court. A structure shown on the 1796 plan may represent the site of a gatehouse into it. Extensive brick-walled enclosures, still substantially intact, spread out on the west and north sides.

The interiors of that part of the building which comprised the Barns were mostly plastered at the ground floor and panelled at the first floor, though the evidence was not entirely clear and this pattern seems not to have been consistent throughout the building. Although the ground-floor ceiling heights were lofty (about 4.0-4.5m), the first-floor windows were considerably higher than those at ground floor. There are five of these in the Golf Club north wing, curiously misaligned on the four gables; about 3m high, they would have been four-light with transoms. This implies a hierarchy of function, and suggests that the ground floor was a utilitarian 'cellar' or semi-basement area. Certainly it was not particularly well lit, the windows being neither plentiful nor arranged regularly on the external elevations. The ground floor seems also to have lacked heating or garderobes. It was probably paved in brick, perhaps with a plaster surface over it. The culverts may have been covered by stone slabs set at floor level. There is some evidence that the interiors were accessed via corridors along the courtyard side of the main ranges. Stairs were in the polygonal turrets in the north-west and north-east angles of the courtyards. The octagonal corner towers bear no evidence of stairs, though it is possible that they may have contained stairs at a higher level.

There is a tradition that the large arch at the south end of the west wall of the central range belonged to a chapel. Although there must have been a chapel, there is nothing to indicate that it was necessarily located here. Indeed, the south end of this range was divided into small spaces difficult to reconcile with such a function, the arch communicating with what seems to have been a small building aligned north-south.

The fabric showed little evidence of having undergone much alteration before the 18th-century fire. The exceptions are two inserted doors, one in the west wall of the central range, and the other in the south wall of the range to the east of the central range. The lintel of the former gave a tree-ring date of 1572, plus a sapwood estimate of 10-50 years.

Many of the great houses of Elizabeth's reign were designed with a view to accommodating royal visits. Rochford Hall may have had the space to do this, but it was probably completed in Mary's reign before such visits had become institutionalised. Its imposing exterior apart, the surviving elements give the impression of a rather utilitarian and functional building. They are a reminder that as well as being a great house, the Hall should be seen as the hub of a vast agricultural estate.

Set in the context of the architecture of its age, the Hall appears as a mixture of both conservative and advanced features. It may have had, from the exterior at least, a coherent unified layout, but the octagonal corner towers, in particular, seem anachronistic, giving it a fortified aspect. In the absence of a licence to crenellate, such as William Petre obtained for Ingatestone in 1551 (Emmison 1961, 27), these towers were presumably capped with lead-covered cupolas. The rows of gables that lined the exterior were in marked contrast with the towers, and must be one of the earliest surviving examples of the use of display gables as such a dominant element in an architectural composition. The timber-framing of the gables, and also the floors, as Cecil Hewett noted, is sophisticated carpentry and must have been designed if not executed by men from London. The butt purlin roof, and the narrow section joists with two tenons, are all early by the standards of Essex carpentry. In its combination of gables and towers, Rochford Hall may be compared with the Lordship, Standon, Herts., a great house built by another wealthy courtier, Sir Ralph Sadler (cf. Smith 1992, 50-51). This is a less unified composition, with less regular fenestration and fewer gables. The ground plan seems also not to have swept away earlier buildings to form an integrated whole within a single envelope. The Lordship also has chimney stacks expressed on the external elevations, something avoided at Rochford, except on the gables on the north side where flues run up them to the apex. With the two-light windows set either side of these gable flues, this arrangement resembles the Methwold Old Vicarage, Norfolk, of *c.*1500, which has a brick corbie gable with a decorated octagonal chimney running the middle of it, flanked at attic level by two-light windows. At Rochford, it is the more curious that only one attic room on the north side has a hearth in it. In general, the Hall seems not to have been generously provided with fireplaces. Only 32 are recorded in the Hearth Tax of 1671, about half what might be expected of a building of this size.

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Note

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resembles the Methwold Old Vicarage, Norfolk, of *c.*1500, which has a brick corbie gable with a decorated octagonal chimney running the middle of it, flanked at attic level by two-light windows. At Rochford, it is the more curious that only one attic room on the north side has a hearth in it. In general, the Hall seems not to have been generously provided with fireplaces. Only 32 are recorded in the Hearth Tax of 1671, about half what might be expected of a building of this size.

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ADDENDUM

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Excavations at St Mary Magdalen's Hospital, Brook Street, Colchester

by Carl Crossan
Specialist contributions by Janet Cooper, Nina Crummy, C. Pamela Graves, Andrew Harris, Peter Murphy, S. Pinter-Bellows and Helen Walker

Rescue excavations in St Mary Magdalen's churchyard and adjacent almshouse land revealed the remains of a small medieval hospital and recorded the stages in its transition to a post-medieval almshouse. A religious institution which was founded as a refuge for lepers in the early 1100s, the hospital's original accommodation included an infirmary hall and a timber outbuilding in grounds situated half-a-mile from the walled town. Some of the excavated skeletons showed abnormalities consistent with leprosy. In the c. mid 13th century, the hospital's main quarters were relocated to a new site in the northern area of its grounds when St Mary Magdalen's church was built on part of the hospital's original infirmary hall. Next to the church, the eastern part of the 12th-century hall was altered and retained for a time. Foundations projecting from the south side of the church are believed to belong to a chapel for hospital inmates used from the 13th century onward. The main hospital building to the north was later joined by a second block which remained in use as an almshouse until it was demolished in 1832.

Introduction

The early Norman period saw the introduction of the hospital as an independent institution in England. Estimates vary, but, among the more cautious surveys, at least 68 hospitals were found to have been established between 1080 and 1150, with over 800 which are thought to have been brought into existence in the period from 1150 to 1530 (Orme and Webster 1995, 11). Some were short-lived, closing within a century or so of their foundation. Others, of which St Mary Magdalen's is an example, were maintained in differing forms until the present day.

Founded as a refuge for lepers in the early 12th century, later housing the poor and infirm, St Mary Magdalen's is of value to the social historian for its documented links with its neighbouring parish, a relationship which is materially reflected in aspects of the archaeological record. For this reason the report brings together an archaeological account of the site with a history gathered from the Victoria County History archives and including additional previously unpublished material researched by Janet Cooper.

History of St Mary Magdalen's hospital

by Janet Cooper

St. Mary Magdalen's hospital was apparently founded by Eudo Dapifer at the request of Henry I between that king's accession in 1100 and Eudo's death in 1120.[1] The first half of the 12th century was the peak period of hospital foundation in medieval England, and the Colchester hospital was one of several in whose foundation Henry I and his queens, Maud and Adeliza, played an active part. Two of these other semi-royal foundations, at Chichester and Newcastle, were dedicated to St. Mary Magdalen. Medieval hospitals were essentially places of refuge, where lepers and the other sick could be given food and shelter, although some of them did provide basic medical treatment. They were also religious foundations, whose occupants were expected to follow a semi-monastic rule, attending frequent church services and saying private prayers. As medical knowledge advanced and it was realized that leprosy might be infectious, hospitals also served to segregate lepers from the community. The popularity of St. Mary Magdalen as the patron of leper hospitals arose from a confusion between the name of her supposed brother Lazarus and the word 'lazar' meaning leper.[2]

St. Mary Magdalen's may have been under the direction of Eudo's other foundation, St. John's abbey, from the first, and the arrangement seems to have been confirmed at Eudo's death,[3] although the early records in the abbey's cartulary may have been altered to strengthen the abbey's case in later disputes. It is clear, however, that Henry II, at a council in Colchester in 1157, gave or confirmed the hospital to the abbey.[4] The sick or lepers were under the rule of a prior or master, occasionally called the chaplain, a priest appointed by St. John's.[5] He conducted services for the inmates in the hospital chapel. By 1237 that chapel had come to serve the inhabitants of neighbouring houses as well, and was called a parish church [ecclesia]. In 1254 the master of the hospital was rector of the church.[6]

In 1301 the lepers disputed the abbot's authority, rejecting their recently-elected master Roger of Crepping and electing a leper, Simon of Nayland, in his place. The new election was made at least partly to avoid payment of the lay subsidy, from which houses governed by a leper were exempt, but it was also a clear challenge to the abbot's authority. The abbot responded by taking away the hospital's charters, and apparently going to the lengths of dragging Simon and another brother out of their church and keeping them out of the hospital.[7] Further violence in 1391 seems to have been caused by another disputed election. William Fleet, who

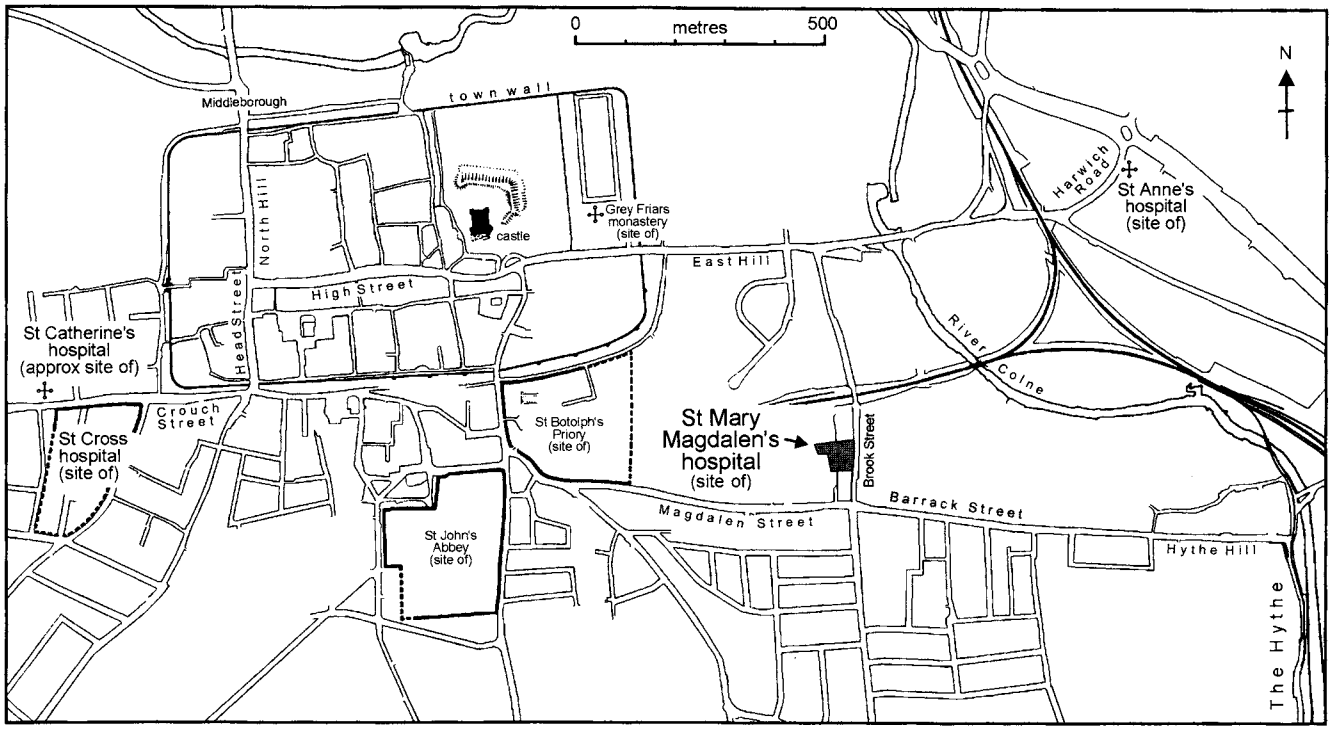


Fig. 1 The sites of Colchester's medieval hospitals and religious institutions. St Mary Magdalen's was the earliest of at least four endowed hospitals in medieval Colchester, all located outside the town walls.

had been confirmed as warden earlier in the year, broke into the lodgings of the 'prior', John Newland, and into another chamber from which he stole the hospital's muniments as well as other goods. On the same day, and presumably as part of the same dispute, the warden of St. Mary's chapel on St. John's green, which belonged to St. John's abbey, locked the parishioners out of the hospital church.[8] There was another theft from the hospital, again by its own chaplain, in 1399.[9]

These disturbances were probably symptomatic of the difficulties which St. Mary Magdalen's, like many other hospitals, suffered in the late 14th and the early 15th centuries, as inflation rendered their small endowments increasingly inadequate, and public generosity was directed more and more towards parish churches or friaries. At the same time, the monastic atmosphere of the hospital was disturbed by the admission of women. The inmates had been referred to simply as brothers throughout the 13th century and as late as 1302, but in 1323, 1327 and 1394 sisters as well as brothers were recorded.[10] Presumably all were infirm or lepers, although it is possible that the women were employed to look after the men. The accommodation of both sexes in a single institution may have appeared improper, and women seem to have been excluded by 1413 when a townsman was ordered to keep his leprous wife from selling in Colchester market.[11] The removal of the women may have been the beginning of a reform of the house, but serious complaints about its condition apparently continued, and in 1423 Humphrey duke of Gloucester made new orders for the hospital and its inmates.[12] His ordinances, claiming to repeat the lost rules of the original foundation, laid down that the master was to be a healthy secular priest, and the inmates to be five poor, sick or leprous men. The brothers were to spend much of their time in prayer, attending mass, keeping the monastic hours, and saying the lord's prayer 300 times a day.[13] It is unlikely that these rules were followed to the letter, and indeed in 1437 the chaplain was alleged to be a common night vagrant who frequented taverns in dubious company.[14] The continuing exclusion of women, however, is suggested by complaints made in 1438 and 1439 about leprous women selling in Colchester market.[15] Leprosy was dying out in the 15th century. By 1502 there seem to have been only 4 brothers at St. Mary Magdalen's, and they were poor rather than ill.[16]

Compared with the small chapel and hospital of St. Anne on the Harwich road (Fig 1), which with its associated guild received at least 8 bequests in the late 15th century and the early 16th,[17] St. Mary Magdalen's received comparatively few recorded bequests, and most were from parishioners of the church. The merchant John Baker left the brothers and sisters 6s. 8d. in 1394,[18] and Edmund Harmanson, a wealthy merchant of the New Hythe, in 1502 left 20d. to the church, and 4d. each to the almsmen.[19] A parishioner, John Polstead, in 1411 left 6s. 8d. for the repair of the church, and a similar sum to the lights of the Virgin and the Holy Cross there.[20] Another parishioner, Walter Ramyssen, in 1457 directed that the church clerk have the use of his house for a year, and another, Rose Debenham, in 1511 left the church 12d. and a towell. Rose Semer, of Magdalen Street in St. Giles' parish, in 1504 left the church 2s. to pray for her soul.[21]

The hospital, on the road from the south gate of Colchester to its port at the Hythe, was presumably outside the built-up area of Colchester at the time of its

foundation, but if the 'hospital garden' recorded in the late 12th century was its garden, there were by that date houses near it.[22] The hospital building or buildings were probably simple at first, perhaps a dormitory and chapel under one roof. Once the church became parochial, probably in the early 13th century, there would have been a division between it and the hospital chapel. When in 1391 the warden of St. Mary's chapel on St. John's green locked the door of the hospital church and carried off the key, his action appears to have affected only the parishioners;[23] there is no reference to the inmates of the hospital who may by then have had a separate chapel. Five old men giving evidence in a lawsuit of 1580 said that the hospital, whose buildings were then in ruins or demolished, had adjoined the churchyard, and a sixth stated that the chapel for the inmates of the hospital had adjoined the side of the parish church, but was then 'clean down'.[24] If his statement was correct, it implies that the chapel was built against one of the church walls, like an aisle only with a blank wall instead of an arcade between it and the nave. There appears to be no other evidence for such an arrangement, unless the porch recorded in 1601[25] was originally a small chapel.

The admission of women in the early 14th century implies that separate accommodation was available for them, and the description of William Fleet's thefts in 1391 suggests that the main hospital building was then a hall with chambers. Presumably it was either a hall with a chamber block at one end, or a hall which had been subdivided to provide private rooms. The prior seems to have had a separate house [domum mansionis], and the outbuildings included a barn and a brewhouse.[26]

St. Mary Magdalen's, like other medieval hospitals, was poorly endowed. Its main income was probably the £6 a year from the manor of Brightlingsea which Henry I confirmed to it in 1120,[27] and which had perhaps been given to it at its foundation. Richard I granted the lepers an annual fair on St. Mary Magdalen's day and its eve (21 and 22 July);[28] by 1777, and probably from its foundation, the fair was held on Magdalen Green.[29] By the mid 13th century the hospital held land in and around Colchester. In 1254 the master, already said to be 'poor', tried unsuccessfully to recover 14 a. of land outside the walls of Colchester which he claimed his predecessor had held in King John's reign.[30] His successor in 1272 was more successful when he recovered a house in the suburbs.[31] In the same year three men, Brother John Beaufiz, Richard the clerk, and John the chaplain, all apparently from the hospital, were accused of taking a house and 3 a. of land in the suburbs, probably near the hospital, from Richer son of William de Baudeswell;[32] presumably the hospital claimed the house and land as its own. In 1285/6 the hospital held a house in East Street.[33] In 1297 the master and brethren sold a house and land in Hythe Street for 20s., retaining only a 'peppercorn' rent of one ginger root a year;[34] presumably the hospital was in urgent need of cash. In 1405 the prior of the hospital held land near Old Heath,[35] probably the 11 a. north of the village there which was still part of St. Mary Magdalen's parish in 1881.[36] In 1301 the hospital was farming its land, producing rye and oats, perhaps in saleable quantities, and keeping 2 or more cows and 30 or more sheep.[37] By the Reformation the hospital held a total of approximately 94 a. within the liberty of Colchester, 20 a. and a heath in Layer de la Haye, and approximately 3½ a. in Ardleigh.[38] Its income was £11 a year, making it one of the poorest of the religious houses in Essex and poorer than the two other surviving hospitals, at Newport and Ilford, worth £23 10s. 8½d. and £16 13s. 4d. respectively.

At the Reformation, the position of St. Mary Magdalen's, like that of other similar institutions, was uncertain. Because of its parochial functions it was not dissolved with the monasteries in the later 1530s. As a hospital could be considered a religious house, however, it was later claimed that St. Mary Magdalen's had been dissolved, and in 1565 two speculators, Nicase Yetsweirt and William Tunstall, obtained from the Crown a grant of its lands.[39] From them the lands rapidly passed to the wealthy Colchester burgess Benjamin Clere, who sold them on to other local men. The hospital recovered some of them in the early 1580s.[40]

Meanwhile, the hospital continued to function after a fashion. The master was recorded in 1548, when the town chamberlain paid him rent for a field.[41] Another master, Thomas Gale, made his will in 1557, bequeathing money and furnishings to family and friends, but making John Gates, a brother of the hospital, his residuary legatee and executor.[42] Gale's successor Robert Mortlake, appointed later that year,[43] apparently died *c.* 1562, when the mastership, with the rectorship of the church, was granted to Benjamin Clere's son, Benjamim Clere the younger, for life. Although he was described as a clerk on his appointment, parishioners alleged in 1580 that he was neither minister nor priest.[44] Whether he was ordained or not, Clere does not seem to have served either the hospital or the church. Hugh Allen was rector in 1563,[45] and in the same year the borough admitted John Somer as governor and keeper of the hospital and spital house in St. Mary Magdalen's parish. Somer was to provide for the poor in his charge and to ensure that they did not beg around the town; he was not to keep an alehouse or to lodge sturdy beggars or vagabonds. Later that year a beggar was ordered to remove from the hospital a woman from Maldon suffering from the falling sickness, whom he had introduced.[46] It is not clear whether the objection to the woman was her illness, or her relationship to the beggar. In 1570 the 'procurator' of the poor-house or hospital of Colchester, perhaps St. Mary Magdalen's, entered into a bond with the town to distribute well and honestly the money given to the poor people living in the house.[47] In 1586 the master of St. Mary Magdalen's was assessed for subsidy at the low rate of 6d.[48] The hospital was still occupied in 1606 when Henry Thorgo, 'one of the poor of the hospital of St. Mary Magdalen in Colchester' made his will. He was

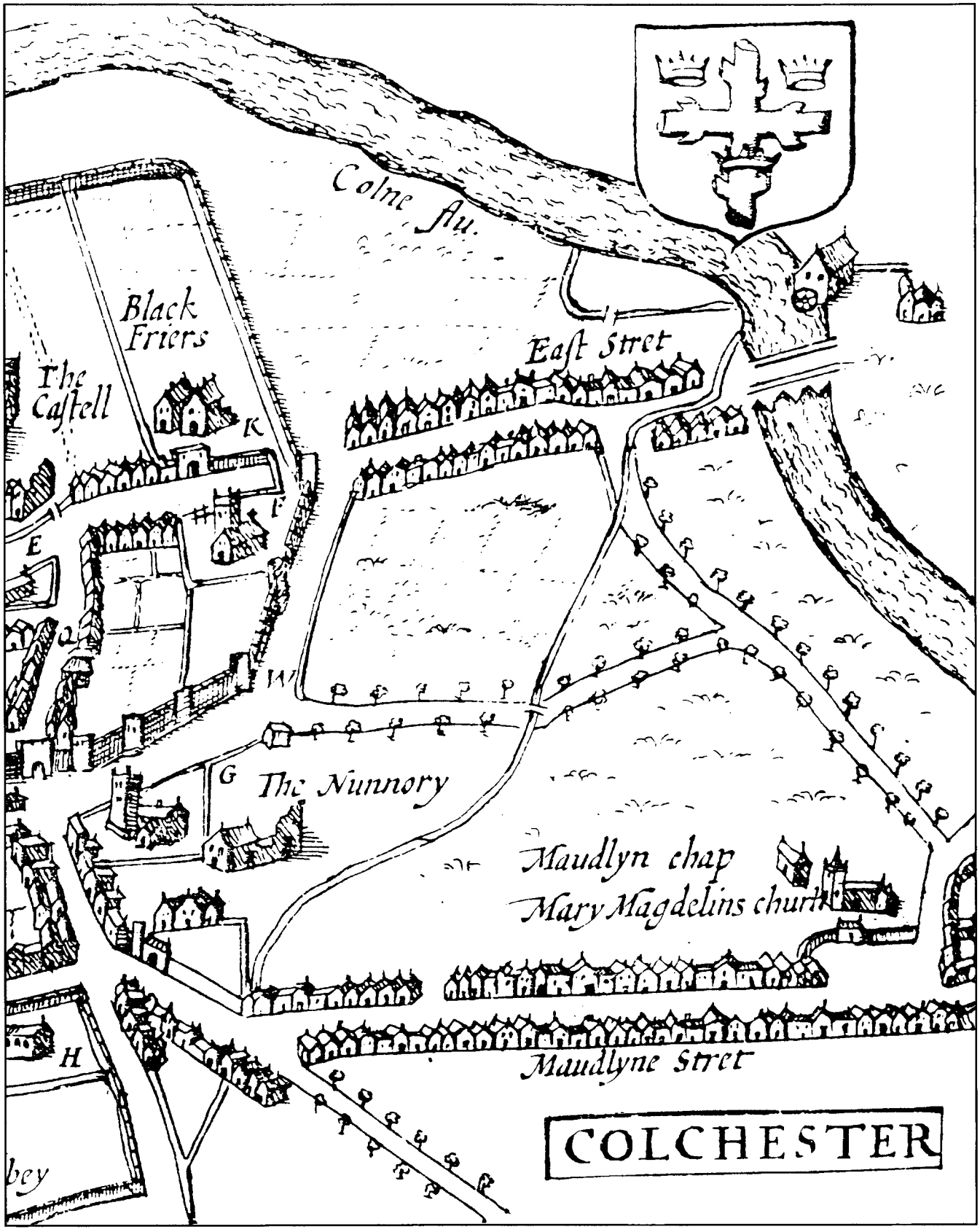


Fig. 2 Detail from John Speed's map of Colchester, published 1610.

by no means penniless, as he held the lease of land in Ardleigh, and could bequeath 10s. to his married daughter and the residue of his goods to his wife.[49]

The hospital was refounded by James I in 1610 for a master, who was also to serve the parish church, and five poor men or women. Each inmate was to have a stipend of 52s. a year. The foundation charter stated that the hospital was then almost decayed and its chapel totally destroyed.[50] The single rectangular building at right angles to the church, shown on Speed's Colchester map

of 1610 (Fig 2), was replaced before 1748 by new buildings, perhaps slightly further north.[51] They may have dated from the mid 17th century and been built after the siege of 1648, which severely damaged the church. The 17th-century buildings were demolished in 1832.[52]

The church, effectively separated from the hospital although the masters continued to be rectors, was poorly served by Benjamin Clere and his successors. In 1584 there were apparently no services, and in 1585 sermons were so infrequent that some parishioners, probably Puritans, said contemptuously that they did not even know whether or not their minister preached sound doctrine.[53] In 1594 Thomas Low, the pluralist rector, failed to perambulate the parish bounds, perhaps because the way had been ploughed up at one place. [54] There was no curate in December 1597, and the churchwardens were ordered to find a minister to say service on the next holy days, which would have been Christmas. By mid 1599 there was a curate, perhaps only a temporary one, for in May 1600 the churchwardens reported that there had been no services on several Sundays during the previous year.[55]

In 1633 the steeple, which could only have been a bellcote, and the 'church', probably the nave, needed repair; a grave in the chancel was uncovered.[56] The church was damaged in the siege of 1648, and in 1650 repaired only as housing for the poor.[57] By 1705 only the walls were standing, and no services had been held there since the Restoration.[58] Stukeley on his visit to Colchester in 1718 drew 'St. Magdalen's church' complete with roof and doors (Fig. 17b),[59] but his drawing is probably a reconstruction rather than an accurate record of the state of the church when he saw it. It apparently remained ruined and unusable until 1721 when the Lord Chancellor, who was patron of church and hospital, repaired and fitted up the chancel at a cost of £52 6s. 11½d.[60] By 1852 the church was again ruinous and dilapidated; it was also said to be damp and unhealthy, and too small for the parish. It was demolished and replaced by a new church on a new site, at the corner of Magdalen Street and Brook Street.[61]

The excavations

Location (Figs 1 & 3)

The site lies at TM 0058 2482 on the 23m OS contour, approximately half-a-mile beyond the south-east corner of the walled town and set back a short distance from the medieval road route between the town and Hythe Quay (today known as Magdalen Street, Barrack Street and Hythe Hill). The leper hospital would have occupied a conspicuous location at the time of its foundation, within view of travellers along the Hythe road and also visible from the south-east corner of the town wall from where it would have been among the more prominent features high on the opposite side of a small valley containing the St Botolph's stream.

Background to the excavations (Fig. 3)

The archaeological investigation was prompted by a scheme involving redevelopment of the site for social housing. Excavations took place in two stages. Site A, in St. Mary Magdalen's churchyard, was examined in 1989 with the kind co-operation and financial support of the Diocese of Chelmsford. Site B, to the north of the churchyard, became available for an excavation which was generously funded by English Heritage in 1995 following demolition of 19th-century almshouses and the developer's acquisition of a plot of British Rail land to the west of the almshouse gardens.

Extent of excavations (Fig. 3)

Excavations focused on the northern half of the churchyard and the almshouse property beyond. The southern part of the churchyard and Magdalen Street frontage was subject to a watching brief in the course of the redevelopment. This confirmed previous indications from cartographic research and observation of engineers' trial-trenches that the ground occupied by the Victorian church and southern part of the churchyard was of little archaeological value, since it appears to have been open land from the medieval period until encroached on in the mid 19th century for the construction of the new church and southern extension to the churchyard. Morant identifies this area south of the medieval churchyard as Magdalen Green (Morant 1748, Book II, 22) and its extent can be estimated from Speed's Colchester map of 1610 (Fig. 2).

With the exception of a small extension at the north-west corner of Building 186, the northern limit of the excavations on Site B corresponded to the housing redevelopment boundary. The open land beyond that point was at the time of excavation earmarked for a future stretch of the proposed phase 2 Colchester Eastern Approaches Road. The western extremity of the Site B excavations stopped short of the full housing development area as the region immediately beyond was found to have been destroyed archaeologically by a World War II bomb.

Conditions

The site occupies an area of very fine natural sand which drains quickly and has little cohesive strength. Once stripped of topsoil cover, underlying soils tended to be rapidly eroded by weathering and traffic, a characteristic which may in past centuries have contributed to a loss of the more superficial features.

The condition of early structural features was generally poor. In the churchyard (Site A) this was due to the destructive effects of centuries of later grave cuts. Although Site B was largely free from graves, this too produced fragmentary and highly localised structural evidence with early medieval to modern stratigraphy almost at one level. In the phased plans, shading is used only to show clear-cut edges of later ground disturbance. Areas of less sharply defined loss of strata have been left unshaded.

Summary of phases

Figure 4 gives a simplified view of the structural

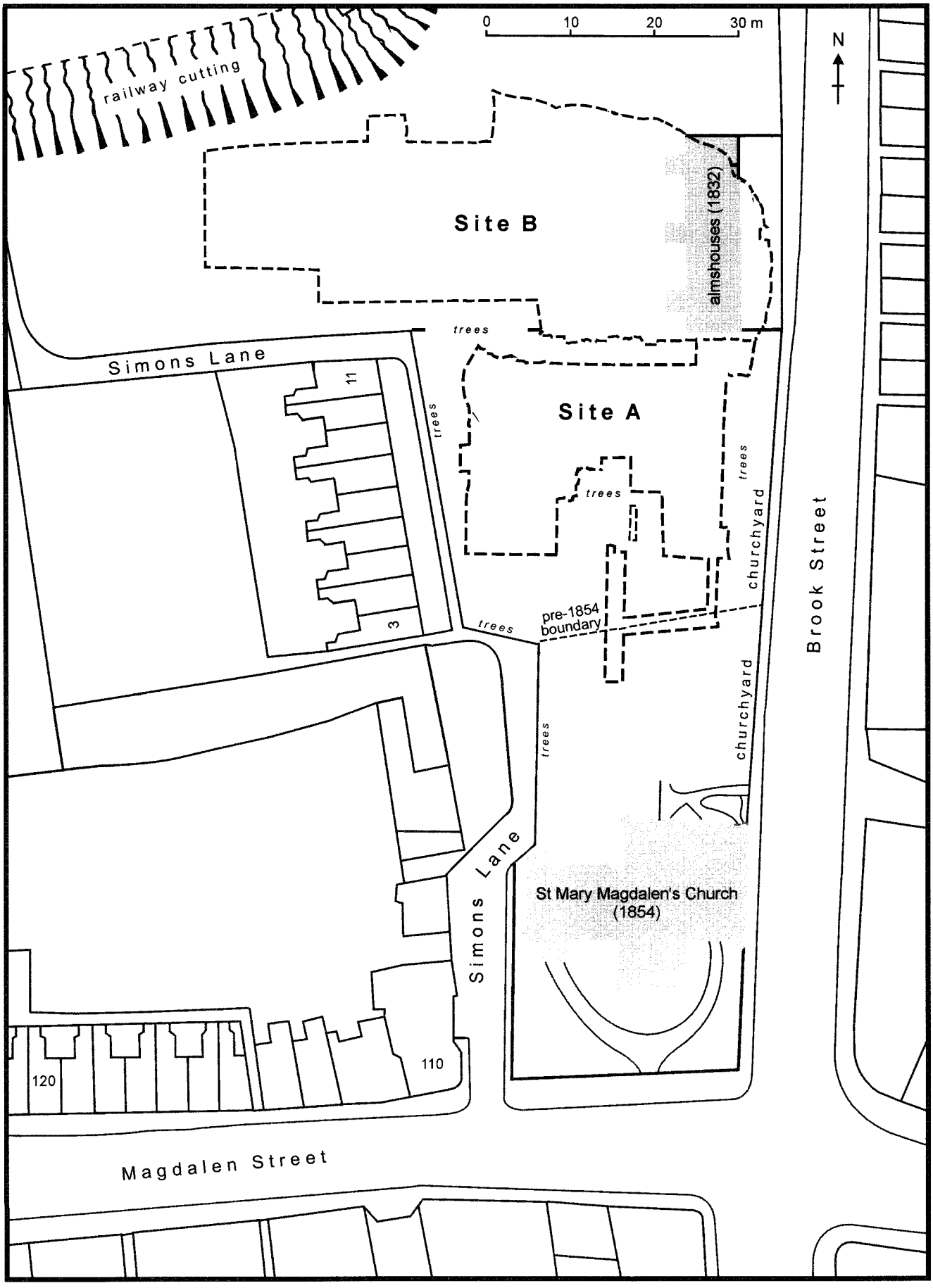


Fig. 3 Sites A and B: location plan. © Crown copyright Ordnance Survey. All rights reserved.

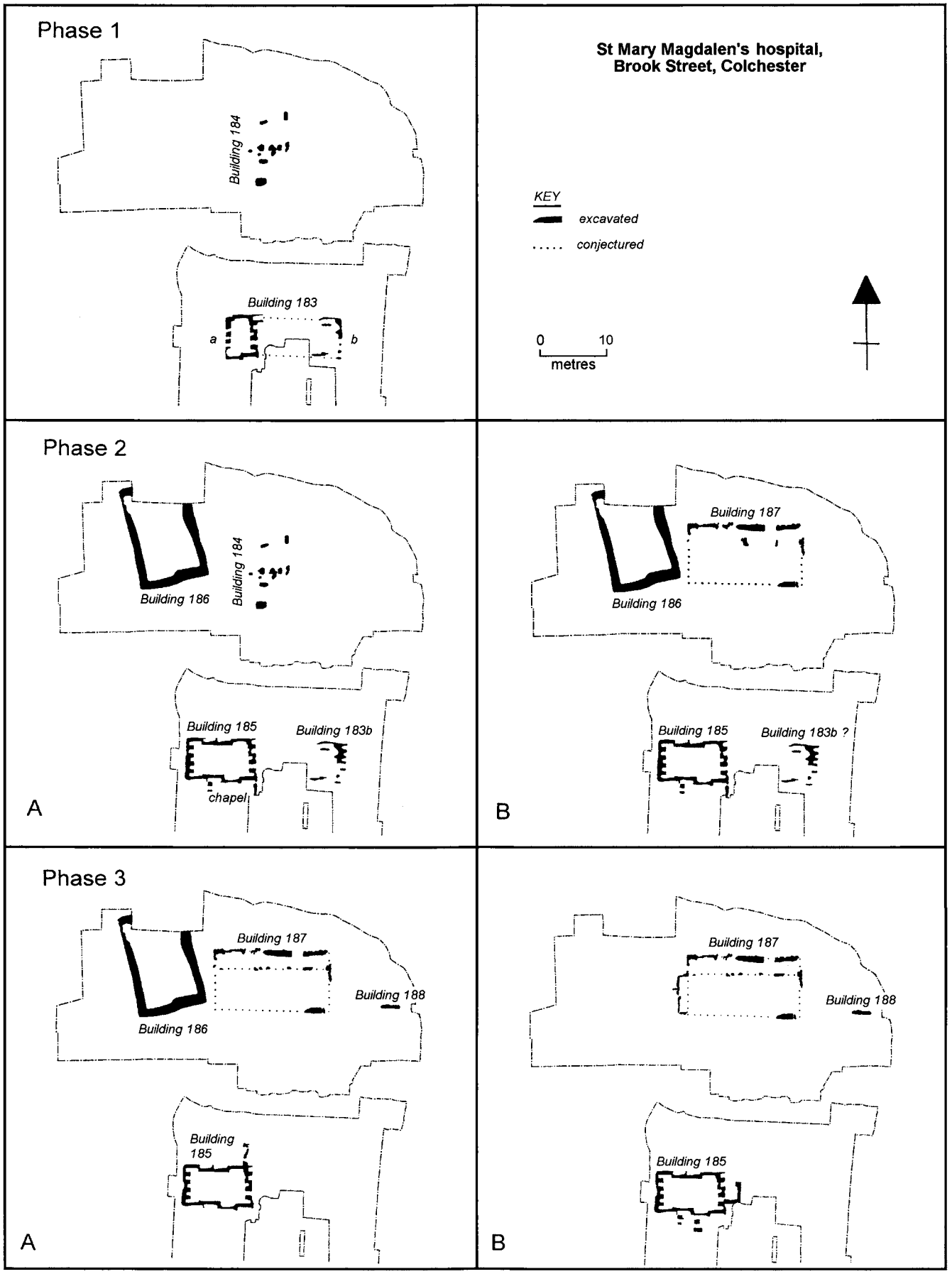


Fig. 4 The building sequence: Phases 1-3.

changes seen on the site from the early 12th to the 19th centuries. These fall into four main phases:

- Phase 1 (early 12th to *c.* mid 13th centuries)
  The hospital was founded in the early 1100s. Its main accommodation was an infirmary hall, Building 183. In the northern part of the grounds stood Building 184, a timber outbuilding.

- Phase 2 (*c.* mid 13th century to 1610)
  A church (Building 185) was established on the site of the 12th-century hospital accommodation. The hospital's main quarters were relocated north with the retention of and alterations to the eastern part of Building 183. Initially, the hospital's new accommodation was based in Building 186 (Phase 2a), later joined by Building 187.

- Phase 3 (1610 to 19th century)
  The hospital was formally refounded as an almshouse in 1610. The 13th-century Building 186 was retained until at least the later part of the 17th century (Phase 3a), alongside Building 187 which was repaired and modified to become the main residence for the almspeople until the early 19th century. Fronting the main road was Building 188, which may have provided separate accommodation for an almshouse warden.

- Phase 4 (19th century to 1995)
  Demolition and replacement of the almshouse (Building 187, demolished 1832) and church (Building 185, demolished 1854) removed all remaining medieval buildings from the site. The sites of the 19th-century church and almshouse terrace are shown in grey on Figure 3.

The hospital

Phase 1 (early 12th to *c.* mid 13th centuries)
The earliest activity on the site was represented by irregular sand-filled pits and depressions (AF268, AF272, AF273, AF275, AL210-AL214, AL218-AL225; not illustrated), which are probably associated with tree removal and general ground-clearance in preparation for the construction of hospital Building 183.

Building 183a/183b, Site A (Figs 5, 6 & 7)
The two groups of heavily disturbed foundations, classed here as 183a and 183b, almost certainly belong to a single building rather than separate structures. Although continuity could not be directly established due to the presence of trees and the destructive effects of later churchyard burials, the foundations appear to form part of the ground-plan of an east-west orientated building, approximately 6m wide and at least 15m long, which stood 80m back from the main road to Hythe quay. Both groups of foundations were constructed of flints, with occasional fragments of Roman tile and chalk lumps, packed in sand bound with a low mortar and silt content. At 3.5m from the western end of the building was a poorly-preserved foundation for an internal cross wall (AF109, AF174, AF207, later to be utilised as the foundation for the east wall of the church, then largely robbed of its flint content in the 18th century). Within the bounds of the western group of foundations (Building 183a) were traces of a silty clay floor (AL83, AL85, AL124, AL126, AL127), but otherwise no internal features survived apart from two large post-pits (AF231 and AF253) against the west wall. Small fragments of painted wall-plaster found in an adjoining early Phase 2 foundation (AF228) were probably from this building. The pieces were too small to distinguish decorative detail, but indicate that the interior wall colours included yellow and medium and dark reds. Two further small mortar, sand, tile and septaria foundations (AF220/AF222/AF265 and AF240) were later installed, projecting west from the north-west and south-west corners of the building. The better-preserved northern foundation was almost square at 1.5m by 1.6m, cut to a similar depth to that of the adjacent flint wall foundation AF87/AF218 (section, Fig. 6) and fitted exactly in the space between the flint foundation and the east end of grave AG138. Their purpose and precise phasing was not clear: if later Phase 1 they might represent the addition of either external plinths or buttresses at the western end of the building. Alternatively, if early Phase 2, they appear to be associated with the church conversion works. This was probably the hospital's main accommodation block which, if typical of similarly-proportioned and orientated hospital buildings encountered elsewhere, would have consisted of a main dormitory and living area with a chapel at the eastern end of the building.

Building 184, Site B (Fig. 8)
Approximately 25m to the north of Building 183a/183b stood a timber outbuilding, perhaps a barn, represented at core by post-holes and pits BF180-BF182 and BF187-BF194, and with which outlying features BF171, BF175, BF183, BF195, BF196 and BF200 may also be associated.

Waste-pits (Fig. 8)
To the west of Building 184, pit BF117/BF124 contained 12th- to early 13th-century pottery together with oyster shell and fish- and small mammal-bone fragments. Waste was also being disposed of in the region north of Building 184, where exploratory excavation within a complex of medieval and later pits revealed in the earliest pit (BF204) an oyster-rich fill which included pottery cross-matching with material from pit BF117.

Phase 2 (*c.* mid 13th century to 1610)
Building 185 (the church), Site A (Figs 5, 6 & 9)
At the beginning of Phase 2, the ground-plan at the western end of Building 183 was extended by 5.5m with the addition of substantial foundations AF190/AF215/AF228, AF75/AF227 and AF111/AF216. The foundations were of a distinctive laminated construction made up of alternating layers of crushed mortar and firm silt loam.

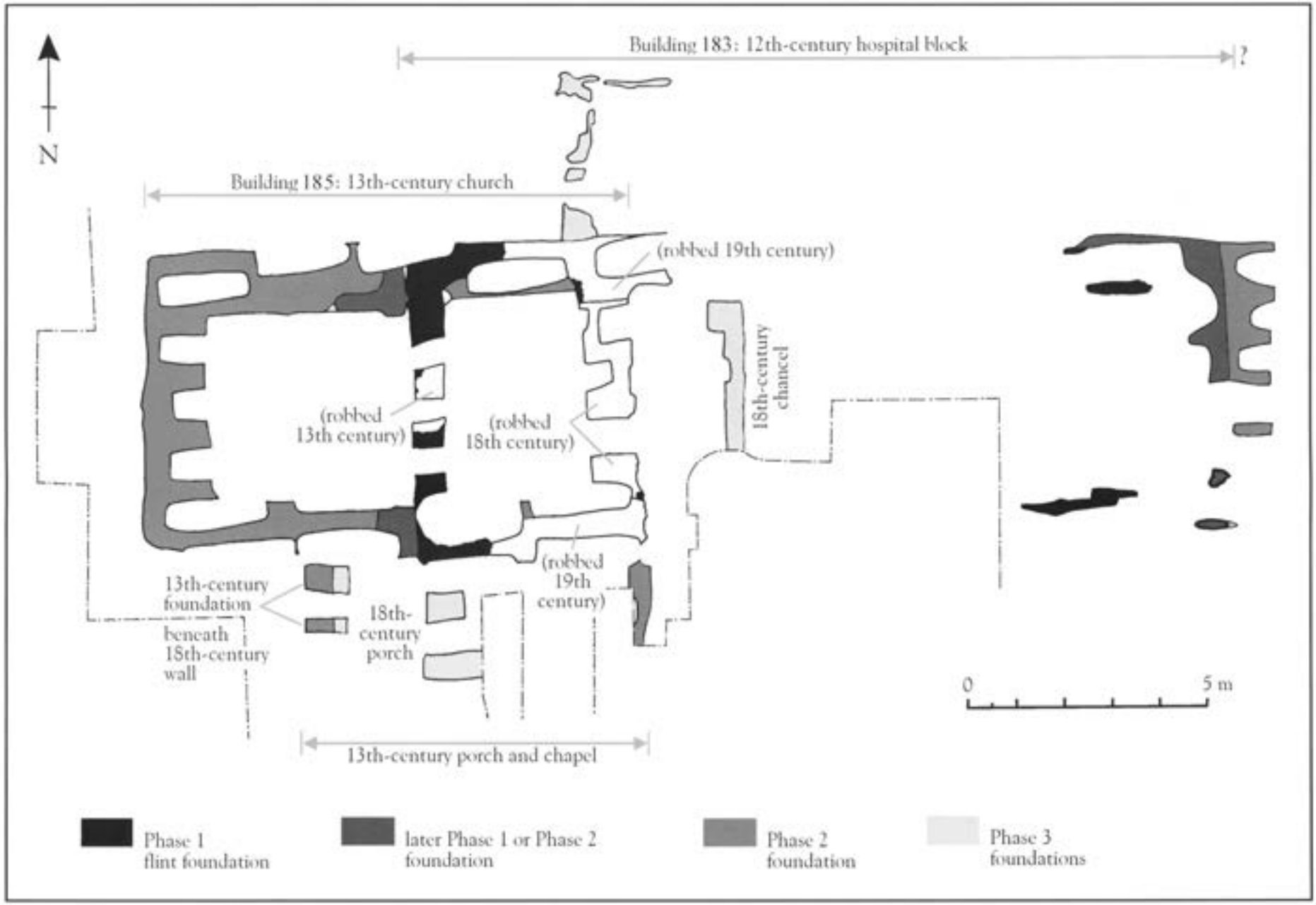


Fig. 5 Buildings 183 and 185: foundation sequence.

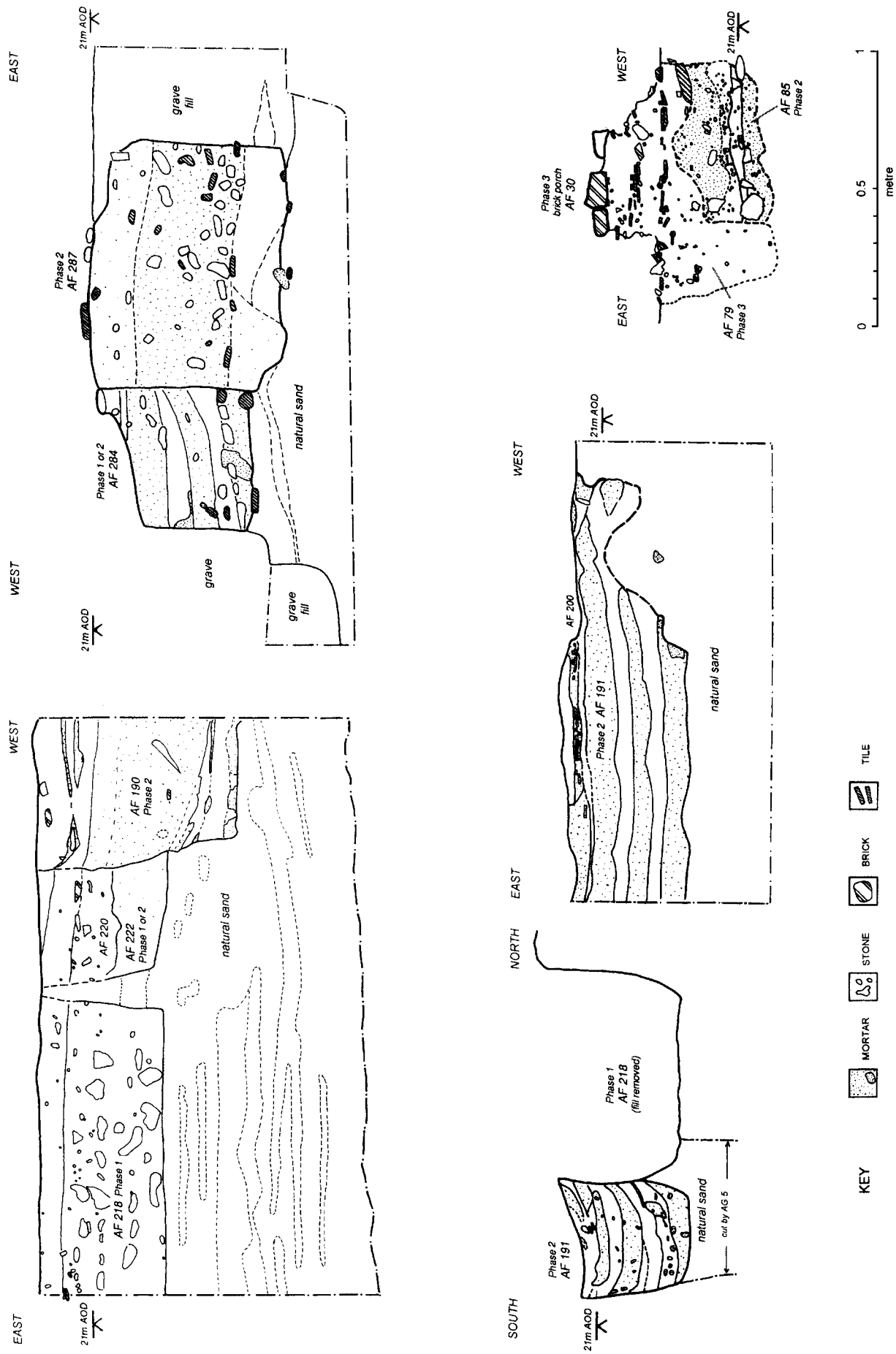


Fig. 6 Wall foundations: sections.

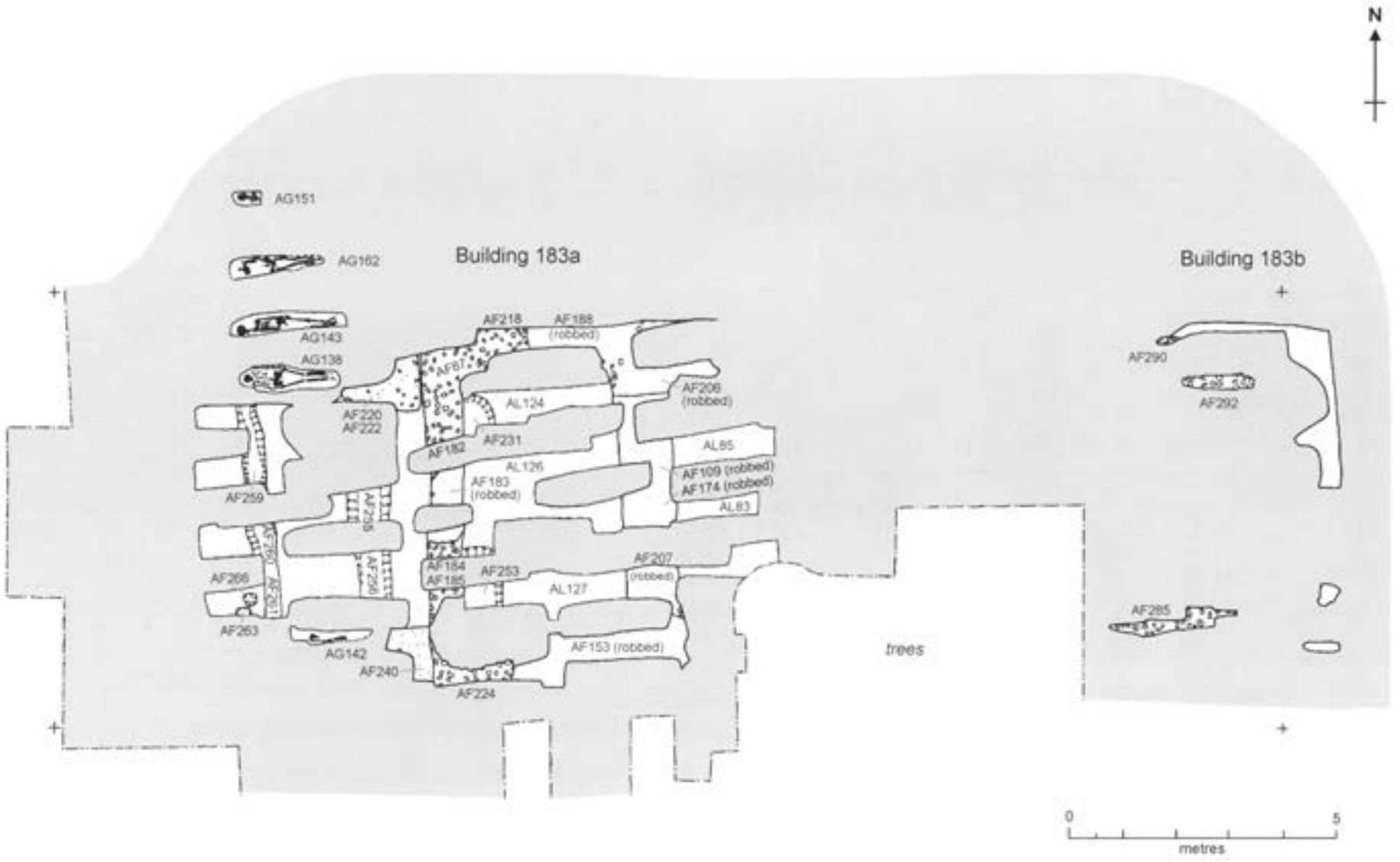


Fig. 7 Building 183a/183b: Phase 1.

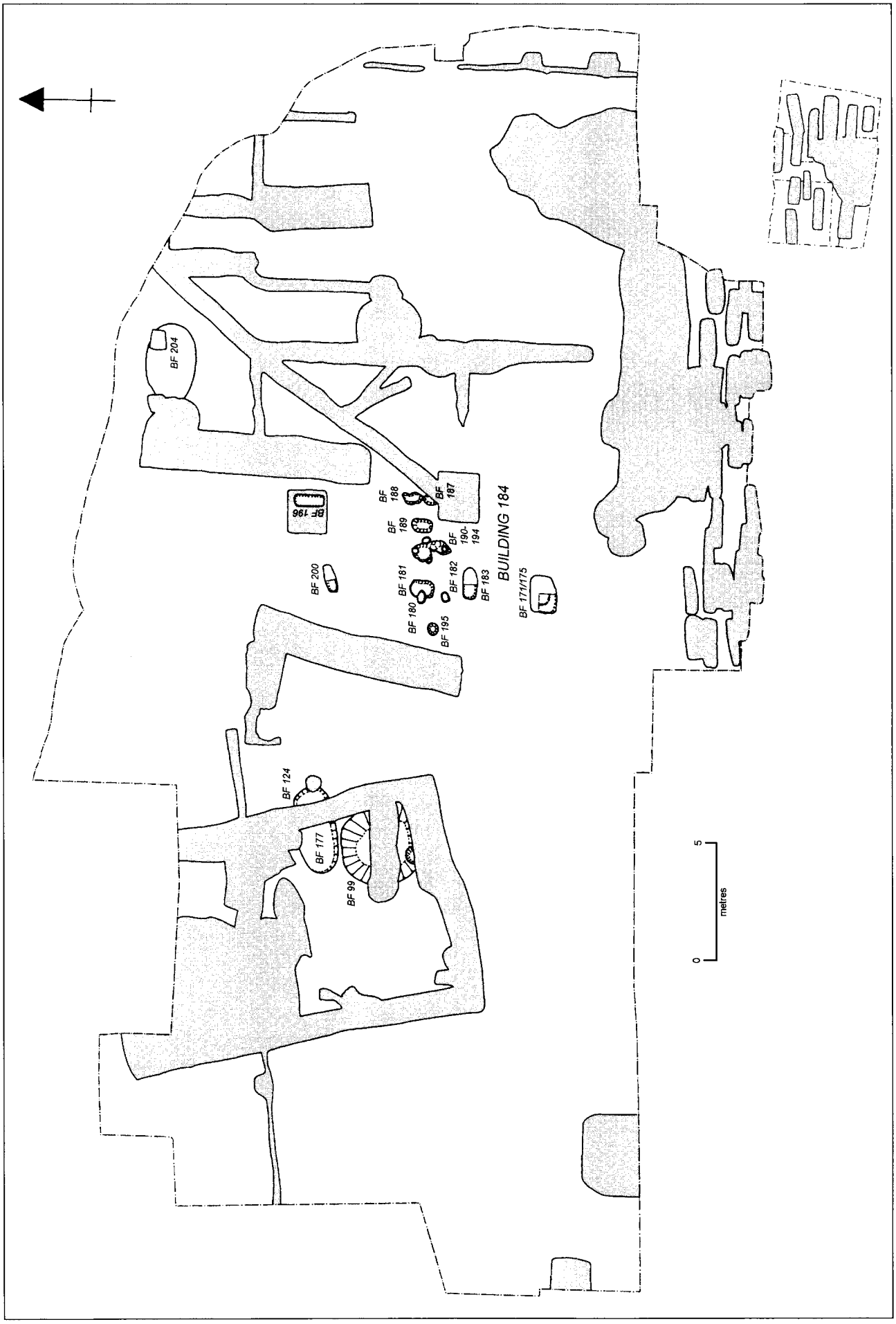


Fig. 8 Site B and Site A (north): Phase 1.

At the same time, the existing north and south flint foundations AF218/AF188 and AF224 (Fig. 7) were enlarged on their inner flanks with the insertion of narrow laminated foundations AF191 and AF216 (Fig. 5). These were cut to similar depth, but brought the overall foundation width to 1.2m (section, Fig. 6) to support standing walls which were found to be 1m wide at the base. The east wall of the church stood on the line of AF109/AF174/AF207, a foundation which was almost entirely robbed of its contents in Phase 3, leaving a trench with occasional flints embedded in the bottom to hint at its Phase 1 origins. Its width, however, was approximately 50% greater than other Phase 1 foundations, and thus it is possible that it may also have been subject to enlargement, although no firm evidence survived the later robbing. The widening of the foundations in this manner is significant since it points to large-scale demolition and rebuilding of standing walls, rather than just the addition of an extension at the western end of the building, and appears to mark the stage at which a place of worship for local people came into being as a free-standing church.

The medieval and later archaeology of the church and churchyard are described separately in later sections (pp. 110-4).

Building 183b, Site A (Fig. 9)
The eastern part of Building 183 remained in use in an altered form for an indeterminate period in Phase 2. By the early part of this phase, the original weak flint foundations (AF285/AF290/AF292) had been added to or partly replaced by a foundation attached to the north wall (AF283) with a return (AF284/AF289) defining the east end of the building. These were of a laminated construction, although less distinctly so than the more substantial foundations used in the early Phase 2 foundations at the west end of the church. Beyond the southern end of AF289 lay a very small remnant of foundation (AF286), so badly disturbed that its constructional detail could not be established, but which was probably a continuation of the AF284/AF289 wall line. The exact stage at which the alteration to the Phase 1 building occurred is uncertain. Burials had already taken place in the area, as evidenced by disturbed human bone found in the foundation AF284.

A rubble-filled foundation (AF287/AF288) was later laid against the eastern side of AF284/AF286/AF289. In common with the other foundations in this area, its limits were obscured by later grave cuts.

The function of the building in this period is unknown. Since the main hospital accommodation seems in effect to have vacated its original site and been relocated north, one possibility is that a converted building standing next to the church might have become a separate residence for the hospital's master in his role as parish rector. Another possibility, further discussed below (p. 114), is that the building housed the hospital chapel.

Building 184, Site B
The life span of the Phase 1 post-hole building is uncertain. Standing approximately 10m to the east of Building 186, it may have been retained until its site was required for the construction of Building 187 as there were no indications of intervening activity between the two.

Building 186, Site B (Fig. 10)
The 13th-century loss of Building 183 resulted in a move north and the construction of new hospital accommodation in the form of Building 186. Externally, this was a substantial structure covering a ground area of approximately 145 sq m. The standing walls were best preserved at the north-west corner (BF110) with a base of reused Roman materials including septaria and a brick quoin, built on 1.2m-deep foundations (BF70/BF71/BF88) which employed a similar laminated technique to that used in the early Phase 2 extensions for the church (Building 185). The walls were destroyed to below the level of a threshold: Speed's Colchester map of 1610 includes a sketch impression of the building with a doorway in the west wall (Fig. 2), but little reliance can be placed on this since his depiction of architectural detail is questionable. Very little of the medieval interior survived. At the southern end was a clay floor (BL48), but no other internal features were conclusively medieval, although further deposits of clay, walls and a hearth associated with early Phase 3 occupation are possibly of Phase 2 origin. One fragment of mid to late 13th-century cusped window tracery was found in later destruction debris to the east of the building, but its location might equally well relate to Building 187.

Land west of Building 186, Site B (Fig. 11)
Extending west from Building 186 was a line of three stone-packed post-pits (BF66, BF67, BF68) spaced apart at 3m to 4m intervals. These shared the same orientation as Building 186 and probably housed boundary posts. The alignments of BF145, BF150, BF155 and other pits in this region may also define medieval land boundaries with implications for the origin and course of Simons Lane which are discussed on page 117.

Ditches (Fig. 11)
Ditches BF176 and BF177 appear have been laid out to establish a boundary between the hospital and the churchyard to the south. A north-south ditch (BF163) abutted the south wall of Building 186 and was perhaps intended to discourage traffic between Simons Lane and the hospital grounds to the east.

Building 187 (Site B) (Fig. 12)
The origins of Building 187 are obscure. Built after the removal of Building 184, the earliest parts of the external structure were preserved in the fragmentary wall foundations BF26, BF43, BF44, BF57 and BF58 which, with the robbed BF80, enclose a floor area of 140 sq m. Constructed of reused septaria, ragstone, flint,

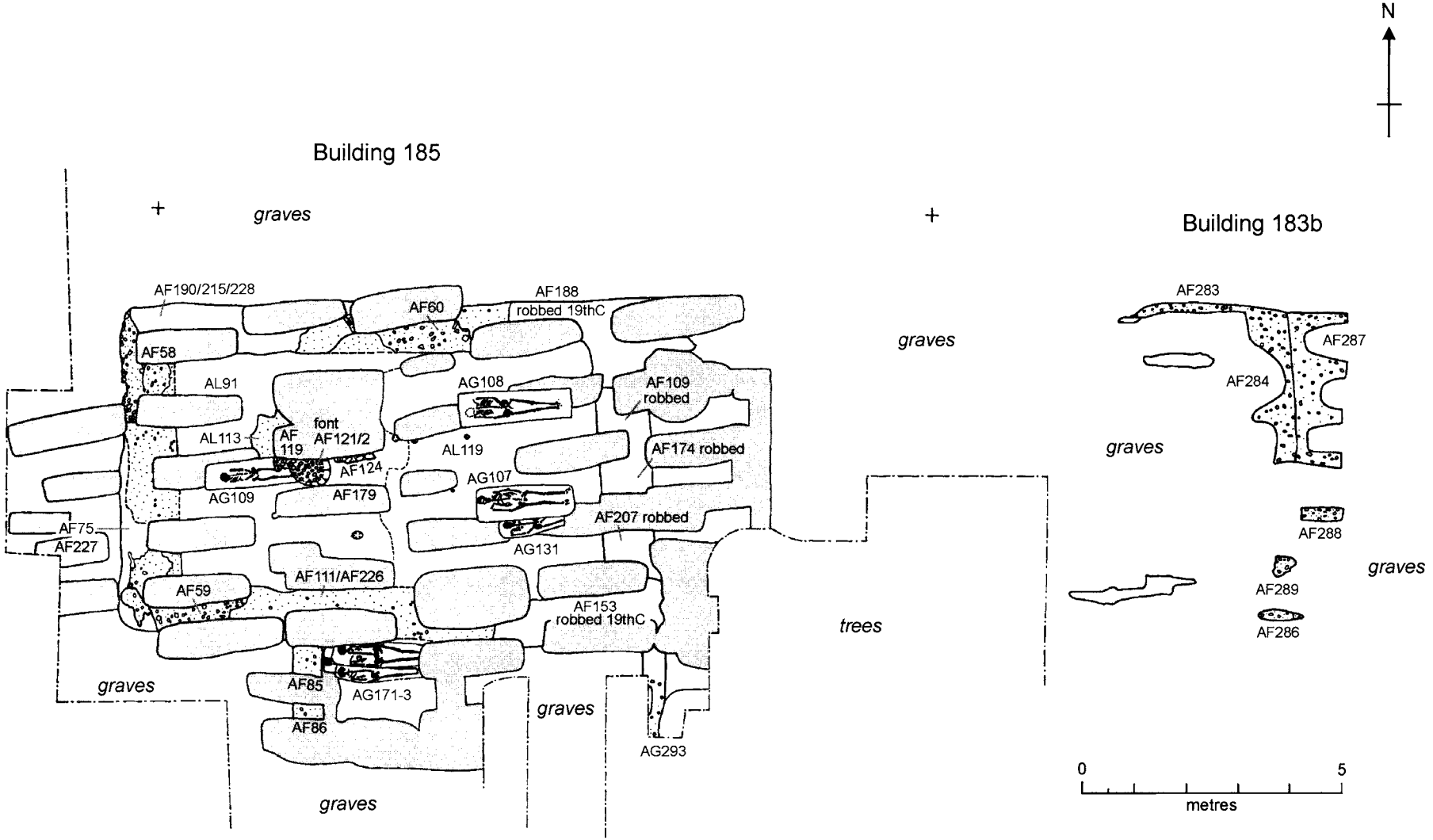


Fig. 9 Buildings 183b and 185: Phase 2.

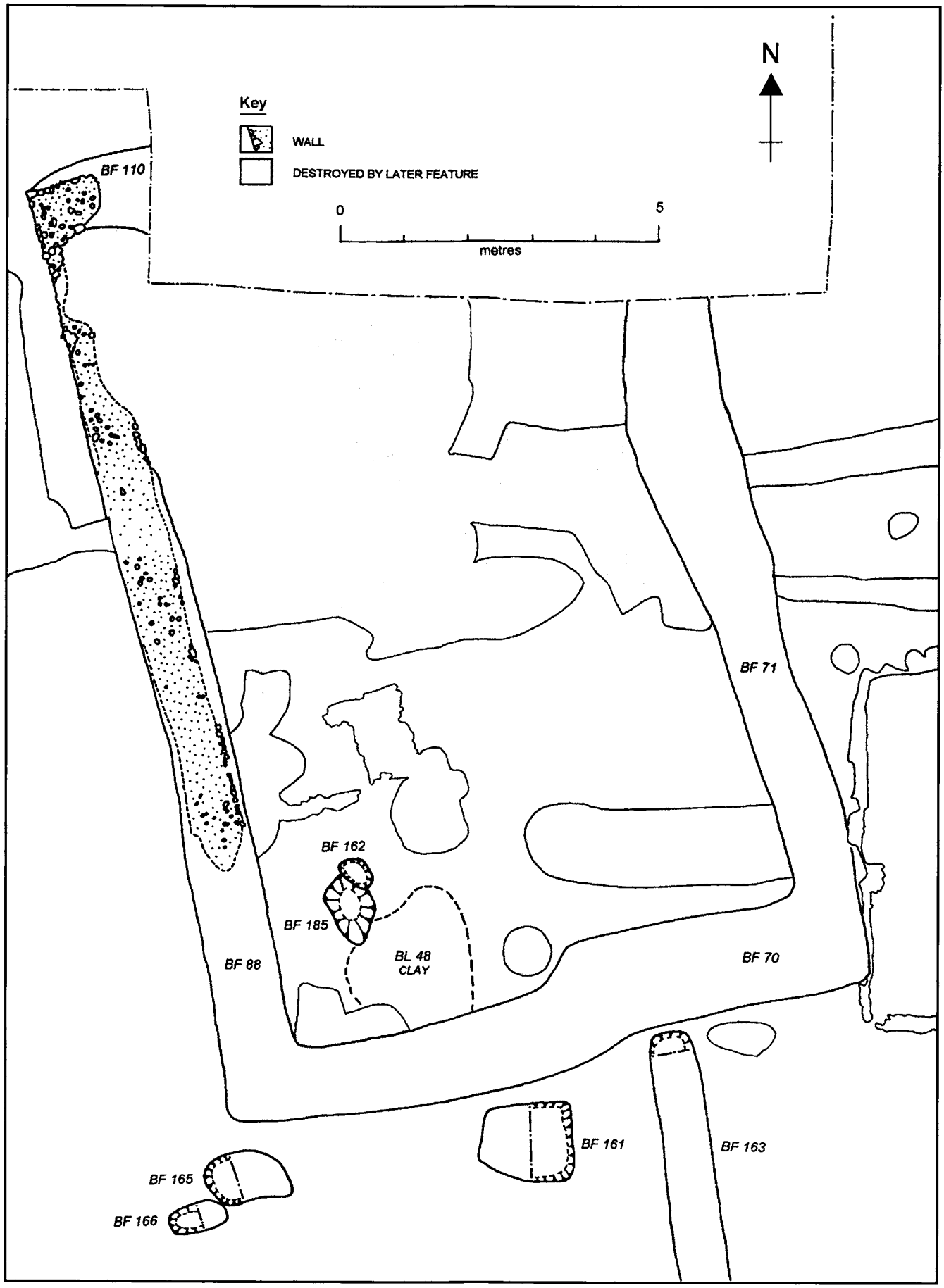


Fig. 10 Building 186: Phase 2.

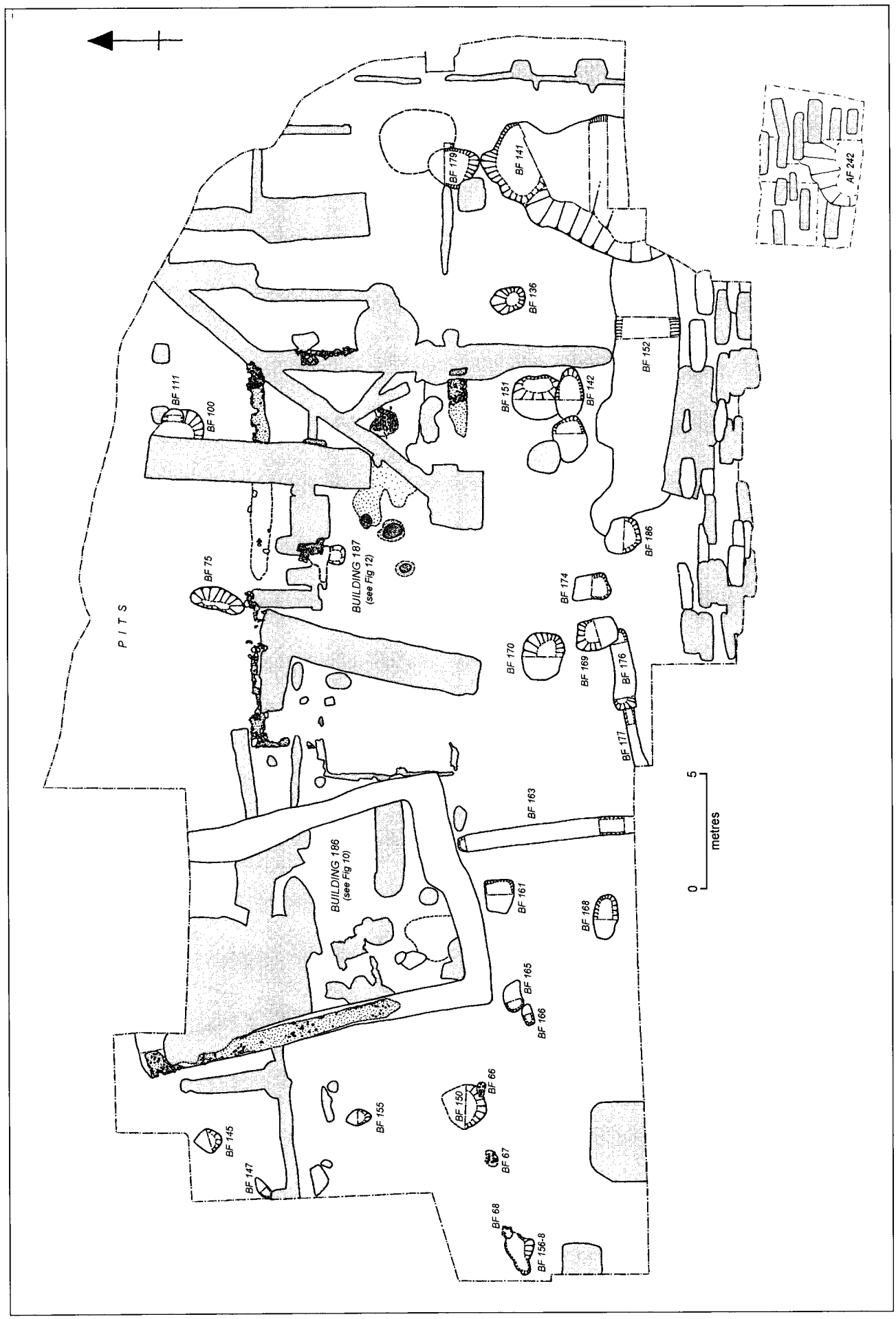


Fig. 11 Site B and Site A (north): Phase 2.

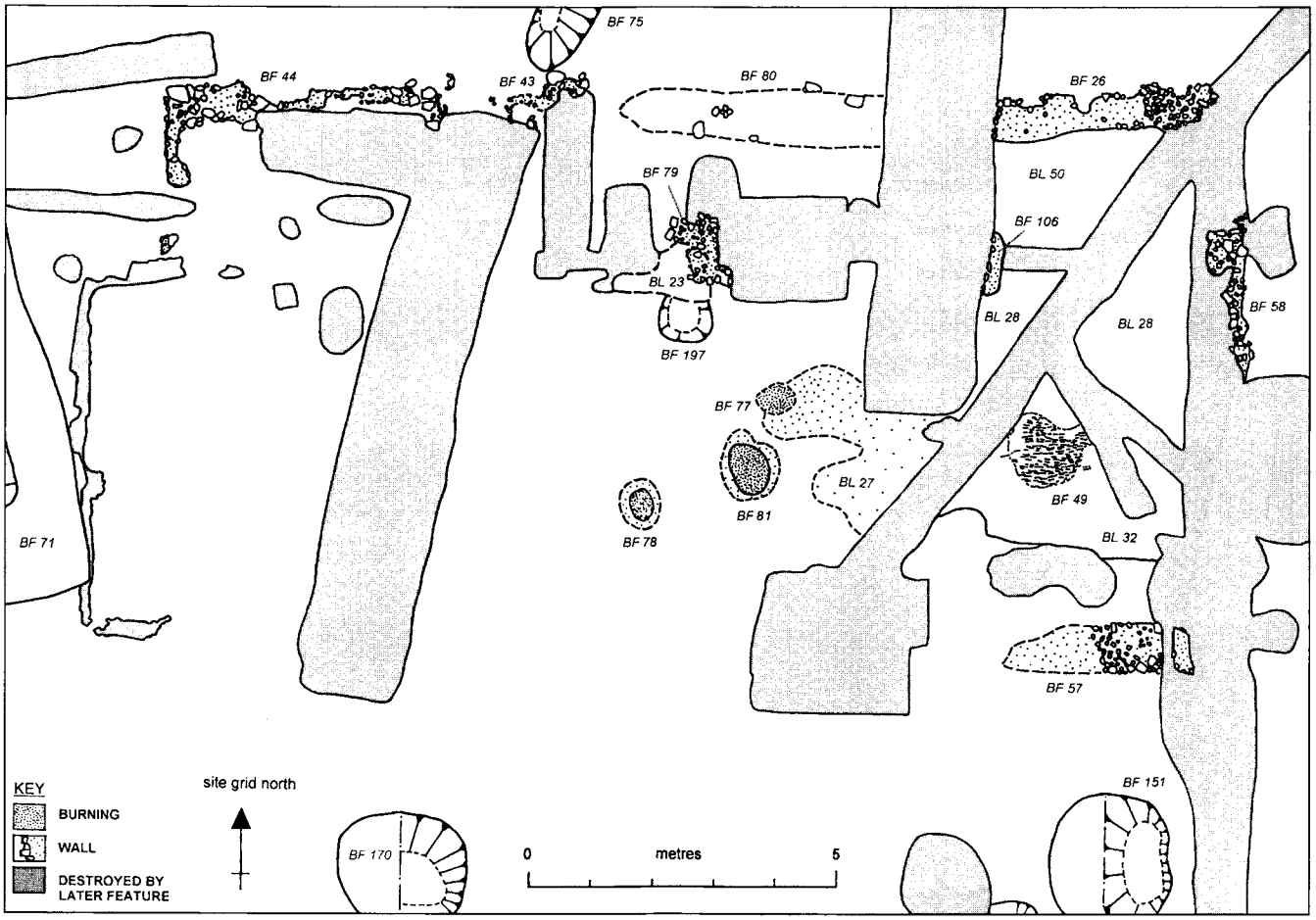


Fig. 12 Building 187: Phase 2.

mortar and Roman tile, the foundations contained no identifiable post-medieval material. Pottery from the foundations was mainly medieval coarse ware of 13th- to 14th-century date, with the exception of one sherd of 13th- to 16th-century sandy orange ware. Decorated window glass found among debris from the 19th-century demolition of the building suggests a late 13th- to early 14th-century date for its construction, if it can be assumed that the glass was an original feature rather than salvage.

Internally, two large Kentish ragstone mortared foundations (BF79, BF106) lay in the north-east quarter of the building, with eroded clay floors to the east and south (BL13, BL27, BL28, BL32 and BL50). The best preserved of the clay floors (BL32) contained a hearth (BF49) made of peg-tile set on edge. The peg-tile was badly decayed and too fragmentary to permit a determination of its date. Four metres to the west, burning within a shallow depression BF77 which was cut into the floor BL27 had severely discoloured the surrounding clay and underlying sand. Its charcoal-rich fill included small flakes of slate, perhaps from a fragmented lining or slate sheets placed over the feature. Nearby, surviving lower parts of two clay-lined fire-pits (BF78, BF81) contained evidence of a recurring industrial activity involving molten lead. In the larger of the two fire-pits (BF78), the primary heavy clay lining was of a greenish hue, burnt red on its upper surface, followed by a relining with sandy clay, again burnt, which enclosed a fill of ash, burnt sand, charcoal and many droplets of lead. The adjacent fire-pit BF81 was shallower, with a thinner burnt clay lining and relining but the same high content of lead, burnt sand and ash in the fill. No floors survived in the western half of the building. Whatever the function of the early phase of Building 187 may have been, it was evidently not used entirely for living accommodation, with an eastern half perhaps housing a workshop in at least one stage of its occupation.

Lime-pit and sand-pits (Sites A and B) (Fig. 11)

The raw materials for the mortar used in the construction works seem to have come from a lime-pit AF242 and sand-pits BF141 and BF179, all situated at the eastern side of the site. The sequence of silts and stratified finds in the fill of BF141 suggests that sand extraction from this area may not have taken place, at least on any large scale, until the early part of Phase 2. It was then only partly backfilled and subsequently enlarged when required with further extraction occurring at intervals until at least the 14th century.

Waste-pits (Site B) (Fig. 11)

Other smaller pits in this area (BF142, BF151, BF169,

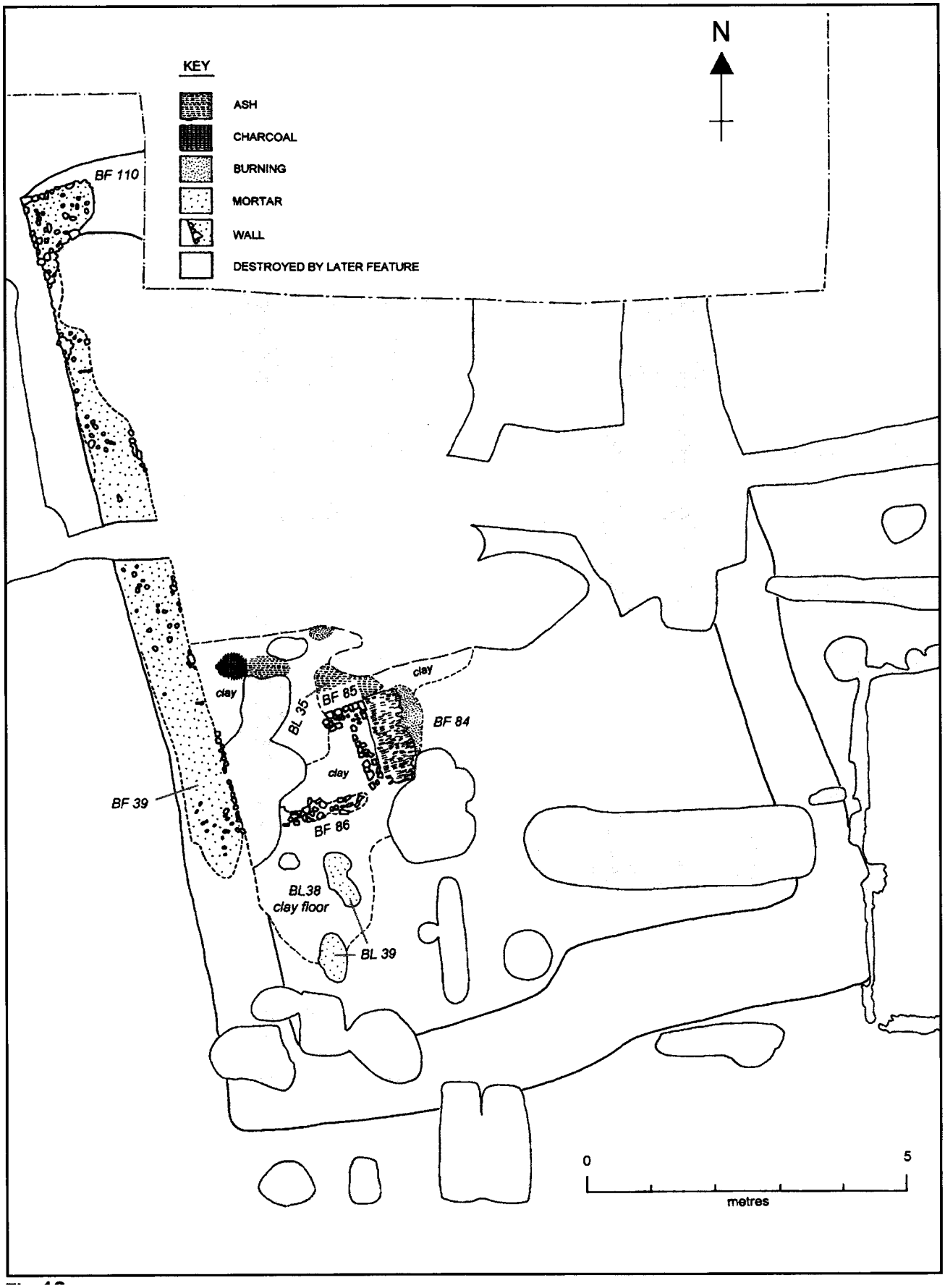


Fig. 13 Building 186: Phase 3.

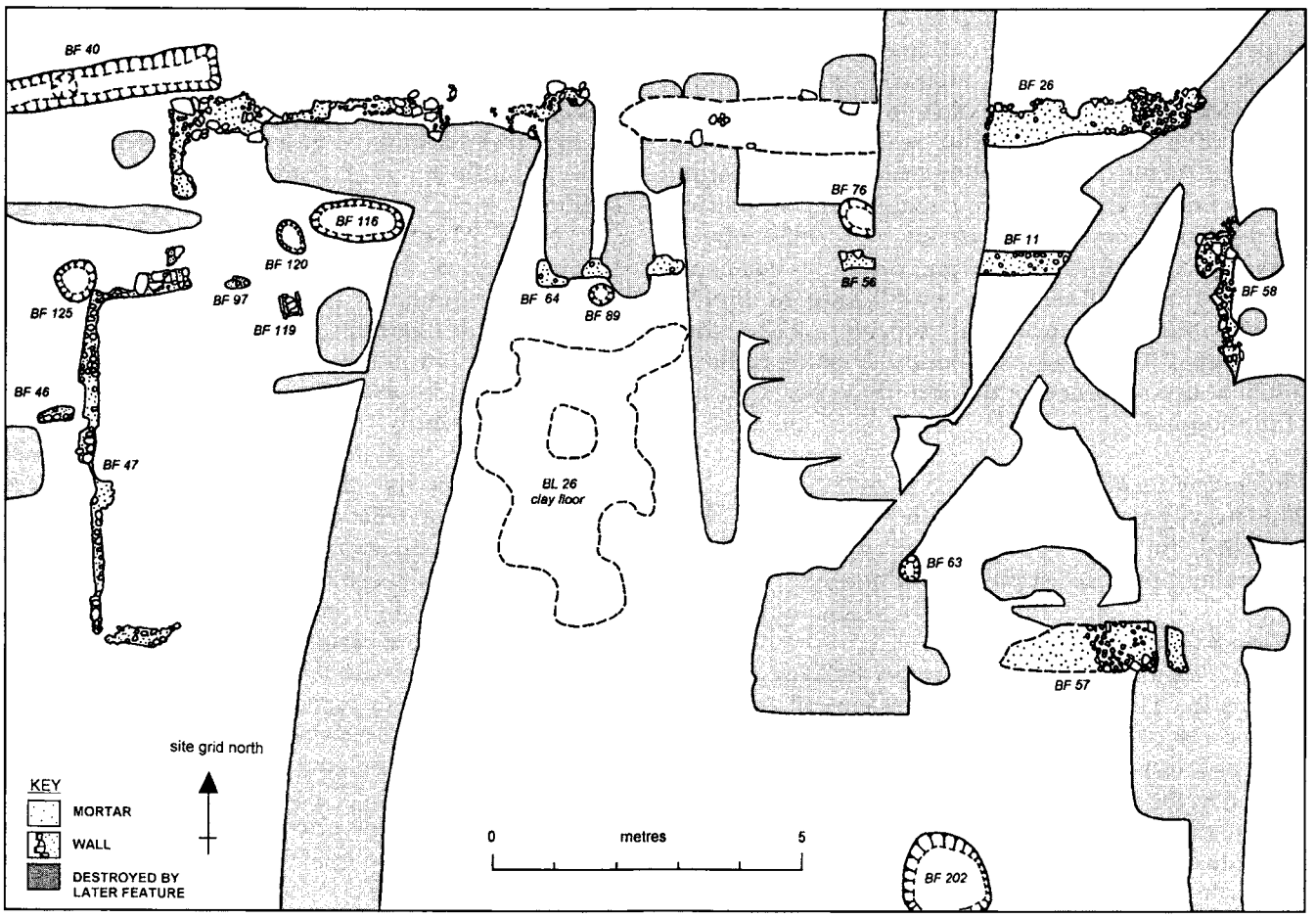


Fig. 14 Building 187: Phase 3.

BF170, BF174 and BF186) contained domestic waste including animal bone and large quantities of oyster shell. However, the main region for waste disposal seems to have been at the northern fringe of Site B, to the east of Building 186 and north of Building 187, where stripping revealed the upper fills of many intercutting pits. These were selectively excavated and produced material which suggests that this was the main area for waste disposal until well into the post-medieval period.

Phase 3 (1610 to 19th century)

Phase 3a use of Building 186 (Site B) (Fig. 13)

Occupation within Building 186 appears to have continued until at least the latter part of the 17th century. Adjoining a hearth of small peg-tile fragments set on edge (BF84) was a wall (BF85) which incorporated brick dated to the early 1600s. Surrounding the hearth and internal walls were clay floor deposits (BL36), possibly belonging to the Phase 2 occupation of the building. These were patched in places with mortar and repaired in the area between walls BF85 and BF86 with clay (BL38) which contained 15th- or 16th-century pottery and clay pipe of *c.* 1670-1700 date. Less securely provenanced finds included 17th-century pottery and a clay-pipe stem apparently from a peg-tile repair to the inner face of the wall BF39.

Building 187 (Site B) (Fig. 14)

Refurbishments probably associated with the formal re-establishment of the hospital in 1610 included the removal of the walls above BF79 and BF106, and the insertion of a partition wall which stood on a shallow mortared rubble foundation (BF11/BF56/BF64/BF97) running the length of the building. A new clay floor (BL26) was laid in the central area of the building. Too little survived to permit a detailed record of the internal layout, but the extant remains give the impression of a central communal area with a row of 2.5m-wide rooms along the northern side.

The latest structural alterations followed the *c.* late 17th-century demolition of the neighbouring Building 186, and comprised a short extension (BF47) which was added to the western end of Building 187. The extended footings were built of roughly coursed septaria, ragstone, peg-tile and brick fragments with a more substantial late 17th- or early 18th-century brick base at its junction point with the line of the main west wall (BF44). Internally, the extension was faced with white plaster carried down to below the exterior ground-level. A small soakaway lined with late 17th- or early 18th-century brick (BF119) was also added during this phase of alterations.

Building 188 (Site B) (Fig. 4)

Building 188 stood close to the Brook Street boundary

of the site and was sparsely represented by a small area of clay floor (BF164, BL44) containing a hearth which included closely-packed post-1500 tile fragments set on edge (BF12). Adjoining the floor to the south were traces of a shallow east-west wall foundation of mortared rubble (BF135). Other than the floor, hearth and possibly associated foundation, no evidence survived the destructive effects of 19th-century terracing to indicate the size or purpose of this building. Since it fronted Water Lane (now known as Brook Street) and was probably separate from the almspeoples' quarters, one speculative interpretation would be as a residence for the later masters or wardens of the hospital.

Pits north of Building 187
The heavily-pitted region north of Building 187 remained in use for almshouse waste disposal, continuing a practice established in Phase 2.

Phase 4 (19th century to 1995)
In 1832, the site was cleared of earlier buildings which were replaced by a terrace of five almshouses (shown in grey on Fig. 3) facing Brook Street with gardens to the front and rear. The new almshouse layout brought a change in the land boundary between the almshouses and the churchyard. This was moved south, taking in a 3m-wide strip of ground formerly used for burial along the northern fringe of the churchyard.

St. Mary Magdalen's church
(Building 185)

Phase 2 (*c.* mid 13th century to 1610) (Fig. 9)
The 13th-century structural origins of St. Mary Magdalen's church are described in the preceding section (p. 103). Built partly on 12th-century foundations for the original hospital living quarters, the parish church contained a floor area of only 38 sq m. Two small and very badly disturbed foundations projected from the south wall. At a point one-third of the way (3.5m) in from the south-west corner, a laminated foundation (AF85/AF86) survived for a distance of 1.5m, beyond which it was removed by later graves and foundations for a post-medieval porch AF79 (section, Fig. 6). Lying parallel to AF85/AF86 at the south-east corner of the building was an even more disturbed feature (AF293), barely recognisable as a foundation, which contained alternating layers of loamy sand and crushed mortar-rich sand. This extended at least 1.8m from the south side of the church, but its full length could not be established due to the presence of trees. Although slight, these foundations are believed to represent the medieval porch and adjoining hospital chapel. Some indication of the church's 13th-century and later architectural detail was derived from fragments of demolished stonework found in later contexts in the vicinity of the building; these are discussed in the architectural stone report.

Internally, the earliest floors were of silty clay, primarily represented in the western half by AL91 which extended east as a less distinct deposit (AL119). There was no obvious definition between nave and chancel, although a piece of roll mould limestone (AR 11, Fig. 18.3), discovered in post-demolition grave fill, raises a possibility of a chancel arch. Later internal additions included a stone-filled font soakaway (AF121/AF122) placed centrally in the nave by the late 14th century at the very earliest. Surrounding the soakaway were traces of a base for the font constructed of mortared tile fragments (AF119, AF124, AF179).

The later medieval floors were very poorly preserved, probably as a consequence of the subsequent deterioration which the church is known to have suffered in the 16th and 17th centuries. In the later medieval period, the church floor appears to have included areas of relief-decorated tile. A total of 93 examples was found, all in secondary contexts ranging from late Phase 2 features to Phase 4 grave fills. A small area of mortar (AL113) in the nave may be a remnant of an originally more extensive mortar bed for the tile. The mortar here was cut by the font soakaway pit, the fill of which contained fragments of tile. Fragments were also found in grave fills elsewhere in the church, which had possibly been displaced as the features were cut through the floor.

Four interments took place within the church in this period. All were middle-aged (i.e. 30 to 50 years). Three (AG107, AG108, AG131), identified as males, were buried in the chancel area. The fourth (AG109), a probable female, lay at the centre rear of the nave. Nails and wood stains survived to varying degrees, confirming the presence of coffins in at least three of the graves (AG108, AG109 and AG131). From their location, the three chancel burials seem likely to be priests, although only one (AG107) produced evidence of status in the form of a pewter chalice placed upright on the chest. The chalice was crushed and too badly decomposed to permit further identification, but it may belong to a period between *c.* 1280 and *c.* 1350 when a medieval custom of placing communion vessels in priests' graves appears to have been most commonly practised (British Museum 1924, 36-9). Coarse ware pottery from the fill lies somewhere in the 12th- to 14th-century range and is thus consistent with a *c.* late 13th- to mid 14th-century date for this grave, which is evidently that of a cleric.

The significance of the lone female (AG109) in the nave is less apparent; perhaps she earned her prominent resting place as a benefactor to the church or hospital.

The earliest of the graves was AG131. This held no datable finds but was cut by the *c.* late 13th- to mid 14th-century burial AG107, severing the left arm and leg bones which were found in a disarticulated state in the lower fill of the later grave. The other two graves, AG108 and AG109, contained fragments of decorated tile which point to late 14th-century or later dates of burial. The interment of AG109 occurred between installation of the mortar floor (AL119) and the font soakaway (AF121/AF122).

Three graves (AG171, AG172, AG173) lay in the porch. Grouped closely together against the church threshold, the two later grave cuts were successively shallower, respecting the earlier remains. No great length of time seems to have elapsed between the earliest and latest of these burials. That much was evident from the manner in which both of the later sets of remains lay at a slight incline, having sunk as the earlier grave fill settled. The earliest burial (AG173), a male over 50 years old, was accompanied by a complete decorated floor tile found lying face down on the flat bottom of the coffin between the femurs. The tile might have been placed there as a base on which to stand another object now completely decomposed or, as suggested in the decorated tile report (p. 123), it may signify a connection between that person and identical late medieval tile used in the floor of the church. The second of the burials (AG172) was a middle-aged female with few abnormalities discernible from the less well-preserved remains. The latest porch interment (AG171) contained an adult, probably female, who may have suffered from syphilis.

Phase 3 (1610 to 19th century) (Fig. 15)
The early part of this phase is known to coincide with a period of neglect in which the fabric of the church was left to deteriorate, then was further damaged by Civil War action. Two hearths (AL95, AF112) with associated deposits of ash (AL38, AL94) and various pits and stakeholes all relate to a period from 1650 when the building was repaired and used as a poor-house. At about this time, the font was removed and its base patched with mortar (AL98). The poor-house conversion included a short-lived extension to the north where traces of a rubble wall foundation (AF5, AF6, AF9) survived between grave cuts dating to the 18th century and later, when the ground formerly occupied by the extension reverted to use for burial.

The church remained semi-derelict until 1721 when repairs included a brick extension to form a new chancel (AF7, AF14). Initially, the floor of the new chancel seems to have been at the same level as that of the nave, and only later, after the interment of AG110, was it elevated with a small step (AF89, AF90, AF91) and floored with brick laid at a diagonal to the walls (AF110). The enlarged nave was also floored in brick, most of which was later salvaged when the church was demolished, leaving a mortar bed covered with an overall scatter of discarded brick fragments (AL21, not illustrated). Among the brick scatter were pieces of plain glazed floor tile, many with clear signs of reuse. These were limited to the western part of the nave. A 17th- to 18th-century costrel (AF130/AF154) was buried in an upright position beneath this floor. A porch (AF30-AF33), with brick flooring and side walls, may have been introduced at the same time as the chancel, but curiously this does not appear on the later 18th-century illustrations (Fig. 17a and 17c). These show only a stump to the south of the doorway, which appears to be a remnant of the medieval porch. Either the published illustrations were based on drawings made some considerable time before or the brick porch was a later 18th-century addition. If the latter is true, then the porch did not last long for it was removed at some stage before the final demolition of the church when the south doorway was blocked and the main entrance was moved to the west wall with new access via a pathway (AL316, AL228) from Simons Lane.

Phase 4 (19th century to 1995)
The medieval church was demolished after the 1854 consecration of a new church built on the former open land at the junction of Brook Street and Magdalen Street. The churchyard was extended south beyond the earlier brick boundary wall (Fig. 3) and burials continued in both the old and new grounds until the early 20th century.

Demolition almost entirely removed the church's medieval walls down to the tops of their foundations, leaving parts of the north, south and west walls standing to heights of only a few centimetres (AF58/AF59/AF60).

The burial ground (Fig. 16)

In total, 234 graves were examined individually in the course of the excavations (197 from Site A, 37 from Site B). Those recorded represent only a small proportion of the total population of a graveyard which, with its 800-year history of interment activity and high incidence of residual skeletal material in grave backfill, must be counted in thousands. Due to the sheer concentration of burials and the disturbance suffered by the earliest, the excavation of graves was of necessity treated as secondary to the location and investigation of structural evidence for the hospital and church and was to an extent dictated by the need to remove archaeologically intrusive features.

The majority of the graves could not be closely dated. Of those that could be assessed with reasonable certainty, five graves belonged to Phase 1; seven graves to Phase 2; 48 graves to Phase 3; and 46 graves to Phase 4. Others could only be bracketed within paired phases with 34 graves in the broad range of combined Phases 2-3 and 94 graves in Phases 3-4. These figures only indicate the low level of securely datable graves and do not represent the relative intensity of burial from one phase to the next.

Those burials clearly belonging to Phase 1 are AG138 and AG142 which were cut by the church foundations AF190/AF215/AF228 and AF111/AF226. The lower parts of these two graves were roughly contoured to the shape of the body and contained no coffin. To the north, a further three of the stratigraphically earliest graves (AG143, AG151 and AG162) shared these characteristics, forming a regularly spaced north-south aligned row to the north-west of Building 183. Residual human bone which was found in an early Phase 2 wall foundation fill (AG201 in

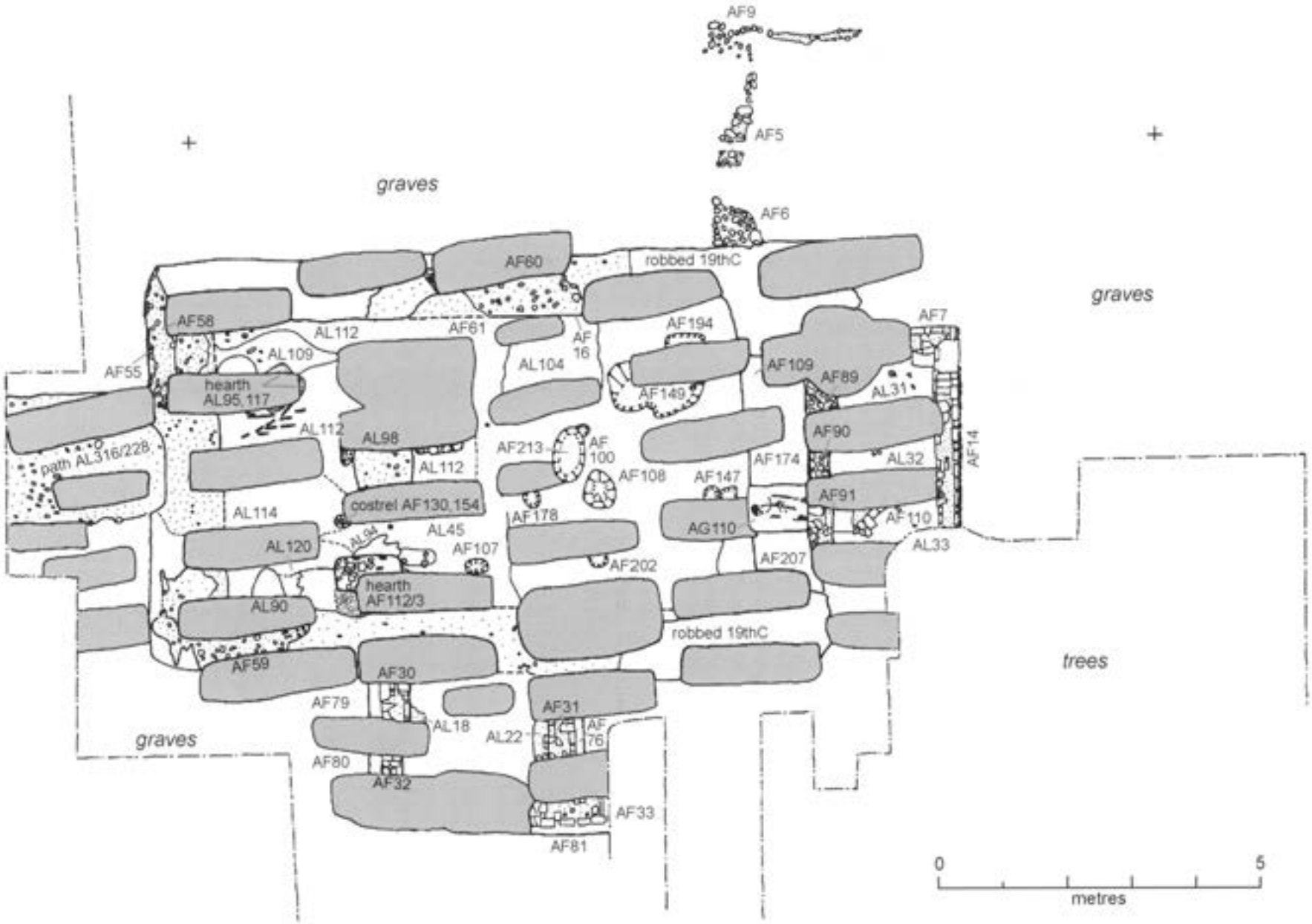


Fig. 15 Building 185: Phase 3.

Fig. 16 The graves.

AF284) suggests that burial also took place in the region close to the east end of the building, although no intact graves of the period were located in that part of the site. The presence of a child's skull in this early context raises the question of whether the disturbed graves here belonged to local people or hospital inmates. Officially at least, leper hospitals were not permitted to take in children: either Lateran Council rule in this matter was ignored, or the hospital's grounds were being used from a very early stage for the burial of the dead from the outside community. If the latter is true, then it is possible that facilities for worship would also have existed at the hospital.

The body-contoured graves without coffins appear to be limited to Phase 1. Thereafter, the graves were more or less rectangular with common evidence of coffins in the form of nails and soil stains left by decomposed timber.

The pattern of post-Phase 1 medieval churchyard burial could not be determined due to the small number of securely datable Phase 2 graves. Graves of possible Phase 2 date (i.e. in the Phases 2-3 range) occurred in most churchyard areas where the sequence of burial was explored to any extent, and they were relatively well-represented in a small strip of systematically excavated graves at the southern edge of Site B. Exceptions were the sites of the Phase 2 lime-pit (AF242) where no graves pre-dated Phase 3, and the adapted Building 183b which was retained for a time in Phase 2.

From the post-medieval period to the late 19th century, burial appears to have taken place in all parts of the churchyard, which from 1854 extended south as far as the new church (Fig. 3). In some instances it was possible to establish the identities and exact burial dates of excavated 18th- and 19th-century graves by association with overlying gravestones or inscribed plates on coffin lids.

The medieval boundary between the churchyard and hospital grounds marked by ditches BF176/BF177 seems to have to have remained unchanged until 1832, when it was moved a short distance south when new almshouses were constructed at the beginning of Phase 4.

Interpretation and phasing

Aspects of the site interpretation and phasing as described below are open to alternative analysis.

Building 183b

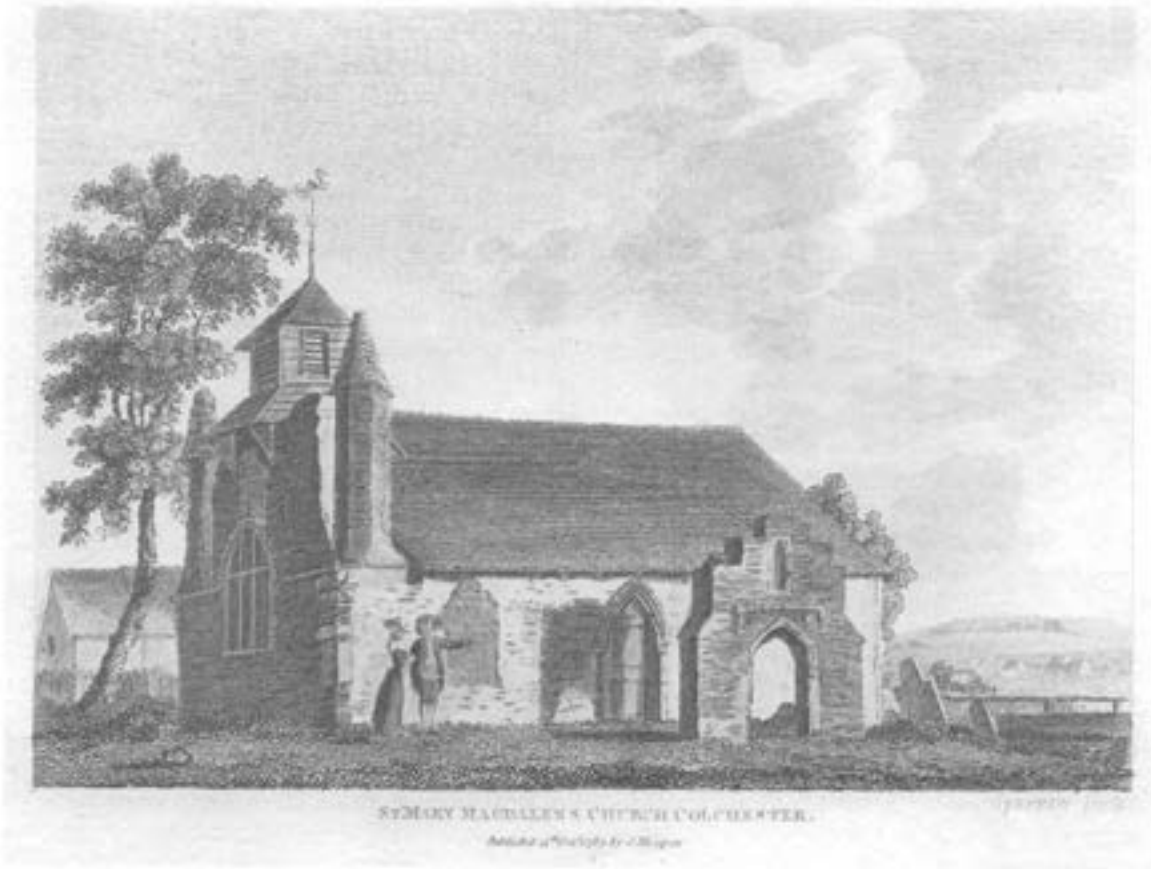
The beginning of Phase 2 has been assumed to mark the point at which the church (Building 185) was established as a separate small structure of the length indicated in 18th-century and later illustrations (Fig. 17). Given the very fragmentary condition of the Building 183b foundations and the lack of stratigraphic continuity between them and the Building 183a/Building 185 foundations to the west, there remains a possibility that the two stood for a period as an integrated structure, which was only later reduced to the 9m length confirmed by excavation of post-medieval features at the east end of the church. While this cannot be dismissed, an early Phase 2 date is preferred, both for the reasons explained on page 103 and on the basis that it is a known point at which major structural alterations took place, and is thus the simplest interpretation consistent with the available evidence.

The hospital chapel in Phase 2

There are three possible sites for the hospital chapel in this period. The cartographic evidence, in the form of the map of Colchester published by John Speed in 1610 (Fig. 2), shows the church with, a large intact building labelled 'Maudlyn chap' to the north. There is little doubt that Building 186 is that structure since it is of the correct size, orientation and location in relation to the church. Documentary evidence is at odds with this interpretation, with a witness in a 1580 lawsuit stating that the hospital chapel *had adjoined the side of the parish church* and further describing the chapel's condition at the time as 'clean down'. The charter which was prepared when the hospital was refounded in 1610 also describes the chapel as totally destroyed (history section, p. 94). While anomalies between the 1610 illustration and references to the building's condition may be explained by the likelihood that Speed's published map was based on an earlier survey, it does not resolve the incongruity in location, if the 1580 description of the chapel's juxtaposition to the church is to be interpreted literally. The archaeological evidence also suggests that Building 186 could not have been demolished totally by the late 16th century, since brick incorporated into a hearth wall (BF85) and finds from an adjacent clay floor (BL38) indicate continued use of the building until at least the later 17th century. Speed's reference to the Maudlyn chapel perhaps reflects an inclination to identify the establishment by its dedication rather than a specific building by its function.

More consistent with the documentary and archaeological evidence is the possibility that part of the heavily disturbed group of foundations classed as Building 183b might represent retention of the original site of a Phase 1 chapel. The 12th-century foundations were augmented by further building activity in the form of foundations AF283, AF284 and AF289. These displayed a similar laminated technique to that which was used for the wall foundations underlying the nave of the church and may well be part of the same phase of building activity, although the layering was less marked. While it is less likely to have been physically joined to the church (as implied by the 1580 description), it is possible that, in Phase 2, Building 183b might have undergone conversion to become a free-standing hospital chapel located immediately east of the church.

The third possibility is that the church had an attached chapel for hospital inmates, in accordance with the 1580 statement. The archaeological evidence for this is thin, but nevertheless present in the form of the foundation AF293 (Fig. 9) which projects from the south-east corner of the building. Paired with the west wall foundation for the medieval porch (AF85/AF86), this is the most likely location for the hospital chapel.



a.

b.

St Magdalens Church Colchester.

c.

St Mary Magdalens Church, Colchester — Essex.

Fig. 17 Three 18th-century illustrations of St Mary Magdalen's church:
a Sparrow, published 1783;
b Stukeley, 1718 (reproduced with the kind permission of The Bodleian Library, Oxford. MS Top.Gen. e.61. folio 43);
c 18th century (from Essex Churches album, ESAH library).

Most 18th-century church illustrations (of which Fig. 17a is an example) show a prominent free-standing arch, stylistically similar to the west end of the church and very like a porch entrance, but located at some distance to the south of the church door. The accuracy of the location of the arch is questionable as artistic licence may have been exercised in the placement of the arch to balance the view of the church. It does not, however, seem to be part of the small gatehouse shown by Speed at the boundary between the churchyard and Magdalen Green, since another *c.* 18th-century illustration (Fig. 17c) shows that as a quite separate feature standing further to the south. A broad area immediately south of the church was stripped down to natural subsoil, but no evidence for the arch was recovered in ground which was heavily disturbed by graves. The elusive arch, drawn with some attention to architectural detail, is unlikely to be sheer invention on the part of the original artist and, if accurately scaled, the drawing offers an indication of the potential size of an adjoining hospital chapel.

Origins of Building 187

In some respects it would be simpler to see Building 187 as no earlier than 17th century in origin, for in a medieval context its presence alongside Building 186 seems to offer spacious accommodation for a hospital which after 1423 probably had no more than five inmates. It also stands uncomfortably close to Building 186 with a gap of only 1m at the narrowest point between the two.

The structural sequence of the building falls into three stages, starting with the main walls and clay floors attributed to Phase 2 (p. 103), followed in Phase 3 by internal alterations and then finally by an extension added to the west. The datable material associated with the earliest phase variously falls within a 12th- to 16th-century range, with 13th- or 14th-century finds being commonest in the wall foundations and floor. This contrasts with the later stages of the building where post-medieval materials and finds were fairly plentiful together with residual medieval material. From a secondary context, all but two pieces of medieval painted window glass from the site were found among a localised spread of 19th-century demolition debris (BL7, BL15) over the centre of the site of Building 187 (the other two pieces from elsewhere, PG27 and PG28, are stylistically unrelated to the main group). The glass is of late 13th- or early 14th-century date and evidently came from one or more windows of the building as there was no other source for the glass in this late context. A further factor is the materials used in the earliest foundations. These were characterised by an abundance of re-used Roman building stone and tile, consistent with an early medieval practice of making extensive re-use of then freely available Roman building materials. In itself, the presence of Roman material is not diagnostic here since it is probable that the late 17th-century demolition of Building 186 would have released quantities of septaria and Kentish ragstone for a second phase of re-use. The window glass too might have been salvaged from elsewhere rather than being an original feature of Building 187. On balance, however, the combination of a consistent absence of later finds, together with the nature of the building materials and presence of the window glass, was considered to be significant. The origin of Building 187 has therefore been placed in Phase 2, but with the reservations noted at the beginning of this section. An alternative interpretation, based on a Phase 3 origin, would involve the introduction of Building 187 either around 1610 as new accommodation for the refounded hospital, or perhaps later in the 17th century if it was built as a replacement for Building 186.

Discussion

Phase 1, Building 183 interior layout

A conventional layout for an infirmary hall of the time would have an entrance into a main dormitory area which led on to a chapel at the east end of the building (Prescott 1992, 7-22). The 12th-century hospital's initial relationship with any nearby residents is not known. However, if it was the case that the hospital was expected to provide worship facilities for a small neighbouring community right from its earliest days, a layout of the kind described would be inconvenient, and probably highly objectionable to outside worshippers who would need to pass through the lepers' dormitory to reach a shared chapel. A more acceptable layout would require at least a separate access if one chapel was common to both locals and inmates, or an additional chapel with its own approach. Various layouts are possible, but if a community chapel were incorporated into the original main building, then structurally it would be simplest to place it at one end with its own entrance. This might explain the cross-wall (AF109/AF174/AF207) division in the western part of Building 183: if that were the location of a community chapel separated internally from the rest of the building, then it would justify the retention of established sacred ground at the west end of the Phase 1 building as the location for the chancel when the free-standing church was constructed. This is highly speculative, but the choice of location for the church seems unlikely to have been dictated merely by the existence of a few inadequate foundations left from the Phase 1 building.

Segregation and a fluctuating inmate population

If Building 187 was added to the hospital in the medieval period then it must have been for a sound practical purpose, as the hospital seems never to have been sufficiently wealthy to significantly enlarge its accommodation as a matter of prestige or merely to provide some minor amenity. One factor that may have encouraged further building was a need to separate different classes of inmate. Following a late 11th-century tradition established by archbishop Lanfranc, segregation in hospitals took two forms: a division between leprous and non-leprous infirm, and separation

of the sexes in mixed institutions. By the 14th century, many English leper houses were also accommodating non-lepers (Orme and Webster 1995, 29, 90-91). It is not known if St. Mary Magdalen's followed this trend, but equally there is no reason to think otherwise. More is known about St. Mary Magdalen's admission of women. The hospital seems originally to have been an all-male establishment, then it took in both sexes before reverting to a men-only regime after 1423. Pressures for separate male and female quarters and perhaps also a further division between leper and non-leper may have led to the introduction of Building 187, if it is assumed that the hospital fully observed the established requirements for segregation.

Another reason may lie in a fluctuating inmate population. It is uncertain whether the relatively low incidence of later medieval pottery signifies a fall in the hospital's population, an increased level of poverty, or some other factor. If this dearth of pottery should in any way relate to the numbers accommodated at about that time (i.e. known to have been set at five after 1423), then it is conceivable that the hospital's population may have been higher in earlier centuries, perhaps necessitating the introduction of further buildings. A fluctuating population would have implications on the purpose to which the buildings were put at any one time: Building 187, for example, might have served as living quarters at one stage, then later housed a workshop as the number of inmates fell, but this is approaching the extremes of conjecture when the surviving material evidence is limited.

The medieval land boundary with Simons Lane

The orientation of Building 186 did not correspond to that of the other medieval buildings on the site. Instead, it follows the inclination still seen today in a 35m length of the modern Simons Lane (Fig. 3; fronting the Victorian terrace, nos 3-11), which suggests that that part of the lane was established by the 13th century or at least follows a boundary set in the early medieval period. To the south, ditches BF176, BF177 and possibly BF163 also observed this orientation, as did an assortment of pits (BF145, BF150, BF155 and possibly BF156-BF158) and a line of stone-packed post-pits to the west (BF66, BF67 and BF68). Various interpretations may be placed on these features. The pits may be haphazard, but if related they establish a line roughly parallel to and 3.5m to 4m west of Building 186, perhaps turning west at BF150 to form an east-west line which is emphasised by the stratigraphically later stone post-pits. Given that the north-south pit line BF145/BF155/BF150 may have defined an open strip between the side of Building 186 and fenced land to the west, it remains uncertain whether the strip was within the hospital grounds or was occupied by a direct northern continuation of Simons Lane. If the latter, then the later introduction of the east-west stone post-pits could indicate a medieval diversion in the northern course of the lane which, again, is today reflected in its sharp turn to the west.

The graves

The small sample of Phase 1 burials consisted of four males and one of indeterminate sex, which within its limitations substantiates the suggestion (see history, p. 72) that the early hospital was an exclusively male institution. Of the three instances of possible leprosy, two belong to the Phase 1 group buried close to the 12th-century infirmary hall. The third (BG30) was found at the boundary between the churchyard and hospital grounds, an area which also contained three of the four possible cases of syphilis. Segregation between diseased hospital inmate and parish burials would almost certainly have occurred, as to do otherwise would not only disregard Lateran Council rule insisting that lepers have their own burial ground (Tanner 1990, 222-3), but also entail a remarkable level of tolerance on the part of parishioners. Although the excavated sample of graves was unbalanced in terms of distribution, condition and date (p. 111), the relatively high incidence of serious disease among the interments in the area closest to the hospital probably points to its use for inmate burial. The duration of such use is difficult to estimate, especially since the latest of the three possible syphilitics (BG26) was a post-17th-century grave. The other burials (BG34, BG37 and possible leper BG30) were stratigraphically earlier and are probably medieval, although in the absence of dating evidence these have been broadly placed in the range Phases 2-3. The post-17th-century burial, a middle-aged female, suggests that some caution is needed in assuming that all instances of major disease indicate hospital inmates. If she was a parishioner rather than almshouse occupant, it is possible that her interment here might indicate continuity of a tradition of burial of the diseased in this region of the churchyard.

The Dissolution

A secondary aim of the excavation and documentary research was to establish whether the hospital, as a religious establishment, operated continuously during the difficult years of the Dissolution. The pottery evidence is indeterminate (p. 140), but the succession of documentary references to various 16th-century masters and business affairs (p. 93) seems to suggest administrative continuity and probably at least a modest level of inmate occupation in spite of confiscation of hospital assets.

Conclusions

St. Mary Magdalen's in many respects conforms to current perceptions of a small medieval leper hospital. In terms of its extra-mural location, original infirmary hall and gradual conversion to care of the long-term infirm and poor, it has many parallels. Among the finds from the site there is a lack of solid evidence for medical treatment, an absence which is consistent with the view that many of England's small medieval hospitals made scant attempt to administer cures for the body (Carlin 1990, 24).

For a leper hospital, St. Mary Magdalen's is

noteworthy for the manner in which the 13th-century church was established on the site of the hospital's original principal building with the resultant move of the infirmary hall to the northern part of its grounds and successive masters' combined responsibilities for hospital and parish. Occasionally, leper hospitals developed relationships with the outside community, some with shared use of chapels. One example from this period is St Leonard's, Northampton which in 1281 was said to have a chapel long used by local people. The conversion of a hospital building to a parish church also occurs elsewhere in this period. The infirmary hall at the Hospital of St Thomas of Canterbury at Ramsey, built on a larger scale than St. Mary Magdalen's, became a parish church in the mid 13th century (Prescott 1992, 8). However, the Ramsey hospital differs from St. Mary Magdalen's in that it is believed to have been an almshouse, accommodating the poor rather than sufferers from disfiguring disease, and it may have closed down altogether at the time of conversion as there seems to be no further record of the establishment (Knowles and Hadcock 1971, 330, 386).

A somewhat closer equivalent to St. Mary Magdalen's may be the hospital of St. Mary and St. Thomas Martyr, Ilford which was founded for lepers in the early 12th century and survives today as a much-altered chapel and six 20th-century almshouses. Standing in an outlying part of Barking parish, the hospital chapel was confirmed as a place for local worship in 1572, probably continuing a tradition of public use established in the medieval period (VCH Essex, v, 228). Structurally, little is known about the 12th-century hospital. The chapel was largely rebuilt in the early 14th century (RCHM Essex, ii, 97), but the circumstances of its reconstruction are obscure and may be unconnected with the development of public access to the building. More exact parallels to the situation at St. Mary Magdalen's may have occurred, but while knowledge of the individual histories and physical layout of most hospitals remains fragmentary, to pursue these distinctions would involve detailed research on a scale outside the scope of this project.

Further excavation

Of the modern property adjoining the site, the only one with identifiable archaeological potential in relation to the hospital is a small wooded plot immediately to the north of Site B. Any future excavation there would offer an opportunity to uncover the northern end of Building 186, establish the extent of the hospital's medieval and later waste-pits and verify the current assumption that the pits mark the northern limit of the hospital's grounds.

Specialists' reports

In addition to the materials covered by the following published reports and summaries, the research archive contains catalogues and assessments of the following: post-Roman brick and tile by Pat Ryan, glass by Hilary Cool, clay tobacco pipe by Mandy Marshall, Roman keyed tile by Ernest Black, flints by John Wymer, and lead samples by Justine Bayley.

Architectural material (Fig. 18)

by Andrew Harris

Introduction

A total of 70 architectural fragments (65 stones, 5 others) were recovered from the excavated areas; 56 derive from Site A and 14 from Site B. Most of the pieces were small and fragmentary, and a number were unworked. A full catalogue and analysis is contained within each site archive; the material is identified first by its site specific finds number, and second by a unique and consecutive cross-site architectural fragment number (AR no) assigned during post-excavation. Only material of an intrinsic and illustrative value is published here.

Materials

The most common material was limestone (40 examples), with greensand the next most common (12 examples). Carstone, chalk, alabaster, granite and flints are represented to varying degrees. An assemblage comprising flint, chalk greensand and carstone, with additional greensand and limestone ashlar material, is typical of medieval architecture in Essex.

The single fragments of alabaster (AR 29) and granite (AR 6) are each derived from Phase 4 deposits and are likely to be 'intrusive' elements to the assemblage and probably introduced during the 19th century.

Sources and uses

Limestone

In addition to a range of lithogies derived from the Lincolnshire and Northamptonshire series, material from Caen and 'marbles' from the Isle of Purbeck are identified within the assemblage.

Caen, a medium hard, white and creamy fine-grained limestone, is the largest single group in the assemblage (thirteen examples from Site A and two from Site B). The stone weathers well and, if correctly bedded, is suitable for most exterior work. Being a true freestone it allows of crisp carving.

Caen was first imported into the country soon after the Norman conquest and quickly established itself as a highly suitable and popular building material. Political upheavals in the 13th century ensured that supply was interrupted, resulting in a decline of its usage. However, in some regions, notably the eastern coastal areas such as Essex, Caen still continued to be imported well into the medieval period. Examples of Caen used in a 13th- and 14th-century context can be found at Chelmsford Dominican Friary (Harris in Harris and Isserlin forthcoming), whilst documentary sources of *c.* 1500 record harbour dues paid to the port of Maldon, Essex from a ship carrying 'carne stonys' (Clarke 1905, 117). At Canterbury (Tatton-Brown 1990, 78-9), the material has been identified from 15th-century contexts.

Within the current assemblage, only a single fragment from Site A (AR 48) can be reliably assigned a 12th-century date, as compared to eight where a date in the 13th or 14th centuries is likely (e.g. AR 26, AR 55, AR 69).

The Lincolnshire and Northamptonshire limestone belt comprises a number of lithogies each with distinctive properties, from the shelly ragstones to the fine-grained freestones. The assemblage from St. Mary Magdalen's consists of a number of categories indicating quarrying from a number of sources. The most common group (12 examples) consists of hard and medium hard, dense, pale yellow or cream oolitic, slightly micaceous rocks. Much of this appears closely related to material from the Ancaster beds, whereas a few comprising of more densely grouped ooliths would relate better to material from Ketton.

Other categories are comprised of hard, slightly oolitic, coarse shelly rocks most of which relate to material of Barnack type (five examples). Finer-grained shelly limestones resembling material derived from Clipsham account for just two examples.

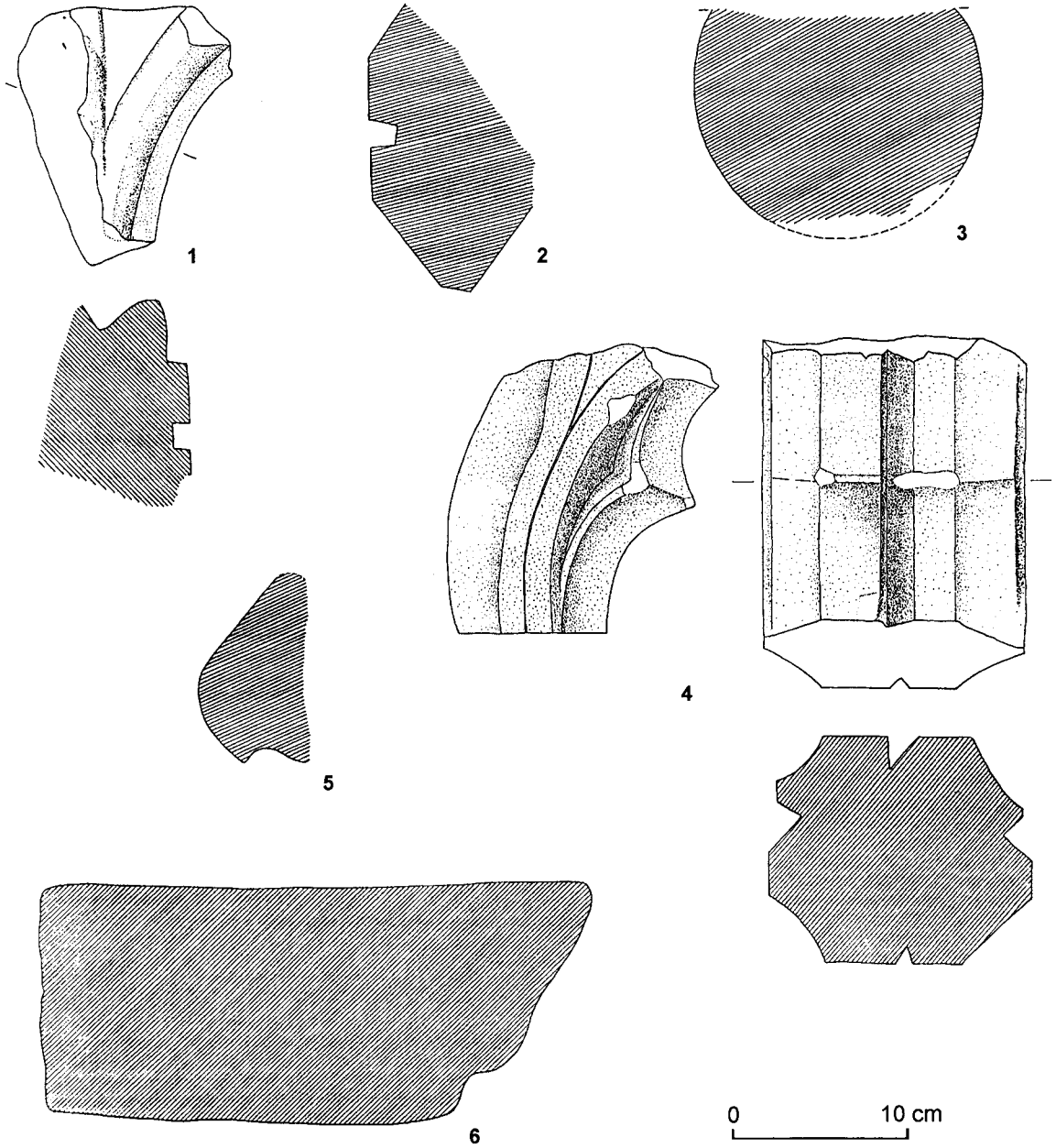


Fig. 18 Architectural material: nos 1-6

The limestones enjoyed a particularly long period of usage and are common in all periods and manner of medieval and later architecture; of the current assemblage, most derive from window mullions or jambs, but only two (AR 3, AR 57) would appear likely to be of 12th- or 13th-century origin.

Purbeck marble, a hard dense shelly limestone able to take a polish, is not a true marble, but was nevertheless favoured in architecture for its marble-like qualities. Of the four architectural pieces (one other is a fragment of a mortar, AR 43), three are from the hospital Site B, and comprise a single polished and worn surface which may therefore represent either flooring or tomb lids. A further example from Site A (AR 18) has been burnt and is very fragmentary. As examples of burnt Purbeck stones are to be found built into the walls of both St Botolph's priory and the castle at Colchester, it is possible that it represents material reused from the Roman town.

Sandstone

Greensand, a medium hard to soft, grey green stone with small black inclusions, is derived from deposits in the London basin. The stone does not weather well and is not generally suited to external use; on interior surfaces the stone was frequently carved and moulded and employed as architectural decoration. However, its availability to the Essex region, from at least the 11th century, has ensured its common use on a wide range of structures as an external walling material, including quoins and window and doorway facing. Virtually all twelve examples from St. Mary Magdalen's are unworked rough walling nodules; only two show vestigial use as architectural moulding of medieval date (AR 35, AR 40), whilst a single fragmentary ashlar (AR 4) is likely to be of 12th-century date.

A single carstone moulding (AR 53) occurs within the assemblage. The rock is common to the Essex region and obtained locally in the superficial strata, where the sand particles have been cemented together by iron solutions. The material is hard, coarse and varies in hue from a dark red brown to a pale blue grey. Carstone is common to most periods of architecture, where it is usually employed as rubble and sometimes for quoins. In the 12th century it was also frequently employed as facing for doorways and windows, though its properties ensured that it was seldom carved.

Tooling

Tooling marks were preserved on many of the stones. Four fragments (AR 3, AR 4, AR 48, AR 53) retain traces of diagonal tooling, an oblique mark characteristic of, and confined to, the 12th century. The recognition of the mark is therefore an indicator of date.

Claw tooling marks result from the use of a serrated bolster. The mark is common to the 13th and 14th centuries and, as with diagonal tooling, can also be an indicator of date. Claw tooling is evident on at least nine stones, five of which are Caen stone.

Architectural moulding (Fig. 18)

Phase 1 (12th century)

Only three mouldings can be attributed to the 12th century, with an additional three attributable on account of their tooling. All of this material is derived from Site A where there exists structural evidence (Building 183) for this date.

Not illustrated — AR 30, Caen. Small roll arch mould. Site A, context AG35, Phases 3-4.

Not illustrated — AR 49, limestone (Caen type?). One fragmentary quirked upright, possibly from an impost. Site A, context AL233, Phase 4.

Not illustrated — AR 53, carstone. Rebated chamfered jamb stone with square-cut housing for bolt or window bar. Site A, context AR 93, Phase 3.

Architecturally, Building 183 is likely to have comprised a rubble fabric with quoins and dressings comprising both greensand and Caen. Doors are likely to have been simply roll moulded. Round-headed windows, apparently dressed in carstone, were unmoulded with only a single external chamfer.

The absence of 12th-century material from Site B would confirm the supposition that this area was devoid of stone structures at this time.

Phase 2 (13th to 16th centuries)

The bulk of the architectural material from this period derive from windows, some cusped. None of this can be closely dated. However, variations between the moulds do suggest that the assemblage is multi-phase and it is probable that there is evidence of 13th-, 14th- and 15th-century work.

A range of materials is evident, including both native limestones and Caen. Greensands are less evident with only two pieces, showing a simple rebate (AR 35) and a chamfer (AR 40). The presence of Gault brick within the excavated assemblages indicates that stone was not the only building material employed on site. Gault brick is a common material widely evidenced on a range of buildings from the 13th to 14th centuries. In many instances the bricks were moulded, but in other cases mouldings were 'cast' in plaster fixed to the surface of the brick. A single fragment of plaster with evidence of fixing to brick (AR 1) comprising a simple hollow chamfer mould can be directly paralleled with a moulded stone (AR 44) in Caen. The mould is of an undiagnostic type, but a 14th-century date is likely.

Not illustrated — AR 57, Barnack rag. Window sill chamfered on both internal and external faces and without glazing slots. Probably 13th century. Site B, context BF2, Phase 4.

Fig. 18.1 — AR 69, Caen. Cusped window tracery with glazing slot and keeled roll. Mid to later 13th century. Site B, context BL9, Phase 4.

Fig. 18.2 — AR 23, Barnack. Window mullion with glazing slot and chamfered faces. 13th/14th century. Site A, context AL233, Phase 4. (Details of similar mouldings from Site A contexts are given in the archive.)

Fig. 18.3 — AR 11, limestone (Caen type?). Roll mould (diameter 165mm) showing sharp arris to rear at union with further rolls. Possibly part of a composite shaft to a major feature of 13th- or early 14th-century date. Site A, context AG2, Phase 4.

Fig. 18.4 — AR 55, Caen. Cusped window mullion with glazing slot and chamfered and hollow chamfered moulding. The curvature of the stone indicates either reticulated or curvilinear tracery of the early and mid 14th century. Site A, context AL136, Phase 4. (Details of similar mouldings from Site A contexts are given in the archive.)

Fig. 18.5 — AR 44, limestone (Caen type?). Beaked half-roll with hollow chamfer. Probably part of a drip of hood mould of possible 14th- or 15th-century date. The moulding is closely paralleled in plaster (AR 1). Site A, context AG35, Phases 3-4.

Fig. 18.6 — AR 56, dense shelly limestone of Clipsham type. Ogee mould with slightly curved inner order. Probably 14th century. Site A, context found reused and incorporated within the fabric of AR 33, Phase 3.

Distribution plots of the Site A residual material indicate the insertion of several cusped windows to the church during the early and mid 14th century. These may have replaced earlier windows, but there is some evidence that the church, or Building 183b, may already have had some 13th-century features inserted. The presence of a composite shaft possibly denotes the provision of a chancel arch.

The fragment of ogee moulding was found, inverted and reused in the foundations for the south porch. A square post-setting had been let into the rear face of the stone and probably relates to its period of new use. The stone clearly indicates that the removal of certain architectural features (i.e. demolition or works of refurbishment) was contemporary with the erection of the porch, believed to be of 17th- to late 18th-century date. In addition to this there are a number of other stones which show mortar attached to both worked and fragmentary surfaces, indicating a period of reuse.

Phases 3 and 4 (17th to 20th centuries)

There is very little diagnostic material of these periods; activity is evidenced primarily by the introduction of 'exotic' materials, i.e. Ketton, Coade, terracotta, alabaster and granite.

Ketton stone is commonly employed as a facing material throughout the post-medieval period and was especially favoured by 19th-century masons. Coade, an artificial stone material, was developed in the 18th century, after which it became popular, favoured for its ability to be 'cast' or moulded into intricate forms. A single fragmentary piece (AR 41) was recovered from Site A, insufficient to determine its form or function. Terracotta is also an artificial material capable of moulding and has been extensively used in many great and not so great buildings since at least the 16th century, undergoing a revival during the 18th and 19th centuries. The single piece excavated from Site B (AR 60) is a composite 'tile' showing fleur de lys in relief and is probably of 19th-century date. Alabaster was commonly used in the medieval and post-medieval periods for a range of monuments or similar ancillary structures. The single piece from Site A (AR 29) shows a roll and fillet and is not otherwise capable of being assigned a date. However, as it was found within a Phase 4 grave infill (AG40), it is possible that it is debris derived from the demolition of the church.

Discussion

There is an obvious distinction in not only the quantity but also the quality of material excavated from the two areas. Material from Site A far outnumbers that from Site B, and in addition is of a more diverse range. The assemblage from Site A would be typical of any similar multi-phase church excavations; it comprises ashlar material, moulded jambs and mullions derived from a number of identifiable chronological periods. Its range accords with the site's known history as a 12th-century building, enlarged and extended in the medieval periods and retained in use until its demolition in the mid 19th century.

Site B, on the other hand, produced a very limited range of materials. Although the structures would appear to have been in use almost as long as those on Site A, in any other circumstances the restrictive nature of the material would suggest a single-phase occupancy.

The only possible conclusion must be that the hospital buildings in Site B retained much of their original architecture and character right up to their demolition. In contrast, the Building 183a/Building 185 complex excavated on Site A seems to have been subject to additions and refurbishment on several occasions in the 13th, 14th and 15th centuries.

Several related 18th-century views of the church are known (Fig 17). These show a single cell structure with an integral bellcote and curious polygonal pinnacles at the west end. There is a prominent doorway about midway down the church, apparently of mid to later 13th-century form. It appears to be aligned with a free-standing gable wall housing a single pointed arch with a flat drip-mould, the ruined remains of a porch. The drawing is not particularly clear, but the indications are that this porch is of brick or has brick detailing, and a 14th- or 15th-century date appears possible.

The illustration generally confirms the excavated evidence and certainly indicates the likely provenance of a number of architectural fragments. The presence of large, cusped windows is clearly shown in the west and south walls and a large east window can also be assumed. Both the excavated evidence, the stone assemblage, and the illustrations indicate a building of unremarkable form and of a style and accomplishment typical of its type, form and date.

The building materials (Fig. 19)

by Nina Crummy

Roman tile and brick

Though no Roman occupation was observed on the site, it lies only a short distance from the Roman town and Site A produced a quantity of Roman tile. This consisted of *fragments of tegulae, imbrices,* flue tile and bricks, including at least one small piece of a segmental brick which is 49mm thick. Not enough remains of this fragment to tell if it was originally semicircular or quadrantal. Brick forms a high proportion of the total Roman assemblage, suggesting deliberate selection for reuse in the construction of the medieval buildings on the site.

Ernest Black has provided the following report on the Roman relief-patterned tiles and bricks:

Roller-stamped flue tile is represented by a small, very abraded, fragment of Lowther's 'florid' Die 9 (Lowther 1948, 27), which was recovered from a Site A Phase 3 ?floor surface (AL112). Though Die 9 has an extensive distribution from Kent to Lincolnshire, it has not previously been recorded from Colchester, and is known from only one other site in Essex, the rural site at Rayne (Black 1989, 20-21), where it was associated with Dies 13, 16 (*ibid.*, 29), and 5aA (Rudling 1986, 210). The Rayne assemblage is dated to *c.* AD 120-30 or slightly later, and this date is similar to that of the collection of other relief-patterned tiles from the St. Mary Magdalen's site.

This consists of thirteen fragments of combed flue tile and four of scored tile. Many of the combed tiles show evidence of reuse, and have combing similar to assemblages excavated elsewhere in Colchester (*CAR* 6, 261-72). One of the scored fragments is from a flue tile, two are from *pila* bricks, as may also be the fourth, which has a surviving thickness of approximately 30mm.

Medieval and later floor tiles

Forty plain floor tiles were examined, 34 of which are glazed, the others, at least one of which is Flemish, are worn and bear no trace of glaze. Four, though externally oxidised, show some patchy reduction on the upper face which suggests that they may originally have been glazed.

Three of the unglazed pieces are similar in size and fabric. Two are about 105mm square and the third is triangular, cut from a similarly-sized square tile. The upper surface was scored before firing and the tile snapped in two later. The fabric is a hard-fired sandy clay with some grit and the occasional flint pebble. The tiles are oxidised, with variable reduction of the core and upper face. They are similar to locally-made relief-decorated tiles described below, though slightly smaller, and are also probably of local manufacture. They can be ascribed a general later medieval or early post-medieval date, but all are residual in grave fill, two from Phase 3/4 contexts and one from Phase 4.

Several glazed tiles are medieval or later Flemish imports. One, from the fill of the Site A Phase 4 grave AG3 is complete. It measures 120mm square, is 25mm thick, and retains patches of very dark green, almost black, glaze on the upper face. There is a nail-hole in each corner.

The remaining plain tiles are almost certainly English. Many are fragments in a fabric and of a thickness that is closely comparable to that of the relief-decorated tiles described below. They may be plain products of the same kiln.

A fragment of a relief-decorated tile (Fig. 19.i) glazed a deep green, almost black, was recovered from a Phase 4 (or possibly earlier) context on Site B (BL42). The fabric is a hard-fired sandy clay with inclusions of fine grit, and is reduced except for an oxidised lower margin and an area beneath an unglazed patch on the surface. The latter feature is probably an original manufacturing flaw rather than later spalling, as the clay beneath it would have been reduced had it been covered with glaze. The surface is decorated with a complex geometric pattern impressed into the clay before glazing. Though only 25mm of one edge survives, reconstruction of the pattern gives the tile's dimensions when complete, assuming it is not repeated, as about 110mm square. The size makes this piece comparable to the major collection of decorated tiles from Site A described below. No parallel for this tile is known, but on the basis of size and fabric it can be assigned a date late in the medieval period.

The Site A relief-decorated tiles

From Site A came 93 lead-glazed relief-decorated tiles, three complete (one triangular, two square) and 90 fragments. Four designs can be identified, and only four fragments cannot be allocated to a design. A full catalogue, with the tiles numbered 1-91 (with 59a and 61a) is in the site archive. Those numbers, prefixed 'Tile', are used here to identify individual pieces.

The fabric of the tiles is a hard-fired sandy clay with some grit and the occasional flint pebble. The tiles are oxidised, with variable reduction of the core. The degree of reduction varies considerably, from a slight darkening of the red fabric to a well-defined grey core with very narrow oxidised margins. Most tiles show a patchily-reduced core in the centre of the tile, fading outwards to the corners through dark red to unreduced fabric. Some of the flints in the tiles are quite large, and in one case (Design A, Tile 10) a large flint protrudes from the surface in the centre of the tile. However, though the design is consequently flawed, the stone would have lain below the raised elements when the tile was new. The tile is well worn, with a distinctive pattern of wear passing diagonally across its surface with the flint at the junction between the most worn and least worn areas.

At least 38 (40 per cent) of the tiles were square, on average 111 by 111mm, and 19mm thick, and nearly all the edges were at least slightly bevelled. One of the complete square tiles (Design A, Tile 1) is scored diagonally on the underside into two triangles, and at least two of the tiles (Design A, Tile 35, fragment; Design D, Tile 73, complete) are triangular, of a size commensurate with a square example cut diagonally in half. The triangular pieces can be assumed to have been made to provide a straight edge to a rectangular pavement in which square tiles were set diagonally.

Tile 35, a fragment of a triangular tile, was cut to shape before the original square tile was glazed, probably when it was leather-hard. Its diagonal edge is cleanly and fully cut, and bears dribbles of glaze. In contrast, the diagonal edge of the complete triangular tile (Tile 73) shows that the original square was only partially cut, and was then snapped in two after glazing and firing, presumably when a triangular tile was required as the pavement was being laid. These two tiles and the scored line on the underside of the square tile show that a certain number of triangular tiles were made before glazing and firing, and this number, should it prove inadequate, could be supplemented on site from scored square tiles.

Both scoring tiles on the underside and cutting triangles before firing contrasts with the method used to produce subdivisions of basic square tiles at the late 13th- to early 14th-century tile factory at Danbury in Essex. There, plain glazed floor tiles were scored on the upper surface before being fired, and only later snapped along the scored lines (Drury and Pratt 1975, 112). If plain tiles are to be

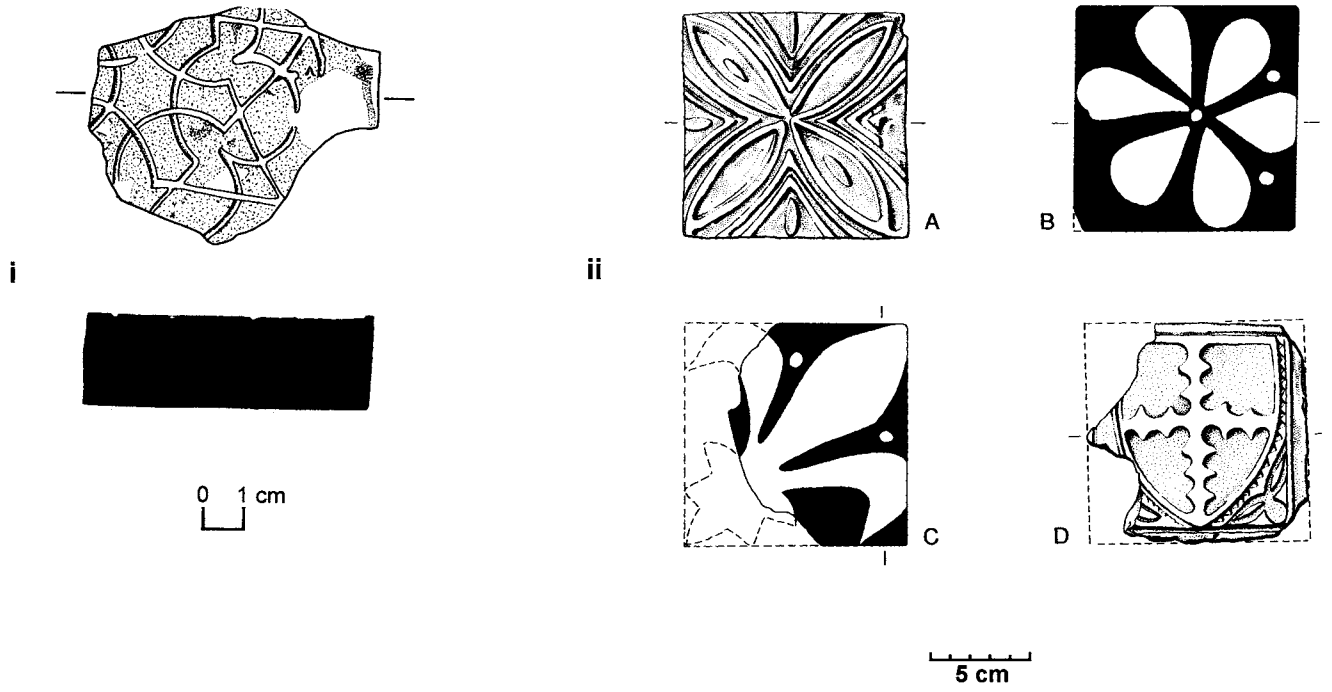


Fig. 19 Building materials: i and ii, scale 1:2
i Relief-decorated tile SF 1 from Site B. ii Patterns A-D on relief-decorated tiles from Site A.

snapped after firing, then it is clearly best to have the scored line on the upper surface to minimise damage to the glaze. However, if relief-stamped tiles are scored on the upper surface, the design will be blurred by clay being pushed ahead of the knife and dragged along the scored line after it. Scoring the upper surface before it was decorated would not be a reasonable alternative, as the scored line would be at least partially eradicated by the application of the stamp.

The four designs on the tiles are: A, a four-petalled floret, the petals pointing into the corners and the spaces between filled with tracery; B, a six-petalled rosette, with a central dot of white slip and other dots in the field; C, a fleur-de-lys, also with dots of slip in the field; and D, a shield, accentuated on the curved edges by a toothed line, and bearing a cross engrailed in relief, with a triangular frame filled by a counter-relief mouchette in the spandrels. All four designs are paralleled at St Giles' church, Colchester (*CAR* 9, fig. 5.25, A, B, C1, D: reproduced here in Fig. 19.ii), where the assemblage also included a second fleur-de-lys design (*ibid.*, C2).

On most of the tiles a basic lead glaze was used, which, where it overlay the fabric produced a dark to mid brown surface colour, speckled with green from iron impurities in the glaze, the speckles being more obvious on the lighter browns. In a few cases copper had been deliberately added to the glaze in sufficient quantity to produce a greenish-brown surface colour, still green-speckled, referred to here as khaki.

Many of the tiles were also partially painted with a white slip to produce two colours. Combined with both the basic lead and copper-enriched glazes the slip has produced a yellow surface colour, though on many tiles the slip has been unevenly applied and the result is a yellow-mottled brown or khaki. On only one example (Tile 52) does slip appear to have been used across the while surface and this identification, being unique and from a very worn fragment, should be regarded as suspect.

The colours used on the tiles are summarised, by design, in Table 1. Some tiles are so worn that only faint traces of glaze, slip, or relief-pattern remain, and the numbers given here represent the maximum possible. Given that many of the pieces are small fragments, many are very worn, and that the slip, where used, was often applied skimpily, it is likely that some of the pieces catalogued as monochrome were in reality two-coloured.

Table 1: Colours on relief-decorated tiles from Site A.

Design	Brown		Brown/ yellow		Khaki		Khaki/ yellow		?Yellow		Total
	no	%	no	%	no	%	no	%	no	%	
A	30	50	22	35	3	5	5	8	1	2	61
B	4	80	1	20							5
C	6	100									6
D	2	12	11	65	1	6	3	18			17
uncertain	3		1								4
Total	**35**		**44**		**5**		**8**		**1**		**93**

The four designs can be split into two groups: A and D, which make use of outline and counter-relief, and B and C, where the motifs are solid figures, raised above a dark background. The first group are more numerous; there are 61 examples of Design A and 17 of D, compared to only 5 of B and 6 of C. Designs B and C were moulded (Keen 1972, 140), while Designs A and D were stamped onto a blank (*ibid.*, 141). On one Design D tile (Tile 71), the stamp has been applied both off-centre, leaving an unstamped flange on one side, and with unequal pressure, so that surface on the opposite side is scarcely marked. A Design D tile in Colchester Museums (unprovenanced, but probably from St Botolph's Priory) was stamped twice, the second impression being about 1mm off the first. This tile may also be a waster (*CAR* 9, 232, 234).

On Designs B and C slip was painted onto the raised elements so that they showed yellow against a brown field. On most of the tiles the slip has been worn off, it survives on the raised parts of only two tiles (Tiles 63 and 66), but on all but a very worn khaki-coloured tile (Tile 64) the slip ran down onto the field and is now evident beneath the glaze right up against the edges of the raised elements.

On Design A slip was also painted onto specific areas, but not in this case the raised ridges of the petals and tracery, only the hollow within the four petals and the 'V' in the centre of each side. Thus the floret was enhanced by the contrast between relief in one colour with counter-relief in another. However, on Tile 59a the slip has been splashed or run onto one ridge of a petal.

Design D makes use of slip both as on Design A (counter-relief), and as on Designs B and C (raised elements). The inside of the mouchette in the spandrels was slip-painted. But so also was the relief

engrailed cross on the shield, which thus stood out in emphatic relief as yellow against a brown or khaki field.

The technique used on the St. Mary Magdalen's tiles, applying the slip as toning to the relief design, is unusual. On Designs B and C the colour seems essential to the design; without it the raised parts of the floret and fleur-de-lys would not stand out sharply against the background. The inclusion of freehand dots in the field links these two designs to Keen's painted ('slip-decorated') tiles (Keen 1972, 147). However, examples from St Giles' church are monochrome (CAR 9, 232), suggesting that the use of two colours was either a later improvement on an originally monochromatic design or an indication of a more costly product. The latter is perhaps most likely, as on tiles of Designs A and D the tone appears to be used as an optional enhancement. It is definitely absent on some tiles, most notably the complete example of Design A (Tile 1), and has been confirmed as absent on other pieces by semi-quantitative analysis using energy-dispersive X-ray fluorescence (XRF).

If the toning of the St. Mary Magdalen's tiles is unusual, so the individual designs are paralleled only by tiles from Colchester and one of its neighbouring villages, though they make use of patterns common enough in the repertoire of medieval tilers (*ibid.*, 232-4). The tiles must therefore be of local manufacture (*ibid.*).

All the tiles show at least some wear, most are very worn, and one is so worn that the surface is smooth. Designs A, C, and D were found scattered over a wide area, while Design B was concentrated at the east end of the church. The deliberate deposition of a complete tile of Design A (Tile 1) in grave AG173, placed face down between the femurs and with the diagonal aligned on the body, suggests that this individual was directly associated with the tiles. The precise association is unclear, but possibilities include tile-maker, donor, or paviour (or any combination of the three).

Given this direct association, the date of grave AG173 should provide the best evidence for the date of the tiles. Unfortunately, only a date range of Phase 2 (*c.* mid 1200s to 1610) has been allocated to this burial. Table 2 shows four Design A tiles deriving from Phase 2 (Tiles 1, 8-9, 37), and five of Design D (Tiles 73-77). All but Tile 1 are residual in their contexts. Seven of the nine are from levelling (AF127) over a Phase 2 grave (AG109) within the church, and three of those seven have been reused. The other tile from Phase 2 comes from the fill of grave AG108, also within the church and likely to be similar to AG109 in date (Tile 37).

Table 2: Date of relief-decorated tiles (unstratified tiles and those of uncertain design have been omitted). Phase 2: c. mid 1200s to 1610; Phase 3: 1610-1852; Phase 4, 1852 and later.

Design	Phase 2	Phases 2-3	Phase 3	Phases 3-4	Phase 4	Total
A	4	1	23	2	25	55
B			3		2	5
C			2		2	4
D	5	1	2	3	5	16
Total	9	2	30	5	34	80

That no Design B or C tiles were recovered from contexts earlier than Phase 3 may suggest that they are later in date than Designs A and D. However, fewer were recovered in total, so their absence from earlier contexts may not be a valid indicator of date. All four designs were found in association at St Giles' church (*CAR* 9, 234), pointing to their being contemporary. They also show great similarity in fabric and size.

Dating evidence from other Colchester sites is as unspecific as that from St. Mary Magdalen's. At St Giles' the earliest stratified, though residual, fragment came from a post-pit dated from the early 16th century to 1648, and most were residual in contexts dated 1648-1819. From excavations at St Botolph's priory (unpublished site archive, Colchester Archaeological Trust), two examples came from post-medieval contexts, destruction debris and topsoil, though a fragment from a tile that may match the St. Mary Magdalen's series came from a pre-Dissolution floor in the south transept, giving a *terminus ante quem* there of 1535 (CAR 9, 234). Major improvements to most religious houses were unlikely from then on, and the latest possible *terminus ante quem* at St. Mary Magdalen's is provided by the confiscation of the hospital under Edward VI's Act of 1547 suppressing gilds and chantries (Martin 1959, 45-7).

Relief-decorated tiles are often assigned a general 14th-century date (e.g. Keen and Sherlock 1972, 200). The lack of strong stylistic links between these tiles and others from England (*CAR* 9, 232-4), together with their unusual use of toning, suggests that they may be rather later in date, and a range from the late 14th to the 15th century is therefore probably most appropriate, though an early 16th-century date cannot be completely discounted (*ibid.*, 234).

Medieval and later roof tiles and bricks

Five fragments of 12th- or early 13th-century roof tiles were recovered from Site A, four of them reused in the foundations for the Phase 2 church, AF75, AF227, AF228, and AL166. All are about 15mm thick and made from a distinctive gritty fabric, with only very narrow oxidised margins. The largest fragment measures 86 by 130mm, neither dimension being complete. Four of the five are coated on the upper face with a very dark brown lead glaze, the glaze on the fifth is a lighter brown with a greenish tinge, probably from iron impurities rather than from the deliberate addition of copper. The glaze is unworn, and the surface of the tiles uneven. Three fragments of similar roof tiles came from Site B BF141 and BF142.

The earliest brick fragment from Site A is part of a 13th- or 14th-century cut brick (Harley 1974, 64), probably an import from the Netherlands. From the Phase 2 robbed foundation AF183, it is 104mm (about 4 in.) wide, 122mm long (at least half the length is missing), and 40mm (1.5 in.) thick along one long edge tapering to about 30mm (1.25 in.) along the other.

Of 14th-century date are bricks from Site A Phase 3 dump/make-up, AF90 (214 x 108 x 40mm; 8.5 x 4.25 x 1.5 in.), from ?backfill in the Site A Phase 4 robber trench, AF152 (moulded; 207 x 102 x 52mm; about 8 x 4 x 2 in.), and from Site B Phase 3 make-up BL47 (fragment, more than 100mm wide and 50mm thick).

The remaining bricks are all post-medieval. From a Phase 3 pit on Site B (BF138) and a Phase 3 wall (BF47) in Building 187 on Site B came fragments of Tudor bricks, 110mm wide and 55 to 60mm (9.25 by 4.25-4.5 in. thick). Also from Building 187, though from a brick base BF119, dated to late in Phase 3, came two late 17th- or early 18th-century bricks, both measuring about 230 x 110 x 55mm (9 x 4.25 x 2.25 in.).

Moulded bricks sampled from the walls of the south porch (Site A, features AF30, AF31, AF32, AF33) are all clearly from one supplier. They measure about 234 x 110 x 50mm (about 9.25 x 4.25 x 2 in.). A fragment from a similar brick derives from the Site A Phase 3 foundation AF80. The porch was built between 1730 and 1832, but the size of the bricks and the absence of a frog suggests that they are 17th century in date and either came from an old stock-pile or were reused.

Slates

The largest collection of early roofing slate from the town and suburbs was recovered from Site B, scattered throughout both Phase 1 and Phase 2 contexts. All are of 'blue' slate, appearing here as a dark grey weathered to silvery greenish-grey, with iron-rich deposits between the laminae. One fragment is a dull purple, but is likely to be only a colour variant within the slate beds, rather than indicative of a different provenance. None of the fragments is anywhere near complete, and only one retains a nail-hole, but the larger pieces suggest that they were of subrectangular form with a single nail-hole near the centre at the upper end (*cf.* Allan 1984, e.g. fig. 168, 137).

In medieval Exeter, roofing slates were first used in the early 12th century, though a robber trench in the Cathedral Close contained a number of fragments that may have come from a late Saxon building (ibid., 300). While Exeter is close to several sources of slate (*ibid.*, fig. 169), some of which were also exploited in the Roman period, it seems unlikely that the St. Mary Magdalen's hospital was sufficiently well-endowed at its foundation to set a local lead in importing slate. The paucity of this material in Colchester is matched at King's Lynn, Norfolk, where only a single medieval slate, probably from the Cotswolds, was recovered from excavations in the town (Geddes and Dunning 1977, 320). However, by the early 13th century the use of

slates was becoming more widespread in England (Jope and Dunning 1954), their increased use possibly stimulated by regulations imposed on roofing materials aimed to prevent the spread of fire (e.g. Schofield 1984, 76). The scatter on the St. Mary Magdalen's site presumably indicates that at least some of the Phase 1 hospital buildings were roofed with slate, either originally or as part of maintenance or upgrading.

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Medieval decorated window glass (Fig. 20)
by C. Pamela Graves

Summary
Approximately 225 sq cm of medieval potash window glass are included in this report. The majority of fragments are undiagnostic, but the occurrence of small birds and some naturalistic foliage suggests a composition of grisaille with a border of birds and foliage, possibly highlighted with yellow stain, and dating to between the late 13th century and the early 14th century. Site distribution plots indicate Building 187 to be the source of the late 13th- to early 14th-century material. One fragment of early to mid 13th-century glass appears to be associated with Building 186. It has not been possible to discern the quality of painting or glazing, although grisaille glass was the cheapest form of painted glass available.

Methodology
The window glass was quantified by area since this can be related to function. It is misleading to give merely the number of fragments, since six fragments may represent less than 6 sq cm, whereas a different six fragments may represent greater than 60 sq cm of a window. The fragments were measured to the nearest half of a square cm using a 1 sq cm grid. Assessments of the date of fragments, where possible, have been made on the basis of analogy with art-historically-dated glass *in situ*. The *Corpus Vitrearum Medii Aevi* (Newton 1979) numbering system for windows has been used for reference where appropriate.

Composition and decay
The glass displays a fairly consistent progress of decay. In this report, 'opaque' denotes the dark grey-brown corrosion product of potash glass; there was no soda-lime glass present. The corrosion patterns in the assemblage are consistent with a potassium composition. Pitting of the external (unpainted) surface, a result of exposure while part of a window, is evident on many examples. Only on one piece had the corrosion progressed to the inner face (PG 27 *344*, BF144), and this was no doubt due to post-depositional leaching of the potassium in the soil. Most of the glass was originally 'white', that is, essentially colourless.

Manufacture
The presence of fire-rounded edges is evidence of the cylinder method of flat glass manufacture, the edges being those cut in opening out the cylinder and subsequently melted down when the cylinder was placed in an oven for flattening out (e.g. PG 6 *115*, BL15; PG 9 *127*, BL15).

Painted decoration is red-brown, typical of medieval iron-oxide based paint. The most identifiable of the fragments of painted design can be described by the term grisaille: that is, predominantly white glass painted with stylised or repeated designs of foliage, and set in largely geometric patterns or used as a background to coloured panels.

There is no discernible evidence for coloured glass (pot metals), but deposits on the external face of PG 9 127, BL15 suggest that silver sulphide was applied to give a yellow stain on this piece at least. The technique is known to have been used in England from *c.* 1307-12, in the Heraldic Window, York Minster (*CVMA* nXXIII; Marks 1993, 38). Since the piece is no longer transparent on any of the area to which this deposit has been applied, it is not possible to verify the colouring. Washes of a dilute form of the red-brown iron-oxide based paint which was normally used on glass were often applied on the reverse of panes to emphasize certain points in the design, or to add depth and contrast. This technique was used widely from at least the 12th century. Such washes often precipitate corrosion, especially in the soil, and when the glass is in this condition it is not possible to distinguish the two techniques satisfactorily.

A number of fragments are marked with a narrow white stain around the edges where the lead cames overlapped the glass. Only one context produced a rectangular pane of a type often found in proliferation from excavated window glass debris, that is the plain border or glaziers' side strip, used to frame the decorated panels (PG 17 *137*, BL15). Such pieces provided sacrificial panes which could be broken to remove the decorated glass intact if repairs or releading were necessary.

Most of the glass is of a consistent thickness, but three small pieces are very fine, approximately 2.00mm thick or less (PG 16 *137*, BL15). Glass of the 12th-late 13th centuries, as a rule, is thick, usually varying between 2.50 and 6.00mm. It is a phenomenon observed in the west windows of York Minster (David O'Connor pers. comm.) and excavated window glass from the Gilbertine Priory of St Andrew, York (Kemp and Graves 1996, 285-8) that some consistently thin window glass was available in the second quarter of the 14th century. Several hundred pieces of glass in good condition and measuring between 1.00 and 2.00mm thick were recovered from pit F8 at Colchester Castle in 1964, and have been assigned to the late medieval period. Painted glass datable to the mid 14th century found in the same pit measured 1.00mm thick (O'Connor 1982, 354-5). It is clear that such thin glass was available in Colchester in the 14th century. By the mid 16th century, the glassmakers of the English Weald had achieved a more consistent product, but this was dark green, shiny, uncorroded and relatively clear, thus distinguishable from the pieces found here (Kenyon 1967, 104).

Whilst there is both documented and archaeological evidence for the manufacture of white window glass in the Weald from the 14th to 17th centuries, by far the majority of medieval window glass in the British Isles is unprovenanced in terms of origin (Kenyon 1967 passim).

Dating and stylistic affinities
Only one fragment suggests the presence of early to mid 13th-century trefoil grisaille on a cross-hatched ground (PG 27 *344*, BF144).

A few pieces may have been contemporary components of a larger composition. Two birds of similar size and execution may well have come from a border such as that excavated at Bradwell Abbey, Buckinghamshire, and dated to *c.* 1270 (Croft and Mynard 1986, fig. 8). Birds, along with other zoomorphic motifs, and hybrid mythological beasts, appeared in the marginalia of illuminated manuscripts from the late 13th century (cf. Alexander and Binski 1987, 354-7). They appear increasingly in glass windows throughout the first half of the 14th century, usually amidst foliage (e.g. York Minster south aisle, sXXXI and sXXXII; north aisle nXXV; for a fuller discussion see Marks 1993, 153-4). The Bradwell border accompanies a grisaille panel consisting of tight trefoils on a plain ground. Sometime between the third and final quarters of the 13th century, more naturalistic foliage started to be introduced into grisaille painting, similar to the example from Colchester (PG 13 *127*, BL15). Naturalistic leaves appear in grisaille in the chapter house of York Minster, *c.* 1285-90; the chapter house vestibule of Wells Cathedral, Somerset, *c.* 1286; the parish church of Stanton St John, Oxfordshire (nIV), *c.* 1285-1300; Chartham, Kent (sIV, sV, nIV, nV), *c.* 1293/4-1300; Merton College Chapel, Oxford, *c.* 1294 (O'Connor and Haselock 1977, 334-41; pl. 9; Marks 1993, 147, fig. 118; Newton 1979, 188-9; Winston 1867, 99, pl. 18; Marks 1993, 148, fig. 119; 152, fig. 123). Naturalistic grisaille continued to be used into the mid 14th century, increasingly within diamond-shaped quarries. The Colchester example suggests a quarry shape. It is therefore possible that the

Colchester fragments formed part of a grisaille field which was bounded by a bird and foliage border.

Alternatively, the birds could have featured in heraldry, again set on a grisaille field, and within the same date bracket of the late 13th/first half of the 14th century.

The above could provide a context for many of the pieces of glass which have small details of painted design, too fragmented to be diagnostic but which have all been executed on a plain or a solid ground (e.g. PG 7 *127*, BL15). Similarly, the fragment which was putatively yellow stained may have been part of the inhabited foliage border (PG 9 *127*, BL15); as may PG 4 *86*, BL7; PG 15 *127*, BL15. The only piece to have come from a medieval context, PG 28 *373*, BF84, probably formed an edge piece from a diamond quarry lattice. It is plain, and is likely to have come from a largely undecorated window, but it cannot be ruled out that it too may have come from a grisaille panel of the kind described above.

Grisaille panels, from the late 13th century to the mid 14th century, were used either as grounds on which to set coloured panels, featuring heraldic shields or figures; or to separate larger coloured and historiated panels in what are known as 'band windows' (cf. York Minster chapter house and nave aisles). It is not surprising, therefore, to find fragments of what may have been chain mail (PG 18 *137*, BL15) or ermine trim (PG 26 *137*, BL15).

General conclusions

The majority of fragments (PG 1 to PG 26) were recovered from deposits associated with the 19th-century demolition of Building 187, indicating that at the time of its destruction the building retained elements of at least one late 13th- to early 14th-century window. The only anomaly seems to be that the fenestration represented by this glass took place at a time when the institution was relatively poor financially. Grisaille, however, was the cheapest of the forms of painted glass available at this time (Knowles 1936, 49, n.2 citing Cotton MS Galba, E.W. fol. 28b; and *cf.* Marks 1993, 134-7).

Only one small fragment shows stylistic traits earlier than the late 13th century (PG 27 *344*, BF144). It came from the fill of a Phase 3 gully located 2m to the west of Building 186, which appears to be the structural source of this piece.

A small quantity of painted window glass was recovered from Colchester Castle in 1964, but no stylistic or dating comparisons can be made with this sample (see O'Connor 1982).

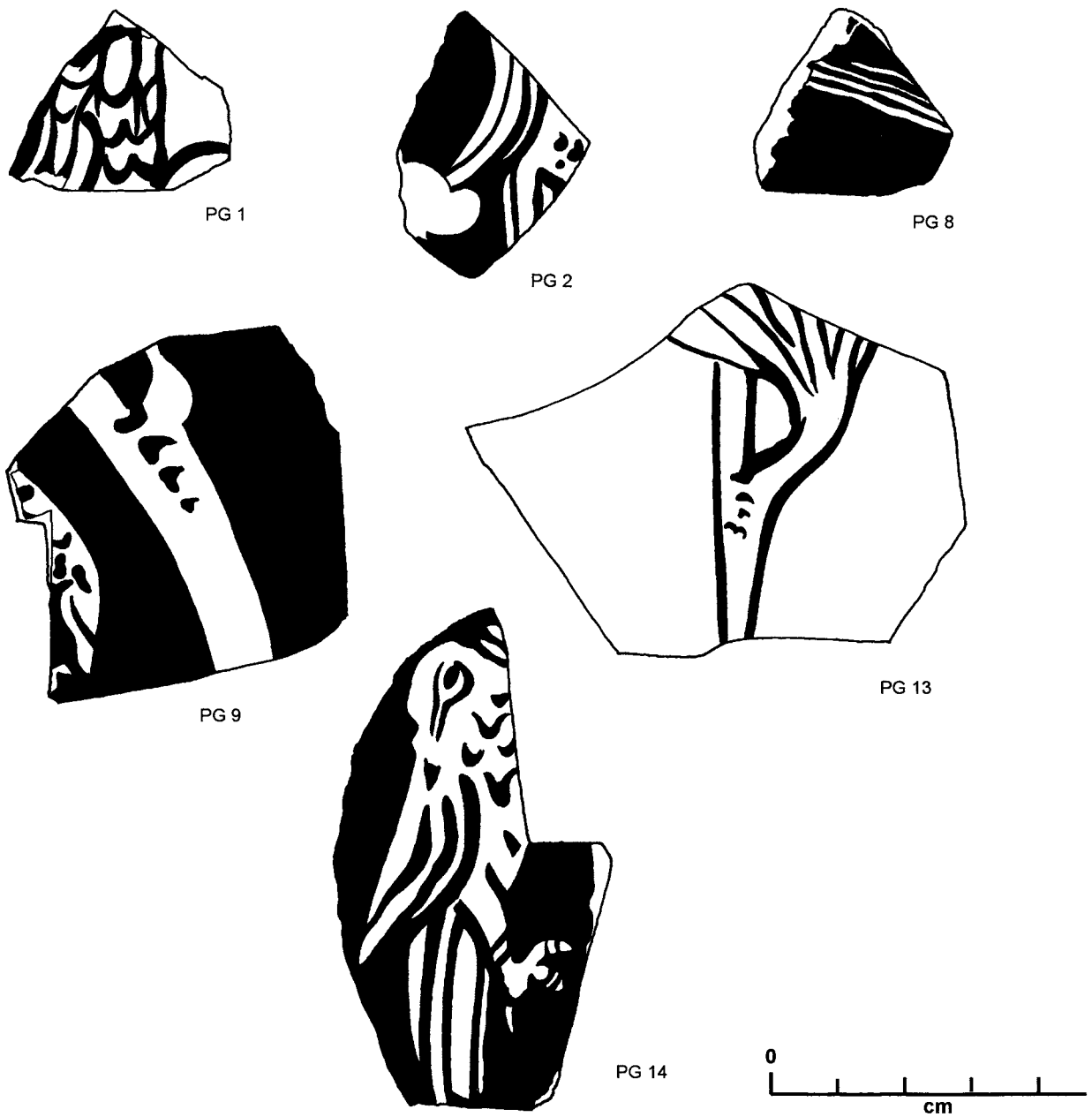


Fig. 20 Medieval decorated window glass: PG 1-PG 2, PG 8-PG 9, PG 13-PG 14.

Grisaille window glass and border designs tend to be found amongst the debris of a religious site since they formed the peripheral zones of most windows, and would be less valued than the coloured panels which occupied the central areas of the lights. Indeed, the grisaille may have been broken in an attempt to retrieve the coloured panels, either for reuse in windows elsewhere or for cullet. Since the lead was amongst the most valuable of the fittings from the point of view of reuse, the broken, unvalued, peripheral glass would be neglected, and either trampled into the ground close to the destruction, found in piles where the lead cames were extracted from them, or in dumps and pits where general debris from these asset-stripping operations was swept away.

Catalogue of window glass

Please note: the entries are prefaced by a catalogue number (PG) for identification. Then follows the find number (in italics), and then the feature or layer number.

Fig. 20	PG 1-PG 2	*86*	BL7	12 sq cm of opaque, formerly white, transparent glass. Two fragments from a bird; one painted with a folded wing and the upper portion of a tail, grozed to a curved edge following the design; the other painted with breast feathers and possibly the top of the wing, two grozed edges. Cf. PG 14 127, BL15. Second half of the 13th century into first half of the 14th century.
Not illustrated	PG 3	*86*	BL7	3.5 sq cm of opaque, formerly white, transparent glass, painted with thick band parallel to the single, straight grozed edge. A second, thinner line parallel to this, but covered with encrusted sand. Overall design indiscernible, possibly grisaille.
Not illustrated	PG 4	*86*	BL7	10 sq cm of opaque, formerly white, transparent glass, painted with two tapered in-curving lines, and a background wash of matt paint from which a series of small curves have been picked. Probably a foliate design in reserve with stickwork details. No grozed edges, but the pitting on the reverse has formed lines.
Not illustrated	PG 5-PG 6	*115*	BL15	10 sq cm of opaque, formerly white, transparent glass, two pieces. The larger piece (PG 5) is painted with a small area of undulating lines bounded by thick outlines, but it is not possible to discern what this is part of. The smaller piece (PG 6) is painted with what may be part of the indentation of a leaf design. One short edge is fire-rounded, indicative of cylinder glass manufacture.
Not illustrated	PG 7	*127*	BL15	5.5 sq cm of opaque glass, painted with two concentric lines of different thickness. One curved, grozed edge. Possibly stem of grisaille on plain ground, therefore possible late 13th-/early 14th-century date.
Fig. 20	PG 8	*127*	BL15	4.5 sq cm of opaque, formerly white, transparent glass. Painted with a number of thin, tapered lines and a possible thicker wash. Some sandy, gritty accretions. Possibly stamen from a foliate design, 13th-15th centuries, but not necessarily from a grisaille design.
Fig. 20	PG 9	*127*	BL15	20 sq cm of opaque, formerly white, transparent glass, with one fire-rounded edge, indicative of cylinder glass manufacture. Painted with the stems of a foliate design, in reserve from a matt ground. There are short lines emphasising an offshoot from the main stem, centrally, and to the left, at the broken edge. A deposit on the reverse suggests that this design, at the left-hand side, was either reserved in yellow stain, dating to after *c.* 1310; or was highlighted with a wash of paint, in which case it might date to the 13th century. In either case, this piece is no later than the early 15th century.
Not illustrated	PG 10	*127*	BL15	5.5 sq cm of opaque, formerly white, transparent glass painted with part of a leaf design in reserve from a matt ground and articulated with curved, tapering veins. 13th-15th centuries, although there is no visible trace of yellow staining on the reverse.
Not illustrated	PG 11	*127*	BL15	5 sq cm of opaque, formerly white, transparent glass, with two grozed edges. Painted with a curved design in reserve from a matt ground, possibly foliage, but now indiscernible.
Not illustrated	PG 12	*127*	BL15	3.5 sq cm of opaque glass.Painted with a linear band in reserve from a matt ground.
Fig. 20	PG 13	*127*	BL15	26.5 sq cm of semi-transparent white glass, with two grozed edges which may have converged at an angle to form part of a quarry. Painted with a foliage design in outline on a plain ground. The design has an upright stem, with an offshoot to the right. There are a number of short lines below the offshoot, and the base of the leaf itself shows several tapering veins. From *c.* 1285 to mid 14th-century grisaille.
Fig. 20	PG 14	*127*	BL15	13 sq cm of semi-transparent white glass. Two pieces which fit together, with one long curved grozed edge, and one straight, shorter edge. Painted with a bird (or winged mythical beast), in reserve and line detail. There is one large, expressive eye, but the beak is missing. Probably detail from an inhabited border design, such as often accompanied grisaille of the second half of the 13th century and into the first half of the 14th century.
Not illustrated	PG 15	*127*	BL15	10.5 sq cm of semi transparent white glass, one curved grozed edge. Painted with a design in reserve from a matt ground. The design is indiscernible, but may be foliate, with a small shoot springing from a larger stem. However, at the far left-hand side, there appears to be a single finger; this cannot be reconciled with the remains of the piece, in its present state.

Not illustrated	PG 16	*137*	BL15	4 sq cm of opaque, formerly transparent white glass. two pieces slightly curved, one flat, very thin. Possibly medieval vessel glass rather than window glass. Undecorated.
Not illustrated	PG 17	*137*	BL15	17.5 sq cm of opaque, formerly transparent white glass, two long grozed edges creating a shape c. 27mm wide. An undecorated glaziers' side strip.
Not illustrated	PG 18	*137*	BL15	10 sq cm of opaque glass, two grozed edges at right angles. Painted with a wash from which a number of semi-circular shapes have been picked with a stick. The surface of the paint has been eroded in part, and this confuses recognition of the design, but it may have been a stylised depiction of chain mail. 13th/14th century.
Not illustrated	PG 19	*137*	BL15	10 sq cm of opaque, formerly transparent white glass. Two grozed edges meet at right angles, possibly from a quarry shape. On the reverse, the edges which were covered by the lead cames have been protected from the fine pitting which has affected the exposed glass. Painted with what appears to be a foliage stem, with offshoot, and small curves of paint beneath the joint.
Not illustrated	PG 20	*137*	BL15	5.5 sq cm of opaque glass.Painted with a number of curved and tapering lines, as if the base of a leaf. Possibly related to PG 13 127, L15, late 13th to mid 14th centuries.
Not illustrated	PG 21	*137*	BL15	13.5 sq cm of opaque, formerly transparent white glass, two pieces, one with a grozed edge. Painted with thin and thick lines, possibly foliage, but now indiscernible.
Not illustrated	PG 22	*137*	BL15	10 sq cm of semi-transparent white glass, finer than most, apparently undecorated.
Not illustrated	PG 23-PG 24	*137*	BL15	9 sq cm of opaque glass. Two pieces. The larger with one grozed edge (PG 23). Both painted with concentric lines in paint and shadowed with thinner wash. Possibly grisaille stems. 13th/14th century.
Not illustrated	PG 25	*137*	BL15	5.5 sq cm of opaque, formerly transparent white glass, painted with almost parallel lines. Possibly foliage stems, or drapery. 13th/14th century.
Not illustrated	PG 26	*137*	BL15	4 sq cm of opaque, formerly transparent white glass. Painted with a circular area in reserve from a matt ground, with tapered lines and tapered stickwork. Design indiscernible, but similar to stylised ermine trim, only this is in reserve, whereas ermine is executed in solid paint.
Not illustrated	PG 27	*344*	BF144	8.5 sq cm of opaque glass. Badly pitted on the interior, painted face. Painted with an indiscernible design in outline on what may have been a cross-hatched ground, but the surface is now too disrupted to be certain.
Not illustrated	PG 28	*373*	BF84	8 sq cm of semi-opaque, white glass. Two grozed edges converge to form the corner of a triangular shape, and probably an edge piece from a quarry lattice. Undecorated.

The medieval and later pottery (Figs 21-23)

by Helen Walker

Summary

A total of 4381 sherds of medieval and post-medieval pottery weighing 78kg was excavated. The medieval phases produced mainly coarse wares dating to the 12th to earlier 13th centuries, comprising early medieval wares with smaller amounts of shell-tempered fabrics and medieval coarse ware. Sherds of Thetford-type ware are also present. Very few medieval fine wares were found; Hedingham fine ware is the most frequent but most is residual in later phases. Little pottery belongs to the late medieval and early post-medieval periods and there are no large Dissolution deposits. This is especially true of Site A. The commonest later medieval ware is sandy orange ware including Colchester ware. Pottery of the 17th century is well represented in both sites and comprises mainly post-medieval red earthenware and black-glazed ware. Other 17th-century wares are only found in small quantities. Little 18th-century pottery is present, but much pottery dates to the modern period and finds of interest include two burials each containing a complete 19th-century plate. Imported wares are present from the ?12th century onwards but occur only in very small quantities. As with many urban sites, there is a large amount of residual pottery in the later phases. There is only very slight evidence of vessels used for medical purposes. The site is briefly compared to two secular sites in and around Colchester.

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. Cunningham's system is also used by John Cotter for *Colchester Archaeological Report* 7 (Cotter 2000). The pottery at St. Mary Magdalen's has been compared to already published material from the town (mainly Crummy 1981 and Cunningham 1982a), and the dating of the early medieval cooking-pot rims is based on these reports. The more developed rims which occur mostly on medieval coarse ware cooking pots have been dated using Drury's typology at Rivenhall (Drury 1993, 81-4). The pottery has been written up in phase order, and the fabrics present in each phase and area are summarised by means of a table giving sherd count and total weight of pottery within each phase (Table 3). Because much of the pottery is poorly stratified, only the larger medieval pit groups are published in detail. The rest of the assemblage has been summarised for this publication, and a more detailed report with quantification by context is available in the archive. Residual pottery occurring in later phases that is of intrinsic interest is described in the fabrics section. All percentages quoted are calculated from sherd count.

The fabrics

Fabric 9 Thetford-type ware: (0.5% of total) Described by Hurst (1976, 314-8) and dated to *c.* 850-1150 but thought to be residual in Colchester after *c.* 1100 (Crummy 1981, 40). It was found in several phases of both sites but can only have been current at the beginning of Phase 1. As Roman pottery is also present in some contexts, which can be similar to Thetford-type ware, the same criteria as used by Crummy have been employed to distinguish between the two (Crummy 1981, 32).

Forms: everted flanged jar rims, one is illustrated (Fig 22, no 11).

Fabric 12A Early medieval shell-tempered ware: (0.1% of total) Described by Drury (1993, 78) dating as for Fabric 12B. Only one sherd (in Phase 2) could be current in its phase.

Fabric 12B Early medieval shell-with-sand-tempered ware: (0.7% of total) Described by Drury (1993, 78-80) at Rivenhall, Drury

dates this ware to the ?early 11th century to the second half of the 12th century. However, in other areas, shelly wares continue well into the 13th century, for example at King John's Hunting Lodge, Writtle (Rahtz 1969, 106). This ware is much less common than Fabric 12C and early medieval ware. It is present from Phase 1.

Forms: one thumbed, beaded cooking-pot rim.

Fabric 12C Early medieval sand-with-shell-tempered ware: (2% of total) Described by Drury (1993, 78), dating as for Fabric12B. Here, sand is the dominant tempering agent with only sparse, usually superficial shell. It is possible that some of this material is from kilns at Middleborough, Colchester, which although classified as an early medieval ware did produce sherds with limited and superficial shell inclusions (Cunningham 1984, 186-7). However, there are no parallels in rim form. Present from Phase 1.

Forms: thumbed, beaded cooking-pot rims (Fig 22, no 14).

Fabric 13 Early medieval ware: (12% of total) This coarse sandy fabric is described by Hurst (1976, 342-3) and Drury (1993, 80). It is generally dated to *c.* 1000-*c.* 1200, although elsewhere in Essex, at Saffron Walden and Stansted, it appears to be current into the first half of the 13th century (Cunningham 1982b, 83; Walker forthcoming). This category also encompasses Hurst's 'developed early medieval ware' (Hurst 1962, 261-3). This is the second most common medieval fabric at St. Mary Magdalen's; only medieval coarse ware is slightly more frequent. It is present from Phase 1. Again this material could be from the Middleborough kilns, but most sherds found have a red-brown fabric, whereas the Middleborough material is usually grey.

Forms: *Jugs;* Fig. 22, nos 8-10

Bowls; one large bowl with a B2 rim (not illustrated)

Cooking pots; no complete profiles were found; cooking-pot rims can be: simple or thickened everted (Fig. 23, no 23); beaded, the most common form (Fig. 21, no 6 and Fig. 22, no 12), and these are often thumbed (Fig. 22, no 13); beaded rims with internal thickening are also present (Fig. 23, no 25); other rim forms comprise B4 rims (Fig. 22, no 15) and a B2 rim

Other forms; the leg of a tripod base and a possible chimney-pot fragment were found in Site A Phases 1 and 2 respectively. A sherd from a possible storage jar with a thumbed, applied strip was residual in a post-medieval phase.

Decoration: Decoration is common; see examples in Phase 1 of Site B.

Fabric 17 Andenne ware: (<0.1% of total) This is described by Vince and Jenner (1991, 104-6) who date it to the late 11th to early 13th centuries. Only one sherd was found, residual in Phase 3. It shows roller-stamped decoration under a yellow-orange glaze.

Fabric 20 Medieval coarse ware: (13% of total) This is a general category of grey-firing, sand-tempered coarse wares dating from the 12th to 14th centuries, and manufactured at several production centres in Essex. The nearest to Colchester are at Great Horkesley and Mile End (Drury and Petchey 1975, 33-60). This is the commonest medieval ware at St. Mary Magdalen's and is present in both sites and

Table 3: Quantification of pottery from Site A and Site B by feature, fabric and sherd count.
(U = unidentified, Ph = Phases)

Table 3a: Fabrics 9-40A.

			Fabrics																					
Site	**Phase**	**U**	**9**	**12A**	**12B**	**12C**	**13**	**17**	**20**	**21**	**21A**	**22**	**23**	**24B**	**27**	**29A**	**31**	**31A**	**34**	**35**	**36**	**39**	**40**	**40bl**	**40A**
A	Phase 1		6		1	1	11		6																
A	Ph 1-2	1	1				6		4																
A	Phase 2		3			3	17		15	2									1						
A	Ph 2-3						1		3			2													
A	Phase 3		3	2			6	1	29	13	6	1								2			186	30	2
A	Ph 3-4						6		11	8	2			1				2			2		114	41	3
A	Phase 4		1	1	1	1	11		67	33	4	5	3			2			2		1	1	538	72	11
A	U/S						1		2														20	5	1
B	Phase 1		1		3	30	233		49	1	1								1						
B	Ph 1-2						2																		
B	Phase 2		7	1	10	46	167		154	59	10	2			1				1						
B	Ph 2-3						2		8	9	2	2					1								
B	Phase 3				1		26		74	45	70	12	1				9	1	2	1			175	5	
B	Phase 4				16		42		127	39	9	7			6	1	2	1					146	6	3
B	U/S				1		5		23	2							10					15	1		
		1	**22**	**4**	**33**	**81**	**536**	**1**	**572**	**211**	**103**	**32**	**4**	**1**	**7**	**3**	**22**	**4**	**7**	**3**	**3**	**1**	**1194**	**160**	**20**

Table 3b: Fabrics 41 to 51B.

Site	**Phase**	**Fabrics**																					
		41	**42**	**45**	**45A**	**45C**	**45D**	**45F**	**45M**	**46**	**46A**	**46A/C**	**47**	**48**	**48A**	**48B**	**48C**	**48D**	**48E**	**48P**	**50**	**51A**	**51B**
A	Phase 1																						
A	Ph 1-2																						
A	Phase 2											1											
A	Ph 2-3																						
A	Phase 3		1				1	4	9	3	7			1	8		3	5	2				
A	Ph 3-4	1	5		1	2	6	5	7	3	10		7		1		26	8	7	15	4	6	
A	Phase 4	2	23	2		4	30	26	91	2	22	5	40	37	2	14	106	246	41	82	19	99	6
A	U/S							1	3				1	2			1	3			1		
B	Phase 1			1																			
B	Ph 1-2																						
B	Phase 2				2																		
B	Ph 2-3																						
B	Phase 3	1	11		4	4	6	1			4	2	1	1	1		2		1		4	3	
B	Phase 4		18			2	12	5	32	1	12	3	8	13	6	5	33	17	3	30	7	17	5
B	U/S	1		1		1	5																
		5	**58**	**3**	**8**	**13**	**60**	**42**	**142**	**6**	**48**	**13**	**64**	**54**	**10**	**20**	**176**	**274**	**55**	**132**	**35**	**127**	**11**

Table 3c: Weight of pottery in each area and phase.

Site	Phase	Wt (g)
A	Phase 1	133
A	Phases 1-2	83
A	Phase 2	333
A	Phases 2-3	114
A	Phase 3	3907
A	Phases 3-4	4114
A	Phase 4	29759
A	U/S	922
B	Phase 1	6326
B	Phases 1-2	12
B	Phases 2	5214
B	Phases 2-3	211
B	Phase 3	9843
B	Phase 4	14175
B	U/S	2765
		77911

all phases. It is more common in Phase 2 than in Phase 1.

Forms: fragments from *jugs, dishes* and *bowls* (none are illustrated)

Cooking pots; As ever these are the commonest form. No complete profiles were found but the following rim forms are present, nearly all are described in the Site B Phase 1 and Phase 2 pit groups: thumbed beaded rims, one example only (Fig. 23, no 24); beaded rims with internal thickening, one example only; B2 rims; B4 rims, one of the commonest types (Fig. 22, nos 16, 17); H2 rims, also common (Fig. 22, no 18); D2 rims (Fig. 23, no 26); H1 rims; E5A rims, a late 13th- to 14th-century type, are present in the assemblage but do not occur in the pit groups

Other forms; a perforated base in Phase 3 of Site A, and the base of a ?small bottle and a jug rim (Fig. 23, no 28) in Phase 2 of Site B.

Decoration: Decoration is fairly rare; a couple of the B4 cooking-pot rims show wavy line combing on the rim and body, and there are a few instances of incised horizontal line decoration and thumbed, applied strips.

Fabric 21 Sandy orange wares: (5% of total) Described by Cunningham (1982a, 359 and 1985a, 1), sandy orange ware comprises any locally made sand-tempered, oxidised ware with a date range of the 13th to 16th centuries. Both medieval and late medieval sandy orange ware is present here. Only one sherd was present in Phase 1 and it is entirely absent in Phases 1-2, reflecting the fact that this ware dates from the 13th century. It is relatively common in later phases, but much of the sherd total in Phase 2 is accounted for by sherds from a single semi-complete vessel.

Forms: *Jugs*; as is typical of this ware, most sherds are from jugs (Fig. 21, no 1 and Fig. 22, no 7).

Bowls; fragments from three ?late medieval bowls

Jar forms; a semi complete cooking pot with an H2 rim (Fig. 23, no 22); a 15th-century-type lid-seated jar rim; a late medieval bifid handle from a ?one-handled jar.

Other forms; a bunghole from a cistern, part of a costrel and a possible chafing-dish sherd. These are all late medieval.

Decoration: comprises mainly slip-painting under a clear glaze and slip-coating with a green glaze, probably from medieval jugs; slip-painted sherds without an accompanying glaze are also present and are most likely to be late medieval. There is one instance of sgraffito decoration (Fig. 23, no 27).

Fabric 21A Colchester ware: (2.5% of total) This is a variant of sandy orange ware produced in the Colchester area between the late 13th and mid 16th centuries, and is described by Cunningham (1982a, 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. Because sandy orange fabrics are all very similar, only those sherds which are very typical of Colchester ware are classified thus, while all others have been placed in the general category of Fabric 21. Therefore Colchester ware may be more common at St. Mary Magdalen's than is apparent from the quantification. It first appears in Phase 2 and is most frequent in Phase 3 of Site B where it should be residual. All the examples are similar to those found at Colchester Castle (Cunningham 1982a).

Forms: *Jugs;* jugs often slip-painted and sometimes glazed are the most common form. Two examples show slip-painted dashes on the rim, a Colchester ware characteristic. Jug bases are usually thumbed.

Bowls; a large unglazed flanged bowl rim has been identified as Colchester ware.

Chafing dishes; several fragments are present including an example with two angular ?ventilation holes just below the rim, cut out during manufacture; chafing dishes are a well-known Colchester ware product, probably manufactured by the mid 14th century (Cotter 2000, 150).

Other forms; a possible jar rim and a skillet-type handle.

Decoration: As well as slip-painting, there are examples of slip-coating under a green glaze.

Fabric 22 Hedingham fine ware: (1% of total) This is described by Drury (1993, 86-9) and Cotter (2000, 75-91). It has the extreme date range of second half of the 12th to first half of the 14th centuries but seems to be commonest from the later 12th to 13th centuries. It first appears in Phase 1 but most is residual in post-medieval phases.

Forms and decoration: *Jugs*; most sherds are from jugs but only two rims were present, both with the familiar triangular rims as found at Rivenhall (cf. Drury 1993, fig. 43.127-30). One rim is decorated with ring-and-dot stamps. Strap handles, sometimes with stabbed decoration, were found, and there is one rod-handle showing a partial greenish glaze and ribbing along its length which may be a copy of Scarborough ware or even London-type ware. Body sherds with applied strip decoration are frequent. Again this is a typical Hedingham ware style often found on jugs with ring-and-dot stamps. The sherd from Phase 1 shows red-slip-painted decoration, and one sherd shows traces of white slip.

Other forms; The most unusual find is a wheel-thrown bottle with a perforated base (Fig. 23, no 29), which was unfortunately residual in Phase 4. A fire-blackened sherd with internal splashes of glaze was also found.

Fabric 23 Medieval white ware: (0.1% of total) A general category for unidentified white wares, this includes possible imported North French and Rouen sherds residual in Phase 4.

Fabric 24B Scarborough ware Phase 2: (<0.1% of the total) One sherd of Scarborough ware Phase 2 was residual in Phases 3-4. This ware is described by Farmer (1979) and was traded down the North Sea coast from *c.* 1225 until the end of the industry shortly after 1350.

Fabric 27 Saintonge ware - green glazed: (0.2% of the total) Described by Dunning (1968), and imported from south-west France from the mid 13th to mid 14th centuries reaching a peak around 1300. Found in Site B, one sherd was excavated from a cleaning context in Phase 2 and further body sherds and a jug base were residual in Phase 4.

Fabric 29A Spanish olive jars: (0.1% of the total) These are described by Hurst (*et al.* 1986, 65-7) and were imported from Seville from the late 16th to 18th centuries. Three fragments from olive jars were residual in Phase 4 of Site B.

Fabric 31 Low Countries red wares: (0.5% of the total) Described by (Hurst *et al.* 1986, 130-45), and imported from the late medieval to early post-medieval periods. Some may actually have been made locally by Dutch immigrants (see Jennings 1981, 134-6). None was identified in Site A, but in Site B it is the most frequent import apart from German stonewares. It first appears in Phases 2-3 but is commoner in later phases.

Forms: a sherd of undecorated slipware dish or bowl; sherds from tripod cauldrons, and part of a small bowl or porringer residual in Phase 4 which is carinated with rilled sides as is comparable to an example from Norwich (Jennings 1981, fig. 57.974).

Fabric 31A North Holland slipware: (0.1% of the total) This is described by Hurst (*et al.* 1986, 154-68), and was traded to Britain throughout the 17th and into the 18th centuries. It is decorated with yellow slip-trailed patterns often over-painted in green under a rich, glossy light brown lead glaze. Small amounts of this ware appear from Phase 3 and include the familiar loop-handled bowl, although none was complete enough to show the interior design.

Fabric 34 Unclassified buff ware: (0.2% of total) This is a catch-all category for any buff-coloured fabric. Of interest is an early medieval red slip-painted buff sherd in Phase 1 (Fig. 21, no 5).

Fabric 35 Mill Green ware: (0.1% of total) Described by Pearce (*et al.* 1982), and made at kilns near Ingatestone in central Essex and probably elsewhere. In Essex, it is dated to the mid 13th to mid 14th centuries. Three body sherds are residual in Phase 3; none show any surface treatment. Colchester is outside the main area of Mill Green ware distribution in south and central Essex.

Fabric 36 London-type ware: (0.1% of total) Described by Pearce *et al.* (1985), two sherds of this were found residually in Phases 3-4 grave fills in Site A. One shows applied strip decoration, while another is slip-coated and glazed, and both probably belong to the early to mid 13th century.

Fabric 39 North Italian marbled slipware: (<0.1% of total) This is described by Hurst (et al. 1986, 33-7), and was most common between 1600 and 1650. A lug from a costrel was residual in Phase 4.

Fabric 40 Post-medieval red earthenware: (27% of total) Described by Cunningham (1982a, 373 and 1985a, 1-2). It does not appear at Colchester Castle until the later 16th century (Cunningham 1982a, 373), presumably because this niche in the local market was filled by Colchester ware, but continued until the 19th century. Production centres in Essex include Harlow, Loughton, and Stock near Chelmsford (Newton *et al.* 1960, 358-77; Cunningham 1985c, 83-8). As always on a site with a post-medieval phase, post-medieval red earthenware is by far the commonest fabric, occurring in quantity from Phase 3. Like nearly all the post-medieval and modern wares, it is far more common in Site A than in Site B.

Forms: Dishes; especially flanged rim dishes; bowls; *jar forms;* including one-handled jars or chamber pots (Fig. 21, nos 2 and 4); Jugs; drinking vessels; a small, virtually complete costrel (Fig. 21, no 3); fragments from dripping dishes, chafing dishes, a possible porringer, lids and pierced colander fragments.

Fabric 40bl Black-glazed ware: (3.5% of total) This is a type of post-medieval red earthenware covered with a black glaze (production centres as for Fabric 40). It dates from the beginning of the 17th century (or possibly the end of the 16th) and was current into the 18th century (Cunningham 1985b, 71). Drinking vessels are the main form produced in this ware and were probably an attempt to copy pewter table wares. Black-glazed ware first appears in Phase 3 and is the second most frequent post-medieval ware.

Forms: no complete or near complete vessels were found but most sherds come from tygs or cylindrical mugs - their thick bases survive particularly well. Sherds from jugs were found unstratified and in a Phases 3-4 grave fill.

Fabric 40A Metropolitan slipware: (0.5% 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 ginger-brown surface and yellow slip decoration (production centres as for Fabric 40; the best known is Harlow). It dates from the 17th to early 18th centuries (Cunningham 1985b, 64), but finds in London and America suggest that it reached its peak around the mid 17th century (Orton 1988, 298; Noël Hume 1970, 102). At St. Mary Magdalen's, it has a similar distribution to the largely contemporary black-glazed ware but is far less common.

Forms: fragments from at least two dishes one showing an 'oak leaf' design. There is also a cup or jug base in Phase 4. That found in Site B (all from Phase 4) is not typical; one example is from a small thin-walled dish with a flanged rim showing leaf decoration but does not look like a Harlow product - it may be an example of Low Countries slipware but no parallel could be found.

Fabric 41 'Tudor Green' ware: (0.1% of the total) This is described by Pearce and Vince (1988, 79-81) and Pearce (1992, 1-2). It first appears in Phase 3 where it must be residual. Forms comprise the rim from a wide, or lobed, cup dating from the late 15th to early 16th centuries (Pearce 1992, 23, 89; Brears 1971, 23-4).

Fabric 42 Surrey-Hampshire white ware: (1.5% of total) This ware is described by Holling (1971) and Pearce (1992) and was manufactured from the second half of the l6th and throughout the l7th century. It first appears in Phase 3 (a phase dating from the 17th century); however, because residuality is high, it is possible that this ware was reaching the site in the 16th century. Both yellow and green glazed examples are found.

Forms: flanged dish rims; one thickened everted bowl rim; a beaded jar rim; a hollow handle and feet from tripod pipkins and cauldrons; a horizontal flanged jar rim perhaps from a chamber pot is also present.

Fabric 45 Stoneware: (0.1% of total) Any stoneware fabric, not subdivided.

Fabric 45A Langerwehe stoneware: (0.2% of total) Described by Hurst (*et al.* 1986, 184-90), imported from the later 14th to 15th centuries. One sherd is intrusive in Phase 1 and a couple of sherds are present in Phase 2.

Forms: a frilled ?jug base and two upright rims probably also from jugs.

Fabric 45C Raeren stoneware: (0.3% of total) Described by Hurst (*et al.* 1986, 194-208), it first appears in Phase 3, where fragments of late 15th- to mid 16th-century squat bulbous drinking jugs were found.

Fabric 45D Frechen stoneware: (1.5% of total) Described by Hurst (*et al.* 1986, 214-21) and imported from the mid 16th to late 17th centuries, with trade expanding at the beginning of the 17th century. This is the commonest German stoneware on site. It first appears in Phase 3 (dating from the 17th century), but 16th-century types occur residually.

Forms: fragments from jugs including examples of a 16th-century and a 17th-century- type face mask from bellarmine/Bartmann jugs, and a 'rats tail' jug handle base dating from the third quarter of the 16th century (Hurst *et al.* 1986, 216). Sherds from large storage jugs were residual in Phase 4.

Fabric 45F Westerwald stoneware: (1% of total) Described by Hurst (*et al.* 1986, 221-5), and imported from the early 17th to 18th centuries.

Forms and decoration: fragments from jugs or mugs showing the typical Westerwald decorative techniques of incised lines and applied stamped pads. Also found was a possible 18th-century type horizontal flanged rim chamber pot, and a sherd with manganese purple decoration.

Fabric 45M English stoneware: (3% of total) This was first manufactured in the late 17th century. This category also includes Nottingham/Derby stoneware produced from the 18th century onwards (Hildyard 1985, 12) and modern stonewares, so that anything identified as Fabric 45M can date from the late 17th to early 20th centuries. It first appears in Phase 3.

Forms: a few sherds from late 17th- and 18th-century salt-glazed globular mugs and cylindrical tavern mugs were found, but most is modern, consisting mainly of cylindrical bottles. These comprise, in order of frequency, ginger-beer bottles, blacking bottles and an ink bottle. Stoneware marmalade jars are also present. Other forms include part of a mixing bowl and a sherd of purple stoneware which may be from a Staffordshire butter pot or

an example of Normandy stoneware. Several Nottingham/ Derbyshire sherds show rouletted decoration, but the only form identified was a jar rim.

Fabric 46 Tin-glazed earthenware: (0.2% of total) Any tin-glazed earthenware not identified as English or Netherlands. This includes a sherd of ?Spanish tin-glazed earthenware which was residual in Phase 4.

Fabric 46A English tin-glazed earthenware: (1% of total) This is described by Noîl Hume (1969, 12-13) and Draper (1984, 25-32), and dates principally to the 17th to mid 18th centuries. It first appears in Phase 3 of Site B.

Forms: plate rims, the base of an albarello and a tile fragment. Decoration comprises blue-painting and speckled manganese-purple. Plain sherds are also present. None of the material was complete enough to identify place of manufacture or date.

Fabric 46 A/C Anglo/Netherlands tin-glazed earthenware: (0.3% of total) This is present from Phase 3 of both sites. Dishes with squared footring bases dating to the 17th century are relatively common and there is one example of a blue-painted albarello rim.

Fabric 47 White salt-glazed stoneware: (1.5% of total) Described by Draper (1984, 36-9) and Noîl Hume (1969, 14-19). This was produced from the 1720s to the 1770s and can be distinguished from other post-medieval white wares by its orange peel texture which was produced by the salt glaze. This ware first appears in Phase 3 where forms comprise: a recessed base perhaps from a mug, and plate rims, some with moulded decoration. Phase 4 produced further plate rims, fragments from a mug, and sherds with scratch blue decoration, popular during the third quarter of the 18th century (Noîl Hume 1969, 19).

Fabric 48 Late post-medieval factory wares: (1.2% of total) This category comprises all Fabric 48 that is not subdivided below, consisting of a *Jackfield ware* teapot lid; *red stoneware* sherds from ?teapots and sherds of glazed red stoneware, some exhibiting engine-turned decoration introduced in 1760s; a *Whieldon ware* or colour-glazed ware plate rim, and sherds of *basalt ware* including a handle, a lid-seated rim and a base again showing engine-turned decoration. The above wares were made in the Staffordshire area from the mid 18th century and are described by Draper (1984, 41-6). Sherds of lustre ware dating from the first half of the 19th century are also present (Gibson 1993).

Fabric 48A Chinese porcelain: (0.2% of total) This was imported in quantity from the late 17th century until the end of the 18th. This is very much a minor ware, and the only forms are a footring base and a rim fragment probably from tea wares.

Fabric 48B English porcelain: (0.5% of total) Described by Draper (1984, 53, 55) and produced from *c.* 1745. Apart from a sherd in Phase 3, most English porcelain is modern and finds include a plate, cup and saucer from Phase 4. A couple of examples showed mauve sprigged decoration.

Fabric 48C Creamware: (4% of total) Described by Noîl Hume (1969, 25), it was first produced in the 1750s. This is one of the commonest of the late post-medieval wares. Undecorated plates are the most common form; one plate shows moulded decoration around the rim. There are also fragments from cylindrical mugs, a teapot spout, and a painted cup rim.

Fabric 48D Staffordshire type ironstone: (6% of total) This is a robust, chunky fabric first manufactured in 1805. There are sherds from plates, bowls/dishes, jugs and a chamber pot. This ware was also used for containers, and a night-light container and a pot lid were found. As is typical of this ware, transfer-printed decoration is almost universal; there are examples of blue and white willow pattern along with non-oriental designs such as countryside scenes, dendritic patterns and floral decoration (including flow-blue). Other colours are also common and examples of purple, green, brown and red transfer print are present. As well as transfer-printing there is one example of an under glaze blue mottled pattern.

Fabric 48E Yellow ware: (1% of total) A thick-walled, yellow-glazed ware decorated with bands of blue, and sometimes with a dendritic pattern known as Mocha, produced from an infusion of tobacco in stale urine and turpentine. Much of this is sherd material but fragments from bowls, jugs and a jar rim were found.

Fabric 48P Pearlware: (3% of total) Similar to creamware but made whiter by the addition of cobalt to the glaze in order to neutralise the yellow of the lead glaze. It was made from *c.* 1779 to *c.* 1830 (Noîl Hume 1969, 25). Fragments from plates, jugs, mugs and footring bowls were found. Several styles of decoration were employed comprising Chinese-style painting, moulded shell edging, annular decoration and transfer-printing.

Fabric 50 Staffordshire-type slipware: (1% of total) This is described by Barker (1993, 14-18). It was first produced during the 1640s and production lasted well into the second half of the 18th century. The familiar press-moulded dishes with scalloped edges and combed slip decoration are common. There are also sherds from cups and sherds showing ?joggled slip decoration.

Fabric 51A Late kitchen earthenwares: (3% of total) This is a thick-walled red fabric usually with an internal white slip-coating and covered in an all over glossy plain lead glaze. It is probably from the north of England and belongs to the 19th/20th centuries. It is a relatively common find. Dish and bowl fragments are the most common find. One example shows slip-trailed decoration.

Fabric 51B Modern flowerpot fabric: (0.3% of total)

The pottery from Site A

Pottery from Phase 1 of Site A (12th to early 13th centuries)
A very small amount of pottery was excavated from Phase 1, a total of 25 sherds weighing 133g, from 17 contexts. Fabrics comprise Thetford-type ware, early medieval ware and medieval coarse ware, along with a couple of examples of shell-tempered wares. As might be expected at Colchester, some contexts also contained residual Roman pottery. The identification of Thetford-type ware is fairly tentative because of possible confusion with Roman grey wares (see fabrics section). Forms present comprise a small fragment from a Fabric 12C thumbed, beaded rim, perhaps from a cooking pot, in ditch/trench AF260. At Colchester such cooking-pot rims are found in groups datable to the late 11th to 12th centuries (Crummy 1981: the Cups Hotel, F46, fig. 32.27-29). While at Colchester Castle, thumbed, beaded rims belong to period VIIB dating from *c.* 1101 (Cunningham 1982a, fig. 26.20-21 and fig. 27.22). Therefore they would seem to be principally a 12th-century type. Also found is what appears to be the leg from an early medieval ware tripod base in pit AF253 for which no parallel could be found. A couple of sherds identified as medieval coarse ware are rilled and could be products of the Middleborough kiln. All the pottery could be contemporary with the founding of the hospital in the early 1100s. Assuming that the Thetford-type ware is current, there is no evidence of activity on site before the hospital was established. As the accommodation block stood here, more pottery would be expected. It seems likely that all discarded pottery was removed to the pits in Site B.

Pottery from Phases 1-2 of Site A
Even less pottery was excavated from Phases 1-2; a total of twelve sherds weighing 83g was recovered from seven contexts. Examples of Thetford-type ware, early medieval ware and medieval coarse ware are again present but there are no examples of shell-tempered fabrics. An unidentified base sherd was found in foundation AF287. It is thick-walled with a creamy orange fabric and buff core and has an uneven, fingered surface showing vesicles where inclusions have dropped out. Remaining inclusions comprise abundant red oxides, clay pellets, carbonised material and angular quartz grains perhaps deliberately crushed for tempering. It is unglazed apart from two spots of clear glaze on the underside of the base. This sherd has been examined by

John Cotter (previously of Colchester Archaeological Trust) who suggests it may be from Normandy or north-west France, perhaps dating from the 12th or early 13th centuries. No other featured or diagnostic sherds are present in this phase.

Pottery from Phase 2 of Site A (early 13th century to 1610)
Slightly more pottery was excavated from Phase 2, a total of 42 sherds weighing 333g, from fourteen contexts. Much of this material probably derives from Phase 1, from the demolished infirmary hall. All fabrics found in Phase 1 are still present and indeed many of these sherds may belong to the same vessels, although no actual cross-fits between phases were noted. However, the ratio of medieval coarse ware to early medieval ware has now increased.

Towards the bottom of the sequence, foundation AF227 produced a fragment from a thick-walled out-flaring vessel in an early medieval ware fabric, which may be part of a chimney pot, although the sherd is far too fragmented for identification to be positive. It may have come from the infirmary hall.

Other featured sherds in Phase 2 comprise an early medieval ware flanged everted ?bowl rim in grave AG109 and an early medieval ware thumbed, beaded cooking-pot rim showing a dusting of shell on the inside of the rim (similar to Fig. 22, no 14), from wall foundation AF284. As already discussed in Phase 1, this rim type dates from the late 11th to 12th centuries and a date of *c.*1100-1175 has been suggested for this sherd. Other wares comprise an unattributed unglazed buff ware sherd in AF189 and a small sandy orange ware sherd with a mottled green glaze from floor surface AL91. The latter sherd almost certainly dates from the 13th century and is the latest pottery found in Phase 2. No pottery belonging to the later part of this phase was found.

Pottery from Phases 2-3 of Site A
Only six sherds of pottery weighing 114g belong to this phase. Hedingham ware occurs here for the first time in this sequence and includes part of an undecorated jug rim and handle, unglazed apart from a patch of decayed glaze beneath the upper handle attachment. Its rim-form and strap handle are typical of Hedingham ware and it is paralleled at Rivenhall (Drury 1993, fig. 43.136). Coarse ware forms in this phase comprise a medieval coarse ware cooking-pot rim, of sub-form H1 rim, a type current throughout the 13th century, from font soakaway AF121. A date in the 13th century is most likely for this material. Again this would be current with the earlier part of Phase 2 and no pottery from the later part of this phase was found. This fits in with the historical evidence of 16th-century neglect of St. Mary Magdalen's, but does not account for the lack of later 13th-, 14th- and 15th-century pottery. Neither is there any evidence of mid 16th-century Dissolution deposits.

Pottery from Phase 3 of Site A (1610 to early 19th century)
Rather more pottery was recovered from Phase 3, a total of 325 sherds weighing 3.9kg from 65 contexts. The vertical stratification is quite confused and tells us little about the pottery present, and therefore this section is greatly summarised. Most contexts produced residual medieval pottery indicating contamination from earlier phases. A ?late medieval sandy orange ware jug rim merits illustration:

Fig. 21.1 Jug rim: sandy orange ware; reduced except for brown-orange margins; unglazed, abraded surfaces; stabbed decoration on handle; uneven rim. The jug is difficult to date but the shape and angle of the handle are similar to that found on jugs and cisterns of the 14th to 16th centuries. It therefore most likely post-dates the pottery in earlier phases. Fills 1050, 1077, 1097 (pit AF208).

Also found amongst the residual pottery are further sherds of sandy orange ware, including Colchester ware, which was not found in earlier phases and which may indicate activity in the later 13th to 15th centuries. A sherd of residual 16th-century type slip-painted post-medieval red earthenware is also present, perhaps indicating activity in the early post-medieval period.

As would be expected in a 17th-century phase, post-medieval red earthenware is by far the commonest ware, followed by black-glazed ware, with much smaller amounts of other post-medieval wares dating up to the 19th century (see Table 3). Post-medieval red earthenware forms comprise fragments from three one-handled jars or chamber pots (Fig. 21, nos 2, 4), and a costrel (Fig. 21, no 3). Other finds in this ware comprise a horizontal handle from a storage jar, a small internally glazed flanged rim bowl, a beaded jar rim, and a flanged dish rim. Also present is part of a small loop-handled bowl with an all over glaze, perhaps a porringer; these were used for serving hot semi-solid foods such as porridge or broth.

Fig. 21.2 Part of a one-handled jar or chamber pot: post-medieval red earthenware; typical fabric but with reduced external surfaces; internal plain lead glaze; incised horizontal lines on upper surface; comparable chamber pots with thickened rims were produced in Surrey-Hampshire white ware and corresponding with Pearce's type 1 chamber pot produced in London during the second half of the 17th century (Pearce 1992, 32, 99, fig. 39. 318-19). Removal 1055 (layer AL125).

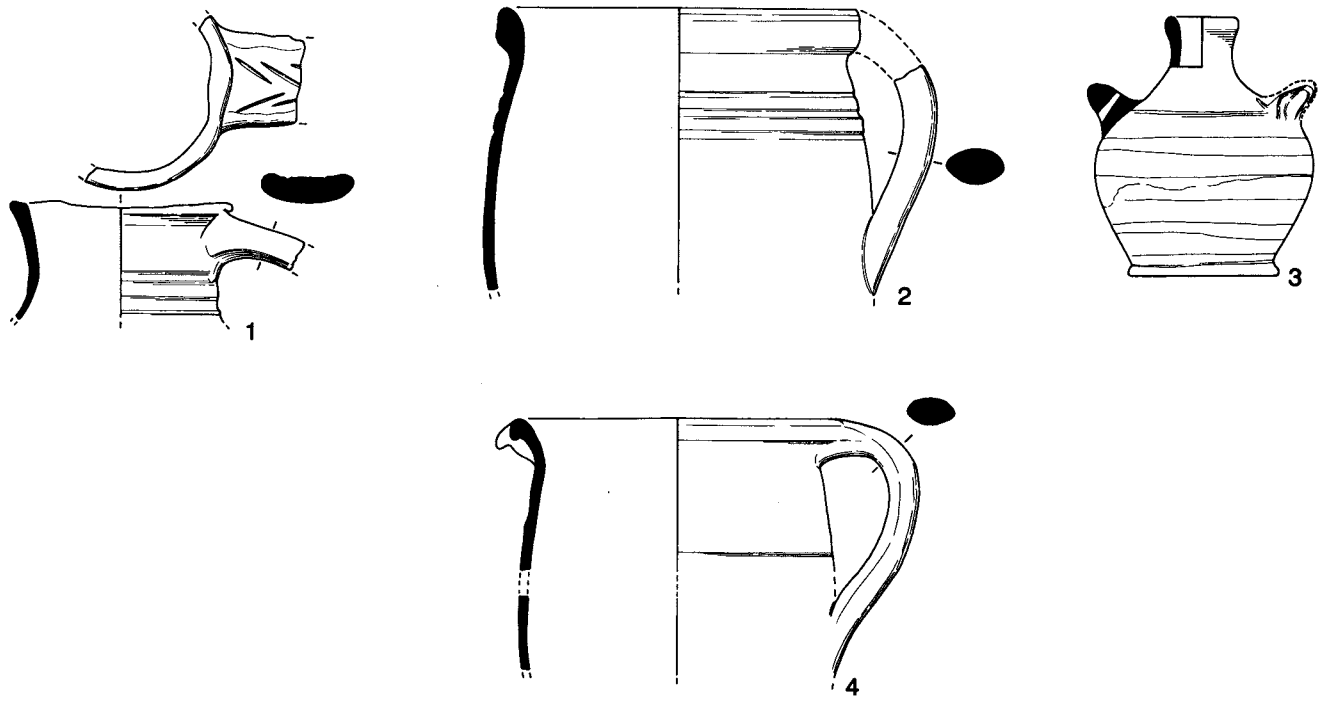
Fig. 21.3 Standing costrel: post-medieval red earthenware; complete except for a missing lug; typical post-medieval red earthenware fabric but with reduced external surface; apparent greeny glaze on top half of vessel; not particularly well finished with extraneous pieces of clay adhering to surfaces. It is of a squat bottle shape with pierced lugs set transversely across the shoulders, and therefore shares characteristics with Cunningham's costrel forms F6 and F7. Both types occur at Moulsham Street in Chelmsford, and Cunningham considers the transverse lugs to be sufficiently distinctive to be described as characteristic of 17th-century central Essex (Cunningham 1985b, 71, table 5). Costrels were portable drinks containers and the pierced lugs were for suspension. When filled to the neck, this vessel has the capacity of exactly three-quarters of a pint. Buried in an upright position beneath the nave floor, this costrel may be a ritual deposit of the kind that sometimes occurs at medieval and late medieval ecclesiastical sites (Merrifield 1987, 121). Finds no 942 (pit AF130).

Fig. 21.4 One-handled jar or chamber pot with pulled spout (a feature not normally found on a chamber pot): internally glazed; generally similar to no 2 but the rim is everted and there is a small external bead; whitish residue on underside of rim which effervesces on the application of dilute hydrochloric acid demonstrating deposit is limescale not urine, i.e. the vessel contained water; lower part of vessel very abraded externally with much of surface missing, either the result of use or post-depositional. Fill 739 (demolition debris/make-up AF095).

The black-glazed ware comprises fragments from tygs. Only two sherds of Metropolitan slipware were found including a sherd showing an oak-leaf motif, perhaps from a dish. It may be a Harlow product, although the fabric is much darker than usual.

Only one sherd of Surrey-Hampshire white ware is present, i.e. a hollow handle attachment probably from a tripod pipkin, showing an internal yellow glaze and dating from the late 16th to the end of the 17th centuries (Pearce 1992, 92). German stonewares comprise a sherd of Frechen stoneware, the neck of a Westerwald stoneware mug or jug with moulded decoration and a cobalt blue background, and a second sherd of Westerwald stoneware showing incised looped decoration also with a cobalt blue background. Unfeatured sherds of English stoneware are also present.

Two sherds of blue-painted tin-glazed earthenware, perhaps dating to the 17th century, are present. But of rather more interest is the base of an Anglo/Netherlands tin-glazed earthenware dish showing



Site B, Phase 1, pit BF099

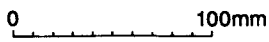


Fig. 21 Medieval pottery: nos 1-6

a blue-painted design of concentric circles with lines radiating outwards. Lines of ochre brush strokes are painted over, at right angles to the radiating lines. The external surface has a plain lead glaze. It is comparable with but not identical to dishes found at Norwich, which share the same decorative elements, and are dated to the mid 17th century (Jennings 1981, fig. 86.1394, 1395 and fig. 87.1402). Similar vessels have also been found inside the town walls of Colchester, at Stockwell Street (Blake *et al.* 1961, fig. 32.33-4).

18th- to 19th-century wares comprise:

- White salt-glazed stoneware including a plain flanged rim from a plate and a moulded plate rim showing dot, diaper and basket pattern dating from the mid 18th century
- A sherd of ?English porcelain
- Creamware including sherds from a flanged rim plate
- Willow-pattern transfer-printed pearlware manufactured *c.* 1800, which dates to the end of Phase 3
- A sherd of yellow ware with 'worm' decoration, a type of Mocha ware (see fabrics section) datable to the 19th century (Curtis 1991, 276)
- Two sherds of slipped kitchen earthenware which could easily be Victorian.

Discussion of pottery from Phase 3

The sherds of 14th- to 16th-century pottery may derive from the latter part of Phase 2, indicating that there was some activity on the site at this time. The bulk of the pottery dates to the 17th century, although the small quantities of Metropolitan slipware, Surrey-Hampshire white ware and Frechen and Westerwald stonewares, usually making up a significant proportion of 17th-century groups, is surprising. This dearth may be accounted for by the historical evidence, which shows that the church was occupied by the poor at some time during the second half of the 17th century. The only common table wares are fragments from black-glazed ware tygs. The presence of the ?porringer and possible chamber pots may indicate that the occupants were also elderly or infirm. However, both types are not uncommon at ordinary domestic sites. The late 18th- to 19th-century pottery comprising sherds of stoneware (both white and brown), creamware and pearlware would be typical on any site of this date.

Pottery from Phases 3-4 of Site A
A total of 304 sherds weighing 4.1kg was excavated from 78 contexts. Most of the pottery from this phase came from the fills of graves, which suffer from a high degree of residuality, and as the graves showed no discernible stratigraphic relationships, detailed publication of pottery was not considered worthwhile.

As would be expected, there are significant amounts of residual medieval and late medieval pottery. One grave produced single sherds of Langerwehe stoneware and 'Tudor Green' ware. As both would have been current during the late 14th to 15th centuries, the grave may belong to the missing end of Phase 2.

The range of wares is similar to that in Phase 3. Again, post-medieval red earthenware is by far the most frequent fabric followed by black-glazed ware. Seventeenth-century imports include part of an Anglo/Netherlands tin-glazed earthenware dish and the base of a North Holland slipware bowl. To the author's knowledge, North Holland slipware is mainly restricted, in Essex at least, to coastal and river ports, and is evidence of overseas trade with the port of Colchester in the 17th century.

Small amounts of other post-medieval and modern wares are present and English tin-glazed earthenware, creamware and pearlware are also relatively common (see Table 3 for a breakdown of wares present). Many of the graves produced pottery belonging to the 19th century.

One of the graves (AG18) produced a complete (but broken in two) china plate. The plate was re-interred with its owner's remains and does not form part of the quantification as only a photograph is available for study. It is unmarked and measures about 200mm (about 8 in.) in diameter, the size of a small dinner plate. The photograph shows a transfer-printed rural riverine enclosed by a floral border. This design is known as the wild rose pattern (presumably from its border) and was produced at Longport and elsewhere from 1835 to 1848 (Copeland 1982, 20). As this plate was found whole, it must have been deliberately interred with the body, but as this is a Christian burial, a ritual purpose can be precluded. Neither would a plate indicate status, and it is unlikely to be buried with the deceased for sentimental reasons as a dinner plate would hardly be considered to be a personal possession. (A second plate was found in a Phase 4 grave; see below.)

Pottery from Phase 4 of Site A (19th to 20th centuries)
A very large amount of pottery was excavated, a total of 1653 sherds weighing nearly 30kg was recovered from 54 contexts. By this phase nearly all the pottery is residual, and as there was no domestic occupation of this area, there are no large groups and subsequently no evidence from the pottery about function and status of this area of the site. The latest, most datable pottery comprises sherds of transfer-printed ironstone in colours other than blue, which were introduced in the late 1820s and 1830s. There is also the usual array of 19th-century blacking bottles, ginger-beer bottles and marmalade jars reflecting the Victorian revolution in packaging. The above would be contemporary with the almshouses on Site B and probably derive from their demolition.

Of note from grave AG183 is another complete china plate, but again only a photograph was available for study. The plate measures about 250mm or 10 inches in diameter and shows the familiar transfer-printed willow pattern design. On the reverse there is part of a printed mark with a crown and scroll with the words 'IMPROVED STONE.....', probably 'stone china', another name for ironstone. The maker's name is not present and the crown and scroll motif was used by several manufactures including Masons who first patented ironstone china in 1813. The word 'improved' was added *c.* 1840 (Fisher 1970, 53), so the vessel would have been made around this date or later. As with the plate found in Phases 3-4, it must have been deliberately interred with the body for some reason. The coffin plate shows that the occupant was female, so the plate may have reflected her domestic status.

Pottery from Site B

Pottery from Phase 1 of Site B (12th to early 13th centuries)
A total of 320 sherds weighing 6.3kg was excavated from 17 contexts, much more than in Phase 1 of Site A. All the material came from pits, apart from a single sherd in slot BF196. Early medieval ware is by far the commonest fabric and there are smaller amounts of medieval coarse ware and early medieval shell-tempered wares (mainly Fabric 12C).

Pit BF99
Pit BF99 produced two early medieval sherds, and both merit illustration:

Fig. 21.5 Sherd from jug or tripod pitcher: hand-made buff ware fabric; poorly defined buff core, pinky buff margins and buff surfaces; tempered with abundant, well-sorted sub-rounded white, fawn, grey and colourless quartz sands about 0.5mm across; red slip-painted decoration, rather in the manner of early Hedingham ware; yellowy-green partial splash glaze. This ware is unidentified but Dr Alan Vince comments that it is found in 12th-century contexts in London. Fill 431 (pit BF99).

Fig. 21.6 Cooking-pot rim with elongated beaded rim: early medieval ware; mainly dark grey but with tan coloured patch; horizontal striations; patch of fire-blackening internally. Fill 221 (pit BF99).

Pits BF117, BF124 and BF204
Much larger amounts of pottery were recovered from pits BF117 and BF124 stratified below Phase 2 wall foundation BF71, and from pit/pits BF204. Cross-fits were found between all three of these pits, with internal cross-fits between the various fills of BF117. All these features must therefore have been infilled at the same time and consequently have been considered as a single group producing a total of 5.9kg of pottery. In addition, pit/pits BF204 were cut by Phase 2 pit BF100 and there are also several cross-fits between this feature and all three Phase 1 pits. Jugs and cooking pots were the only forms identified in this group. There is no evidence of bowls or more specialised forms.

Jugs: The remains of four jugs or possible jugs were found in the pits. One in sandy orange ware and the others in early medieval ware. All have been illustrated (Fig. 22, nos 7-10). Glazed jugs such as no 7 would have been used at the table while the coarse ware jugs are more likely to have been used for storage and for the fetching and carrying of liquids.

Fig. 22.7 Jug rim: sandy orange ware; buff core, creamy-orange margins and surface, oblique streaks of pale green glaze. Fill 503 (pit/pits BF204).

Fig. 22.8 Jug profile: early medieval ware; grey core, red-brown surfaces; unevenness of vessel walls and absence of throwing lines indicate it was coil-built; shape of body similar to that of a cooking pot; handle attachment scar showing beginnings of a strap handle. Fill 288 (pit BF124).

Fig. 22.9 Lower handle attachment of jug (or tripod pitcher): early medieval ware; grey core, red-brown surfaces. Fill 265 (pit BF117).

Fig. 22.10 ?Jug rim: early medieval ware; buff-brown surfaces and margins; borderline medieval coarse ware. Cleaning 268 (pit BF117) and fill 503 (pit/pits BF204).

Cooking pots: As is typical of medieval assemblages, the cooking pot is by far the commonest form. Fragments from at least fifteen vessels are present and a representative collection is illustrated (Fig. 22, nos 11-21). The cooking pot was a general-purpose vessel used for preparation and storage of food stuffs as well as for cooking. However, fire-blackening on the shoulder and around the rim of several cooking pots (Fig. 22, nos 11, 15-17, 20) is consistent with being placed in or at the edge of a wood-burning fire, which would indicate that at least some of these vessels were used for cooking. Cooking pots occur in Fabric 12C, early medieval ware and medieval coarse ware, with a flanged, everted

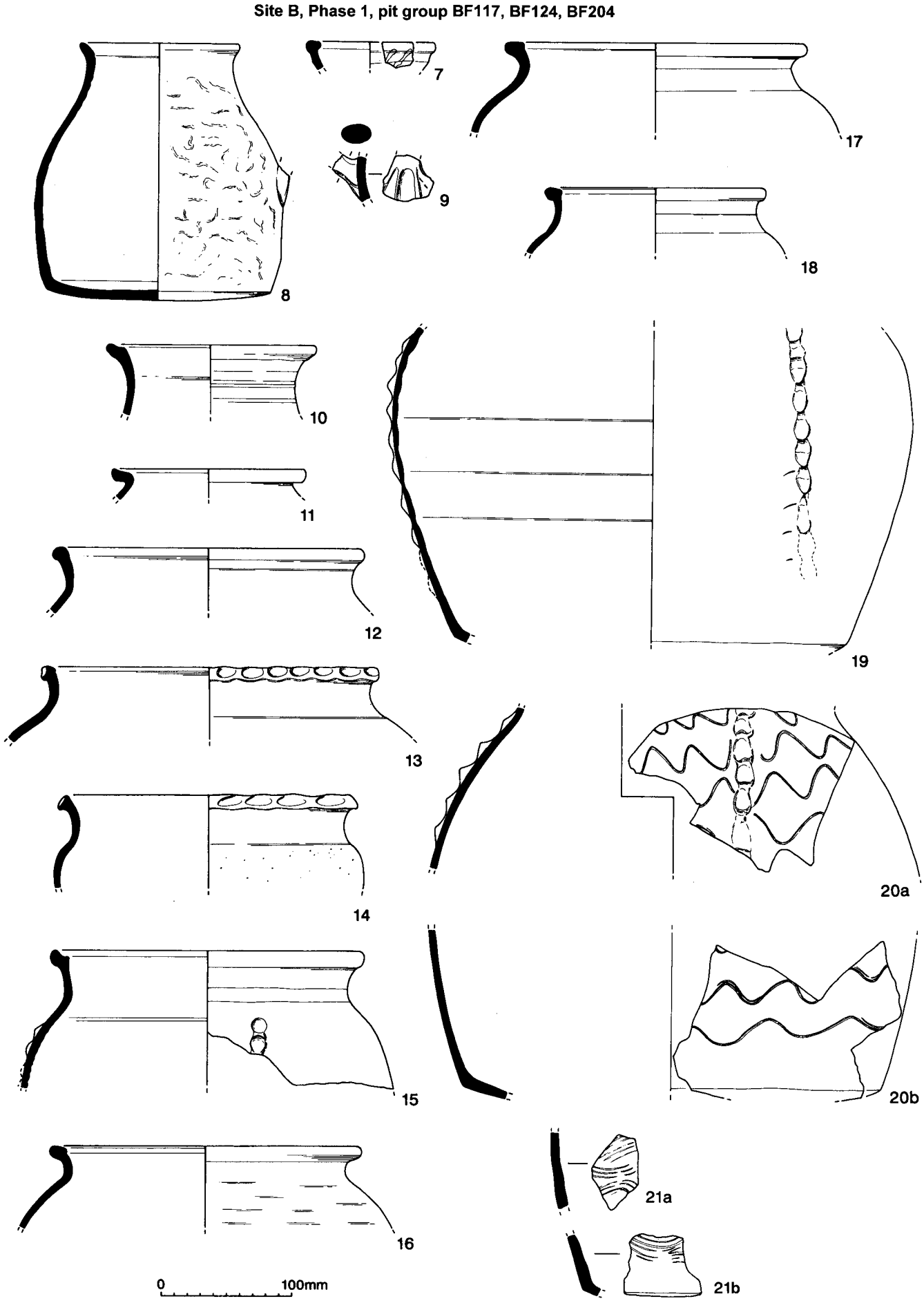


Fig. 22 Medieval pottery: nos 7-21

jar rim in Thetford-type ware (Fig. 22, no 11). Apart from no 11, rims are either beaded or have more developed B4 rims, along with one example of an H2 rim. The rim types by fabric are shown in Table 4.

Table 4: showing cooking-pot rim forms in pit group BF117 and BF204 (no cooking-pot rims were present in BF124).
✓= number of vessels represented

Ware	Rim type					
	Flanged everted	Beaded beaded	Thumbed, internal thickening	Beaded,	B4	H2
Thetford-type	✓no 11					
Sparse shell (Fabric 12C)		✓✓no 14				
early medieval ware	✓✓no 12	✓✓no 13	✓	✓✓no 15		
medieval coarse ware				✓✓✓✓ nos 16-17	✓no 18	

As discussed in Site A, beaded rims appear to be principally a 12th-century type. However, the B4 rim is datable to *c.* 1200 according to Drury's typology and the H2 rim to the early to mid 13th century. This would give a date of early 13th century for the group. The Thetford-type ware jar rim is probably residual here and the presence of Roman pottery in the same feature indicates a residual element. The beaded rims are probably also residual, but it is worth noting that elsewhere in Essex, beaded rims often occur with late 12th- to 13th-century rim types, for example at Stebbingford (Walker 1996, table 2) and Stansted airport (Walker forthcoming). This may mean that the production of early types carried on alongside the more developed forms. Nearly all the cooking-pot rims fall within the size range 200mm to 300mm diameter, with 260mm the most frequent size. The Thetford-type ware cooking pot is much smaller with a diameter of 140mm. There is not enough data to compare fabric with rim diameter or rim-form with diameter.

Several of the cooking pots are decorated. Thumbed applied strips are common (Fig. 22, nos 15, 19-20). There are usually four evenly spaced vertical strips on a pot and they are almost always found on larger vessels indicating that they were used to strengthen the pot as well as for decoration. Horizontal wavy lines (Fig. 22, nos 20, 21) are also commonly used on cooking pots and other coarse ware forms, and must have been a quick, simple yet effective decoration to attract the buyer. Horizontal wavy lines occur on Middleborough products (Cunningham 1984, fig.175, 8-10), but are also found outside Colchester, for example at Stebbingford in north central Essex (Walker 1996, fig. 17.3). There is one sherd of late medieval Langerwehe stoneware in pit BF117, which must be intrusive.

Fig. 22.11 Jar rim: Thetford-type ware; grey with darker grey surfaces; fire-blackening on rim. Fill 261(pit BF117).

Fig. 22.12 Cooking-pot rim: early medieval ware; dull orange surfaces; no traces of use. Fill 503 (pit/pits BF204).

Fig. 22.13 Cooking-pot rim: early medieval ware; thick-brown-grey core; red-brown margins and surfaces; neatly executed thumbing on rim; no evidence of use. Fill 265 (pit BF117).

Fig. 22.14 Cooking-pot rim: Fabric 12C; grey-brown core; dark red-brown surfaces; shallowly thumbed rim; shell vesicles on shoulder and edge of rim. Fill 503 (pit/pits BF204).

Fig. 22.15 Cooking-pot rim: early medieval ware; grey core; purplish-brown surfaces; walls of uneven thickness indicate vessel was coil-built; beginnings of thumbed, applied strip; fire-blackened on shoulder, neck and under rim; same or very similar in fills 265 and 268 of pit BF117. Fill 503 (pit/pits BF204).

Fig. 22.16 Cooking-pot rim: medieval coarse ware; grey but with red-brown margins and brown-grey internal surfaces; horizontal striations on body; fire-blackening on shoulder and under rim; ?same vessel in fill 234 of pit BF100 in Phase 2. Fill 503 (pit/pits BF204).

Fig. 22.17 Cooking-pot rim: medieval coarse ware; brown-grey surfaces, grey core; single horizontal streaks of dark green glaze on inner and outer surface; fire-blackening on shoulder and under rim; some fire-blackening on internal surface. Fill 503 (pit/pits BF204) and fill 234 (pit BF100 in Phase 2).

Fig. 22.18 Cooking-pot rim: medieval coarse ware; grey but with pale orange grey surfaces; no traces of use. Fill 503 (pit/pits BF204).

Fig. 22.19 Body of cooking pot: early medieval ware; buff surfaces but with tan-coloured patches; brown-grey core; thin red-brown margins and darker brown-grey internal surface; finger or thumb-nail marks can be seen next to the thumbed applied strip, probably incidental, made as the potter applied the strip; line of thumb marks internally where the strips were added. Fills 261, 265 (pit BF117) and fill 503 (pit/pits BF204).

Fig. 22.20a-20b Body of cooking pot: purplish surfaces, grey core; incised wavy line decoration with quite steep waves sloping to the left at the top of the pot (a), and shallower waves sloping to the right towards the base of the pot (b); but both sections appear to belong to the same vessel; the thumbed applied strip was added after the wavy line decoration; base (b) is fire-blackened and shows clear vertical streaks through the fire-blackening as if water had boiled over. Fills 265, 268 (pit BF117) and fill 503 (pit/pits BF204).

Fig. 22.21a-21b Body and base from vessel showing combed decoration: early medieval ware; buff-brown internal surface red-brown external surface with grey patch; abstract pattern of combing rather than the more usual horizontal wavy lines; sherd from same vessel in fill 503 of pit/pits BF204. Fills 261, 268 (pit BF117).

Remaining pottery from Phase 1

Little diagnostic material was found in the remaining pits. Of interest, however, is a sherd of Hedingham ware from pit BF200. It is unglazed but, like no 5 in BF99, it shows traces of red slip-painting and may date to the second half of the 12th century. A sherd of early medieval ware with an internal splash glaze is also present in this feature. Worth mentioning is a sherd of early medieval ware from pit BF192 which has been burnished on the outer surface, a fairly unusual surface treatment for medieval pottery, although this is paralleled at Colchester Castle where a burnished 12th-century Fabric 12C cooking pot was found (Crummy 1981, fig. 34.97).

Discussion of pottery from Phase 1

As in Site A, there is no evidence of occupation on the site before the hospital was established. Some of the pottery such as the Thetford-type ware and beaded cooking-pot rims could date to the early 12th century when the hospital was built, while the red slip-painted buff ware and Hedingham fine ware sherds are likely to belong to the second half of the 12th century as they are comparable to London-type ware jugs of this date (Pearce *et al.* 1985, fig. 17.25, 27). However, the latest pottery comes from pit group BF117/BF124/BF204, where the presence of sandy orange ware and developed B4 and H2 cooking-pot rims provide a date for deposition around the beginning of the 13th century at the end of Phase 1. Unfortunately, there is the possibility that the later material represents contamination from Phase 2 pit BF100. There is not enough pottery to comment on function and status of the site during this phase, although the predominance of coarse wares suggests that most of the pottery is from service areas. This is especially true of pit group BF117/BF124/BF204.

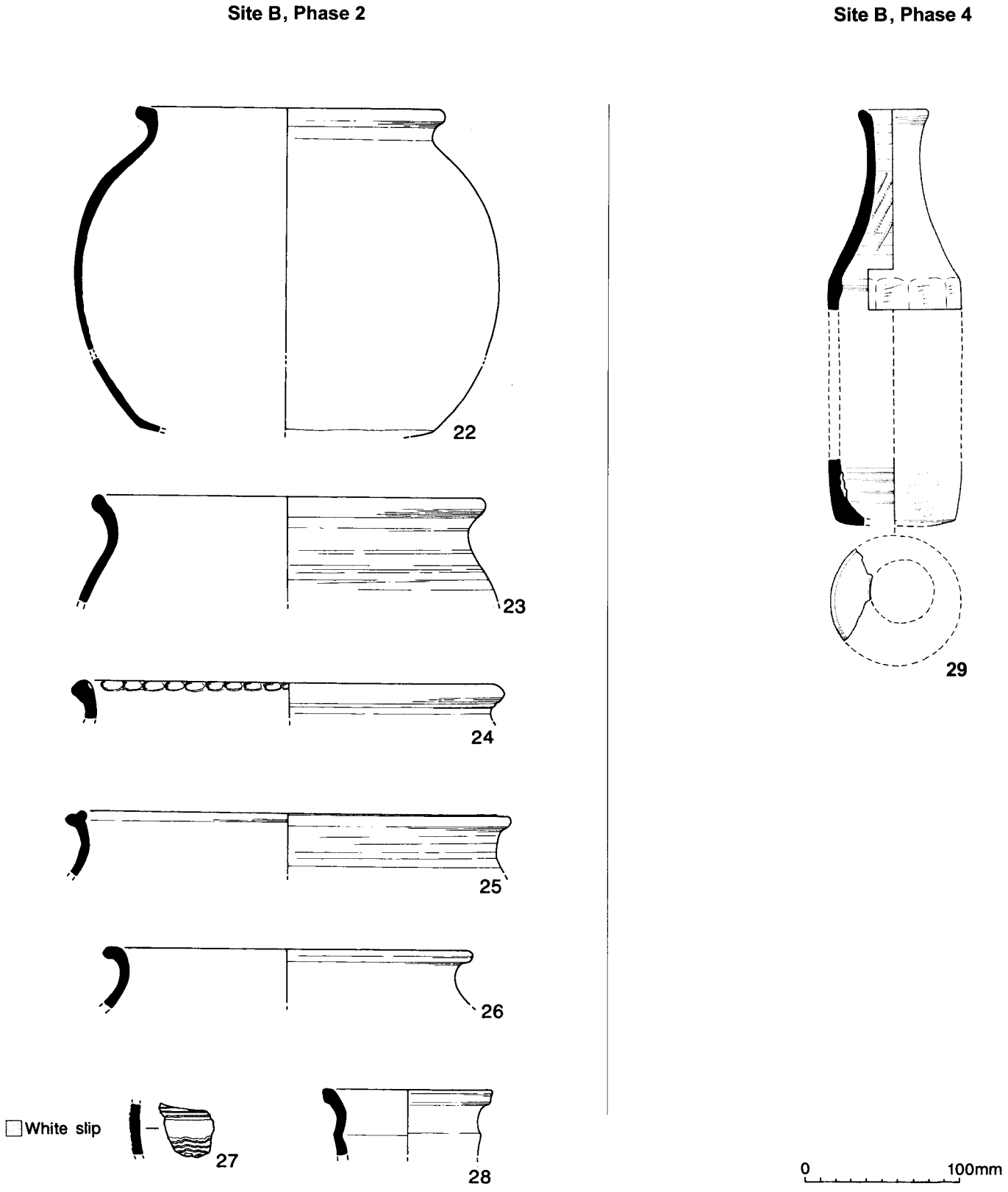


Fig. 23 Medieval pottery: nos 22-28 and 31.

The pottery from Phases 1-2 of Site B
Two sherds of early medieval ware belonged to this phase.

The pottery from Phase 2 of Site B (early 13th century to 1610)
A total of 460 sherds weighing 5.2kg was excavated from 60 contexts. Unlike Phase 1, there is only one large pit group, BF100, which is published in detail. Most contexts produced less than 100g of pottery and are published in summary form. The fabric totals shown in Table 3 are similar to those of Phase 1; almost all the pottery is medieval, with early medieval ware being the most frequent, followed by medieval coarse ware and shell-tempered wares consisting mainly of Fabric 12C. As with Phase 1, there are minimal amounts of Hedingham ware. One difference in Phase 2, however, is that the proportion of medieval coarse ware has increased, and there is now much more sandy orange ware including Colchester ware.

The buildings

Hospital structures Building 186 and Building 187 and associated features produced pottery dating to the earlier 13th century at the beginning of Phase 2. The latest sherd is a Langerwehe stoneware frilled base from quarry-pit BF141 dating to the later 14th to 15th centuries, but as the rest of the pottery in this feature is 13th century it may be intrusive here. (A second Langerwehe stoneware sherd was found in pit BF178 in this phase, also in association with 13th-century material.) One vessel stratified below Building 186 merits illustration:

Fig. 23.22 Cooking pot: sandy orange ware; almost complete profile with an early to mid 13th-century type H2 rim, a form more usually found in medieval coarse ware; red to creamy orange fabric, pale grey core; probably coil-built; all surfaces including the rim are abraded, with much of the internal surface laminated away, but it is not possible to say whether this is the result of use or whether it is because the fabric is exceptionally friable; no evidence of fire-blackening; the fabric is not unlike that of Colchester ware. Fill 165 (slot/pit BF75).

Pit BF100

This feature produced 2.2kg of pottery and is stratified above accumulation layer BL33 in Building 186. Pit BF100 cut pit BF204 in Phase 1 and, as noted above, there are cross-fits between the Phase 1 pit groups. Most of the pottery in pit BF100 came from fills 234 and 245, and, as would be expected, the range of fabrics and forms are similar to those in the Phase 1 pits. However, in contrast to the Phase 1 pits, no jugs are present, but there is one possible bowl rim. The forms are described below:

Bowls: One medieval coarse ware flanged, everted rim perhaps from a bowl was found in fill 234. It is too fragmentary to measure the diameter.

Cooking pots: Vessels which also occur in the Phase 1 pits are not illustrated. The range of cooking-pot rim forms is shown in Table 5.

Fig. 23.23 Cooking-pot rim: early medieval ware; brick-red surfaces, grey core; fire-blackened on shoulder and under rim. Fills 234, 245 (pit BF100).

Fig. 23.24 Cooking-pot rim: medieval coarse ware; slight thumbing on inside edge of rim; no traces of use. Fill 259 (pit BF100).

Fig. 23.25 Cooking-pot rim: early medieval ware; grey except for red-brown external surface; fire-blackening on rim. Fills 234, 245 (pit BF100).

Fig. 23.26 Cooking-pot rim: medieval coarse ware; grey except for thick red margins; small patches on underside or rim. Fill 234 (pit BF100).

Table 5: showing cooking-pot rim-forms in pit group BF100.
✓= number of vessels represented

Ware	Rim type								
	Everted	Thickened everted	Thumbed beaded	Beaded internal thickening	B2	B4	D2	H2	H1
Sparse shell fabric (12C)			✓						
Early medieval ware	✓✓	✓no 23	✓✓	✓✓ no 25		✓			
Medieval coarse ware			✓no 24		✓	✓	✓ no 26	✓	✓

The range of rim types is larger than in the Phase 1 pits with the addition of a cavetto or D2 rim dating to the first half of the 13th century (Fig. 23, no 26) and an H1 rim current throughout the 13th century, which may post-date the Phase 1 pits. Less developed simple everted and thickened rims are also present (Fig. 23, no 23). Worth further mention is a slightly thumbed, beaded rim showing quite large pieces of shell on the outer surface just below the rim, which would appear to be there for decoration. No 24 has been illustrated because it shows thumbing on the inside edge of the rim, rather than the more usual thumbing at the top or outer edge of the rim (Fig. 23). One medieval coarse ware B4 rim (not illustrated) shows wavy line combing on the rim, a common style of decoration on this rim type. Looking at the size of cooking-pot rim, apart from one small cooking pot measuring 160mm in diameter, all fall into the size range 240 to 320mm peaking around 240 to 260mm, a similar result to the Phase 1 pits. In common with the Phase 1 pit groups, some of the cooking pots are fire-blackened while others show no evidence of use.

Other types: One further item of interest was recovered from pit BF100:

Fig. 23.27 Body sherd with sgraffito decoration: sandy orange ware; thick grey core, orange surfaces; horizontal band of straight line and wavy line combing through a covering of white slip; a plain lead glaze gives red-brown decoration and pale yellow slip; the absence of throwing lines makes it difficult to orientate the sherd, so that the decoration could be vertical; fabric similar to any other locally made sandy orange ware; as late medieval Sgraffito ware was part of the repertoire of the Colchester ware industry (Cotter 2000, 166-70), this may be a Colchester ware product. Upper fill 252 (pit BF100).

As for the dating of pit BF100, the cooking-pot rims make a date from the earlier 13th century most likely for deposition. The sgraffito sherd must be later as it came from a later pit fill. The dating is complicated by the presence of mid 13th- to mid 14th-century green glazed Saintonge ware stratified below the pit in the top of layer BL33. However, as the sherd is from a cleaning context it may well be intrusive. Pit BF100 may also be contaminated by Phase 1 material.

Other pottery in Phase 2

A modest group of pottery was excavated from pit BF179 (weight 425g). Unlike the rest of the pottery in this phase, it produced some late medieval pottery comprising a Colchester ware jug rim with a pulled spout, triangular rim and carination about 20mm beneath the rim. This is a typical Colchester ware form and is paralleled by examples from Colchester Castle (Cunningham 1982a, figs 29.49 and 30.56). It may be as late as 15th or 16th century. An unglazed body sherd perhaps belonging to this jug shows slip-painted teardrop shapes. Also belonging to the late medieval period is a small sandy orange ware beaded ?bowl rim and a slip-painted sherd with a decayed greenish glaze.

A slightly more unusual find in this pit is a medieval coarse ware wheel-thrown flat base with vertical sides. The base is quite narrow, measuring 56mm across, and may be from a bottle. It has the typical coarse sandy fabric with dark grey surfaces and thick pinky core of much of the medieval coarse ware found at St. Mary Magdalen's, precluding the possibility that it is Roman. A medieval coarse ware jug rim was found in pit BF38 and is illustrated:

Fig. 23.28 Jug rim: medieval coarse ware; grey core, buff-brown margins and dark grey surfaces; abraded, especially the internal surface which is pitted. Fill 69 (pit BF38).

Discussion of Phase 2

Pit BF100 and the latest pottery from Building 186 and Building 187 would seem to date to the earlier 13th century, at the beginning of Phase 2 (assuming that the Langerwehe stoneware is intrusive). Most of the other features could also be of this date except for pit BF179, which is late medieval. There is not enough pottery to comment on the function and status of the buildings. The preponderance of cooking pots in pit BF100 indicates that the pottery is from a service area. There is no evidence of pottery dating to the time of the Dissolution.

Pottery from Phases 2-3 of Site B

A total of 24 sherds weighing 211g was recovered from three contexts. A disturbed possible post-pit BF150 produced pottery dating to the post-medieval period (although medieval pottery is also present). The latest pottery comprises a sherd of late 16th- to 17th-century undecorated Low Countries slipware, from a dish or bowl with a pinched base, possibly placing the removal of a post at the very end of Phase 2 or in the earlier part of Phase 3.

Pottery from Phase 3 of Site B (1610 to early 19th century)

A total of 467 sherds weighing 9.8kg was recovered from 57 contexts. Much of the pottery is residual medieval and later material and this phase produced a large amount of Colchester ware. As would be expected in a post-medieval phase, post-medieval red earthenware is by far the commonest fabric. Other wares spanning the post-medieval period are present, but only in very small quantities. As with the rest of Site B, there is little vertical stratigraphy and many features produced only small amounts of pottery. Therefore only contexts with diagnostic material are discussed below.

Little can be said about Buildings 186, 187 and 188 as most of the material is residual, although Building 186 did produce some 17th-century material. Some of the features not associated with the buildings (namely accumulation BL3, pits BF30, BF132 and BF160, slot BF21, and cut BF122) produced late 15th- and 16th-century pottery which would have been current with the 'missing' end of Phase 2. These contexts are characterised by late medieval Colchester ware, post-medieval red earthenware standing cups, Low Countries red ware and Raeren stoneware drinking jugs. These would have been current with the Dissolution.

Pit BF14 did produce a good 17th-century group with low residuality which would have been current with the earlier part of Phase 3; the finds are detailed below:

- Part of a type I face mask in Frechen or Cologne stoneware, with a naturalistic face and squared bead, brown wash and external salt glaze. It is probably from an inscribed, foliage or geometric band jug manufactured between 1525 and 1575. Examples have been found at other British sites including Norwich but are not common (Hurst *et al.* 1986, 210). The rim of a Frechen stoneware Bartmann/bellarmine was also found.
- Sherd of Westerwald stoneware from the body of a vessel showing a pattern of incised heart shapes, with an applied five-petalled flower stamp in the centre of the pattern and a blue background. This decoration is fairly unusual but the use of applied stamped pads is common and may be the earliest style of decoration, dating from the early 17th century onwards (Jennings 1981, 123).
- Loop-handled bowl and part of the rim from a north Holland slipware bowl, 200mm diameter showing oblique slip dashes on both surfaces under an all over orange glaze and is perhaps from a cockerel bowl (*cf.* Hurst *et al.* 1986, fig. 77, 238). These were produced throughout the 17th century although most date to the later 17th (Hurst et al. 1986, 163).
- All the Surrey-Hampshire white ware has an internal yellow glaze. Forms comprise a slightly thickened everted bowl rim (cf. Pearce 1992, fig. 23.67) classified by Pearce as a wide bowl. This form is not closely datable but the majority of wide bowls found in London belong to the mid to late 17th century (Pearce 1992, 13). A beaded jar rim of around 160mm diameter is also present in this ware.
- The rim of a tin-glazed earthenware albarello, buff fabric off-white lilac tin glaze on both surfaces decorated on the outside with narrow blue-painted bands. It could be English or Dutch and is similar to albarelli from Norwich dating to the first half of the 17th century (Jennings 1981, 187, figs 91-3).
- Fragment of flanged tin-glazed earthenware plate or dish rim; buff fabric with all over white tin glaze with blue painting, most likely English and could also be 17th century.
- Black-glazed handle from a tyg, most likely 17th century.

The remaining forms are all post-medieval red earthenware and comprise: flanged dish rims; a possible everted bowl rim; jars with thickened rims; a spouted jar with a hollowed everted rim and collared jar rims; the rim of a one-handled jar; and the leg of a tripod base and a hollow pedestal base showing internal fire-blackening, probably from a chafing dish. The majority of post-medieval red earthenware sherds are internally glazed.

All the pottery in pit BF14, apart from the German stoneware-type face mask, would have been current in the 17th century, with the Dutch slipware ?cockerel bowl and the Surrey-Hampshire white ware bowl making a date in the later 17th century more likely.

Pit BF129, cut BF118, pit BF128, gully BF144 and pit BF148 also produced principally 17th-century pottery. Finds include several post-medieval red earthenware forms including the profile of a dripping dish showing a pouring lip, internal glaze and external fire-blackening. It has been classified as post-medieval red earthenware, but this form was also made in Low Countries red ware. It is paralleled by an example from Moulsham Street, Chelmsford (Cunningham 1985a, fig. 2.7) where the form first appears in the 15th century but becomes more common in the 16th and 17th centuries (Cunningham 1985b, table 5). Dripping dishes were used for catching the juices from spit-roasted meat and suggest the user could afford to buy large joints of meat. Other forms in post-medieval red earthenware comprise the beaded rim from a large bowl some 400mm in diameter, an internally glazed flanged dish rim showing incised wavy line decoration on the inside of the flange, and two examples of one-handle jars or chamber pots. These are similar in form to Pearce's chamber pot type 1 manufactured in Surrey-Hampshire white ware (*cf.* Pearce 1992, fig. 39.321-2) found in London throughout the second half of the 17th century (Pearce 1992, 99). Also found was a Frechen stoneware flattened 17th-century type face mask from a bellarmine. Gully BF144 and pit BF148 produced sherds of English tin-glazed earthenware with speckled manganese decoration. They are probably 17th century and represent the latest pottery in their respective features. Cut BF118 produced a Low Countries red ware cauldron with a flanged everted rim, vertical looped handles and a tripod base. Comparable examples have been found at Norwich (Jennings 1981, fig. 56).

The latest pottery in post-hole BF134, cut BF116 and pit BF202 comprises single sherds of Staffordshire slipware including the rim sherd from a press-moulded combed slipware dish with a scalloped rim. Such dishes were popular from the early 18th century (Barker 1993, 18). The two other sherds are from hollow wares and may be from the same vessel, they show more unusual swirling decoration in brown slip which may be an example of joggled slipware made in the early 18th century (Barker 1993, 5). Pit BF120 produced a small discoloured sherd of ?Chinese porcelain most likely dating to the 18th century.

At the top of this sequence, ditch BF40 produced the largest group by weight in Phase 3. However, most of this bulk is accounted for by two large semi-complete post-medieval red earthenware vessels, comprising a bucket-shaped jar with an abraded horizontal flanged rim, and a wide dish with convex sides and a hollowed everted flanged rim (Cunningham's sub-form E2). The latter shows the remains of slip-trailed squiggles dotted around the inside surface with one in the centre, and wavy line slip-trailing around the inside of the flange. This is the same technique used in Metropolitan slipware but not in the same style and may be later. This vessel appears to have undergone some kind of secondary use as the top of the rim is encrusted with a black flaky deposit extending down the outside of the vessel. The deposit has adhered to the slip-trailing on the inside of the flange.

Parts of the external surface are abraded and the internal surface is quite pock-marked.

Ditch BF40 is dated by the presence of slipped kitchen earthenware including a sherd from a hollow ware showing vertical slip-trailed patterns, a 19th-century revival of a 17th-century technique as found at Wetheriggs in Cumbria (Brears 1971, 64-5). Also present is a sherd of white salt-glazed stoneware, a plain creamware flanged plate or dish rim and a very abraded sherd of yellow ware dating from the late 18th to 20th centuries.

Discussion of pottery from Phase 3 (1610 to 19th century)
As with Site A, post-medieval red earthenware one-handled jars or chamber pots are relatively common. Very little 18th-century pottery is present and only ditch BF40 produced pottery datable to the 19th century at the end of this phase. The dish with the black deposit in ditch BF40 may represent very small-scale industrial activity.

Pottery from Phase 4 of Site B (19th to 20th centuries)
In this phase, Building 187 and Building 188 were demolished and a terrace of almshouses was built in 1832. A total of 634 sherds weighing 14kg was excavated from 92 contexts. No pottery was excavated from features belonging to the almshouses. Residual sherds of intrinsic interest are described in the fabrics section but of special interest is a very unusual Hedingham ware bottle (no 29).

Fig. 23.29 Part of a bottle with a perforated base: Hedingham ware; wheel-thrown showing internal throwing lines and oblique creases in the fabric where the neck has been formed; extraneous lumps of clay stuck to the inside of the base; creamy-orange fabric with buff internal margins; patchy orange glaze with green flecks; sides of vessel have been knife-trimmed giving a faceted appearance; the hole in the base was made during manufacture; it is rather like a drainage hole in a flowerpot, but is not in the centre and is too large for a sprinkler; it could be for a stopper rather like a present day salad oil container which is filled from the base and has a cork in the top. Finds no 98 (make-up BL7).

A wide range of post-medieval and modern wares are present. The most frequent of these are creamware, pearlware, and English stoneware (including Nottingham/Derby stoneware and modern stoneware). A number of small 19th-century groups are present and some would have been current with the occupation of the almshouses. None merit publication, but they are detailed in the archive. Of the pottery that is contemporary with this phase, most consists of low-quality kitchen, table, garden and other household wares that would be expected from almshouses where the residents were not well-off.

Discussion of the pottery from Sites A and B
Very little pottery came from Phase 1 of Site A, comprising small amounts of coarse wares. Very similar but larger quantities of pottery, with the addition of a couple of fine ware sherds, were excavated from the pit groups from Site B. This indicates that the pits were indeed associated with the hospital occupation in Buildings 183 and 184, although there is the complication of contamination from a Phase 2 pit.

Another small quantity of pottery was excavated from Phase 2 of Site A, which is very similar to that from Phase 1. Much more pottery belongs Phase 2 of Site B, but little of this came from Building 186 which produced a few coarse wares belonging to the earlier part of this phase. This is therefore similar to the assemblage from Building 183 in Site A. However, it is difficult to compare assemblages from buildings as most of the pottery used in them would have been discarded in outside rubbish-pits rather than deposited *in situ*. More pottery came from Building 187 and includes a few fine ware sherds, although again most belongs to the earlier part of this phase, as does that from pit BF100. However, unlike Site A, some features did contain late medieval Colchester ware, 'Tudor Green' ware and Low Countries red ware, some of which may have been current during the Dissolution, although there are no significant Dissolution deposits.

This lack of late medieval pottery could indicate contraction of occupation at this time, before the Dissolution took place. However, sites with a dearth of late medieval pottery are quite common and could indicate a decline in the pottery industry at this time.

The bulk of the pottery from Phase 3 of Site A dates to the 17th century and, apart from a couple of late medieval sherds, there is no evidence of occupation in Site A from the second half of the 13th century until the 17th century. Again much more pottery was found in Site B of this phase, although a much higher proportion consists of residual medieval material. Mainly residual pottery was found in Buildings 186 and 187, but the presence of 17th-century sherds in Building 186 indicates that it remained in use in this phase. Other features in Site B produced pottery that could have been current with the Dissolution. None of this pottery has very tight dating; for example late medieval sandy orange wares carried on well into the 16th century, so it is impossible to say what happened in the later 16th century immediately after the Dissolution. Much 17th-century pottery was found in Site B, and the range and proportions of wares are similar to that of Site A. In both sites there is little evidence of 18th-century activity.

In Phase 4, far more pottery was found in Site A than Site B with a much lower proportion of residual medieval pottery. It is difficult to compare assemblages between the two sites as most of the pottery from Site A is from grave fills and topsoils and no actual groups are present.

In the medieval period, very few vessels for a specialised function were made, and there is no definite evidence of vessels used for medicine or care of the sick, although such evidence has been recovered at other hospital sites (Gilchrist 1992, fig. 8.3). The pit groups found in Phases 1 and 2 would be typical of any 12th- to 13th-century site. However, it is tempting to suggest that the Hedingham ware bottle with the hole in the bottom, found residually in Phase 4 (Fig. 23, no 29), has something to do with ministering to the sick (as it is wheel thrown it would have been current with Phase 2). In the late medieval and post-medieval period, the relative proliferation of one-handled jars or chamber pots and the two ?porringers may indicate the presence of the infirm, but such vessels are also found on ordinary domestic sites.

Imported wares are present but occur only in very small quantities, making up 1.4% of the total (excluding imports commonly found at inland sites in Essex, namely Raeren, Frechen and Westerwald stonewares and Chinese porcelain). The earliest wares comprise the unidentified but possibly north French sherd in Phases 1-2 and the sherd of Andenne ware residual in Phase 3. Other medieval imports comprise a possible Rouen sherd, and sherds of Saintonge green-glazed ware, the commonest medieval import totalling seven sherds; unfortunately all but one is residual in Phase 4. Post-medieval imports comprise a couple of sherds of Spanish olive jar and one sherd of North Italian slipware again residual in Phase 4. Low Countries red wares including North Holland slipware are relatively common and are more or less current in their phases, as were sherds of Anglo/Netherlands tin-glazed earthenware and German stonewares, although all but Langerwehe stoneware are common on inland sites. Evidence of medieval wares traded along the coast comprise sherds of London-type ware and a single sherd of Scarborough ware. Even though many of these imports are residual, there is no reason to suspect that they did not come from St. Mary Magdalen's.

Imported wares at inland sites may reflect high status, but at a port they are more likely to reflect their ready availability, coming straight off the docks with virtually no transport costs. Given the proximity of St. Mary Magdalen's to the port area of the Hythe, the amount of imports seems remarkably low. But few imports were found at Colchester Castle (Cunningham 1982a); for example, the only import in the early medieval period was a sherd of blue-grey ware, and the later medieval imports comprised (as at St. Mary Magdalen's) mostly Low Countries red wares and a few sherds of early German stonewares. In the post-medieval period, the variety of wares at Colchester Castle is greater than at St. Mary Magdalen's although again they only occur in small quantities.

Another comparable site is at Hythe Hill, outside the town wall and only 250 yards from the Hythe (Walker 2000, 116-19). Here, as

at Colchester Castle, the range of imports is similar to that of St. Mary Magdalen's but there is slightly more variety, although surprisingly imports only account for a small part of the total assemblage. In common with St. Mary Magdalen's, Saintonge is the most frequent medieval import and Low Countries red ware is the most frequent late medieval/post-medieval ware. A recently published synthesis of post-Roman pottery from Colchester (Cotter 2000), confirms that there were very few imports in the town until the late 14th century. However, during the mid 15th to late 16th centuries, imports are common, and as at the sites mentioned above comprise mainly German stonewares and Low Countries red wares (Cotter 2000, 355).

It would seem therefore that the pottery assemblage, at least in the respect of imports, may not be significantly different from other sites, and there is no real evidence to suggest that St. Mary Magdalen's was isolated from the pottery supply available to the rest of the town and its environs.

It is difficult to gauge status. In the medieval phase, the preponderance of coarse wares indicates most of the pottery is from service areas and there are few table wares. In the post-medieval period there are more table wares, especially drinking vessels, but then these forms are a common feature of most post-medieval sites.

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The small finds (Fig. 24)
by Nina Crummy

The majority of the finds from both the Site A (64.1989) and Site B (1995.10) excavations are Victorian, from Phase 4 contexts. Except for the coins, they were not examined in detail and are not discussed here.

The Roman period is represented by three tile counters (Site A, SFs 46, 66, 163) and a large convex disc cut from a brick (Site A, SF 178). One of the counters was reused as building material in the Phase 2 foundation AF75. Probably also Roman are two fragments of weathered Purbeck marble wall veneer, one (Site A, SF 176) used in the Phases 1-2 foundation AF287 and the other (Site A, SF 177) deriving from the fill of a 19th-century grave (AG186). While Purbeck marble was used both for fonts and architectural features in the medieval period, it is mainly found in cathedrals and the wealthier parish churches. The fragment used here in an early foundation is most likely to have reached the site among building material robbed from Roman remains in the town or suburbs.

Two fragments of hones of Norwegian ragstone were found in Site B Phase 1 pits, SF 52 (Fig. 24, A.1) from BF187 and SF 53 from BF188 (Fig. 24, A.2). Norwegian rag is a fine-grained mica-schist quarried chiefly at Eidsborg, near Telemark, and hones made from this stone were imported from the 9th century onwards (Mann 1982, 30). Hones in the cargo of a wrecked Viking ship show that they were imported as finished items (Graham-Campbell and Kidd 1980, 134), but medieval deposits in London show that blocks of the stone were also imported to be made into hones at the port of entry. A block of Norwegian phyllite (also used for hones) was found in an 11th-century context at Watling Court (Pritchard 1991, 155), and waste and semi-finished ragstone hones were found associated with pottery dated 1300-1320 at Ludgate (Museum of London Archaeological Archive, LUD82 [1062]). The Late Saxon and early medieval markets of the eastern and southern coasts of England were dominated by Norwegian ragstone hones, though on the west and in the Midlands the use of local stones prevailed (Crummy forthcoming), as it did on the east coast of Scotland (Trewin 1982, 184). This distinction cannot simply be attributed to a lack of suitable local stone in the south and east, for it also applies in York, which imported both Norwegian schist hones and Millstone Grit hones from the Pennines, the former considerably outnumbering the latter (e.g. MacGregor 1982, 77-80). The import costs may have been balanced against the quality of the product, or, most likely, were kept low by the hones or blocks of stone serving as ballast. Both of the St. Mary Magdalen's hospital examples are fragments from large hones used to sharpen the blades of tools rather than of small knives, and may be associated with tools used in the construction of the hospital buildings, or with horticultural/agricultural activity preceding or contemporary with its early occupation. Both are spalled, SF 52 quite severely, but have continued in use after the surfaces were damaged. SF 52 shows some signs of being used to sharpen points as well as edges.

A small U-shaped staple from a Site B Phase 2 clay floor (SF 24 from BL13) may be from furniture used in the hospital. Small staples were often used to fix on box fittings such as handles, hinges or hasps,

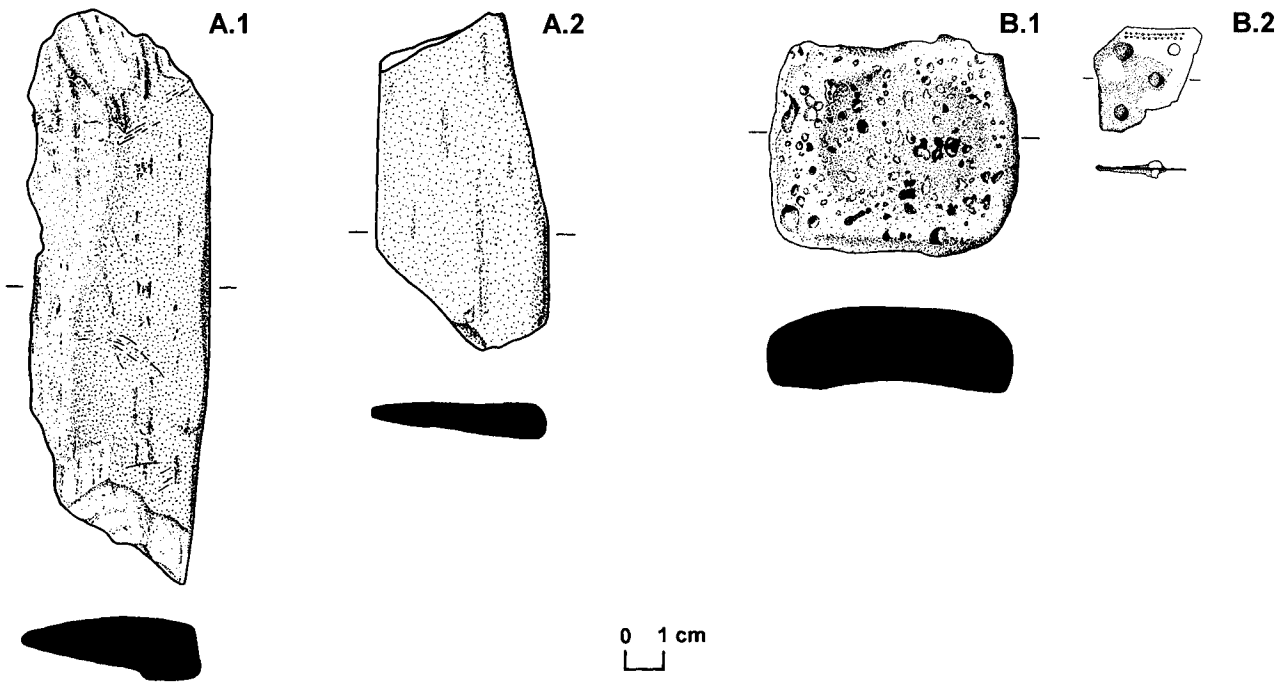

Fig. 24 Small finds.
A Hones from Site B: 1 SF 52; 2 SF 53 B Finds from Site B: 1 SF 54 stone; 2 SF 22 copper alloy

but could also be used to join pieces of wood together in the construction of furniture. The form occurs both in pre- and post-conquest contexts (e.g. Ottaway 1992, 619-23; I. Goodall 1982, 228).

From a Site B Phase 2 pit (BF197) came a neatly-shaped rectangular tool of worked lava, SF 54, shaped to the hand, with a flattened convex top and slightly dished underside (Fig. 24, B.1). The smoother lower surface was almost certainly the working face. Its surface is too vesicular to use for grinding powders or pastes, and too smooth for harsh scouring. The most likely interpretation of this object is that it was used for smoothing or polishing bone, wood or leather items. Similar smoothing stones have been identified in Late Saxon contexts at Southampton (Addyman and Hill 1969, 74), and the use of pumice to smooth wooden or bone scroll-ends is attested in the late 1st century AD by Martial (*Epigrams I*, 117). The choice of stone for this tool probably demonstrates reuse of a broken quernstone of German Niedermendig lava, the trade in which flourished during both the Roman and medieval periods (*CAR* 2, 73-6; *CAR* 5, 36-9).

Also from a Site B Phase 2 pit (BF170) is a small bone point. This has been made from a splinter broken from a hollow long bone, probably from a mammal of sheep/goat size, with all the edges being fractures apart from the very tip of the object. Originally longer, it has broken off at a point where the shaft narrowed. While the point may have been sufficiently strong to pierce thin leather, the form of the object is very close to a roughly-made point from a context dated 1280-1380 at King's Lynn identified as a pin beater (Geddes and Clarke 1977, fig. 143, 5), used to adjust the warp threads on a warp-weighted loom. By the time of the construction of St. Mary Magdalen's hospital the warp-weighted loom was well in decline in England, pushed out by the much faster horizontal loom (Walton 1989, 423) but it is possible that the economically-restricted inhabitants of the hospital were dependent on the earlier, cheaper, technology if they wove their own cloth.

The most important item in the assemblage is undoubtedly the pewter chalice deposited in the Site A Phase 2 grave AG107 (SF 165). This was, unfortunately, corroded and fragmented to the point at which its original form could no longer be determined. Found resting on the chest of the skeleton, it belongs to a tradition of burying priests with a white-metal chalice.

Also from Phase 2 is a fragment of a square mount (SF 22) from Site B make-up, BL30 (Fig. 24, B.2). Two corners are missing. Two retain iron rivets, and there is a third rivet in the centre. The best preserved edge is slightly incurving and is decorated with a fine double line of punched opposed triangles. A square mount of similar size, but with linear edge decoration and a domed centre, comes from a context dated to the second half of the 12th century at Castle Acre Castle, Norfolk (A. Goodall 1982, fig. 44, 41) and similar pieces were found at Billingsgate Lorry Park watching brief, London (Egan and Pritchard 1991, fig. 125, 1061-2). Similar post-medieval examples were used to decorate book covers (Baart *et al*, 1977, 403; Margeson 1993, 74-5). However, there is no sign on SF 22 of any central doming, and the distinctive double line of punched opposed triangles was used from the late 12th to the late 14th century to ornament small personal items, such as buckle-plates, strap-ends, brooches, and mirror-cases (Egan and Pritchard 1991, 30-31). The St. Mary Magdalen's piece is probably most likely to be part of a one-piece folded buckle plate, comparable to examples from London (*ibid.*, fig. 45, 303, late 13th to mid 14th century; fig. 72, 508, late 13th to mid 14th century; fig. 74, 535, second half of the 14th century).

Also of medieval date is a fragment of an unstratified bone whistle made from a sheep tibia. Bone whistles, made from either a bird ulna or a sheep tibia, come from contexts as early as the late 11th or early 12th century at London (Pritchard 1991, 207), and the 12th century at Castle Acre Castle, Norfolk (Lawson 1982, 254), and Exeter (Megaw 1984, 349-51), but they also occur as site finds in later medieval contexts (*ibid.*; Margeson 1993, 211-13; *CAR* 5, fig. 52, 2110; Crummy forthcoming). Possibly also medieval is a bone disc (1995.10 SF 9) with a central perforation, possibly used as a toggle, which is similar to examples from Northampton (Oakley 1979, fig. 141, 100-101).

A small die (64.1989 SF 39) was recovered from the area of the Phase 3 wall foundation, AF5. It is not a well-made piece, being irregular in form, with tiny single ring-and-dot motifs. It is of Brown's Type B, with faces placed so that 1 opposes 2, 3/4, 5/6, dated from the 13th to 16th centuries (1990).

A neatly-made rectangle of lead (SF 32) from a Phase 4 pit, BF69, may have been intended for use as a weight. The underside shows that it was sand-cast. One side is original, the others have been neatly bevel-cut. Similar objects are used in the medieval period as weights (G Egan pers. comm.), but are usually very worn, while this piece appears to be unused.

The small copper-alloy pins and lace-ends common as site finds in the medieval and early post-medieval periods were present in some numbers from Site A, but rather less so from Site B. Two lace-ends were of the riveted form, Colchester Type 1, dated from *c.* 1375 to 1550/75. Each was residual in its context. None of the pins was of a type which could be closely dated.

A few small fragments of painted glass and lead window cames from Site A probably derived from the medieval church, while lead cames and nails from Site B are more likely to have come from the hospital buildings. All are residual, though two fragments of cames were found in a Phase 3 hearth, 64.1989 AF112.

Three objects are probably of 17th-century date. From Site A Phase 3 dump/make-up AL19 came a bone knife (SF 139) with decorative notching on the sides of the handle, which is pierced for suspension. A similar knife came from a pit dated c. 1625-50 on the Long Wyre Street site in the town (*CAR* 5, fig. 77, 3105). A 17th-century date may also be assigned to a iron scale-tang knife with two-piece bone handle (SF 42), from a Site B Phase 3 pit (BF30), and to a fragment of an H-shaped one-piece double-sided bone comb from Site B Phase 4 make-up BL6. Five other bone comb fragments came from Site B, but all are likely to be of 18th- or 19th-century date.

The coffins in two of the 18th-century graves on Site A were fitted with white-metal repoussÈ plaques. In AG89 one plaque is in the form of an angel, the other a vase of flowers. Both were attached to the wooden coffin by small iron dome-headed rivets. Those from the adjacent AG88 are fragmented, but were certainly products of the same workshop. The coffin in AG88 was also fitted with white-metal plated iron drop-handles.

Coins, jetons, and tokens
by Nina Crummy

The collection of coins reflects quite clearly the lack of Roman occupation on the site and the isolation of the medieval hospital from the rest of the town. While some of the post-medieval coins from Site A are stratified in Phase 3 and Phase 4 contexts, all the coins from Site B are from Phase 4 contexts, making all residual.

An *antoninianus* of Postumus (AD 259-68) is the sole representative of the Roman period (64.1989 SF 150). It belongs to a period of high coin loss in Colchester (*CAR* 6, 292). There are no medieval coins, giving no numismatic record of the hospital's construction and early occupation. While medieval coins are not common in the town (*CAR* 4, 68), they are found on sites with reasonably undisturbed medieval levels, such as the suburban Middleborough (*ibid.*, 88). Their absence from St. Mary Magdalen's hospital may therefore be taken as showing that while trade formed an important part of the occupation at Middleborough, with coins changing hands giving opportunity for loss, at St. Mary Magdalen's the lack of contact with the outside world precluded the need for much exchange of coinage.

The earliest piece from St. Mary Magdalen's is a Nuremberg jeton, 1995.10 SF 15, from make-up, BL6. It belongs to the anonymous 'Lion of St Mark' series, dated *c.* 1500-1570, and, may be a late issue as both the nimbate head of the lion and the gospel project into the marginal inscription (Mitchiner 1988, 359-64). This is followed by a double *tournoi* of either Henri III or Henri IV of France. The third digit of the date is obscured, but it reads either 1581, 1591, or 1601.

With the hospital refounded as almshouses in 1610, increased contact with the rest of the town coupled with the appearance of a copper coinage makes the 17th century well-represented numismatically: two farthings of Charles I, four farthings of Charles II, one tin, and in poor condition, and three mid 17th-century trade tokens. Only one of the latter is of a local man, Thomas Renolds, a prominent Colchester baymaker. The others are a municipal farthing of Norwich, and a halfpenny token of a clay tobacco pipemaker, Miles Hacklvitt of Billericay.

Five George III low denomination coins represent the late 18th and early 19th century, with the assemblage completed by a token of 1840 commemorating Victoria's visit to Hanover in 1837, and a centime (one, two, five, or ten) piece of Napoleon III, 1852-70. The precise denomination cannot be given as the piece is now missing.

Site A Phase 3

SF 81	744	AL57	demolition/ make-up	Thomas Renolds	trade token	mid 17th century	Williamson 1967, 143
SF 107	800	AL62	make-up	Charles I	Rose farthing	1635-44	?Type 3
SF 100	829	AF112	hearth	illegible	post-medieval	c. 17th century	
SF 137	900	AL112	?floor surface	Henri III or IV	double *tournoi*	1581/1591/1601	

Site A Phase 4

SF 36	74	AL1	modern topsoil	George III	halfpenny	1806	4th issue Soho
SF 33	52	AL4	topsoil & grave fill	Victoria	commemorative token (farthing)	1840	To Hanover 1837
SF 51	578	AL5	topsoil & grave fill	George III	halfpenny	1799	
SF 150	1276	AL170	turf & grave fill	Postumus	*antoninianus*	259-68	*RIC 76*
SF 153	1514	AL229	grave fill & topsoil	Charles II	tin farthing	16..(?85)	
SF 170	1639	AL233	turf & grave fill	Napoleon III	1/2/5/10 centime(s)	1852-70	

Site B Phase 4

SF 23	80	BL2	accumulation	George III	farthing	1775	
SF 15	94	BL6	make-up	Nuremberg	jeton	*c.* 1500-70	Mitchiner 1988, 359-64
SF 25	155	BL6	make-up	Charles II	farthing	167-	
SF 13	88	BL7	make-up (demolition material)	George III	halfpenny	177-	
SF 30	125	BL7	make-up (demolition material)	blank			
SF 18	140	BL17	accumulation	Norwich	farthing token	1667	Williamson 1967, 93 (Norfolk)
SF 29	14	BF4	trial trench	George III	halfpenny	177-	1st issue
SF 38	194	BF90	pit	Charles I	royal farthing		
SF 19	200	BF96	pit	Charles II	copper farthing	1672	
SF 3	219	BF96	pit	Charles II	copper farthing	167-	

Unstratified

Site A SF 174	1645		jeton	medieval/ post-medieval			
Site B SF 36	4	Miles Hacklvitt	trade token	1666	Williamson 1967, 11 (Essex)		

The human skeletons from St. Mary Magdalen's

(Figs 25-26)

by S. Pinter-Bellows

Summary

A total of 68 articulated skeletons and a minimum number of 62 individuals from a random sample of the 3.5 cubic metres of individual bones excavated were examined. Males greatly outnumber females during Phase 1 and Phase 2 inside the church; the ratio becomes that found in the general population in those burials from outside the church during Phases 2 and 3. Subadults, however, are only represented in roughly the proportion found in the general population in the individual bones.

Stature and the relatively low rate of pathologies shows this to be a healthy population sample overall. The most common pathology found was periostitis, both in its non-specific form and in a pattern which lead to the suggestion of leprosy in three individuals; two from Phase 1 and one from Phases 2-3 outside the church. There were also four possible cases of syphilis: one from Phase 2 in the church porch, and one from Phase 3 and two from Phases 2-3 in the churchyard. The only other pathology of note was a male who had a hydatid cyst from Phase 1, a condition which may have been the cause of death and which is a rare archaeological find. Three individuals had been given autopsies before being buried.

Methods and material

The human skeletal material consists of 68 complete inhumations and an uncertain number of incomplete but fairly well-preserved individual bones. The circumstances of the burials have resulted in the disturbance and fragmentation of some. Inhumations were inserted successively, cutting into and disturbing earlier graves. A random sample of approximately 17% of the estimated 3.5 cubic metres of individual bones were examined; giving a minimum number of 56 individuals. It must be kept in mind that the relatively small number of skeletons and the large span of time to which most of these skeletons have been attributed means that the description of the individual skeletons does not necessarily accurately reflect the mortality conditions which prevailed generally for the people associated with the site.

Table 6 shows that the degree of completeness was fairly equally distributed across the range, 28% were over 80% complete and 21% have less than a fifth of the skeleton present. In most cases the bone matrix was in a fairly good state of preservation. The preservation of the majority of the skeletal material was good (Table 7). Preservation was scored as good, fair or poor on the basis of a visual inspection of the remains. The bones were brushed to clean them and no preservative was applied.

Table 6: Degree of completeness of skeletons.

<20%		approx. 20-40%		approx. 40-60%		60-80%		>80%	
n	%	n	%	n	%	n	%	n	%
14	21	14	21	11	16	10	14	19	28

Table 7: Condition of skeletons.

Good		Fair		Poor	
n	%	n	%	n	%
32	47	25	37	11	16

The demographic characteristics of each skeleton were established following the criteria and procedures presented in Bass 1971, Brothwell 1981, Phenice 1969, and Stewart 1979. Priority for gender determination was given to innominate morphology. Cranium

morphology was also used, and, whenever possible, supplemented by univariate measurements of the femur and humerus head, the glenoid fossa of the scapula, the maximum length of the talus and other robusticity indicators. In assessing the sex of the fragmentary individuals, it is necessary to remember that many of the structural features being evaluated are being correlated with robusticity and size. The physical characteristics have ranges that overlap for the two sexes. Therefore, the sex assessment of individual bones cannot be assessed with 100% certainty. Morphological traits of the pelvis and cranium, while subjective, are reported generally to be around 95% accurate from skeletal series of known sex (Krogman 1962); univariate measurements range from 80% to 90% accuracy (Buikstra and Mielke 1985; Dittrick and Suchey 1986; Steele 1976). Sexing was only attempted for adult skeletons (a term used here to indicate those above the age of approximately 20 years).

Univariate standards were generated from a total of 38 skeletons. These were skeletons which were fairly securely sexed on morphological grounds. The variables were checked to see that they had bimodal distributions, and that the measurements were similar from phase to phase, allowing all the skeletons from the different phases to be combined. Means for each sex were then calculated for each measurement, and the male mean value added to the male mean value and divided by two to produce the sectioning point. The sectioning points used are shown in Table 8, together with the percentage of morphologically sexed skeletons used to generate the original values which would have been misclassified had they been sexed using the metric standards only. Two of the female standards show a greater inaccuracy than those based on skeletal series of known sex mentioned above. This is because of the low numbers of individuals used to generate the standards and several female skeletons which were larger than average for these measurements; these females were not consistently large in all the measurements, however.

Table 8: Metric sexing standards.

Bone	**Sectioning point (mm)**	**% misclassified**	
		F	**M**
Scapula			
vertical diameter of the glenoid fossa	36.6	7	40
Humerus			
maximum head diameter	43.5	12	11
Femur			
maximum head diameter	46.2	6	20
Talus			
maximum length	62.1	12	25

Using the range of technique described above, it was possible to assign a sex to all but 5 (8%) of the adult skeletons. Of those 61 adult skeletons, 50 (75% of the total number of adults) were recorded as reliably sexed and 11 (17% of the total number of adults) were recorded as possibly male or female (M?, F?). Those recorded as possibly male or female were either sexed on the basis of metric standards alone or were assessed as slightly ambiguous; they have, however, been included with the more confidently assigned males and females for the purposes of analysis.

The regularity of adult osteological maturation processes is under debate at the moment, as is the precision and accuracy to which adult skeletal age can be estimated. Acs·di and NemeskÈri (1970), whose complex method is advocated in the recommendations of the Workshop of European Anthropologists (1980), claims an accuracy of 80-85% with a margin of error of two to five years. However, when Molleson (1993, 167-72) used this method on the Spitalfields sample of known age, only 30-35% were accurate to within 5 years and 75% were assessed within fifteen years. Molleson (1993, 171) does caution that there might be a specific environmental or genetic component to the moderate performance of the method on the Spitalfields sample. Therefore, the large age intervals were used in this report for the adults in an attempt to prevent the over-ageing of younger individuals and the under-ageing of old individuals distorting too much the demography of the adult sample. The age profile of a skeletal population sample should only be considered in the most general manner. The age at death of the adults should be viewed as a vehicle to the analysis of the overall age structure of the sample, not as an accurate representation of chronological age for any individual.

Measurements were taken following descriptions in Bass (1971) and Brothwell (1981). The formulae for stature used individual bone lengths (Trotter 1970). However, it should be noted that the limb proportions for this population could differ from the modern Americans of north European ancestry used as a reference population, so the formula is not necessarily entirely appropriate. Of the 61 adult skeletons which could be sexed, 46 (75%; 26 males and 20 females) had long bones from which stature could be calculated. Table 9 shows the bones that were available for the calculations and an assessment of the standard errors for each bone.

Table 9: Bones used for stature estimation, listed in decreasing value of accuracy (standard errors from Trotter 1970, 77).

error (cm)	n		(+/-) standard (cm)	
	Females	Males	Females	Males
Femur and tibia	14	14	3.55	2.99
Tibia	1	4	3.66	3.37
Femur	5	5	3.72	3.27
Radius	0	3	4.24	4.32

Pathological conditions were evaluated through gross anatomical observation and radiographic examination. Criteria for probable diagnosis stemmed from Steinbock (1976), Ortner and Putschar (1981) and Rogers *et al.* (1987).

As the excavation and analysis took place in two stages with a number of years in between, changes took place in the observations carried out on the skeletons, with additions especially in metric analysis in the later analysis. Therefore, not all observations have been made for each skeleton even when they were available.

The skeletal material according to phase

Phase 1

Five skeletons (AG138, AG142, AG143, AG151, AG162) were recovered which could be firmly associated with Phase 1 (early 1100 to *c.* mid 1200s) on the site. All of the firmly associated skeletons are adults, though only one, a middle-aged adult, could be aged with any more precision. The four for which sex could be determined were male. It was possible to calculate stature for three, i.e. 171cm, 172cm and 186cm (5ft.7in. and 6ft.2in.); these figures are consistent with mean statures for English medieval populations (White 1988). These are well-grown individuals, though one (AG138) exhibits enamel hypoplasia, which represents acute stress during development.

The most frequent pathological change in the adult skeletons from this phase is gross tibio-fibular periosteal inflammation. Three of the individuals have periostitis: one (AG162, unsexed adult) has a quite localised periostitis on the medial side of a distal fibula; the other two have more generalised periostitis, one (AG138, middle-aged male) has periostitis on the distal, medial sides of both tibiae and fibulae and the other (AG143, adult male) has periostitis on the medial and posterior sites of both tibiae and the left fibula. Periostitis is a non-specific infection, inflammatory in nature, for which the pathogenic agent is unknown. Periostitis is recognised as a deposition of irregular new bone upon the outer surface of bone.

This type of periostitis, although not pathognomonic, is highly indicative of leprosy, a diagnosis which must be foremost in differential diagnosis. In leprosy, the tibio-fibular inflammatory changes is usually a toxic manifestation resulting from gross ulceration and chronic sepsis of the foot rather than a bacterial infection *per se* (Manchester 1989). Only one of these three skeletons have foot bones which could be examined for changes associated with leprosy and that particular skeleton did not have any (the periostitis on this specimen is located on the middle third of the tibia). In none of the skeletons was the rhinomaxillary area well enough preserved to examine it for changes associated with lepromatous leprosy. Periostitis is often found on the tibia in the absence of general pathology; in these cases it probably resulted from repeated and minor trauma to the lower legs or ulcers from varicose veins (Brothwell 1961; Manchester 1984). However, in these cases it is the middle third of the tibia which is the most likely area to be affected by such an injury, as opposed to the

distal third. Therefore, there is the suggestion that two of the individuals (AG138, AG143) might have been affected by leprosy, but a definite diagnosis cannot be made.

During excavation of burial AG143 (adult male) an object was discovered, ellipsoid in shape, approximately 25mm lateral of the 11th and 12th thoracic vertebrae, lying on the 11th and 12th ribs, measuring 60 x 30mm in its maximum length-breadth axes, and not attached to any bone (Fig. 25d). It is less than a millimetre thick and has a slightly lobulated or knobbly exterior surface and a finely granular interior surface. The most likely diagnosis is that it is a calcified hydatid cyst caused by the tapeworm *Echinococcus granulosus*. Other calcareous capsules, cysts produced by the pork tapeworm, *Taenia solium*, healed tuberculous cavity, calcification around caseous tubercular glands, bronchiectatic cavitation and a neoplasm of the cystadenematous type, are all discounted because of position, shape or general appearance.

This organism, which measures from 2.5mm to 9.2mm in length, is primarily an intestinal parasite of dogs, foxes and wolves. Human infections derive from the chance ingestion of eggs on vegetables or by the fondling of an infected dog leading to the transference of eggs from the animal's hair to the mouth by the fingers. Once ingested they develop into embryos, or oncospheres, which pass through the intestinal wall into the blood stream; many settle are the liver (70%) (Berkow 1977) while others migrate into the pulmonary, abdominal and pelvic cavities. In the affected organ the oncosphere develops into a hydatid cyst. The cyst grows slowly, taking six to twelve months to reach a diameter of about 1cm, sometimes growing for 20-30 years (Seaton 1979). While infection is a common occurrence even today in England and Wales (Palmer and Biffin 1987), this is only the third published discovery of one in an archaeological context in England (Price 1975; Wells and Dallas 1976).

Whether this individual's death was directly due to the hydatid cyst is indeterminable. It is not unusual for a hydatid cyst to die and become calcified without causing the least disturbance to health; however, they may suppurate or rupture. The cyst 'shell' in this instance is broken, and this could have occurred post-deposition or it may have burst antemortem into the lung or pleural cavity causing a fatal allergic shock.

Another pathology of note is Schmorl's nodes on two thoracic and one lumbar vertebrae of burial AG138 (middle-aged male). While the aetiology of Schmorl's nodes are not completely understood, it is believed that if the disk located between the vertebrae is subject to too much strain it may rupture. The bubble of escaped material then presses against the body of the adjacent vertebra, which gradually yields to the pressure and a small cavity is formed in its body.

Phase 2 burials within the church

Four skeletons were excavated from inside the church (AG107, AG108, AG109, AG131). These individuals date from any time between the c. mid 1200s and the early 17th century. All four of the skeletons are middle-aged adult. Three of them are males or probable males and one is a probable female (AG109). It was possible to calculate statures for all of them; those of the males were 171cm, 174cm and 179cm (5ft.7in.-5ft.10in.) and the possible female has a stature of 152cm (5ft.1in.). These figures again are consistent with mean statures for English medieval populations. While no chronic developmental stresses could be detected, two individuals (AG107, AG109) exhibit enamel hypoplasia, showing that these individuals experienced some periods of acute stress during development.

Two individuals have periostitis on lower leg bones; there is one case of healed periostitis on the distal tibia (AG107, middle-aged male) and one case of unhealed periostitis on the distal fibulae (AG131, middle-aged male). These cases probably resulted from repeated and minor trauma to the lower legs. There is also a bony osteoma, a benign bony tumour, mid-shaft on a right femur (AG107, middle-aged male).

Phase 2 burials in the church porch

Three burials belonging to Phase 2 were recovered from the porch of the church: AG171 (old adult, possibly female); AG172 (middle-aged adult, female), and AG173 (old-aged adult, male). It is possible to calculate statures for all of them; the male was 171cm (5ft.7in.) and the females 156cm and 160cm (5ft.2in.-5ft.3in.). These figures are again consistent with mean statures for English medieval populations.

There is one case of healed cribra orbitalia (AG173); the most likely cause of this was iron anaemia in early childhood cause by nutritional problems and/or illness affecting the uptake of nutrients.

One individual, AG171, has a possible case of treponemal infection of syphilis. The skeleton exhibits the lower half of the right radius swollen and covered with a fine-grained porous bone and shows the imprint of blood vessels over and in it. The left femur is swollen on the medial side of the shaft. The excess bone is of a fine-grained porous nature, with the imprint of blood vessels running over it and through it. The fovea capitis is filled with ossified ligament. Both tibiae are also affected, the left more than the right. The distal two-thirds of the shaft is swollen (the distal articulation is not affected) on the left tibia. The right tibia is less swollen and has a rough irregular area of additional bone medially on the lower third of the shaft. The latter two are not classic examples of a treponemal disease; there is no involvement of the nasal cavity or cranial vault, and in AG171 the changes are not bilateral. However, the bones do not exhibit the microscopically visible mosaic pattern found in Paget's disease, nor the more localised node formation, often encroaching on the meduallary cavity, found in non-suppurative sclerosing osteomyelitis of Garré.

Two of the individuals have osteoarthrosis; none of the cases seem to originate from trauma. AG171 has osteoarthrosis in the cervical and lumbar vertebrae, with cervical vertebrae 6 and 7 almost fused together by osteophytes around the centre and eburnation between the articular facets of lumbar vertebrae 2 and 3. AG173 also has osteoarthrosis in the cervical and lumbar vertebrae, with cervical vertebrae 3-5 fused on the dorsal side on the centres and eburnation between the articular facets of cervical vertebrae 2-7, and lumbar vertebrae 2 and 3 fused on the left side of the centres.

Osteoarthrosis has an association with accumulated daily wear and tear and can be used to give some idea of how strenuous were the activities that various individual were involved in, taking into account the fact that some individuals have a greater propensity for exhibiting these changes. Burial AG173, besides exhibiting arthrosis, gives another indication of having been involved in physical activity from an early age in displaying the non-metric trait of the os acromion not fused. The os acromion is a part of the scapula which has an separate growth centre and normally fuses onto the rest of the scapula between the ages of 16 and 22. Research suggests that arduous work involving the muscles of the shoulder which begins before the age of acromial fusion may lead to the os acromion not fusing (Stirland 1985a).

AG171 has a benign neoplasm, an osteoma. An osteoma is bone cells in a circumscribed area, normally in the periosteum, which grow more than the surrounding tissue; it is not progressive. This osteoma is a small hemispherical hard projection on the left femur, about the size of a pea.

Phase 2-early Phase 3 burials outside the church

Twenty-eight skeletons were excavated from outside the church from Phases 2-3. These individuals date from any time between the c. mid 1200s and the early 1700s. Twenty-seven of the inhumations had characteristics allowing a sex to be determined. Eleven skeletons were diagnosed as female and one as possibly female, twelve skeletons were diagnosed as male and two as possibly male (see Table 10). This gives a gender ratio of 1:1.17, that expected from a normal biological population. It is generally assumed that cemeteries with an even sex distribution are likely to be those where a representative selection of the whole adult population was buried, probably in family groups. However, turning to the age profile (Table 10), not one of the skeletons is from a subadult (those individuals approximately under the age of 20 years). This differs dramatically from what should be represented if a sample of an entire population had been excavated. A rough test of a skeletal sample's completeness is that a minimum of 30% of the skeletons should be under 15 years of age (Weiss 1973, 49). The adult age distribution for Phases 2-3 shows that the greatest percentage of aged adults were in the middle-aged category. This is a quite common distribution.

Table 10: Demography for St. Mary Magdalen's, Phases 2-3 outside the church.

Age	Unknown sex	Males	Females	Total
Foetal-birth				
Birth- .9				
1-4.9				
5-9.9				
10-14.9				
15-19.9				
Young adults (20-29.9)		3	2	5
Middle-aged adults (30-49.9)	4	3	7	
Old adults (50+)	2		2	
Adults: age unknown	2	5	7	14
Total	**2**	**14**	**12**	**28**

While an absence of subadults might have been expected during Phase 2, when a more select group may have been buried here, a more complete age distribution would have been anticipated for Phase 3. Interestingly, 27% of the minimum number of individuals estimated from the individual bones from all three periods (see below) were from subadults. There is no explanation for why the individual bones appear to represent an entire population sample while the inhumations do not, unless it could be proved that the individual bones came from dirt brought from elsewhere on the site during the period that the cemetery was in use.

It was possible to calculate statures for 16 of the 26 skeletons which could be sexed; the males had a mean of 173cm (5ft.8in.) and the females of 162cm (5ft.4in.). The distribution of statures can be seen in Figure 26. Growth and stature have been shown to be important factors in evaluating overall stress in a population (Hummert and Van Gerven 1983). Chronic stress during development can affect adult stature. Developmental stress does not seem to have been a problem for this community, with the mean statures for both males and females again consistent with mean statures for English medieval populations.

No enamel hypoplasia or cribra orbitalia was evident in this sample, again showing a lack of acute and chronic stress.

Two individuals (adult, female, BG34; young adult, male, BG37) have possible cases of the treponemal infection of syphilis. Skeleton BG34 has grossly swollen right and left fibulae with long-term periostitis, florid with gunnas deposits; tibiae were less involved, mostly on lateral sides. The skull was not present; however, the legs show classic signs of the disease. Skeleton BG37 has left tibia and fibula swollen with long-term periostitis and plaque-like formations, and the right tibia and fibula also show signs of this but in a milder form.

One individual (middle-aged, male, BG30) has a possible case of leprosy. The left first metatarsal distal articulation is half eroded, the associated proximal and distal phalanges are fused together (Fig. 25.c). The right first metatarsal distal articulation is fused to proximal phalanx at a 45° angle. Other metatarsals and phalanges are seemingly normal. The tarsals show slight periostitis. Tibia and fibula, left and right, show florid long-term periostitis starting with the distal articulation and going all the way up the shaft. The classic bone absorption at the metatarsal-phalangeal joint is not seen, and unfortunately the rest of the skeleton is not present. Therefore a differential diagnosis of various infections cannot be ruled out.

Non-specific infections were seen on four individuals. One (young adult, female, BG11) has osteomyelitis, an infection of the compact bone and medullary cavity. In osteomyelitis, the pathological process is one of bone destruction and pus formation, and simultaneous bone repair involving the deeper layers of the bone. The osteomyelitis with sinus is on the lower third medial shaft of the right tibia. Long-term incorporated florid periostitis is seen on all sides of both tibiae and fibulae shafts. The other three have the more superficial periostitis. One (middle-aged, female, BG21) had a chronic disease, on-going at the time of death, with long-term, florid periostitis medial and lateral on both tibia shafts and the left fibula (only one present), and medially on the proximal left ulna shaft (only one present), but it has not affected the left radius. Two (middle-aged, male, BG20; middle-aged, female, BG28) have periostitis which was fine-grained in appearance and well incorporated into the outer layer of the bone; this is often interpreted as being healed, though the clinical evidence for this is incomplete (Juliet Rogers pers. comm.). Skeleton BG20 has healed periostitis on the lateral side of tibia shafts, and the medial side of fibula shafts, in both cases left and right. Skeleton BG28 has healed periostitis along the entire shaft of the left fibula.

One individual (AG197) has a Schmorl's node on the 4th lumbar vertebra.

A non-metric trait which studies are beginning to link more with physical activity than a genetic source is transitional vertebra; these are vertebra which take on some of the characteristics of the neighboring type of vertebra. It has been suggested that transitional vertebra may have to do with the amount of rotation of the spine (Stirland 1985b). Skeleton BG100, an adult female, has a 5th lumbar vertebra which is sacralised and fused to the sacrum; and BG24, a middle/old age male, has the opposite, i.e. the left half of the first sacral segment is lumbarised.

One congenital abnormality was also noted, a fused cervical vertebrae 2-3 (middle-aged, female, BG23).

One individual (adult, possible male, BG145) shows the evidence of an autopsy performed. The cranial vault has been sawn off, but above the classic plane; the cut was above the brow ridges and at the top of the occipital. There is no abnormality to explain the autopsy.

Phase 3 burial within the church

The church in Phase 3 contained one inhumation, AG110, an adult male which exhibited unhealed periostitis on the distal fibulae.

Phase 3 burials outside the church

Twenty-six skeletons were excavated from outside the church from Phase 3. Of the 25 adult inhumations, 24 had characteristics allowing a sex to be determined. Seven skeletons were diagnosed as female and four as possibly female; nine skeletons were diagnosed as male and three as possibly male (Table 11). This gives a gender ratio of 1.09:1, relatively close to the 1:1 expected from a normal biological population. Looking at the age profile (Table 11), only one of the skeletons is again from a subadult, a late adolescent of between 14 and 20 years. The adult age distribution shows that the greatest percentage of aged adults were in the middle-aged category. There are, however, almost an equal number of young adults and as they are not disproportionately female (which might suggest child-birth as the cause) or have other obvious causes of death, it is probably an artifact of the small number of skeletons being studied.

Table 11: Demography for St. Mary Magdalen's, Phase 3.

Age	Unknown sex	Males	Females	Total
Foetal-birth				
Birth- .9				
1-4.9				
5-9.9				
10-14.9				
15-19.9	1			1
Young adults (20-29.9)	1	4	3	8
Middle-aged adults (30-49.9)		4	6	10
Old adults (50+)		1		1
Adults: age unknown	1	3	2	6
Total	**3**	**12**	**11**	**26**

It was possible to calculate statures for 19 of the 23 skeletons which could be sexed; the males had a range of 162-189cm (5ft.4in.-6ft.3in.) with a mean of 176cm (5ft.9in.) and the females had a range of 160-180cm (5ft.3in.-6ft.0in.) with a mean of 169cm (5ft.6in.). The distribution of statures is not bimodal and the male range completely overlaps the female range, perhaps because of the small numbers involved.

A

B

C

D

Fig. 25

Photograph no.		Caption
422-8	a	Grave BG26. Tibia showing 'sabre shins' with florid periostitis.
422-5	b	Grave BG26. Skull with stellate scarring on the frontal bone.
422-9	c	Grave BG30. Left and right metatarsals showing erosion and fusion.
766	d	Grave AG143. Showing location of hydatid cyst

One individual (middle-aged, female, BG26) has 'classic' indications of syphilis (Fig. 25.b). This is stellate scarring on the frontal, resorption of the alveolar around the maxillary incisors, 'sabre shins' with florid periostitis. Swelling and periostitis of the proximal right ulna, periostitis on the fibulae, periostitis and erosion on medial sides of the patellae, and the distal right humerus shows signs of slight erosion.

Periostitis in the form of a non-specific infection is the most common pathology seen. One individual (middle-aged, male, BG6) has a systemic infection which probably started just weeks before his death as seen by the grey, porotic, unincorporated nature of the periostitis. It is found on the lateral tibia shafts, left and right; the medial and lateral fibula shafts along the full length, left and right; the proximal femur shafts, left and right; the distal radius and ulna shafts, left; and the middle segments of the visceral surface of the ribs. Hypoplasia is present. An old-age male (BG25) has long-term, florid periostitis on tibia shafts, left and right. Four individuals (young adult, probable male, BG10; adult, probable male, BG12; middle-aged, probable female, BG18; middle-aged, female, BG27) have 'healed' periostitis on the tibiae.

Osteoarthritis can be seen in two individuals. A middle-aged female (BG17) has osteophytes and porosity on the vertebrae. An old age male (BG25) has eburnation on the right distal femur, the right acromion, the lateral clavicle, the dens area on cervical vertebrae 1-2, the right first metatarsal and associated first phalanx, the right first metacarpal, right lesser multangular, cuboid and first cuneiform. Erosion, porosity and osteophytes are seen on vertebral centres and some vertebral and rib facets. Lumbar vertebrae 2-3 are fused together by osteophytes of the left side. Cervical vertebrae 5-7 are fused together by the left facets.

Several individuals have developmental or congenital problems. In an unsexed adult (BG14a), the proximal fibular articulations have 'slid' down and fused to the sides of the shafts; as the tibiae are not present it is impossible to ascertain whether the cause is trauma or developmental. Two young adult males (BG2; BG15), very probably related, show identical hip malformations. In both cases the pubic portion of the acetabular articulation comes to a point, and the head of the femur is not round but faintly wedge-shaped, with the point downwards. There is no signs of osteoarthrosis in the area and the malformation may have caused much discomfort. These same individuals also have spina bifida occulta of the first cervical vertebra and sacral segments 1-4, though there is no relation between this and the aforementioned malformation. Spina bifida occulta is a failure in the bony spinal canal of the vertebrae, and it is most common at the sacral, lower lumbar and first cervical vertebrae (Schmorl and Junghanns 1971, 83); in life the defect is bridged by fibrous tissue and causes no symptoms. There is strong evidence that spina bifida are inherited; however, recent evidence suggests that what is inherited is the propensity for this defect and the trigger is a deficiency in folic acid during the early formation of the foetus (MRC Vitamin Study Research Group 1991; Milunsky *et al.* 1989).

There is also one individual who has had an autopsy. The cranial vault has been sawn off, along the classic plane. There were no abnormalities observed to explain the autopsy.

Unstratified individual bones (Phases 1-3)

A random sample of approximately 17% of the estimated 3.5 cubic metres of individual bones excavated from outside the church was examined (881 bones). These individuals date from any time between the early 1100s and the mid 1800s. The bones were in poor to good condition; approximately 30% were complete and 70% were fragmentary or incomplete.

The 881 individual bones represent a minimum of 62 individuals, ranging in age from newborn to old adults (Tables 12 and 13). This sample includes 15 subadults, 17 males or probable males, 11 females or probable females, 13 adults of unknown sex, and 6 individuals of unknown sex or age. The proportion of subadults to adults is consistent with the bones representing an entire sample of the population. While there is a larger proportion of males than females, the circumstances do not allow much to be read into it; there is a large number of adults whose sex is unknown and which might easily equal the proportions.

Table 12: Anatomical distribution of individual bones.

Bone	Side		
	R	-	L
Skull		10	
Frontal	7	10	3
Zygomatic	2	1	1
Vomer			1
Parietal	4	18	7
Temporal	13	1	3
Occipital	1	22	
Maxilla	3		4
Mandible	3	5	2
Tooth	1	2	
Clavicle	6	4	9
Scapula	8	3	14
Sternum		1	
Humerus	25	10	32
Radius	7	8	17
Ulna	13	8	20
Capitate			1
MC		2	
MC1	6	2	1
MC2	3		1
MC3	8		5
MC4	1	1	2
MC5	6		3
Hand phalanx		21	
Rib	11	45	11
V		1	
VC		23	1
VT		46	
VL		20	1
Innomiate	17		10
Ilium	1	4	6
Ishium	1		2
Pubis	2		2
Sacrum		9	
Femur	37	10	52
Patella	5		1
Tibia	30	4	35
Fibula	11	7	8
Talus	5		5
Calcaneus	2	4	11
1st cuneiform	1		3
Cuboid	2		2
Navicular		1	
MT		6	
MT1	4		4
MT2	3		3
MT3	2		5
MT4	2		5
MT5	4		2
MP		5	
Foot phalanx		12	
Unidentified phalanx		3	

It was possible to calculate statures for 11 bones from which the sex of the individuals could also be inferred; the 9 males range from 169cm to 185cm (5ft.6in.-6ft.2in.) with a mean of 176cm (5ft.9in.) and the 6 females from 152cm to 173cm (5ft.1in.-5ft.7in.) with a mean of 166cm (5ft.6in.). There was one case of cribra orbitalia and two cases of enamel hypoplasia.

Periostitis was observed on 24 bones. Sixteen per cent (11) of the tibiae and 35% (9) of the fibulae exhibit periostitis. On both these bones, two-thirds of the cases were on the distal portions of the bones and one-third on the mid-shaft. One of the fibulae is thickened and completely covered by thick granulated new bone growth. One of the tibiae has a large unhealed periosteal swelling midshaft on the medial side; it is the bony reaction to an overlying skin ulcer. There is also a subadult humerus with periostitis on the proximal shaft, an infant temporal with a layer over the outer surface of the bone, a subadult occipital with a layer on the inner table, and an adult frontal with a

Table 13: Demography of individual bones.

Age	Unknown sex	Males	Females	Total
Birth- .9	3			3
1-4.9	1		1	2
2-4.9	1			1
5-9.9	2			2
10-14.9	1			1
15-19.9	2			2
Young adults (20-29.9)		1	2	3
Middle-aged adults (30-49.9)		5	1	6
Old adults (50+)		3	2	5
Infants	2			2
Children	1			1
Adolescents	2			2
Adults: age unknown	13	8	6	27
Individuals: age unknown	6			6
Total	**34**	**17**	**12**	**64**

layer on the inner table. Aside from the lesion from the skin ulcer, none of the other cases of periostitis can be related to particular disease processes, but can only be termed non-specific infections.

Four bones show signs of trauma. Three bones have healed fractures, and one a dislocation. A clavicle had been fractured just lateral of mid-shaft and had healed at an angle. Clavicle fractures are usually due to falling on the point of the shoulder and are very difficult to heal straight because of powerful muscles pulling the fractured ends past each other. A rib shows a callus from a healed fracture. A fourth metatarsal had been fractured at the neck, probably from a badly stubbed toe. A scapula shows a partial dislocation, with the articular surface on the glenoid fossa having shifted dorsally. Shoulder dislocations most frequently occur when someone puts out their arms to catch themselves as they fall backwards. It would appear that this individual also tore the long head of the triceps muscle which inserts just under the glenoid fossa, probably in the same accident. This area of muscle was infiltrated by blood and ossified.

Eight bones exhibit degenerative disease. A second foot phalanx shows severe osteoarthritis at the distal end. The articular surface has been destroyed and is very porous; there is a thick layer of osteophytes. There is an osteoarthritic third foot phalanx and a cervical vertebra with osteoarthritis on the centre. A thoracic vertebra has heavy osteophytes around the centre and a Schmorl's node. A lumbar vertebra has osteophytes are the centre. Three bones show osteophytes, a clavicle at the lateral articulation and two humerus heads.

Four non-metric traits were noted. There is one transitional vertebra, a fifth lumbar which was sacralised and the sides of which had fused onto the wings of the sacrum. One skull had wormian bones. Two skulls had metopic sutures present.

There are two miscellaneous pathologies. There is one occipital which has been sawn at the bottom of the occipital crest, probably as part of an autopsy. There has also been a roundel cut out of the upper right quadrant of the occipital. There is no sign of healing in this area, and no way of telling whether the bone was removed before or after death. There was no fracture line on the occipital to suggest that the roundel was trephined to remove pressure in the skull.

There is also a femur, patella and tibia which have fused together. The knee has fused in the extended position; however, there is a 90°curve in the femur above the condyles. The tibia has a narrow sabre-like shape. Both the femur head and the distal articulation of the tibia are normal. The trauma happened a long time before death and the area is completely remodelled and healed. The bony ankylosis of the knee joint has most likely resulted from septic arthritis, resulting from an oblique or spiralling fracture to the distal femur above the condyles. If the fracture had not been splinted, the contracting muscles might have drawn the femur into that position, the accompanying trauma leading to the ankylosing of the joint. It is also possible that trauma or infection directly affecting the knee or tubercular arthritis lead to the ankylosing when the individual was a subadult and biomechanical forces resulting from the way the individual walked led to the bending of the distal femur. The individual may have used a knee crutch, a T-shaped crutch with the horizontal member curved to cradle the skin and the vertical element providing support.

Animal bone

by S. Pinter-Bellows

The excavation at St. Mary Magdalen's, Colchester produced a total of 663 animal bones and fragments in the burial fill: 13 from Phase 1, 235 from Phase 2, 213 from Phases 2-3, and 202 from Phase 3. The following species were identified: horse (*Equus caballus*), cow (*Bos taurus*), pig (*Sus scrofa*), sheep (*Ovis aries*), hare (*Lepus* sp.), and chicken (*Gallus* sp.). Bones which could not be identified to species were assigned to higher order categories: sheep/goat, small artiodactyl (sheep- or pig-size), small mammal (cat- or dog-size), and large mammal (cow- or horse-size). No bones were identified as goat, while elements were identified as sheep. It is therefore likely that most of the indeterminate sheep/goat fragments are sheep rather than goat.

A selective detailed record was made for the assemblage, with further work done only where it appeared to add substantially to the results. For a full description of the methods used see Davis (1992). In brief, all mandibular teeth and a restricted suite of articular ends/epiphyses and metaphyses of the girdle, limb and foot bones were always recorded and used in counts. Other parts of the skeleton were only noted selectively, e.g. when a scarcer species could be identified, or when the bone was of particular interest. In order to be able to calculate the proportion of the bones which were unidentified fragments, a count was kept on the number of unrecorded identifiable skeletal elements. Measurements follow von den Driesch (1976) with additions as described in Davis (1992).

The bones are in good condition. There are very few bones which were gnawed by either dogs or rodents, suggesting that the deposits may have been rapidly covered up. A simple fragment count of the parts of the skeleton always counted (POSAC, following Davis 1992, 1-2), was used to estimate the relative importance of the major animal species. The species and the number of fragments are listed in Table 14. All of the identified bones belong to the domestic species. Cattle bones are seen in the largest number, followed by sheep, then pig; with chicken also included in the diet. There is no reason by anatomic part or butchery to believe that the horse bones were food bones. The single hare could either have been part of the diet or the bone of an animal which died in this dirt. Measurements from the parts of the skeleton always counted can be found in Table 15.

The distribution of anatomical elements from Phases 2 and 3 can be seen in Table 16. While the most numerous elements are those with more cortical bone or which fuse earliest, the elements come from all portions of the carcase. Elements from the foot and head are present as well as the scapula and femur, areas where more meat is found. This can be interpreted as butchery taking place at the site or the refuse being a mixture of domestic and non-domestic. Butchery marks are seen on bones associated with prime meat, i.e. a cattle ilium sawn just below the acetabulum (the area of the rump roast); those which could be interpreted as butchery waste, a chopped distal cattle tibia; and those from the horn-working industry, cattle horn cores with saw marks on the base. The nature of the faunal assemblage necessitates serious consideration that the refuse is not related to the site, but brought in from elsewhere.

Table 14: List of animal species.

Animal species	Phase 1	Phase 2	Phases 2-3	Phase 3
Horse (*Equus caballus*)	-	1	-	1
Cow (*Bos taurus*)	2	14	17	17
Pig (*Sus scrofa*)	1	1	5	5
Sheep (*Ovis aries*)	-	1	4	3
Sheep/Goat	-	8	8	10
Hare (*Lepus* sp.)	-	-	-	1
Chicken (*Gallus* sp.)	-	5	-	4
Identifiable mammal	5	96	87	118
Unidentified mammal	4	100	92	41
Unidentified bird	1	6	-	2
Unidentified fish	-	3	-	-
Total	**13**	**235**	**213**	**202**

Table 15: Measurement.

Phase 1		
Cow	Radius	Bd - 66.2
Cow	Astragalus	GLl - 54.8, GLm - 51.8, Dl - 32.0, Dm - 28.3, Bd - 26.1
Phase 2		
Cow	Astragalus	Bd - 45.0
Sheep	Humerus	Bd - 28.5
Sheep/goat	Radius	Bd - 26.6, BFd - 22.9
Sheep/goat	Radius	GL - 115.1, Bp - 26.7, Bfp - 23.4, Bd - 24.8, BFd - 19.9
Sheep/goat	Tibia	Bd - 33.8
Sheep/goat	Femur	Bd - 33.6
Sheep/goat	Radius	GL - 142.2, Bp - 29.2, BFp - 26.3, Bd - 26.8, BFd - 22.2
Phase 3		
Cow	Horn core	44 - 168.0, 45 - 54.7, 46 - 46.4
Sheep	Humerus	Bd - 31.4
Sheep	Metacarpal	Bd at F - 24.2, Bd - 24.8
Sheep	Humerus	Bd - 30.1
Sheep/goat	Tibia	Bd - 25.9

Table 16: Species/anatomy distribution for main food animals for Phases 2-3 combined.

Anatomy	**Species**		
	Cattle	Pig	Sheep
Horn core	2	NA	0
Mandible	2	2	5
Scapula	2	0	0
Humerus	3	0	5
Radius	2	1	4
Innominate	3	0	2
Femur	2	1	3
Tibia	2	2	5
Astragalus	2	1	0
Calcaneus	3	0	2
Metacarpals	1	1	2
Metatarsals	1	0	0
Metapodia	2	0	1
First phalanx	5	0	1
Loose teeth	7	3	4

Environmental assessment of soil samples

by Peter Murphy

Summary

Samples from hearths and ovens produced no charred assemblages which might indicate their functions, though occasional charred cereal grains and burnt bone fragments were noted. It seems likely that this resulted from the use of coal as part of the fuel and resultant high combustion temperatures.

Pits and other feature fills included low densities of food refuse: charred cereals, mollusc shells and occasional fragments of fish and mammals. Such material is typical of medieval urban sites, but the quantities present here were too small to justify further study.

1989 churchyard survey

by Carl Crossan

Summary

By 1989, a total of 76 memorial stones remained in the churchyard, of which 59 including one family tomb stood *in situ*. The locations of all standing stones were plotted and details from all except four completely illegible memorials were recorded individually and incorporated into the coded site record. Indexes by family name and date are included in the research archive.

In all, 82 individuals were noted, including six church officials and fourteen members of their families; also four militia men and one wife associated with the town's 19th-century garrison. Inscriptions ranged in date from 1725 to 1919. The majority were 19th century except for six 18th- and four 20th-century memorials.

Archive

The St. Mary Magdalen's research archive is lodged with Colchester Museums under accession references 64.1989 (Site A) and 1995.10 (Site B). In addition to the excavation record, finds, catalogues and related documentation, the archive includes a photographic survey of the abandoned 19th-century almshouses and church. The human remains were reinterred at the Colchester Borough Cemetery, Mersea Road, Colchester.

Colchester Buildings Series

The building numbers 183-188 quoted in this report belong to the Colchester Buildings Series, a cumulative record of structures examined by excavation since 1971.

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CAR **4**, 1987 *The coins from excavations in Colchester 1971-9*, ed by N. Crummy, Colchester Archaeological Report **4**

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CVMA The County of Oxford, Corpus Vitrearum Medii Aevi, Great Britain, vol. I

RCHM Essex Royal Commission on Historical Monuments (England), *An inventory of the historical monuments in Essex, vol. ii, 1921*

RIC *Roman Imperial Coinage*

VCH Essex Victoria History of the Counties of England, *A History of the County of Essex*, vol. v, 1966

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Endnotes

1 *Victoria History of the County of Essex* (hereafter *V.C.H. Essex*), ii. 184, citing W. Dugdale, *Monasticon Anglicanum*, vii. 631.

2 See E. J. Kealey, *Medieval Medicus*, 83—99; P. Richards, *The Medieval Leper and his Northern Heirs*, 8, 56—9.

3 *Cartularium Monasterii Sancti Johannis Baptiste de Colecestria*, ed S. A. Moore (hereafter *Colch. Cart.*) i. 21; *Regesta Regum Anglo-Normanorum*, ed H. W. C. Davies and others, ii, no. 1230.

4 *Colch. Cart.* i. 57.

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18 E.R.O., D/B 5 Cr29, rot. 4d.

19 P.R.O., PROB 11/13, f. 79v.

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21 E.R.O., D/B 5 Cr68, rot. 27d.; *ibid.* D/ACR 1, ff. 84v., 219v.

22 B.L., Arundel MS. 145, f. 26v.

23 E.R.O., D/B 5 Cr27, rot. 14d.

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27 *Colch. Cart.* i. 21.

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29 J. Chapman and P. Andre, *Essex Map* (1777).

30 P.R.O., JUST 1/233, rot. 36.

31 P.R.O., JUST 1/233, rot. 27.

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50 *V.C.H. Essex,* ii. 185.
51 P. Morant, *History and Antiquities of Colchester*, map.
52 *V.C.H. Essex*, ix. 367.
53 E.R.O., D/ACA 11, f. 74; D/ACA 14, f. 19.
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The place-name element 'beorg' and other mounds in Essex

By James Kemble

To many archaeologists, local historians and lay people interested in their historic environment, the word "barrow" has a certain frisson. The word derives from the dative singular *berwe* of Old English *beorg*. *Beorg* was used for mounds in the Anglo-Saxon period as is evidenced by Plumberow Mount in Hockley, *Plumberga*.

Though barrows standing to any impressive height in Essex are few (Sturmer bronze age barrow, Bartlow End Roman barrows on the border with Cambridgeshire are rare examples), air-photography has revealed large numbers of ring-ditches which may have been barrows before their degradation by erosion and ploughing. Lawson *et al.* (1981) counted 60 barrows (including 29 ring-ditches) which had been investigated in Essex since the 16th century. In drawing up a list of barrows in East Anglia, they cited ten place-names in Essex in *beorg*. An underused resource for identifying former mounds and barrows is place-name evidence of which more than 70 examples have now been identified from an analysis of Essex place- and field-names.

Beorg, and its Old Norse equivalent *berg*, were used both for natural and man-made hills. Gelling and Cole (2000) identify the word for small continuously rounded hills, and give just two Essex examples, Wigborough (TL9615), *wicgan Beorgan*, documented in 946, and Bergholt (TL9528), *Bercolt*(a), 1086. The former stands elevated on the 30m contour line above the Blackwater estuary, the latter on the 46m contour above the River Colne. Great Wigborough stands on a natural rounded hill (well-illustrated on the Chapman and André map of 1777), though the name might equally derive from a small mound near the church said to be a battle grave (Salmon 1740). Bergholt is harder to make fit a "rounded-hill" description, being rather more on a spur or promontory. East Bergholt in Suffolk (TM0734) is likewise on a spur (above the River Stour).

Though rather late in first documentation, *t.* Elizabeth I, to be sure of its origin, *Barrowes* at Great Parndon (TL4209), lies on a 60m promontory above the River Stort. A cropmark of a ring-ditch representing an eroded mound or enclosure has been noticed here (ECHR 3649) but not yet excavated. Hawkesbury Bush (TQ704868), *Hauechesberga*, 1166, in Fobbing, likewise lies on a ridge overlooking the Thames marshes. Should a man-made tumulus be being sought at these sites to account for the place-name, or should Gelling's description be modified for eastern England *beorgs*?

Beorg is associated with Saxon personal names, perhaps of the individual buried. Deadmans Farm has evolved from *Dodeberwe*, documented in 1310, Dodda's hill or mound (TL871009). In the vicinity has been found a 1st-century BC Celtic copy of a Philip of Macedon coin (ECHR 7689). More certain man-made *beorgs* are Bedeman's Berg (TL6302), the site of a 12th-century hermitage, *Bedema(n)nesberga*, 1177, in Writtle. Within living memory an earth mound was visible in a field west of adjacent Monks and Barrows Farm though it appears not have to been further investigated. Within half a mile are Barrow Farm (TL6202), *Berga* in 1270, though the present farmhouse site postdates 1805, and Barrow Wood, *forest of Berewe*,1323, still extant. In Hockley is Plumberow Mount (TQ8493), *Plumberga*, documented in 1086. Here a 4m high 25m diameter earth tumulus is extant and has been investigated by Heppell (1998), considered to be Roman, possibly a beacon or boundary mark, though a globular bowl and Saxon sherds were present in the top fill suggesting reuse (Jones 1980).

East of Southminster on the Dengie peninsula in the middle of *Plumberwe merssch* was a homestead *Plumbarowe*, documented in 1303 and early 16th century (TM0098). It is associated with John de *Plumberegh* or *Plumplowe*, who may have come from Hockley. However the suffixes *-beregh* and *-lowe* derive from *beorg* and *hlaw*, indicative of a pagan burial mound. If the Hockley *Plumberga* was not a burial, *Plumplowe* suggests this was so regarded. On Mersea Island, Barrow Hill (TM0214), *Berwe*, 1319, a circular mound 34m diameter, 7m high with a flat top, was excavated in 1873 and found to contain a tiled chamber with a lead casket, glass urn, a bowl and cremated bone, dated to the 2nd century (Warren 1873).

Place-name evidence for man-made mounds is at Mucking, *Seuebergh(e)*,documented in 1293. The site is remembered in Seaborough Hall (TQ653806). Here and elsewhere the frequency of occurrence of the figure seven and a discrepancy between this and the number of observed mounds suggests 'seven' may simply indicate a 'large number', perhaps of special significance to Anglo-Saxons (Lawson *et al*, 1981).

Two of four ring-ditches have been shown on excavation to be Saxon. A Neolithic causewayed enclosure overlooking the Thames valley surrounded by three concentric ditches (TQ6580) is within 200 metres of the hall site (Hedges and Buckley 1978). The association of Neolithic monuments with barrows is echoed north of the River Chelmer where a Neolithic cursus was associated with a least two and probably three barrows or subcircular enclosures (Buckley *et al.* 2001).

At the road junction to the southeast of Great Wigborough is *Saybarowes* documented in 1588, in the 18th century *Seborow Farm* (TL978157) (probably after John Saburgh, 1327, ? from Seaborough). Westbarrow Hall, Eastwood, *Barewe*, 1285, *Berghis*, 1297, and *Bergehall*, 1499, stands to the west of the River Roach (TQ864894) but its situation can scarcely be described as a hill. However, close by have been excavated Late Bronze Age enclosures and Roman rubbish deposits which may have survived as mounds (Crowe and McLeod 1981; ECHR 9114). In Little Wakering, 150 metres east of Barrow Hall, *Berreuuera, Barewe*, a small oval contour its long-axis aligned north-south is shown on the Ordnance Survey 6" map (Pewsey, *pers comm*). Burrows (Farm), *Barwe* in 1235, *Burrowes* in 1621, at Clatterford End in Stanford Rivers, is now a timber-framed farmhouse of the 16th century (EHCR 33321). Its geographical position is not on a natural hill suggesting a man-made mound the more likely.

An interesting group of place-names in *beorg* close to prehistoric sites occupies the shoreline of the Blackwater estuary. Many barrows here were presumably visible in the medieval period when they were named, although the first documentary evidence we have is 15th and 16th century and later. Late Neolithic and Bronze Age ditches and dykes of probable farmsteads have been revealed by excavation following air-photographic and crop-mark analysis in the Great Totham area at Lofts and Slough House Farms (Brown 1988; Wallis 1989). *Borowghmershe*, *c.*1550, *Barrow-hills*, 1584, and *Barrow Hill Mills*, 1777 (TL881078) may refer to earlier tumuli, although other causes of mounds such as salt-production sites (some of which have been shown to be prehistoric or Roman) cannot be discounted. Chigborough Farm (TL8707), *Chyddeberg*' and *Chyddeber(e)we*, 1288-1293, may refer to neighbouring now-eroded mounds represented by three ring-ditches in the same locality or where large amounts of Neolithic pottery have been found (Lawson *et al.*, 1981; Wallis and Waughman 1998).

Unlikely to be associated with salt-production since it is well inland is Inworth, *Bergh*, 1327, *Baruewe*, 1459, *Beruewehill*, 1461 and *Barrows* (TL870170). Here have been found an Iron Age warrior burial (EHCR 8363) and a late Roman stone coffin below a Saxon interment (EHCR 8134). Located at Poseborough Wood (TL780177) in White Notley is *Posseberue* and *Postborwe*, 13th century, *Posborow(e)*, *c.*1400. The first element is uncertain but may be contracted Old English *post*, a pillar (Smith 1987), perhaps suggesting a timber marker on or near a mound, though more likely from a personal name *Possa*.

Of interest as the possible meeting-place (moot) of Harlow Hundred (which formerly included part of Hertfordshire across the River Stort) is *Mudborow*, late 16th century, *Mudbroune Grene*,1777 (TL476116) which may have evolved from *(ge)mot beorh*. Such moots were often hills or mounds near the centre of the Hundred at which the Anglo-Saxon formal assembly was held monthly to settle legal and ecclesiastical matters. Christy (1926) identifies the hill 300 yards west of Harlow railway station, half a mile northwest of the church, a natural mound a few hundred yards south of the river.

Documented in the Cartulary of St Bartholomews Hospital which held Dunton in 1355 is *Bergfeld*, 'open country with a hill or mound'. The parish on the escarpment overlooking the Thames plain has few features which would qualify as a natural *beorg* though the eminence at Dunton Hall and church might qualify (TQ6588). The presence of the church could indicate a earlier religious site or place of significance. Nearby, now a suburb of Basildon, is Vange where in 963 was *aelf wenne*, elves' barrow, marking its boundary. This *wenn* would seem to be on Vange Marshes between Vange Creek and the Fobbing Road. The parish boundary skirts immediately north of a low round knoll which rises to 17m above the marsh, a prominent feature in a flat marshscape (TQ701858).

Beorg appears in the charter bounds of West and East Ham dated 958 as *wortan beorg*, perhaps indicating a personal name *Worta*. Though the exact site is now lost in the urbanisation of the area, it lay towards the eastern end of the northern border of the parish. Likewise *spelbeorhge* is documented in the Anglo-Saxon bounds of Littlebury and Strethall. Since *spell* implies "discussion, speech" this is likely to signify a place of assembly. The location has been discussed by Hesse (1995) who cites Coploe Hill as one of the likely sites. Coploe Hill, (TL492420), *Coplowe*, 1653, Coppa's hill or mound, on the Strethall-Ickleton boundary and which appears as *Coplar Bank Shot* in the Strethall Tithe Award, may be the natural hill feature on which a tumulus was still visible when the bounds were documented in 1008. Alternatively *spelbeorhge* may be the earlier name for Coploe Hill, the latter for which there is no documentary evidence before 1431.

A large Roman cremation barrow in Elmdon (TL456348) at Rumberry Hill, *Rumbergh*, was opened in 1858 by Richard Neville. The Ordnance Survey map of *c.*1880 shows the parish boundary diverting around the tumulus. The first element may be Old English *rum*, large, or *run*, deliberation, suggesting this was a moot (Neville 1858; Ekwall 1960; Hesse 2000).

Old English *'hlaw'*.

While *beorg* may indicate either natural or man-made hills, Old English *hlaw* usually signifies artificial mounds, frequently of Anglo-Saxon age (Gelling and Cole 2000). Lawson *et al.* (1981) found thirteen examples of the place-element in the county. Although *hlaw* place-names are not necessarily places of burial, often marking assembly-places (Adkins and Petchey 1984), Bartlow on the Essex-Cambridgeshire border, *Berkelawe*, 1247, where there are remaining four huge tumuli of Romano-British date, is clearly of the burial-site type (Gage 1833; 1840).

Midway on the watershed between two tributaries of the River Stour in Helions Bumpstead is Boblow, (TL653405), *Bobbelowe*, *c.*1170. Though close, it is not on the parish edge and cannot be assumed to be a boundary marker; it lies next to the Radwinter-Wixoe Roman road where there may well have been a road marker (EHCR 1565). There is no natural hill here and this is the possible site of a Saxon *hlaw*, standing as it does on a spur.

Resemblance between *hlaw*, *howe*, hill, and *hoh*, promontory or ridge, may create etymological confusion which can be sorted out only with difficulty. The relative infrequency of *howe* place-names deriving from Old Norse *haugr* in Essex (Lawson *et al.* 1981 cite Howe Hall (TL4938) and Howe Wood in Littlebury as rare examples) compared with Norfolk has been used as evidence for a relative lack of Scandinavian penetration into Essex in the 9th and 10th centuries. The numerous instances of other *howe* names in Essex are deemed to derive from *hoh* (of which some can certainly be supported from the ridge or promontory topography) but the argument is dangerously circular.

The Hundred and parish place-name Harlow includes Old English *hlaw*, hill, qualified by *here*, usually reserved for the Danish army force as distinct from the Saxon *fyrd* (though Christy derives it from *her*, sacred).

Gelling and Cole (2000) point to the use of *hlaw* as an Anglo-Saxon burial in an earlier prehistoric tumulus. Where a *hlaw* is being excavated as a prehistoric burial it is worth considering the possibility of an associated Anglo-Saxon secondary interrment. In the northwest of the county at Wendens Ambo documented in 1316 is *Motelawe*, the assembly-place for Uttlesford Hundred, where, says Reaney (1935), was once a barrow from which were excavated a Saxon shield boss and spearheads (Fox and Palmer 1923; Jones 1980). This is identified with Mutlow Hill (TL5136) just north of the point at which the road to Great Chesterford crosses the small tributary of the River Cam, close by Audley End rail station which has somewhat distorted the topography. Though now not at the centre of Uttlesford Hundred it was more so before the eight parishes of Clavering Half-Hundred were taken out of it for Swein of Essex after the Conquest (Round 1903).

As a field-name, apparent derivatives of *hlaw* are quite frequent, and some have been shown to be sites of former barrows. Buckley *et al.* (1988) investigating an oval cropmark in *Fen* and *Lowes* field at Rivenhall excavated Neolithic pottery, scrapers and blades from a double-ditched enclosure. *Dalwedone 18 acres* (in the Tithe Award 'Dully Downs' field, TQ735927) in Downham, *Denylawe alias Dullowe* field (TL7735) in Castle Hedingham, *Laweshill* (TM189276) in Great Oakley, *Houneslowe* in Stebbing, *Pentlowefielde* (TL6216 ?)in High Easter, *Harlawe* in Heydon and Harlow Hill, *le Herlawe* (TL810328) in Little Maplestead have yet to be investigated. An intriguing site already shown to be in an area of Iron Age activity near to the Saxo-Norman church is *Shardlows* (meaning 'mutilated mound', TL7920) in Cressing (Hope, 1978, 1984). *Shardlows* Wood in Gosfield (TL7931) and *Shardlows* Farm (TL6245) in Haverhill likewise await investigation.

Pentlow parish includes three discrete hills rising to the 76m contour at Pannell's Ash (TL7944), Larks (TL8045) and Pentlow Tower (TL8144). Any of these could be the site of Penta's barrow (Ekwall 1960) or perhaps reference is to the valley of the River Stour, British *pant* (Coates and Breeze 2000).

The element *'cryc'*.

There remains the British place-name element *crug* and Old English *cryc*, *cruc* which may denote man-made mounds. Resemblance to Old English *cruc*, a cross, and *cirice*, church, is a potent source of confusion. Gelling and Cole (2000) state that the typical outline for a natural hill with *cruc* is one of strikingly abrupt contour. Because of the perceived wisdom that the native British population was influenced early by Anglo-Saxon in Essex, survival of British place-names has been deemed to be rare. Hence Anglo-Saxon cognates have almost invariably been preferred, again entering a circular argument.

Essex, which mostly lacks natural hills of abrupt shape, has a possible example of a barrow mound in *Crikelwode*, documented in 1291 for Barking, since 1830 in Ilford. Reaney (1935) boldly assigns this as 'probably barrow-hill wood', though Gelling (1993) rejects Cricklewood in northwest London from this class. *Cricklewood*, *Cricklewood Reden* and *Ditch* close by St Mary's Church are now part of a recreation ground (TQ448867), but the quarrying of brickearth has destroyed any archaeological confirmation (Lockwood, *pers comm*). The proximity of the church (of the 19th century) making *cirice* a possibility is probably coincidental.

Crickspurse in Hatfield Peverel (TL7811) incorporates the suffix *purse* which occurs also in the Anglo-Saxon bounds (TQ588963) of South Weald, dated 1062. This may be a corrupt form of *pearroc*, enclosure, but is of doubtful origin (Gelling, Hart, *pers comm*). The first element is also uncertain as the earliest form we have dates from 1589. Creeksea (TQ9396) on the north bank of the estuary of the

River Crouch was *Criccheseia* in Domesday Book. The elements seem to be *crug* and *hyp*, hill or mound at the landing-place (Gelling and Cole 2000). In the absence of a natural abrupt hill this may refer to a lost tumulus.

A more fruitful search is possible at North Benfleet, *Crechefeld*, documented in 1222-46, associated with Crick Corner. The second element *feld* is 'open country', the first perhaps *cruc*. *Creeks Meadow* (TL809394) and *Cricks* (TL809405) in Belchamp Walter, *Crekes, Cricks* field (TL717207) in Felsted, and *Crekys*, Cricks Land in Ashingdon, the latter not documented before 1487 and 1534 respectively, are too late for certainty.

This article draws attention to several place- and field-names which may allude to former mounds awaiting investigation. While field survey and aerial photography can provide evidence of possible sites of former man-made mounds, place-names, including field-names should be added to the list of means of their detection, warranting closer inspection. The corpus of field-names on the Essex Place-names database, currently held at the Essex Record Office and available on the internet at www.essex.ac.uk/history/esah/essexplacenames, is being added to periodically and provides a tool for such research.

Summary:

(a) Possible place-names in beorg, berwe, berg:

*Bergholt, *Bercolt(a)* 1086, *Burcot'* 1185, TL953281.

Bulmer, Wesborough Hill, *Wisborow-hill*, TL831384. Site of Roman building at TL828388.

Chrishall, *Barrow Grove* c1808, TL448369.

Dengie, *Barrowhill field*, 1714, TL 994 018 (alias Further Barn field, Tithe no. 145)

Dunton, *Berghefeld*, ?Deserted medieval village TQ653885 (EHCR 5129)

Eastwood, Westbarrow Hall, *Berghis* 1297, *Barewe* 1285, TQ8689. 2 Late Bronze Age enclosures TQ855890 (EHCR 9114); Romano-British graves TQ857895 (EHCR 9552).

East Ham (bounds), *wortan beorge*, TQ4383 ?

Elmdon, Rumberry Hill, *Rom-*, *Rumbergh*, *-berwe* TL456348, 40mx2.5m tumulus (EHCR 123).

Feering, *Barrow fields*, TL8720. Saxon inhumation cemetery TL868192 (EHCR 8238). Ring-ditches TL875202, TL870193.

*Fobbing, Hawkesbury Bush, *Hauechesberga, Hauekesberga*, TQ704868.

Great Baddow, *Upper & Lower Barrow Hills*, TL719030. Windmill (?mound) demolished 1973 (EHCR 5727).

Great Parndon, *Barrowes* 16th cent, TL427099. Ring-ditch cropmark TL419104 (EHCR3649); House-platform TL419102 (ECHR 3653).

Great Wigborough, Seaborough Farm, *Saybarowes* 1588, TL978157. ?John *Saburgh*, 1327.

Goldhanger, Barrow Marsh Farm, *Borowghmershe* 16th cent, *Borrow* 1570, TL922095. Tumuli (salterns); Round barrow TL926097 (EHCR 13447).

Harlow, Mulberry Green, *Mudborow* 16th cent, TL476116.

Heybridge, Mill Beach, *Barrow Hill Mills* 1777, TL8707. Salterns? (Beacon Hill mill demolished 1892 TL88000770 (EHCR 7839).

Hockley, Plumberow Mount, *Plumberga* 1086, *-ber(e)we* 1294, TL840938. Roman beacon mound?

Inworth, *Baruewe-*, *Beruewehill* 1459, 1461, *Barrows* *c*1840, TL8718. Iron Age warrior burial TL870170 (EHCR 8363); Roman stone coffin below Saxon interment TM867191 (ECHR 8134).

Lawford, *Barrow field* 1838, TM096314. Ring ditches TM096314 (EHCR 2765, 2782); 80m diam enclosure (EHCR 2771); Bronze Age cemetery TM100310 (EHCR 3201); Round barrows TM098318 (EHCR 1710).

*Littlebury, (bounds), *spelbeorhge* 1004, ?Coploe Hill, TL492420.

Little Parndon, *Barrows, c.*1875, OS. TL453067, (a moated site).

Little Totham, Chigborough, *Chyddeberg'* 1288, *Cheteberwe* 1307, TL876078. Neolithic pottery and ?building.

Little Wakering, Barrow Hall, *Berreuuera* 1086, *Barewe* 1255, *Barrow field* *c*1840, TQ920881. Ditched enclosure TQ916076 (EHCR 11099).

Mersea, Barrow Hill, *Berwe* 1319, TM023144. 34m diameter Romano-British barrow.

Messing, *Great and Little Berry*, *c*1840, TL9018.

Mucking, Seaborough Hall, *Seuebergh(e)* 1293, *Sebergh al Seberwe* 1334, TQ653806. Enclosure, concentric ditches, cropmarks (ECHR 14643, 14572).

Purleigh, Deadman's Farm, *Dodeberwe* 1310, TL8701 (EHCR 7689).

Rayne, *Upper Barrows* TL713261, *Lower Barrows* TL715261, *Barrows Pasture* TL716261, *Little Barrows* 1837, TL715260. Cropmark circle 25m diameter (EHCR 6507, 6238).

Rivenhall, *Great & Little Barrow fields*, Roman bronze patera and ewer (EHCR 8100).

Saffron Walden, Great & Little Bearges, *Berges* 1605, TL562375.

St Osyth, *Little Barrow field* 1838, TM137149. Ring ditches (EHCR 2981,2919,2936,2931).

Shalford, *Barrow field, Burrows* *c*1840, TL7126?. Bronze Age burials.

Southminster, Plumborough, *Plumberwe merssch* 1303, *Plumbarowe* 16th cent, TR0099. Site of windmill

TR00509940 (EHCR 2798); Salterns (EHCR 11312, 11319).

Stanford Rivers, Burrows, *Barwe* 1235, TL525022.

Wethersfield, *Shenebourgh* 1319, *Shinborowes* 1552, TL749302

*Wigborough, *wicgan Beorgun* 946, *Wicgheberga* 1086, TL968157.

White Notley, Poseborough, *Posseberue* 13th cent, *Postborwe* 1216-72, TL780177.

Woodham Walter, *Boro* field 1844, TL820085, Iron Age enclosure TL810080 (EHCR 5759).
Writtle, Bedeman's Berg, *Bedeman(n)esberga* 1177, TL633021. Barrow Wood, *forest of Berewe* 1323, *Barowe* 1477, TL630028. Barrow Farm, *Berga* 1270, *la Berewe* 1323, TL628029. Ploughed tumulus west of hermitage (EHCR 750).

(b) Possible place-names in hlaw:
Aveley, *Low Well Close* 1838, TQ580802.
Bartlow End, *Berkelawe* 1247, *Berlawe* 1316, TL5844. Romano-British barrows.
Castle Hedingham, *Dalenheia* 13th cent., *Denylawe al Dullowe* 1390, *Dallowe* c1840, TL7735. Roman cremation burial TL779373 (EHCR 6886). Tesserae, Roman pottery TL771355 (EHCR 6888).
Chishill, *Arlow field* 1818, TL415402.
Cressing, *Shardelawe* 1328, *Schardeloweslond* 1384, *Shardlows* 1842, TL7920. Enclosure cropmarks.
Doddinghurst, *Low Pasture* 1845, TQ600981.
Downham, *Dalewedo(u)n* 1315, 1352, *Dully Downs* 1843, TQ735921.
Easthorpe, *Rushy Lows field* c1840, TL907215; *Ploughed Lows field* c1840, TL907214.
Gosfield, Shardlowe's Farm/Wood. *Scherdelow* 1417, TL785305, TL790310. Cropmarks (?moat) TL783304 (EHCR 14304).
Great Oakley, *Lawshillfield* c1840, TM1827. Ring-ditches TM180273, TL183274 (EHCR 3158, 3169).
Harlow, *Herlawe* 1045, *Herlaua* 1086, TL4711. Romano-British temple.
Helions Bumpstead, Boblow, *Bobbelowe* 1154-89, *-lawe* 13th cent, TL653405. Penannular ditch TL649413 (EHCR 17085); Samian ware TL6540 (EHCR 1626).
*Helions Bumpstead, *Wyns(t)elowe* 1273, ?origin of *Wynslowes* in Hempstead .
*Hempstead, Wincelow Hall, *Wynslowes alias Crouchmans* 1609, TL638389. Windmill TL633381, TL634380 (EHCR 1539; 1512); Mound TL637385 (EHCR 1430).
High Easter, Pentlow End, *Pentlowefielde* 1337-76, TL622163. ?from Pentlow.
Little Maplestead, Harlow Hill, *le Herlawe* 14th cent, TL8133.
Manuden, *Low field* 1839, TL492277.
Pentlow, *Pent(e)lawe* c1045, *Pentelauua* 1086, *Pentelawe* 11th cent, TL8146.
Rivenhall End, *Fen and Lowes field*, TL846167. Neolithic enclosure, excavated 1987.
Stebbing, Hounslows, *Hownes-, Houneslow(e)* 1517-98, TL6524. Cropmarks.
*Strethall/Ickleton, Coploe, *Coplowe* 1653, TL491420.
Thunderlow Half-Hundred, *Thunreslau* 1086, *Thundreslawe* 13th cent, TL8440.
Wendens Ambo, Mutlow Hill, *Motelawe* 1316, TL5136. Saxon tumulus and moot.
Widdington, Bromley Barn, TL5331, *Bromelowevaley* 1529, Roman silver coin hoard found *c.*1827.
Woodham Walter, *Lowes* pasture/wood 1844, TL8107. Iron age enclosure TL810080 (EHCR 5759). 2 ring-ditches TL799850 (EHCR 5775).

(c) Possible place-names in *cruc, crug, cryc:*
Ashingdon, Cricks Land, *Crekys* 1534, TQ8694. Saltern (EHCR 13481).
Belchamp Walter, *Creeks meadow,* TL809394, *Cricks* c1840, TL809405. Circular cropmarks TL790396 (EHCR 6812).
Benfleet (North), Crick Corner, *Crechefeld* 1222-46.
*Creeksea, *Criccheseia* 1086, *Crikesse* 1198, TQ9396.
*Felsted, Crick's Green, *Crekes* 1487, *Cricks field* c1840, TL717207.
Hatfield Peverel, Crix TL783111. *Creyk* 1273, *Crickspurse* 1589. Ringditches TL785108, TL777102 (EHCR 6148, 6139).
Ilford (Barking), Cricklefield, *Crikelwode* 1291, TQ450868.

* probably geological or personal name.

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A life of true conversions?: the career of Nehemiah Rogers 1618 - 1660

Maria Egan

'The division of hearts must needs hinder the building of our new Jerusalem: God's sabbaths are neglected, the word, the gospel of Christ Jesus, cannot have the free passage that it would otherwise have, were it not for our own home breed broyles ... How happens it that touching ceremonies ... and discipline ... there is such disagreement? ... that giveth advantage to our enemies.' (Rogers 1621, 56) So wrote Nehemiah Rogers, vicar of Messing, Essex in 1621. It should not be thought, however, that Rogers was simply a peacemaker. Nor was his career that of a clergyman interested primarily in consensus within the Church of England. During his lifetime, Rogers aligned himself first with Puritans, then with Laudians. He changed his mind on both ceremonies and discipline. Furthermore, he abandoned Calvinist theology in favour of its opposite: Arminianism. Was Rogers merely an opportunist, a man who altered his opinions in accordance with the prevailing opinion in the church? Or were his changes of heart genuine?

Nehemiah Rogers was the second son of Vincent Rogers, Pastor of Stratford-le-Bow in Middlesex, and his wife Dorcas. He was baptised at his father's church on October 20th 1593 and from the age of nine educated at Merchant Taylors' School. From there Rogers moved to Emmanuel College, Cambridge, matriculating in 1613, gaining his BA in 1614 and his MA in 1618 (DNB; Robinson 1882, 45). His college was a well known centre of Puritanism with strong links to the county of Essex, for it had been established by the Essex gentleman Sir Walter Mildmay in 1584 and many Essex Puritans had received their education there (Webster 1997, 15-23; Tyacke 1987, 11, 15, 28, 40, 133).

Puritans emphasised preaching and Bible centred piety, arguing that churches should be unadorned, reverence being through the mind and soul not the body. They held that ceremonies were at very least unnecessary and at worst offensive to God, and encouraged *ex tempore* prayer. Puritans could be both moderate and nonconformist. Moderate Puritans were deeply pious individuals distinguished by their emphasis on 'painful preaching' and Bible study. They were prepared largely to conform during the 1620s and 1630s, believing that although it was their duty to advocate further reformation, it was also their duty to abide by ecclesiastical law. Puritan nonconformists were not constrained by feelings of loyalty or obedience to the Church of England. On the contrary, they believed that it was imperative that they actively oppose those ceremonies they wished to see eradicated: use of the surplice, the use of the sign of the cross in baptism, kneeling at the sacrament and the churching of women. It was these Puritan ideas that loomed large during Rogers' Emmanuel years.

After leaving Emmanuel, Rogers was for a short time a fellow of Jesus College, Cambridge.[1] He moved from there to the position of lecturer at St. Margaret's New Fish Street, London. Thomas Wood was rector there from 1616 until his death in 1640. He is obscure; his parish is not. From the 1570s St. Margaret's was a Puritan stronghold and home to a succession of godly lecturers, including James Stile, Robert Crowley and Sydrach Simpson (Seaver 1970, 134, 150, 207, 281). Rogers is not out of place in this list for although his first two books, *The True Convert* (1620), and *Christian Curtesie* (1621), were Calvinist rather than Puritan tracts, his third publication, *A Strange Vineyard in Palestina* (1623), demonstrates that in the 1620s Rogers was a moderate Puritan. Rogers did not, however, stay at St. Margaret's; he left shortly before the publication *The True Convert.* Nevertheless, he dedicated this book to the rector, churchwardens and parishioners of St. Margaret's. Rogers' new position was as vicar at All Saints', Messing, Essex.

Rogers stayed at Messing until 1640 and seems to have enjoyed a relatively untroubled ministry in the village. Only a handful of parishioners were presented to the archdeaconry courts for failing to receive communion, absenting themselves from their parish church, or refusing to pay towards the repair of the church.(ERO D/ACA 45, ff. 38r, 168r, D/ACA 47, f. 34v, D/ACA 49, f. 229v, D/ACA 50, ff. 111v-r, 212r, D/ACA 51, f. 58v, D/ACA 54, ff. 22v, 35r). The motives of these individuals are unclear. Undoubtedly though, Rogers was troubled by nonconformists. For example, the man whom Rogers himself presented in November 1627 for disrupting a service and leaving the church when the sacrament was being given (ERO D/ACA 46, f. 16r). Samuel Wigley, the individual who threatened to defile the surplice if he was questioned over his refusal to receive the communion at Easter 1637, must have been a nonconformist too (ERO D/ACA 52, f. 58v). Thomas Creshoell, on the other hand, was probably a separatist for in 1637 he not only refused to attend his parish church but also stood outside the church

catechising during divine service (ERO D/ACA 52, f. 187v). The archdeaconry court records do not indicate if anyone listened to Creshoell in preference to attending Rogers' services but perhaps Creshoell attracted a following in Messing.

Although the final two incidents date from 1637, it should not be thought that opposition to Rogers escalated in the late 1630s; in fact, Rogers seems to have faced more opposition in the 1620s than the 1630s. This is interesting because *A Sermon Preached at the ... Visitation of ...William, Lord Bishop of London* (1631), the second edition of *The True Convert* (1632) and *Mirrour of Mercy* (1640) demonstrate that although Rogers was still a Calvinist between 1631 and 1640, he did not reaffirm his Puritanism during that decade. In fact there is evidence that Rogers was moving towards a Laudian position.

Laudians believed that the church and every object within it was sacred and should be revered. Thus Laudians decorated their churches with religious pictures and stained glass, and sought to beautify church ornaments. Laudians elevated the communion table to a position of new importance: altarwise, behind rails, at the east end of the church, a location which confirmed its status as the most sacred of all holy objects. The Eucharist, through which it was believed God's grace could be diffused to mankind, was the *sine qua non* of worship for Laudians. Indeed for some Laudians sacramental grace assumed the role assigned by Calvinists to the grace of predestination.[2] Rogers himself may or may not have accepted all these ideas but he certainly numbered the Laudians William, Lord Maynard and Robert Aylett amongst his patrons (Laud VII 1975, 242; Rogers 1632, sig. A2; Rogers 1640, sig. A2).

In 1640 Rogers resigned the living of Messing and became rector of St. Botolph's Bishopsgate, in London. He was sequestered from that living in 1643 for 'preaching against arming to fight the king', a charge he did not deny (Matthews 1948, 56). After his sequestration, Rogers returned to Essex and received 'light, lodging and fyring' at the house of Thomas and Dorothy Roberts in Little Braxted (Rogers *Figg Tree* 1658, sig. A2). He left Little Braxted in 1650 to become pastor to a congregation at St. Osyth in Essex, a position he obtained by leave of Mary Savage, Countess Rivers (Matthews 1948, 56). The precise nature of Rogers' role at St. Osyth is unclear but since, as a sequestered minister, he did not have the right to preach, his duties were presumably primarily pastoral. Rogers cannot have been entirely satisfied with his new post, for in 1656 he asked the council for permission to preach. Thanks to the support of Edward Herries of Great Baddow, Major General of Essex, Rogers's request was granted and in 1656 he became vicar of Doddinghurst in Essex, a living in the gift of Thomas Roberts (Everett Green 1883, 50-2). Whilst at Doddinghurst, Rogers published his first books for several years: *The Fast Friend* (1658) and *The Figg-Less Figg Tree* (1658). Rogers died at Doddinghurst in 1660, two years before his final book, The Rich Fool, was published. These three books were produced during a new stage of Rogers' life and they mark a last, and surprising, shift in his thinking for *The Fast Friend* and *The Rich Fool*, in particular, are Arminian tracts.

For the purposes of analysis it makes sense to examine each of the three phases in Rogers's career separately. The article is, therefore, divided into three sections. The first section focuses on the moderate Puritanism of Rogers' early years; the second section explores Rogers' views from 1631 to 1640, over which period of time he remained faithful to Calvinism but came to tolerate, if not accept, Laudianism; the third section examines the Arminianism of his last years.

During his moderate Puritan period Rogers published three works: *The True Convert, Christian Curtesie* and *A Strange Vineyard in Palestina*. The first two books were licensed by the Calvinist Daniel Featley, chaplain to Archbishop George Abbot, and the third by Bishop George Montaigne's chaplain Thomas Worrall. (Arber III 1876, 19, 48, 307) By the mid 1620s Montaigne's licensing policy displayed Arminian sympathies and Worrall was responsible for licensing Richard Montagu's Arminian treatise of 1625, *Appello Caesarem*, but *A Strange Vineyard in Palestina* is, like *The True Convert and Christian Curtesie*, a Calvinist work. (Tyacke 1987, 101, 114, 119, 166)

The True Convert is a fairly standard Calvinist exposition of the parable of the prodigal son; the prodigal son is portrayed as a member of the elect who has temporarily wandered from the path of salvation. Rogers emphasised that God would inevitably return the elect to his fold because he holds a 'special love' for them, even before they are called. (Rogers 1620, passim and 240) In other words, Rogers believed that the elect could fall temporarily, but not totally and finally, from grace. For the reprobate, on the other hand, Rogers held out no hope. They were 'of old ordained to condemnation' and God's desertion of them was 'eternall'. (Rogers 1620, 46)

Rogers added only a little in *Christian Curtesie* to his existing words on the elect. Rogers referred in his dedication to Lady Margaret Chibborne, his patron at Messing, being 'of the elect', a distinction which gave her 'cause to boast'. It is clear, however, that Rogers did not wish to encourage his patron to complacency: 'Go ... in your godly course and while others strive to ... secure their monies, confirm their estates (leaving their salvation unwrought up) let it be your principal endeavour, to conform your life still more ... to the rule of God's most holy word and make your salvation sure unto yourself.' (Rogers 1621, sig. A2) In this passage, Rogers sounds like an experimental predestinarian. Experimental predestinarianism was not an exclusively Puritan theology, for it had the support also of non-Puritans such as Archbishops George Abbott and Toby Matthew (Tyacke 1987, 18-19). But certainly a belief in experimental predestinarianism was a commonplace among Puritans, so it is no surprise that in 1621 Rogers seems to have believed that Christians should seek for

assurance that they were among the number of the elect. It is not, however, possible to be sure for how long he believed this because he made no similar statements in his other works.

Rogers did, though, return to the wider questions of salvation and reprobation. In *A Strange Vineyard in Palestina* he again assured the elect that they could not fall totally and finally from grace: 'I confesse God will not wipe out those, whose names he hath written in the booke of life, nor damne any of his elect which are in Christ.' (Rogers 1623, 255-6) As importantly, Rogers sought to provide an answer to a question so often posed by opponents of Calvinism: 'How can it stand with God's justice, to punish the wicked for afflicting his church and people, seeing they are but instruments in the executing of his judgements, and do no other than ... he sets them?' (Rogers 1623, 226). His response was a justification of unconditional reprobation: 'the will of God is secret or revealed. The former was never propounded as a rule for us to conform our actions unto; but the latter ... requireth conformity and obedience; and by it we are enjoined to love our neighbours as ourselves, and by all good means to seek the good and advancement of our brethren. Now ... the devvil and all reprobates do [the secret will of God], and cannot otherwise choose but must do, will they nill they, yet because they run full butt against God's revealed will, [by] the rule and square of all their actions their condemnation is most just' (Rogers 1623, 226-7).

Any discussion of his religious convictions in the 1620s must not be confined to his belief in double and unconditional predestination. He felt very strongly on other issues as well. On the topic of preaching, for example, Rogers was uncompromising: 'a soldier should dy standing and a minister in the pulpit preaching.' (Rogers 1621, 10) In so saying, Rogers was echoing the words of Bishop John Jewel and Archbishop George Abbot (Tyacke 1987, 202) and there can be no doubt that he agreed with them fervently because he was careful to stress all the different functions that must be performed by a preacher: 'hath [the preacher] broke up the fallow ground of his people's hearts? Then he must sow precious seeds therein. Hath he sowed the seed? Then he must water what he hath set and sowed ... Is knowledge planted? Then practice must be urged. Is practice good? Then perseverance, progress and continuance must be pressed' (Rogers 1621, 10). And as a preacher must direct his words according to the spiritual needs of his audience, so the listener must pay close attention for 'the sermon that wants consequent meditation here, may be meditated in Hell thereafter' (Rogers 1621, 11). In placing considerable emphasis on preaching, Rogers was, if not uniquely, at least typically Puritan.

His Puritanism was equally evident in his comments on the communion: 'the sacraments [of bread and wine] were ordained as a means to increase faith ... but [they are] so handled that they serve no other means than to increase ... judgement.' He elaborated: 'the wicked, whose hearts are full of poisonful corruption ... corrupt everything they have or doe receive. Yea such an antipathie there is betwixt God's grace and man's bad heart, that the more [God] wrastles with him, to bring him to salvation, the more he wrastles against [God] to his own confusion.' (Rogers 1623, 164) These words were intended as a reminder that the bread and wine should be received only with a worthy heart and a good conscience. Of course, all clergymen believed that people should prepare properly for the communion but Puritans were more insistent on this point because of their belief that an unworthy individual could bring judgement on themselves by receiving the communion when not in a state of grace. (Collinson 1982, 271-273)

Another subject of particular interest to Puritans was the role of discipline in the Church of England. Rogers, like so many Puritans, felt that true discipline was lacking: 'our church is not destitute of it altogether: I would we had the execution of so much as our church alloweth. Neither doe we deny but therein there may be some defects and wants, as appeares by those words in the Book of Common Prayer 'untill the said discipline may be restored'. But doth it follow hereupon, that because discipline is wanting, the church is fading, and that the infirmity of one maketh the nullity of the others?' (Rogers 1623, 96) Rogers was careful to stress that he was not denouncing the church as a whole. Nevertheless, his views would have been controversial, for complaints about discipline tended to go hand in hand with a desire for individual ministers to be given increased disciplinary power, including the rights to exclude people from communion and to excommunicate members of the laity. (Collinson 1983, 16-17) So although Rogers did not say that he thought ministers should have more autonomy in the exercise of discipline, nor indicate that he thought that ordinary ministers should be given the power to excommunicate lay people, both may have been implied by his words.

Rogers was far more explicit when discussing his views on the Roman Catholic Church which, he wrote, suffered not only from 'corruptions in doctrine' but more seriously from corruptions 'against the foundation' which 'overturne all'. Rogers continued: 'Thus the Church of Rome doth willfully and obstinately destroy the foundation of itself, and therefore may be concluded no church of God' (Rogers 1623, 98). To condemn the Roman Catholic Church in such a way was not an exclusive mark of Puritanism, but Puritan values and strongly expressed anti-papal opinions were closely associated. Through the medium of anti-popery, Puritans could show both that they were loyal to the Church of England and that they desired further reformation. Furthermore, although Puritans and non-Puritans alike thought that an extreme dislike of Roman Catholicism was proof of a person's faithfulness to Christ, Puritans alone believed that uncompromising anti-popery in an individual was one of the signs that they were of God's elect (Milton 1995, 31-36). Therefore, in expressing anti-papal views Rogers was not affirming uniquely Puritan sentiments

but in the light of his Puritanism his opinions have an extra significance.

The impropriation of tithes was not a concern confined to Puritans either; Rogers' ideas on this issue would have attracted non-Puritan support.[3] They were, nevertheless, entirely consistent with Rogers' Puritanism. It was his belief that: 'tithes are due only to the church; neither have the laity aught to do herewith; ... tithes are ... a matter of giving and receiving; the minister giveth spiritual things ... and receiveth carnal things. Now because laymen cannot perform the one, they have not to meddle with the other...' These were strong words, and Rogers was anxious that they were not misinterpreted as an attack on the authority of magistrates, for he continued: 'I do not deny but it may be in the power of civil magistrates to allow any other maintenance unto the minister, so it be competant'. Rogers emphasised, however, that in saying this he was not compromising his own position: 'tithes are by law established among us [and] ... it is ... a sin to defraud the minister of his portion' (Rogers 1623, 302-3).

Another issue on which Rogers had uncompromising views was Sunday observance. 'God's sabbaths are neglected', he complained' (Rogers 1621, 55). Frustratingly, he did not add by whom or in what way they were neglected but in 1623 he bracketed 'sabbath breakers' with 'blasphemers' and 'ungodly userers' and warned them 'thou hast thy portion appointed thee, and that is brimstone and fire' (Rogers 1623, 281). In the 1620s, then, Rogers seems to have been a sabbartarian for he implied that Sundays should be wholly devoted to the worship of God (Parker 1988, 6, 214-16). This was, again, not an exclusive hallmark of Puritanism but it was a view with which Puritans would almost inevitably have agreed.

Despite his strongly expressed views on all the issues discussed above, Rogers was a moderate Puritan. Indeed, he informed nonconformists: 'that misery of miseries, a wounded spirit ... is the fruit of your church gadding and sermon following'. Expanding upon his theme, Rogers explained: 'The division of hearts must needs hinder the building of our new Jerusalem: God's sabbaths are neglected, the word, the gospel of Christ Jesus, cannot have that free passage that it would otherwise have, were it not for our own home breed broyles. Some will hear none but refusers of conformity: others take advantage of their disobedience to contemn the ministry: both waies the Kingdom of Christ is hindered. It gives likewise a matter of encouragement unto our enemies. How cometh it to pass (say Papists unto us) that you will have so many sects among you? What mean the terms Zwinglians, Lutherans, Calvinists? How is it that some are Brownists, some Baraists, some Puritans, some Protestants. How happens it that touching ceremonies ... and discipline ... there is such disagreement? ... that giveth advantage to our enemies' (Rogers 1621, 49, 56). His point was that by concentrating their attention almost exclusively on the issues of ceremony and discipline, nonconformists and sectarians were having an adverse impact on the progress of further reformation. Why then did Rogers himself express reservations about discipline in the Church of England two years later? Had he changed his mind? The answer is probably not; Rogers's comments on discipline in *A Strange Vineyard in Palestina* were an aside, not the main theme of his work. In any case, Rogers did not so much condemn the Church of England's disciplinary record, as suggest that there was room for improvement. Furthermore, in the same book, Rogers defended the Church of England: 'blemishes are in every church [but] ... we have the true word of God preached, the true sacraments of Jesus Christ administered ... we maintain at every point the most ancient creeds' (Rogers 1623, 96-7). It should be stressed too that there is no evidence that Rogers ever refused to conform to the ceremonies of the Church of England or abide by ecclesiastical law.

Despite his preference for moderation, Rogers was prepared to give his support to nonconformist Puritans. In 1629, Rogers was one of the forty nine Essex clergymen who signed the petition in support of the Puritan nonconformist Thomas Hooker. The petition informed the Bishop of London, William Laud, who seems to have been planning to prosecute Hooker for nonconformity, that 'Mr. Thomas Hooker ... be, for doctrine orthodox, and life and conversation honest, and for his disposition peaceable, no ways turbulent or factious' and urged him to consider with 'honourable favour [Hooker's] lawful suit' (PRO SP 16/151 f. 65v-r; Davids 1863, 153). In signing the petition, Rogers was at very least acknowledging that he and Hooker shared some common religious and theological ground and it may be that, their differences on the issue of conformity notwithstanding, the two were friends.

Certainly Hooker and Rogers shared a common patron in the staunchly Puritan Earl of Warwick. The earl, who devoted most of his life to advancing the careers of Puritans such as Jeremiah Burroughes, Edward Calamy, William Gouge, Stephen Marshall and Hugh Peter, had been educated at Emmanuel College, Cambridge, but left ten years before Rogers' matriculation. Precisely how and when Warwick and Rogers met is not known, though they must have been on good terms in 1623 when Rogers dedicated *A Strange Vineyard in Palestina* to the Earl and it is possible that they were still friendly in 1632 for in that year *A Strange Vineyard in Palestina* was republished under the title *The Wild Vine* but the original dedication remained (Rogers 1623, sig. A2; Rogers 1632, sig. A2). There is no evidence of any relationship between the two men after 1632; this might be coincidence or could be a result of Rogers' shift away from Puritanism in the 1630s.

Although the Earl of Warwick was undoubtedly Rogers' most illustrious patron during the 1620s, he also benefited in that decade from the support of Lady Margaret Chibborne, the widow of Sir Charles Chibborne of Messing. In his will of 1620, Sir Charles appointed his wife executor of his estate and it was in this capacity that she presented Nehemiah Rogers to the

living of Messing. (FRC Prob 11/135/24 f. 193r-194v; Newcourt 1710, 572) Sir Charles, who died only a short while before Rogers' arrival in Messing, may have had Rogers in mind for the vacant position, but he did not name the clergyman in his will. That having been said, it seems likely that Sir Charles would have been satisfied with Rogers, at least for as long as the latter maintained his moderate Puritan stance. Sir Charles, who was a lawyer, (Lincoln's Inn 1896, 104) was one of the men to whom Thomas Gataker dedicated his Puritan treatise of 1619: *Of the Nature and Use of Lots.* (Gataker 1619, sig. A2) Gataker, who is perhaps best known for his later role as a member of the Westminster Assembly, first demonstrated his Puritan credentials whilst lecturing in Cambridgeshire in the 1580s. (Lake 1982, 117; Webster 1997, 25, 316) Sir Charles Chibborne probably shared Gataker's Puritan views for it is highly unlikely that he would have been named in the dedication to *Of the Nature and Use of Lots* had he not agreed with its contents.

Was Lady Margaret Chibborne a Puritan? Certainly Rogers described her as 'right vertuous and truely religous' and praised her 'love to God' and 'zeal to his house' Furthermore, Rogers assured Lady Margaret that she was one of the elect and urged her to 'make sure [her] salvation unto [her]self' (Rogers 1621, sig. A2). Of course, not only Puritans spoke of the elect, but seeking assurance that you were of the elect was, as has been pointed out earlier, an especial Puritan concern. Rogers was, therefore, encouraging Lady Margaret to continue along the straight and narrow Puritan path.

Ironically, Rogers himself wandered from that path, although in the 1620s there were no signs that he would do so. His most famous patron in that decade, Robert Rich, Earl of Warwick, was a Puritan, and Lady Margaret Chibborne seems at least to have been sympathetic towards Puritanism. Rogers began the decade working at the Puritan parish of St. Margaret's New Fish Street and lent his support to the nonconformist Thomas Hooker as late as 1629. Furthermore, in his first three books Rogers extolled Puritan beliefs on the importance of preaching, the lack of discipline in the Church of England, the corruption of the Roman Catholic Church, and the sanctity of the sabbath.

In 1631, Rogers published his fourth work, *A Sermon Preached at the ... Visitation of ... William, Lord Bishop of London*, which was licensed by Laud's chaplain, William Bray. This was followed in quick succession by the publication of a new, extended version of *The True Convert*, licensed by Robert Austin, chaplain to Abbot. His sixth work, *Mirrour of Mercy*, followed in 1640, having been licensed by William Juxon's chaplain, Thomas Wykes (Arber IV 1877, 234, 453). Taken together, these three works demonstrate that in the period 1631-40 Rogers was still a Calvinist but that he had laid his Puritan sympathies aside.

In his sermon of 1631 Rogers quoted from a series of Calvinist divines, most notably Bishop Joseph Hall, Archbishop George Abbot, John Yates and Bishop Gervase Babington (Rogers 1631, 5, 11, 24, 25). He also recommended John Calvin's *Institutions* to young divines as a suitable source for sermon subjects (Rogers 1631, 22). Similarly, in *Mirrour of Mercy* Rogers recommended that his readers turn to the work of the Calvinist John Preston for an explanation of the full implications of Christ's death for mankind (Rogers 1640, 'Penitent Citizen' 78-79). It is, however, in the second edition of *The True Convert* that Rogers' Calvinism comes across most clearly. He extended his exposition of the prodigal son and added two new expositions: the first of the parable of the lost sheep and the second of the parable of the lost groat. The lost sheep and the lost groat, like the prodigal son, are seen as representing members of the elect who have gone astray but will inevitably be reclaimed by God. The reception of the elect into heaven was guaranteed because: 'Christ himself lives in the hearts of those who are truly sanctified and converted and [that] Christ can die no more is evident. Now hee may as well die at the right hand of the father, as die in the heart of a Christian' (Rogers 1632, 'Indulgent Father' 225). Furthermore, the elect Christian had only God to thank for his salvation: 'By the grace of God you are saved', he wrote, 'and that not of yourselves, it is a gift of God ... this may serve for confutation ... of the Pelagians, who affirm that our good actions and cogitations proceed only from free will, and not from God's special grace ... secondly it maketh against ... Papists, who are all for will, little or nothing for ... God's grace.' As God alone saved the elect, so God alone damned the reprobate. As Rogers explained, 'Eternall desertion is where God (upon just causes best knowne to himself) leaveth man to himself wholly, and for ever, befalleth reprobates, onely ... as Caine, Esau, Judas and others, who are of old ordained to condemnation' (Rogers 1632, 'Watchfull Shepheard' 46).

Just as Rogers' belief in double and unconditional predestination remained constant between 1620 and 1640, so he retained an emphasis on the importance of preaching. 'The pulpit is not for show but for use ... The minister is the watchman. His charge and pulpit is his watchtower', he preached in 1631 (Rogers 1631, 5-6). But, for the first time, he also qualified his enthusiasm for preaching. He did so by criticising those 'who upon their first entry into the ministry ... preach ... twice every sabbath ... which is the cause of venting many raw and undigested meditations.' Rogers suggested that 'such as cannot preach often well ... spend more time in their studies and less in their pulpits' (Rogers 1631, 16). He was concerned too about those who took 'the greatest mysteries of religion [as] fittest arguments for exercising their wits, [such as] the question of predestination.' Rather than attempt to tackle such complicated questions, preachers should, Rogers advised, 'aske councell of Calvin's ... learned *Institutions* or to peruse well the *Articles of our Religion* and the *Booke of Homilies* ... that what you deliver for doctrine may be comprehended in essence, substance, effect or natural inference with some one of them. But of all sheaves let

the Bible have preheminence' (Rogers 1631, 22). These views indicate that by 1631 Rogers had distanced himself from the Puritans. The latter would certainly not have suggested that preachers look to the Articles of Religion or the Book of Homilies for guidance when preparing a sermon, nor would they have agreed that it was wrong for young ministers to preach twice on a Sunday. In fact, Rogers disparaging comments about over-ambitious young preachers were probably aimed directly at newly ordained Puritans. Furthermore, in urging caution in the discussion of predestination, Rogers was not simply taking an anti-Puritan line, he was, more importantly, expressing an opinion held by both Charles I and William Laud (Tyacke 1987, 48, 167).

On other matters too Rogers was taking a conformist line by 1631. For example, he defended the need to catechise. '[It is] a great fault ... to scorn the catechism for a profounder kind of learning ... Let us first teach the principles plainly and diligently, and after a familiar manner by question and answer and spend one part of the Lord's Day in this course' (Rogers 1631, 22-3). He also argued in support of confirmation: 'A ceremonie which (through the long neglect thereof) is much excepted and carped at, but may be wished that it were used oftener than it is and more respected' (Rogers 1631, 24). In expressing contempt for those who 'carped at' confirmation and 'scorn[ed]' catechising, Rogers was again thinking of his former allies in the Puritan movement and reinforcing the fact that there was now some distance between his views and theirs.

On the issue of church ornaments Rogers was also clearly a conformist by 1631, for he attempted to vindicate their use in the Church of England: 'You may remember what was said of the church of Boniface the Martyr, when the church had wooden chalices she had golden priests, but after, when she came to have golden chalices (as in the time of popery) she had wooden priests. But why touch I on this? For if superstition made our adverseries too careful and bountifull, prophaness and atheisme has made us too carelesse ... God holds himselfe contemned, when his churches are defaced and his utensils not decently preferred ... Meere human inventions in the circumstantialls of God's worship are not therefore unlawful ... unless in some other respect some sinfulnesse be found in them' (Rogers 1631, 25). In so saying, Rogers was following the standard Prayer Book line that even those things 'devised by man' should be 'reserve[d] ... for a decent order in the church ... because they pertain to edification' (Booty 1976, 18). And these were sentiments with which Rogers obviously still agreed in 1640 when he wrote: 'Things in themselves lawful, superstitiously abused are not through such abuse made unlawfull to bee used' (Rogers 1640, 'Penitent Citizen' 157).

As significantly, by 1640 Rogers had significantly softened from his earlier position that the Roman Catholic Church was not a true church. Instead, Rogers wrote: 'whether the Church of England or the Church of Rome be the true church, and in which of these salvation is probably to be found is a hot dispute betwixt us and the Papists: but so fully and learnedly determined by ... the Lord Archbishop of Canterbury in his *Conference with Fisher*, that no more remains to be said' (Rogers 1640, 'Good Samaritan' 150). *A Conference with Fisher the Jesuit* was a defence of the Church of England against the Roman Catholic Church but in it Laud acknowledged that the latter was a true church (Laud II 1975, 143, 333; Milton 1995, 148). As Rogers directed his readers towards the book, we can only assume that he had come to think likewise.

His views on discipline in the Church of England had shifted more obviously and dramatically by 1631. In a statement directly at odds with his stated concern in 1623 about the lack of discipline, Rogers condemned 'a rash censuring of church government and discipline, through heate of affection and want of judgement'. He continued: 'Censurious ... professors ... those who spend their zeale in this way, have not wherewith to answer you if you question with them about fundamentall points' (Rogers 1631, 26). In other words, those who excoriated the government and discipline of the Church of England generally did so from a position of ignorance. Rogers was similarly impatient with those who 'separate themselves from our church assemblies, because of the blots and spots dreaming ... of such perfection here ... For what church will they joyne themselves to upon earth that is without filth?' (Rogers 1632, 'Good Housewife' 105).

Although he did not return to the theme of separatists, in *Mirrour of Mercy* Rogers again had harsh words for the Puritans or, as he preferred to describe them, 'those who startle at the use of anything, which [is or] ... hath bin ... abused by supersitious papists and idolators.' Rogers complained: 'They can scarce with any peace of conscience, tell you the name of that hill on which St. Paul stood and preached to the men of Athens ... The daies of the week must not be called Monday, Tuesday &c. as ordinarily ... But they will number them ... The glorious company of saints and apostles, because too much honoured or rather dishonoured by papists shall be to them unsainted; their days must be called Peter's, Paul's, John Baptist's, the saint must be left out, and so for the churches ... Bay leaves may not be admitted into church or house, for the heathens so used them. I know not wither they durst ride upon a mule (though it were King David's owne) for that Anah first found them.' Rogers' point is that by focusing on these minor matters the Puritans had made themselves ridiculous. It would be better, Rogers argued, for them to lay these concerns to one side and be 'in weightier matters more wise' (Rogers 1940, 'Good Samaritan' 79).

From the evidence presented above it is clear that the views Rogers held between 1631 and 1640 were in many important respects different from those he held in the early 1620s. What is not clear is why Rogers changed his views, for that was something he chose not to explain. Indeed, Rogers never directly admitted that he had altered his opinions on any subject. He did,

however, refer bitterly to the 'false calumnies and ignorant censures of some ill affected spirits' which may be a reference to the reaction of some of his acquaintances to his change of heart (Rogers 1631, sig. A2). Certainly, the loss of some old friends or patrons would explain why Rogers acquired some new patrons in the 1630s. These individuals are of interest mainly because an examination both of their beliefs and their interaction with Rogers throws some light on a topic that the Vicar of Messing avoided in print: his attitude to Laudianism.

One of Rogers's new patrons was Nicholas Hubert. He is an obscure figure but it is known that he presented Rogers to the sinecure rectory of Great Tey, Essex in 1632 (Newcourt 1710, 572). Rogers retained the living of Great Tey until 1640 and then swapped it for the living of St. Botolph's Bishopsgate, London. His partner in the exchange was Thomas Wykes, precentor of St. Paul's and licenser of *Mirrour of Mercy*. This work was Calvinist in tone but since Wykes worked as chaplain to William Juxon it is probable that he also had Laudian sympathies (le Neve 1854, 18; Foster 1891-2, 1593; Arber IV 1877, 453).

Better known than either Hubert or Wykes is William, Lord Maynard. The 1632 edition of *The True Convert* was dedicated to Lord and Lady Maynard, and in the preface Rogers describes himself as their 'servant and chaplain'[4] (Rogers 1632, sig. A2). Precisely what responsibilities and personal ties lay behind these titles is not known because no other sources mention, let alone discuss, the relationship between Maynard and Rogers. Without doubt, though, Rogers had a very high opinion of Maynard, for he wrote: 'your honour is deservedly esteemed, who have not onely entertained the love of the truth in your owne heart but ... have provided a resting place for it under your honours roofe ... Yea, if any deserve the style of the churches friend; the clergies sanctuary; the uncorrupt patron of church livings; a bountifull encourager of learning; a munificent favourer of vertue it is your honour' (Rogers 1632, sigs. A4v-A5v). Why did Rogers have such a high regard for Maynard? Perhaps he viewed him as a model Calvinist patron. Certainly it would be odd for Rogers to have dedicated such an unambiguously Calvinist work to one who did not believe in double and unconditional predestination. Unfortunately, though, all the rest of the evidence for Maynard's beliefs dates from a later time. For example, in 1634 John Browning, rector of both Little Easton and Rawreth in Essex, dedicated to his patron Lord Maynard *Concerning Publike Prayer and the Fasts of the Church*, a collection of sermons in which there is a brief but positive allusion to Arminian theology. Furthermore, he described Lord Maynard as his 'chief auditor, at the hearing of some of them', which suggests that his patron probably shared the religious and theological ideas he expressed in 1634 (Browning 1636, sigs. A3, A4, pp. 164-5). Certainly Maynard was an Arminian four years later, because in his will of 1638, in which he appointed William Laud joint guardian with Lady Maynard of his son, he described Christ as having made 'general promises to all men penitent sinners' (Tyacke 1987, 193). Whatever Maynard's theology in 1632, he was a Laudian by this time. At least, the private chapel that he had built at Easton Lodge in Essex conformed to the Laudian 'beauty of holiness' ideal, dominated as it was by a glass window showing Christ on the cross (Tyacke 1987, 193). The chapel was erected in the early 1620s so, as the Maynard's chaplain, Rogers must have officiated in there, something he would surely not have done had he objected to the image of Christ.

Rogers's views on the window can only be conjectured; his respect for William Laud can be confirmed. In his 1640 publication *Mirrour of Mercy*, Rogers directed his readers to Laud's only published work *A Conference with Fisher the Jesuit* (Rogers 1640, 'Good Samaritan' 150). More importantly, in 1635 Rogers gave the living of Gatton in Surrey to William Laud[5] (Laud VII 1975, 242; DNB). It might be argued that Rogers only gave the benefice to Laud in order to draw the attention of the Archbishop of Canterbury towards him, perhaps in the hope of promotion. Indeed, if his aim was greater recognition it was achieved for in 1636 Rogers was appointed by the King to a prebend in Ely cathedral (le Neve 1754, 360). That having been said, it is equally unlikely that Rogers would have given Gatton to Laud if he had known himself to be in fundamental disagreement with any of his religious beliefs. In 1635, however, Rogers might have been unaware of Laud's support for innovatory policies, such as the railing in of the altar, and admired him simply as an energetic and efficient Archbishop of Canterbury.

The problem of deciding how Rogers regarded Laud's beliefs and policies could be resolved if it was known how Rogers felt about east end, altarwise, railed communion tables. Direct evidence for this is lacking, but on the eve of the metropolitical visitation of 1637, Laud made some notes for his vicar general, Nathaniel Brent, and amongst these was the following line: 'Nehemiah Rogers desired (sic) an order for the setting up of a rail about the communion table in Messing church' (PRO SP16/339 f. 123r). Every other minister to whom Laud directed Brent's attention was to be investigated for nonconformity but it is not certain that Rogers was refusing to conform. In fact, exactly what lay behind Laud's note to Brent is unclear. Had Rogers written to Laud asking for the order for the railing in to be issued? And if so, why was this necessary? As early as May 1636 Brent had instructed that all communion tables in the diocese of London should be railed in. Those parishes with Laudian ministers complied promptly with the order but Puritan-led parishes were less co-operative, with many refusing to erect rails until forced to do so by the courts. (ERO D/AEV 7; Davies 1992, 227) Rogers, however, was not taken to court for refusing to rail in the communion table, probably because of his communication with Laud. Why was the communication necessary? The most likely explanation seems to be that Rogers was experiencing difficulty in

railing in the altar, perhaps because of opposition from parishioners, or from the Puritan Matthew Newcomen, who had been his curate at Messing from 1632 to 1636 (Seaver 1970, 370). Or perhaps Rogers did not want the communion table railed in at all and was employing delaying tactics. But if Rogers did want the table railed in was it simply in the spirit of conformity to the established church or for religious reasons?

His friendship with Robert Aylett may help answer these questions, for Aylett was that unusual combination, a Laudian and a Calvinist. After his education at Trinity Hall, Cambridge, Aylett became commissary to William Juxon, Bishop of London. (DNB) In this capacity he became one of the most forthright enforcers of Laudianism, incurring the wrath of William Prynne for upholding the innovations of the 1630s (Prynne 1637, 351-4). When not working for Juxon, Aylett wrote Calvinist poems, penning lines such as: 'Christ loveth those he chooseth for his own' (Aylett 1653, 22). It was to Aylett that Rogers dedicated his essay 'The Good Samaritan' in *Mirrour of Mercy* with thanks for his 'many favours' (Rogers 1640, 'Good Samaritan' sig. A2). Of the relationship that lay behind Rogers' gratitude for Aylett's kindness there is no indication either in the dedication or elsewhere but that the two men were friends is nevertheless interesting.

Another man for whom Rogers felt affection was Hanameel Chibborne, son of Sir Charles and stepson to Lady Margaret. Rogers dedicated 'The Watchfull Shepheard', a tract included in the 1632 edition of *The True Convert*, 'to the truly generous and religious ... Hanameel Chibborne' (Rogers 1632, 'Watchful Shepheard' sig. A2). The fact that Rogers bestowed upon his son the extremely unusual name Hanameel is also suggestive of a closeness between the two men (Rogers 1662, title page). Perhaps a shared Calvinism was a factor in Rogers's and Chibborne's friendship - 'The Watchfull Shepheard' is a Calvinist piece. Furthermore, Chibborne was sufficiently close to Robert Aylett to request that the latter witness the codicil of his will (ERO D/ACW30/5).

Like his father, Hanameel Chibborne attended Lincoln's Inn, but unlike his father he seems to have had no Puritan leanings (Lincoln's Inn 1896, 191). In fact, he was an enthusiastic conformist who spent his own money refitting and decorating All Saints', Messing. Chibborne added wooden panelling to the church in 1634. The panels were adorned with relief carvings of the royal arms and cherub heads. Chibborne's other purchases in 1634 were two silver cups, two silver flagons and a silver standing dish for use during communion, and a new communion table. Then in 1640, Chibborne supplied the church with an alms dish and two altar candlesticks, both of gilded wood. More interesting than all these, however, was the east window Chibborne commissioned from the artist Abraham van Linge. (RCHM Essex III 1911, 180-1; Staley 1904, xv) The main six frames of the window are a pictorial representation of Matthew 25 verses 35-36: 'For I was an hungred, and ye gave me meat: I was thirsty, and ye gave me drink: I was a stranger, and ye took me in: Naked and ye clothed me: I was sick, and ye visited me: I was in prison, and ye came unto me'.[6] The glass above the large frames is divided into nine small panels, variously decorated with stars, cherubs and the allegorical figures of faith, hope and charity.[7] The fact that the window did not show Christ or any of the saints is indicative of a certain restraint but it does not prove that Chibborne was not a Laudian. All Chibborne's additions to the church could have been prompted by a belief in the 'beauty of holiness'. Furthermore, it would be extremely unusual for anyone other than a Laudian to add altar candlesticks to a church in 1640. But as no other record or indicator of Hanameel Chibborne's beliefs exists, it is impossible to prove that he was anything more than an ardent conformist.

Between 1631 and 1640 Rogers was a Calvinist with a conformist position on preaching, catechising, church ornaments and discipline. Furthermore, he had at least two Laudian patrons. By 1658, however, Rogers had changed his views again. The third phase of his career, hailed by the appearance of Rogers' next two works, *The Fast Friend* and *The Figg-Less Figg Tree*, in 1658, was marked by his abandonment of Calvinism and his adoption of the Arminian theology to which Laudianism was closely linked. Rogers made his first Arminian statement in 1658: 'God ... is willing to give [a sinner] life and salvation ... God would that he should turn frome his wicked wayes and come to the knowledge of the truth ... [God] sends his words, and messengers to convince [man] of his sin, to reclaim him from his evill courses wherein if [he] be wanting [him]self, God withholds his power and [he] perishes: And thus by his conditional will, he wills the salvation of all; but by his absolute will which doth always most certainly and infallibly take effect he wills the salvation of none but the elect only' (Rogers 1658, *Fast Friend* 300-1). This statement can be better understood alongside a second pronouncement, that by which Rogers explained how first God's conditional will and then his absolute will took effect: 'first [there is] a time of preparing and trying before the unchangeable decree come forth, which to some is longer than to others ... And there is a time when the decree is come forth and past: till [then] ... there is a dore of hope opened, ... [and prayers] may do much: but if the decree is past, all hope is past, prayer speeds no, the dore is now shut' (Rogers 1658, *Fast Friend* 259). It is clearly implied in these passages that God offered salvation to all but if the offer was not accepted within a certain time God would withdraw it and the person would perish. In *The Rich Fool*, Rogers made a similar point: 'Reason with some men about salvation, ask them how they hoped to be saved ... rejecting the means ... they will tell you, that if it be God's will they shall be saved, if not, they cannot help it, but it is God's will. But God clears himself, in that he wills the salvation of all, and that seriously and intentionally ... And why does he offer life and salvation in the ministry of the gospel to all? Why is he so earnest in pressing ... men to accept of salvation offered? Whence is it that men perish but from

the perverseness of the will of man, which will not accept the grace offered upon God's terms; he chalks the way that should lead us to life, but man will not walk that way ... following the sway of his own crooked and perverse will, [he] rejecteth those means which God afforded for his salvation, and so perisheth everlastingly; who is now to be blamed?' (Rogers 1662, 182-4). There can be little doubt that Rogers thought that the individual was to be blamed; grace was universally offered but not universally accepted.

Although his theology changed considerably between 1640 and 1658, his views on preaching remained fairly constant. Once again he wrote that preaching was of the utmost importance: 'A minister may be pastorally non-resident, albeit he be not personally so. If he be a stranger to his pulpit, though he be no stragler outside the bounds of the parish, he resides not: (And indeed this is the worst non-residencie of the two)' (Rogers 1658, *Fast Friend*, 28). But, as in 1631, Rogers did not give preaching his unqualified support. He stressed that ministers should be aware: 'there are some things which it may be more convenient to conceal, than to make mention of, in publique auditory ... And there are others, albeit sound and good, yet they are too intricate and high for an [audience] of a mean capacity ... But there are other divine truths which are necessary to be known to all, being of daily use, either for the [e]stablishment of faith, or the practice of life; the state and welfare of the souls of our people, doth very much depend, on the frequent iteration and inclucation of them.' It was the actions of the Devil that made repetition so essential: 'So long as the Devil fights with the same sword, give us leave to defend with the same buckler, whilst he doth not vary the sine, nor the temptation ... what need we vary the doctrine?' Inevitably perhaps, Rogers was keen to ensure that this argument was not used as an excuse for constant repetition or the construction of inadequate sermons so he added: 'Some things must needs be recalled, by the minister in preaching, to guide the attention of his auditory... but the attention of an auditory may not be discouraged with needlesse tautology' (Rogers 1658, *Figg Tree* 14-16). All these quotations demonstrate that for Rogers frequent and regular preaching was not only a necessary duty but also a very precise skill. At the most basic level, most Puritans would have assessed the importance of preaching in the same way. Nevertheless, few Puritans would have accepted that some doctrines were best avoided. Unfortunately, Rogers did not say to which doctrines he was referring but if he was thinking about predestination, a subject he had suggested in 1631 that newly qualified ministers should not discuss, Puritans would have disagreed especially strongly. The ire of Puritans would have been raised too by Rogers' suggestion that a minister should speak primarily of 'comfortable things'. As a result of the aforementioned incongruities, Rogers' views on preaching are extremely difficult to categorise.

His opinions on prayer were more straightforward. He advised that prayers would be more effective if they were short and frequent 'for the shorter we are the lesse apt to wander' (Rogers 1658, *Fast Friend* 389). More significantly, he claimed that prayers were more likely to garner a successful response if they were made by several people in unity: '[If] the prayer of one ... may do so much with God, how much more the prayers of many, yea the whole church of God, were they united? What judgement cannot [they] ... bear off? What blessings are they not able to pull down from heaven on us?' (Rogers 1658, *Figg Tree* 469). This was the first time Rogers had addressed the subject of prayer in anything other than the most general way but it seems likely that he had been in favour of set, public prayer since the 1630s; certainly, a belief in set, public prayer was in harmony with the conformist stance he took on other issues at that time.

Equally the defence of episcopacy that Rogers penned in 1658 could have been written by a conformist in the pre-Civil War era: 'a parity in the ministry is very dangerous, the mother of sects and schisms, which to prevent (saith Calvin) the elders ... did chuse but one [bishop] ... from amongst themselves ... lest by equality ... dissentions should arise ... one bishop may be richer than another, or more learned than another, but he cannot be more a bishop than another bishop is' (Rogers 1658, *Figg Tree* 171).

Just as 'a parity in the ministry' was bound to have a detrimental effect, so 'a unity' would inevitably have a positive one. And Rogers felt that in England in 1658 the ministry was too divided. This he blamed partly on the attitudes of their congregations: 'Hearers are many times too factiously inclined ... they [make] a choyce to themselves, of this or that preacher, whom they would follow, with contempt of the rest ... so it is among us to this day. Some affect those onely that are of the same judgement with them (it may be Episcopalian, or Independent or Presbyterian...) albeit all teach the same fundamental truths, and the same Christ ... Christians may acknowledge a difference of gifts in teachers and prefer one before another ... yet ought we to esteem all that are good; hear all as occasion is offered; reverence all; and bless God for all. This factious disposition of hearers of the word, hath been a great cause of dissention amongst ministers' (Rogers 1658, *Figg Tree* 193).

It was not just divisions among ministers that troubled Rogers, he was more generally concerned by the state of religion in England in 1658: 'If we cast our eyes on our present condition, and compare it with what it was, we have cause to take up bitter lamentation ... Not long since [the church] was in such a condition of rest and peace ... we had the gospel truly and sincerely taught amongst us; the sacraments frequently administered, marriage honoured and solemnized, the sabboth religiously sanctifyed, our congregations duly frequented; the hearts of the people knit together, as one man in praising God, hearing his word, singing psalms ... But in a sudden all is in confusion ... [There are] factions and fractions' (Rogers 1658, *Fast Friend* 282-3). Rogers did not set a date on the golden era for which he was so nostalgic. Was he referring to the 1620s? If

so, he liked them better with hindsight than he had at the time for, as will be remembered, he had complained in 1621 about the neglect of the sabbath (Rogers 1621, 55). Or perhaps Rogers was describing the 1630s. If so, the passsage above would constitute further evidence of his toleration of Laudianism, for if he had disliked the innovations of the 1630s he would surely not have painted the decade in such glowing colours.

Despite Rogers' negative feelings about the organisation of religion in England and his support for the King during the Civil War (Matthews 1948, 56), he suggested that the Protectorate was a legitimate form of kingly government: 'How weary were we growen of a good monarchical government, ... (which indeed is the best form of government under heaven). Yea weary of receiving so many benefits by one man? Indeed we were weary ... [but] we are returned to that government which we despised ... and yet still we are discontented people, nothing will please us; and who can but look upon this as an evident token of God's ... displeasure against us?' Rogers 1658, *Figg Tree*, 274). His point was surely that the English should learn to appreciate the government with which they had been blessed. Maybe Rogers felt well disposed towards the established government in 1658 because they had recently restored his right to preach. Undoubtedly Rogers was thankful to Edward Herries, Major General of Essex, for petitioning for his preaching license to be returned - Herries and his wife were named in the dedication to *The Fast Friend*[8] (Rogers 1658, *Fast Friend* sig. A2).

In 1650 Mary Savage, Countess Rivers gave Rogers leave to act as pastor to a congregation at St. Osyth, Essex. Countess Rivers's religious views cannot be traced because her only written legacy, her will of 1658, contained no statement of faith and no bequests to ministers. (FRC Prob 11 272/5, f. 33r) Nor were any books dedicated to her. It is interesting to note, though, that her late husband, Earl Rivers, had patronised Edward Cherry, a Laudian-Arminian clergyman. Cherry, who had been Earl Rivers childhood tutor, was presented by his erstwhile pupil to the benefice of Great Holland, Essex in 1633. When that living was sequestered from him in 1642 he found shelter in the Cheshire home of Earl Rivers (White 1643, 3; Corayne 1949, 26-7). Of course, Mary Savage may not have shared the Earl's inclinations, but if she did that would explain her interest during the 1650s in the by now doctrinally Arminian Nehemiah Rogers.

It will, however, remain difficult to determine why anybody gave support to Rogers in the 1650s, because his collection of beliefs at that time was somewhat eclectic. His Arminianism, his belief in set, public prayer, his defence of episcopacy and his call for unity among ministers were not an unusual combination, but they fit awkwardly alongside his zeal for preaching and his positive assessment of the Protectorate. That having been said, consistency was not a hallmark of Rogers' career. He made the progression from moderate Puritan to defender of the Church of England and theologically he shifted from being a Calvinist to an Arminian. In the 1630s Rogers had at least two Laudian patrons and thought highly of William Laud. All these different beliefs seem to have been sincerely held, when Rogers changed his mind he did so on principle. If his only thoughts were for promotion within the church or adhering to the ascendant viewpoint he would not have been a moderate Puritan in the 1620s nor an Arminian in the 1650s. Furthermore, at various times Rogers defended all his beliefs convincingly in print. Rogers was not a Vicar of Bray, adopting whatever viewpoint was most convenient or advantageous at a particular time. Rather, his beliefs and ideas changed during his long and eventful career. Rogers is significant too because during his lifetime he gained the support of such a diverse range of Essex patrons. He was the link between four of the most powerful people in Essex, all of whom had different religious perspectives: Robert Rich, Earl of Warwick, William, Lord Maynard, Robert Aylett, and Mary Savage, Countess Rivers. Despite, not because of, his frequent changes of mind, Rogers always found someone in Essex willing to befriend him. Rogers proves that to be atypical in Essex in the early seventeenth century was not to be marginal.

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Endnotes

1 It is not clear exactly when Rogers became a fellow at Jesus College.

2 I am grateful for the help of Nicholas Tyacke in forming these definitions. In forming my definition of Puritanism I have drawn on the work of Patrick Collinson. My definition of Laudianism owes much to Peter Lake. (Collinson 1982; Lake 1993)

3 For evidence of non-Puritans with Essex parishes who supported Rogers views see S. Nettles 1625, *An Answer to the Jewish Part of Mr. Seldon's History of Tithes*, Oxford, *passim* and B. Walton 1641, *A Treatise Concerning the Payment of Tithes in London*, London, *passim*. Nettles was a Prayer Book Protestant and Walton a Laudian. For evidence of their beliefs see Matthews 1948, 61, 158

4 *The True Convert* was divided into three parts. Each part was dedicated to an individual but the book as a whole was dedicated to Lord and Lady Maynard.

5 The circumstances under which Rogers acquired the living are not known.

6 This quotation is taken from the King James Bible.

7 The window was taken down during the Civil war and stored in a rood chest in All Saints', Messing. It was re-erected after the Restoration. (Staley 1904 xv) The window is still the main feature of the church.

8 The others named in the dedication, all of whom were inhabitants of St. Osyth, are obscure figures.

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Myth, memory and martyrdom: Colchester 1648

Barbara Donagan

The English civil war is not rich in martyrs. After Charles the Martyr the field is thin, although there are many narratives of atrocities and of heroic deaths in action. Death in battle, however, honourable and courageous though it may be, is not normally (in the Western tradition) a martyrdom, but rather one of the predictable outcomes of the practice of a vocation.[1] Martyrdom requires on the one hand the appearance at least of unusual nobility or virtue on the part of the victim and his or her innocence of crime, combined with notable faithfulness to a cause, and of unusual cruelty, injustice and un-Christianity on the part of the executioners. In our day, suicide also makes claims to martyrdom, but in the 17th century suicide was a sin, not a pathway to paradise. Martyrdom also requires some element that causes the story to take off - something interesting or bizarre or picturesque - and it needs to be useful to the allies of the martyrs and to be helpful in selling a story. Finally, of course, it needs to be recorded and propagated: cults do not happen by accident, and they frequently become industries. The story of Sir Charles Lucas and Sir George Lisle may not meet quite all of these requirements but it comes close, and in the years after 1648 it was nurtured by their fellow royalists. The parliamentarians had nothing to rival them. Their most promising episode was probably the death (or murder) of Colonel Rainsborough, but it was a scrambling affair without the dignity of the deaths of the Colchester martyrs.

By 1646, parliament had emerged as the decisive victor in the first civil war, but in 1648, in a series of scattered campaigns, the royalists staged a second ill-organised and uncoordinated struggle that reflected both desperation and incompetence. To parliamentarians, now themselves rent by political and social divisions, it was a frightening and treacherous return to war and blood. Their anger was increased by the fact that many of the royalists now in arms had broken their promises not to bear arms again against the parliament. The royalists had sinned against the nation and the parliament, but their offence was also professional for they had, by breach of faith, broken the laws of war.

In May 1648, Kent erupted in a royalist rising, but on 1 June the army, led by the affable but unmilitary Earl of Norwich, was defeated at Maidstone by parliamentary forces under Lord Fairfax. When expected support from London did not materialise, Norwich took the remnants of his army across the Thames into Essex and marched towards Colchester. There, on 12 June, Fairfax caught up with him and forced him to make a stand. The next day a parliamentarian attempt to storm the town was bloodily repulsed, and both sides settled into a siege that lasted for 11 weeks of a miserably wet summer and did not end until 28 August.

The royalist commander, George Goring, Earl of Norwich - at 63 by far the oldest of the leading officers - had been a successful courtier, whose career and finances flourished under James I and Charles I. Bluff, jovial and shrewd, but no soldier, he was devoted to the king and his family, and had spent most of the past six years as a diplomat and fund-raiser on the continent. His was the public face of command, but he was supported by a younger and more military triumvirate. Lords Capel and Loughborough and Sir Charles Lucas were all veterans of the first civil war, and Lucas had extensive professional experience on the continent and against the Scots. He was also a son of Colchester and counted on local influence to aid the royalist cause. On the face of it, this was a surprising expectation in view of his family's long history of quarrels with the town's rulers and citizens, which had culminated in 1642 in a notorious and riotous attack on the Lucases and their property.[2] Colchester had a reputation for 'wrangling spirits' and it 'had beene long possesst with the spirit of disobedience', but it appears that by 1648 some at least of its citizens were prepared to welcome the royalists.[3] The trio of experienced soldiers had complementary talents (Loughborough, for example, took inventive charge of logistics) and they formed an effective and socially cohesive command structure. They fought until, in the words of the defenders in another hopeless siege, honour was all that was left to them.[4]

Norwich's opponent at Colchester was Thomas, Lord Fairfax, parliament's lord general since 1645 and now 36 years old. Reserved, gout-ridden, the scion of a family with an extensive military tradition, and extremely able, at this time it was 'Black Tom' whom royalists feared might become a military dictator. He was no enthusiast, but he was undeviatingly committed to the cause of parliament and, as events at Colchester demonstrated, behind the moderate façade he was an iron man. To many royalists, he represented the socially acceptable face of puritanism. In their efforts to explain the severity of the terms he imposed at Colchester, they suggested a personal vendetta against Lucas or,

alternatively, that he was under the thumb of scheming radicals, most notably Cromwell's son-in-law Henry Ireton.

For all their differences, Norwich and Fairfax were alike in one respect. Neither sought a quick resolution at Colchester. One of Norwich's aims was simply to hold on and prolong the siege in order to tie down forces that could otherwise be used against the royalists elsewhere. Fairfax, after his initial failed attempt to storm the town, resisted all pressure for another dramatic and expensive attack. He drew the noose around its walls tighter and tighter, and knew that he would win by attrition.

Until 1648, Colchester had a quiet war, but its siege had mythic elements even before the drama that followed surrender.[5] They help to explain the hold the siege took on English imagination and the harshness of the relations between enemies. God's arrows of sword, famine, pestilence and fire were all present. Starvation threatened, and after eleven weeks there was not a cat or dog left inside the walls and very few horses; grain was scarce and polluted, and the inhabitants ate starch and candles. Water pipes were cut, and the remaining water supply was muddy or fouled by dead horses. Both sides fought with fire, razing houses that seemed to offer advantage to the enemy. On the worst night, flames shot above the house tops and spread for a mile along the walls so that 'a terrible red duskeye bloody cloud seamed to hang over the Town all night', and the crackling of the fire could be 'heard a mile or two' away.[6] The town was heavily bombarded, with consequent strain on the nerves and fears of inhabitants, and rich and poor alike lost their goods and livelihoods. Hungry citizens, vociferously led by starving women, demanded surrender, but Norwich's response was to send the women and children - hungry mouths he did not want - out of the town. Fairfax refused to let them pass, and they stood in the no-man's land between the armies until Norwich at last allowed them to return. Contemporary accounts suggest the effect that 'Colchesters Teares' wrought on the public imagination:

> How sad a spectacle it is to see goodly buildings, well furnished houses, and whole streets, to be nothing but ruinous heaps of ashes, and both poor and rich brought almost to the same wofull state, to see such people scarce able to stand upon their legges, ... to see poor and rich men, late of good quality, now equal to the meanest, toyling and sweating in carrying some mean bed or other away, or some inconsiderable household stuffes out of the burning, all of them with wailing weeping gastly countenances and meagre thin faces, shifting and flying in distraction of mind they scarce no whither.[7]

A parliamentarian who rode in after the siege found Colchester 'a very strange place'. It was, he said, a 'sad spectacle to see many fair houses burnt to ashes and so many inhabitants made feeble and weak with living upon horseflesh and dogs, many glad to eat the draught and graines for preservation of life.'[8]

These accounts of the 'mournfull city' - not, I think, exaggerated - establish the physical context of surrender. The intellectual context was provided by the unwritten but internationally recognised laws of war that governed the military conduct of both sides in the English civil war. They covered crucial military situations such as surrender, the life or death of the defeated, treatment of prisoners and parole. By the laws of war, for example, if a town surrendered on terms, its citizens should not be killed, raped or plundered. If it refused to surrender and the besiegers were forced to storm it, the inhabitants could be legitimately killed and looted (though not raped). This did not mean that a successful storm was necessarily followed by wholesale murder and looting. Compassion and moderation were admirable and often prudent. But while murder and plunder in such a case might be a crime against humanity, they were not offences against the laws of war. The rules were, of course, not perfectly or uniformly observed, any more than they are now, but in the first civil war they remained the official and bipartisan standard, and lapses (loudly denounced) were irregular and did not take hold as the norm: fear of reprisal was a powerful argument for observance so long as both parties had the ability to do harm. The second civil war, more bitter and one-sided, threatened a breakdown of mutual restraint, and for a while the protections that those laws offered were selectively withdrawn. In some cases, this was done by a jurisdictional shift, so that the 'military' offence of fighting for the enemy became the civilian offence of treason.[9] Colchester has a prominent place in these annals.

The siege of Colchester, then, offered all the classic components of the traditional disasters of war. Already, before surrender and execution, it was assimilated in English eyes to the class of legendary and terrible sieges as fire, famine and disease raged in the town. Its razed and burned houses recalled the fate of Magdeburg and the horrors of the Thirty Years' War; its hunger recalled the starving French protestants of La Rochelle. Classic elements of taboo and atrocity, of offences against military and human norms, were exploited in the polemic of both sides. An ill-conceived joke attributed to Norwich raised, in feverish parliamentarian minds, the spectre of cannibalism among a starving population. Fairfax's refusal to allow the passage of the expelled women and children denied their ancient right (often ignored in practice) to special protection. Claims that royalist soldiers had used poisoned bullets (a crime against reciprocally recognised norms of combat) led to the lethal beating of prisoners in reprisal (another offence against the laws of war).[10]

The end of the siege thus came in an overheated atmosphere of acrimony and alarm and, on the parliamentary side, of simple military irritation, for the end had been protracted beyond (in their view) common sense and usefulness, and had cost unnecessary lives and money. The royalist commanders had rejected all summons to surrender. Only when all supplies of food and ammunition were exhausted and they were faced by a rebellious civilian population,

mutinous soldiers, and news of Cromwell's crushing victory at Preston, did they agree to negotiate. By then they had lost their chance to benefit from the relatively generous terms previously offered. Instead, they were forced to accept surrender terms that were both severe and humiliating.

Although surrender terms varied with circumstances, they were always negotiated within the framework of the known laws of war. The most basic distinction, on the battlefield and in sieges alike, was that between quarter and mercy. A surrender to quarter meant that the life of the defeated soldier was preserved: prisoners who had surrendered to quarter should not be killed. They could be tried later for offences committed *while* they were soldiers, but they should not be accused for what they did *as* soldiers, that is, in the normal course of military duties. Thus, by the laws of war, the soldier who had thrown down his arms and surrendered to quarter was safe as far as his actions as a soldier were concerned, and he could expect food, clothing and shelter while a prisoner. Mercy was another matter. By the laws of war, the life of the soldier who surrendered to mercy was subject to the discretion of the victorious general; he was literally at his mercy. This discretionary flexibility - a kind of uncertainty principle - was characteristic of much 17th-century military law, for penalties for many offences were both discretionary and exemplary. Justice was selectively executed with a strong eye to its deterrent as well as its punitive effect, as well as to the circumstances of the moment. Admittedly, during the civil war, the general's power to kill prisoners at mercy was rarely used, but the legal provision that would allow him to do so was familiar.[11]

Terms of surrender were drawn from a common menu of options: mercy or quarter; imprisonment or freedom to return home or to go abroad, with or without an oath not to bear arms again; honourable or humiliating departure, and so on. Generous terms might allow officers to march out with their horses and weapons, their men fully armed and their colours flying, all with freedom to return home. Harsh terms might deny all such recognition of the honour of the defeated, stripping them of arms, colours, clothing and cash, imprisoning them, or forcing them to march away humiliated before the public gaze. At Colchester, the royalists had lost their chance for generous terms.

On 19 August, Norwich and his officers at last conceded that they must seek surrender negotiations, but they did not like the terms that Fairfax now offered. On 24 August, they sent out the 'lowest conditions' they would accept. These would have been generous at the best of times and it is hard to believe that they were serious. In response, Fairfax declared that their past refusals 'disengaged' him from any obligation to repeat his earlier generous offers, and he unleashed another bombardment of 'great shot' on the battered town.[12] The royalists still haggled, insisting that they wanted honourable terms not demeaning conditions, but Fairfax was immovable and Norwich had nothing to bargain with.[13] Finally, at about 10 o'clock at night on 27 August, commissioners for both sides signed articles of surrender.

By the treaty - all the terms of which had been clearly defined in the exchanges between the parties - all officers of the rank of captain and above must surrender to mercy, which was defined as a surrender to the lord general or his deputy 'without certain assurance of quarter so as the Lord General may be free to put some immediately to the sword if he see cause.' Junior officers and men surrendered to quarter, which was defined as 'Quarter for their lives', freedom from wounding or beating, warm clothes and suitable food. In practice, it was unofficially explained, this meant that soldiers could expect 'to have their skins whole, though stripped of all their outward apparel'. The royalists had, however, won one concession. The initial proposal, that senior officers surrender to the mercy of the lord general and parliament, was modified so that they were now to surrender to the lord general alone. This was no mere quibble. It kept prisoners who surrendered to mercy, so royalists later argued, under military jurisdiction and protected them from charges that parliament might choose to bring.[14] Fairfax's defining codicil to the surrender treaty, however, spoke with two tongues. While it explicitly stated the general's right 'to put some immediately to the Sword, if he see Cause', it also declared his intention to surrender the 'generality' of senior officers to the 'Mercy of the Parliament'.[15] He thus retained his claim to summary justice in the short term while handing later and general jurisdiction to parliament. His assurance that he could be trusted to treat prisoners with his customary civility must have been cold comfort.

At eight in the morning of 28 August, royalist guards around the town were replaced by Fairfax's men. Weapons were collected and officers and men gathered in the places assigned in the surrender treaty. Fairfax was to receive a list of all senior officers by nine a.m., and by eleven o'clock lords, 'Gentlemen of Quality' and senior officers were to be present at the King's Head 'to render themselves to the Mercy of My Lord General'.[16] The last stage had begun. At two in the afternoon, Fairfax rode into Colchester. He viewed the royalist lines and 'shew[ed] himselfe in triumph' to the defeated soldiers. Then he repaired to his quarters and called a council of war.[17] What followed was the most notorious event of the siege - indeed one of the most notorious and controversial of both wars.

A colonel was dispatched from the council to the captive officers at the King's Head. They expected a visit of courtesy, but instead he brought a message that Sir Charles Lucas, Sir George Lisle, Sir Bernard Gascoigne and Colonel Farr were to return with him to the council. Lucas, suspecting what was to come, took solemn leave of his fellow prisoners, and he, Lisle and Gascoigne left them. Farr had escaped. Soon a message came to the King's Head asking for a chaplain, 'which strook a dead sorrow in to the hearts of all'. The three officers were to be summarily executed. Fairfax and his council had condemned them in absentia. They

had 'past their doom without ever calling the convicted to the Court, or Bar. A new unheard of way, of condemning men in our Nation'.[18] Unfortunately we have no record, as far as I know, of the proceedings in the council of war. We do know, however, what went on at the King's Head, for we have the record of one of the officers present, the young royalist quartermaster Matthew Carter. In his account, the themes of martyrdom and unprecedented illegality are already in place.

The court martial had also condemned Norwich, Capel and Loughborough. Loughborough too escaped, but Fairfax reserved Norwich and Capel for the judgement of parliament. It was more suitable to try them by civil jurisdiction, he said, because they were 'considerable for estates and family', unlike Lucas and Lisle, who were 'mere soldiers of fortune and fallen into our hands by the chance of war'.[19] He may well not have wished to offend the members of parliament's residual House of Lords by the execution of two peers. The reasons for the choice of Lucas are clear enough. He was commander of the horse and one of the inner royalist command group; he was held responsible for the royalist presence in Colchester; Fairfax believed that he had broken his parole; and once the decision had been made to kill him, other justifications could readily be discovered, such as accusations of harshness to the people of Colchester and earlier killing in cold blood. Lisle, a commander of foot and, though young, a European veteran, was Lucas's 'constant Loyall' and 'dearest friend'. He too was accused of breach of parole, and was 'a great cause' of burning the town's houses. He and Gascoigne, however, belonged to the second level of command, unlike Lucas, Norwich and Capel. It was clear from the outset that Lucas, Lisle and Gascoigne were to be exemplary victims. They were the 'Persons pitched upon for this Example' said Fairfax; they were an 'example of justice' said a newsletter.[20] They were hurried from the council of war to the castle. There Commissary General Ireton told them to prepare to die. Lucas demanded to know 'by what Law they were to dye, or whether by an Ordinance of Parliament, by the Councell of Warre, or by command of the Generall?' Like other Englishmen in the civil war, he clung to legal distinctions and appearances of legality, and in doing so raised the issue of parliamentary jurisdiction as opposed to military law or a commander's arbitrary choice. Ireton evaded the issue, citing the authority both of the council of war and of a parliamentary order of 20 June that all found in arms were to be proceeded against as traitors.[21] This reversed the understanding reached in the first civil war that captured enemies would not be executed as traitors.

Lucas asked unavailingly for a respite until the next morning, to settle his affairs in this world and prepare for the next, 'that I might not be thrown out of the world with all my sins about me'. Lisle too asked for 'a little respite' to write to his father and mother, which was also denied. They were at least granted the comfort of Capel's chaplain. Ireton left them and they prayed and received the sacrament. Lucas's prayers, according to Carter, were leavened by 'zealous expressions and heavenly ejaculations'. Gascoigne, a Florentine, also prepared to die and asked to make his confession, but this led to 'much Expostulation and Discourse', for the chaplain provided objected to auricular confession. At last he was accommodated by conversation with another chaplain, and all three prepared for death.[22]

From the time of their arrival in the castle yard we have an extraordinary eye and ear witness account of the events, recorded in the hand of young William Clarke, secretary of the General Council of the Army. It remained unknown to historians until the effective discovery of the Clarke papers late in the nineteenth century. Sober, unvarnished and detailed, it provides a verismo counterpoint to the more florid heroics of Carter and his fellow royalists. The constant in both is the courage and dignity of the victims.

Lucas declared himself guiltless of wrongdoing, but he lamented the shortness of the time granted for repentance, 'for the best of us all hath not liv'd such a life but he does deserve a longer time of repentance than I have now'. A minister assured him that repentance that was 'true', even though short, was acceptable to God. There followed a long personal conversation between Lucas, Gascoigne and Lisle. At one point, Lucas turned to the parliamentary officers to ask how they were to die, and a captain confirmed that they were to be shot, as was 'most proper to soldiers'. Their honour would not be insulted by death by hanging, the lot of common soldiers. Lucas responded with a black joke: 'With all my heart, shoote mee out of a cannon when they please'. Essentially though, the three victims talked together of sin and repentance in the face of death, of comfort to family and friends, of duty and love to the king, and of comradeship, affection and support for one another. 'Come, my heart', said Lucas to Gascoigne, 'I need not cheer you up, I know your chearfulness by my owne'. There were flashes of reflection on their own natures. 'I do not profess myself a rhetorician att all', said Lucas, as he tried to express his piety and loyalty. Lisle comforted himself that it was God's will, '[t]hough I don't beleive in predestination'. They acknowledged sinfulness but unshakenly defended the righteousness of the actions that led to their deaths. In extremis, they revealed the nature of their royalism. At its core were service, allegiance and love. Lucas sent his 'duty' to his 'Prince and 'Master'; Lisle hoped for the king's return to his throne and 'bes[ought] God to send all happinesse which is due to so just, so good a man'.[23]

When Lucas asked by what authority they were to die, Ireton replied that it was dual: they were condemned as traitors by parliament, but in the context of Colchester and their exception from quarter, the authority was military. Lucas now begged leave as 'a dyeing man ... to speak'. This produced an harangue from Ireton repeating, not altogether lucidly, his previous argument. Lucas next appealed to the laws of the kingdom. 'Sir', he said, 'this is a very nice point to take away a man's life when there is a law in the

kingdome, which truly I must plead'. He claimed legitimacy for actions done under commission from the king, and he added the curious claim that the royalists had only yielded under constraint and therefore had a right to trial. Ireton, not unreasonably, dismissed the latter argument. At this point, Lisle intervened with an appeal to conscience, warning that the council of war would have to live with their decision and that they should 'consider what it is to take away a man's life in this kind'.[24] Ireton, however, was unstoppable. Ignoring Lisle's intervention, he reverted to the laws of the land, but effectively reversed himself for he now declared that it was 'a certaine rule, that among armes the lawes are silent'. The exchanges - on the relative spheres of military and civilian law, and on the relation of justice and mercy - continued. Ireton's only concession was to admit that he was not an expert on the law of arms. Discussion reached a dead end with irreconcilable assertions of legal treason and legal loyalty.[25]

Lucas was now resigned to his own fate, but he asked that his life might 'satisfy' for those of Lisle and Gascoigne. Lisle intervened on his own behalf. 'I have given many hundred men quarter', he said, but the argument had no weight. The friends prayed and embraced, and Lucas prepared to die 'like a soldier'. He remembered his friends, asked forgiveness where it was due, begged for decent burial with his ancestors and - recalling recent orgies of destruction and desecration in the family vault in St Giles - that they might 'from henceforth lye in quiet'. He prayed that vengeance would not fall on his killers and made his last request, 'When I shall [fall] lay me downe decently ... Oh Father, Son and Holy Ghost, receive my soule'. He knelt to pray, then rose with a 'cheerful countenance', opened his doublet and showed his breast, put his hands at his sides and called, 'See I am ready for you, now Rebells do your worst'. The six dragoons allotted to the task fired and 'he was suddenly dead'.[26]

Lisle's death followed immediately. Clarke gave it half a sentence. It was left to others to celebrate the 'heroick ... untroubled, undaunted' end that smote 'his Enemies ... with horror, though not with compassion'. He had been taken aside so that he should not see his friend fall. Now he was brought to the place and saw his body 'dead and bleeding on the ground'. He knelt and kissed it, Carter recounted, 'sobbing forth a funeral Elegie in many sweet Characters of his peerlesse and unspotted honour'. He stood up, took five pieces of gold from his pocket (all he had) and gave one to the executioners and the rest to a gentleman nearby as a last legacy for friends in London. He spoke of father, mother and friends, and then addressed the spectators: Oh! How many of your lives here have I saved in hot blood, and must now my self be most barbarously murdered in cold ... I dedicate my last prayers to Heaven, and now Trayters do your worst'. He urged the musketeers to stand closer. When one replied, "'I'le warrant you, Sir, Wee'll hit you': he Answer'd smiling, 'Friends, I have been nearer you, when you have miss'd me'. Thereupon they all fired upon him, and did their work home, so that he fell down dead of many wounds without speaking word". Thus fell, concluded one chronicler, 'these matchlesse twins of valour, and payre of glorious martyrs'.[27] It is not surprising that their deaths became the stuff of instant legend.

The Italian Gascoigne now prepared to share his friends' fate. As he stood ready with 'his doublet off', he was suddenly reprieved. Carter, less interested in a survivor, noted perfunctorily that he 'was reprieved out of the consideration that he was a stranger to the Kingdome', and this seems to have been the generally accepted explanation. A professional soldier, born Bernardo Guasconi, Gascoigne already had a history of distinguished military service to the king. It was said that when Fairfax learned he was Italian, he was reprieved lest his countrymen be tempted to take vengeance against English travellers in Italy. Another explanation offered was that his 'faire' conduct in the past towards parliamentarians now won him mercy.[28]

We now have our martyrs, but before turning to the creation of the myth we may look briefly at the fate of the other senior officers. In the evening after the executions, Fairfax sent a message to the apprehensive royalists at the King's Head that he now assured them of 'faire quarter as Prisoners of warre'.[29] The fates of the survivors were various. Gascoigne lived to be arrested as a trouble-maker in London in 1649 and then to be an active royalist on the continent in the 1650s. After the Restoration, he received a pension, became a Fellow of the Royal Society, and died in 1687. Farr, already a renegade from parliamentary service and hence a man whose execution by his former colleagues would have raised no objection under military law, survived and prospered, helped by influential friends. Loughborough, although recaptured, lived to compound for his estates and to conspire against the regime in the 1650s. Norwich and Capel, whom Fairfax handed over to parliament, were tried by a parliamentary tribunal in 1649, with their fellow peers the Earl of Holland and the Duke of Hamilton, for their parts in the second civil war. Of the four, only Norwich escaped, saved by the casting vote of the Speaker of the House of Commons to whom he had done past kindnesses.

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The summer and autumn of 1648 were a time of uncertainty and anxiety. There was a widespread sense that society was on the edge of chaos, and the bitterness of royalist defeat, parliamentary divisions, fear of radicalism, distrust of former allies and desire for retribution against treacherous enemies all combined to heighten the polemical stridency that had marked the siege and that persisted in the months that followed.

The literature of Colchester both reflected and contributed to this febrile atmosphere, and continued to shape memory for centuries. Civil war polemic was normally overheated, but it exhibited a particular desperation in 1648. Parliamentary rhetoric of blood,

breach of faith and individual atrocities paled, however, beside the royalist barrage. This is not surprising. The weaker and losing side needed more heartening, and royalist writers were masters of spin. They enthusiastically employed the weapons of abuse, scorn and ridicule. They reported terrorisation of women in childbed, playing on an ancient taboo; they spoke of torture and death by pressing; they titillated readers with *ad hominem* attacks that accused parliamentarians, individually and collectively, of physical, social and sexual failings: they were ugly or unhealthy, they were racially or socially inferior; they were sexually incontinent. Throughout the siege, the most persistent attacks had been directed against Fairfax, only to grow in venom in its aftermath. He was gouty, swarthy and a cuckold; he was unprofessional and cautious to the point of cowardice, and he acted from 'Vindictive spleen' and 'bloudy inclination'.[30]

This royalist fervour was invigorated by the execution of Lucas and Lisle, but the language of satirical abuse gave way to that of moral and legal outrage. For royalist polemicists, it was never other than murder in cold blood, for which no excuse or palliation could be offered, and Fairfax became a serious moral villain. Against the perfidy and cruelty of parliamentarians were set the loyalty and spotless valour of the victims, whose fate acquired Christ-like echoes. In one version, Lucas was tied to a pillar before being 'cruelly butcher'd'. In another, Fairfax, like Pontius Pilate, offered a hesitant defence of the victims before abdicating responsibility to the vengeful Ireton and Rainsborough.[31] They created the memory of Colchester as a history of martyrdom, to which the actual characters of the victims were irrelevant. Lisle, indeed, seems to have been widely admired for his personal as well as professional attributes. His nature was 'soft ... and ... gentle', he was 'kind to all and belov'd of all', he had no enemies, and he inspired complete loyalty in his men, by whom he was so 'infinitely belov'd and observ'd' that 'no Man was ever better followed'.[32] Lucas was a more difficult character. Clarendon did not care for him, finding him rough, proud, abrasive and taciturn but he conceded that he was 'as good a Commander of Horse ... as the Nation had' and that his men willingly followed him into battle. Although he was no 'rhetorician' and 'persuasion was not his talent', he could inspire followers; on the way to Colchester 'his eloquence was so prevalent' that it was enough to alter the 'humours' of doubtful Essex countrymen and win their support for the royalists.[33] In fact, however, the past character of the victims had little to do with the myth of their martyrdom, which depended on the commitment to the royalist cause that they shared with the writers, the wickedness ascribed to the villains, and their unflinching and principled courage.

The chorus of horror began with the royalist newsletters, which became the basis of successive narrations. *The Loyall Sacrifice* of 1648 owed much to *Mercurius Pragmaticus*, and Carter, Clarendon and a shoal of lesser writers in turn drew on their accounts. A stream of *Elegious Poem[s]*, indifferent in quality but passionate in feeling, embroidered on their themes. Their language was that of 'torrents' of 'Loyall Blood', of 'butchering true, spotlesse Innocence', of 'wad(ing) in Blood and div(ing) in gore', of 'bleeding honour', and of the contrast between the exemplary honour of the undaunted martyrs and the shame of their judges, who had 'murther'd [their] own honors', and no longer merited 'the Souldier's Name'.[34] It was above all the language of murder, of killing in cold blood men who had surrendered, of mercy promised and withdrawn, of betrayal of the codes of war, and thereby of the soldierly honour of Fairfax and his officers. The accepted military meaning of surrender to mercy played virtually no part in this discourse, which insisted on crime and illegality, and on the barbarity of the denial of mercy in its colloquial sense. In a sermon composed - though not delivered - for the funerals of Lucas and Lisle, and printed within weeks of their deaths, the author recognised that there was in fact a military meaning. As his title explained, Colchester had surrendered 'upon Tearmes of Mercy', for 'by the necessity of war (they were) forced to put themselves upon the mercy of their enemies', but in a conscious play on multiple significances, the sense shifted: 'indeed *the mercies of the wicked are cruel*'.[35] The themes of royalist outrage were to vary little over the years.

The facts of the matter got short shrift in the construction of royalist memory. Bishop King, the most accomplished of the commemorative poets, acknowledged the existence of a treaty entered into that governed the surrender, and by implication he too recognised a dual definition of 'mercy', but he dismissed both treaty and semantic duality as a cheat: 'Rendring up to Mercy [was] the snare'. Mercy, 'though fair promis'd', had become faithless and 'barb'rous slaughter' worthy of the Turks. Another work, *The Famous Tragedie of King Charles I*, cast in dramatic form, called on the authority of the laws of war, and implied that there were circumstances in which a general had power to execute, but the author denied that they were applicable here, insisting that all had surrendered to quarter.[36] Even these elusive and guarded recognitions of treaty and law were exceptional, and furthermore posited the false premise of an assurance by Fairfax of clemency to Lucas and Lisle.

Most writers were untroubled by legalistic details. The false premise, unquestioned, lay behind the standard loyalist accusation of tyrannical and arbitrary action:

> Say *Tyrants*, say, was't not a shameful strife
> To send a *Death*, after a promis'd *Life*
> If this be *Mercy*, Heav'n protect us all
> From such a *Mercy*, so *tyrannical* [37]

To 'cruelties immense', barbarity, perversion of mercy, perfidy, dishonour and abandonment of compassion were added accusations of tyranny and overturning the 'course and current of the Lawes'. Parliament's claim to stand for liberty and the laws was

exposed as a fraud, and the royalists, through the deaths of their martyrs, shown to be the party not only of loyalty but of the rights and protections secured by the law. Fairfax's treaty was 'a Cheat', and his claim to have exercised military justice a pretence. Posterity, like the authors, would 'pronounce Crimes to be Crimes'.[38]

In 1656, John Evelyn summed up the received wisdom - although with a new primary villain - when he visited Colchester and recalled that Lucas and Lisle 'were barbarously shot & murdered by *Ireton* in cold blood & after rendission upon articles'. By 1656, too, Carter's assertion that grass would not grow where the martyrs had fallen was accepted 'as a kind of miracle', and indeed the site was still bare in 1662.[39] With the Restoration, martyrdom became official. In 1648, Lucas and Lisle had been privately buried in St Giles' church, long associated with the Lucas family. In June 1661, their funerals were magnificently solemnised with full civic honours and a black marble slab was laid over the vault. It proclaimed that they 'were ... by the command of Sir Thomas Fairfax, the General of the Parliament army, in cold blood barbarously murdered'. According to tradition, and in one of the many ironies of civil war, the Duke of Buckingham, a royalist insurgent in 1648 but now married to Fairfax's daughter, approached Charles II to have the epitaph erased. Lord Lucas, Sir Charles' brother, agreed to abide by the king's decision, so long as he could replace the original inscription with another that declared that Lucas and Lisle had been 'barbarously murdered for their Loyalty to K. Charles I and that his son K. Charles II ordered this memorial of their loyalty to be erased'. He made his point and on the king's order, so it was said, the original epitaph was carved in as deeply as possible.[40]

In time, the story of the deaths of Lucas and Lisle lost its supernatural elements. By 1724, Defoe noted that the story that grass would not grow had been dropped, and Colchester's sceptical 18th-century historian, Philip Morant, dismissed it as a 'vulgar notion'. The phenomenon was explained, he said, by 'the great resort of people to see the place'.[41] That great resort is, however, revealing of public interest and memory, and Morant himself was hardly neutral. The harm Fairfax had brought to the town, he said, would render his name 'for ever odious and detestable'. Fairfax's painstaking elucidation of the distinction between mercy and quarter was summarily dismissed: 'This is a strange kind of Mercy; Military Mercy'.[42] Morant was quite right, but not in the sense that he intended.

Fairfax, although defensive about his actions, never changed his mind about their legitimacy. In his 'Short Memorials', he noted that the terms at Colchester were not exceptional. If he was to be questioned for the articles of surrender there, he said, he might 'as well be questioned for the articles of Bristol, Oxford, Exeter, or any other action in the war'. Not only did Colchester's articles conform to the recognised laws of war but the meaning given to their terms was conventional: 'delivering upon mercy is to be understood, that some are to suffer the rest to go free'. He had acted according to his commission, and the 'trust imposed in me'. Significantly, when the 'Short Memorials' were published in 1699, his defence of the 'justice' of his proceedings was omitted.[43]

Fairfax had in fact to walk a tricky path in 1648, for he had on one hand to explain to members of parliament the military conventions governing surrender, and on the other to reassure them that the army was not attempting to usurp parliament's power. He attempted to balance claims for army autonomy in military matters, including jurisdiction over prisoners, against acknowledgement of the sovereignty of parliament.[44] The problem of the proper relations between army and parliament was to loom large in the near future. It was new to England, and it had broad constitutional and legal significance, but it did not interest royalist polemicists. Nor, except accidentally and indirectly, did questions that engaged then and still engage theorists of the laws of war, whether unwritten as in the 17th century or internationally codified (for what that is worth) as in our own day: what are the rights of the prisoner of war and the obligations of his captors? how are claims to 'human rights' to be captured in legal language and process? and, indeed, what is a war crime? Then, as now, the answers are not always benign.

Instead, ignoring theory and, usually, the facts, the memorialists created a story that helped to shape the 'romantic' image of royalism. Martyrdom, by its nature, is the last refuge of losers. The defeated in this world are victors in the next. Their name liveth for evermore, and both comforts and justifies the losers left on earth. What may start as myth - the implausibly perfect virtue of the victims - becomes historical memory, and embodies the ideal qualities of a whole cause. After 1648, the 'Loyall sacrifice' of Lucas and Lisle embodied, for royalists, the loyalty and courage of those who fought for the king, and the cruelty, irreligion and lawlessness of their enemies. The myth of their martyrdom, I would suggest, had even less to do with the compromises and calculations of the Restoration state than did the greater martyrdom of Charles I, but it had an inspiring and nostalgic charm for the pious high Anglican and high Tory, and has helped to shape the popular conception of the 'cavalier'.

The passions the episode aroused did not die, and partisanship and 'heated and angry recriminations' persisted.[45] In 1876, a speaker at a meeting of the Archaeological Institute at Colchester found the deaths 'one of the very few cruel and unnecessary deeds which disgrace(d) our civil wars', while a paper that actually defended the legality of the executions and impugned the characters of Lucas and Lisle provoked such 'strong feeling' and 'insults' that a 'very painful scene' ensued.[46] In 1894, J H Round, the great medievalist and a son of Colchester, contrasted 'the shuffling and shifty Fairfax' with the 'dauntless martyrs'.[47] Fairfax had his defenders, including Carlyle, S R Gardiner and C H Firth, but for many Lucas's death remains a martyrdom and his execution a murder.[48]

Yet despite the success of the martyrdom narratives and the passions they fed and spread, this martyrdom did not have long-term political effects. With the Restoration, it was no longer necessary to make so much of the evil of the victors of the civil war, who had now in their turn become the defeated. There was indeed a broadside class of 'royal martyrs', of those who had died nobly and sometimes unjustly in the cause, but the published lists seem to have had the dual function of memorialising the loyal dead and of nudging the authorities towards grateful benefits to their families, rather than of creating a cult or nurturing revenge. Lucas and Lisle were remembered, but their myth did not have the lasting political power and resonance of the Irish martyrs of 1916 - and not just because they did not have a Yeats to memorialise them. This fact and the reasons for it can tell us much about the processes of post-war and post-Restoration reconciliation in England.

Potent as the memory of martyrdom was, its power was to prove limited. It did not become a 'foundation myth' or one that shaped future politics. In part, this was because, once the royalists finally won in 1660, it was not needed. But I would also argue that the cultivation of such myths was recognised as counter-productive. It was more important to preserve the links and institutions that had survived civil war than to foster divisive memories that could lead to a return to war and blood. This was, as we have seen, a world in which Fairfax's daughter married one of the insurgents of 1648 and Colonel Farr prospered under both Cromwell and the restored Stuarts. The memories were not forgotten, but they could not be allowed to dominate the policies of the state. In 1661, the Duke of Albemarle could argue that it was worthwhile to make a deal with the parliamentarian Sir Arthur Hesilrige in order to prevent 'engaging in blood' and endangering the Restoration.[49] By 1685, when John Wallis, the mathematician, was accused of collaboration in the war years, he not only denied the charge but also raised the question 'whether it [was] now proper to repeat what was done above forty years ago.'[50]

Modern Colchester's stance is ecumenical. A monument stands in the castle grounds on the place where the martyrs fell, but streets named for Lucas, Fairfax and Cromwell lie cheek by jowl, and Lisle is near at hand. There is a certain irony in this shared secular beatification of these two imperfect patterns of martyrdom and their nemeses.

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Endnotes

1. Compare Eden Naby and Richard N. Frye, "The Martyr Complex", *New York Times* 14 September 2003: "the war memorials in Europe and North America don't list martyrs, but those 'killed in battle'. In the Middle East, however ... shihad is today used for any man who falls in battle". The authors link this generalised attribution of martyr status to the religious character of war against the "infidel". The case of Lucas and Lisle exhibits a comparable assimilation of the secular to the religious. An article by David Rohde in the same issue of the *New York Times* reveals the similarities between 17th and 21st-century machinery for publicising martyrdom.
2. John Walter, *Understanding Popular Violence in the English Revolution. The Colchester Plunderers* (Cambridge 1999), chs 3 and 4
3. Quoted ibid., 74; HMC *Twelfth Report. Appendix. Part IX*, "Beaufort MSS" (London 1891), 22-3
4. East Sussex Record Office, Danny MS 99
5. A full account of the siege will appear in *War in England*, now in preparation
6. *Colchesters Teares: Affecting & Afflicting City & Country* (London 1648), printed in *The Clarendon Historical Society's Reprints* (series I, Edinburgh 1882 - 1884), 489-90 [13-14].
7. Ibid., 492 [16]
8. Worcester College, Oxford, Clarke MSS, v. 114, f.72v. The 'draught and graines' were the residue or lees left after brewing.
9. B. Donagan, "Codes and Conduct in the English Civil War", *Past and Present,* no. 118 (Feb. 1988), 65-95, and "Atrocity, War Crime and Treason", *American Historical Review*, 99 (1994), 1137-66, passim.
10. *A Diary of the Siege of Colchester by the Forces under the Command of His Excellency the Lord Generall Fairfax* (London 1648) n.p., 28 June, 5 July, 15-16 August: HMC, *Thirteenth Report. Appendix. Part I Manuscript of the Duke of Portland* (London 1891), 483.
11. After the execution of Lucas and Lisle, a parliamentarian newsletter noted, 'This is the first example of Justice that ever was shewed in this kind (since the first and second war) by the parliaments party, though it be according to the rules of war (in submitting to Mercy)'; it cited an earlier (but hardly parallel) royalist precedent. *A True and Exact Relation of the taking of Colchester Sent in a letter from an Officer of the Army* (London 1648), 3. 'The manner of taking the Lives of these worthy Men was new and without Example', said Clarendon. Edward Hyde, Earl of Clarendon, *The History of the Rebellion and Civil Wars in England* (Oxford 1702-1704), 3.138.
12. Worcester College, Clarke MSS, v. 114, ff.63-65 69-69v; BL Harl. MS 7001, ff.189-189v; M. C[arter], *A Most True and Exact Relation of That as Honourable as Unfortunate Expedition of Kent, Essex and Colchester* (n.p. 1650), 182: *True and Exact Relation of the Taking of Colchester,* 1-2.
13. Throughout the siege, the royalists had one significant bargaining chip; they held as prisoners in Colchester the members of the parliamentary committee for Essex, including a leading M.P., Sir William Masham. They refused parliament's anxious efforts to arrange exchanges, hoping to use the prisoners as a lever in negotiations, but Fairfax showed - from the committee's point of view - a lamentable unwillingness to be blackmailed into either easing the siege or mitigating surrender terms in order to ensure their release.
14. Worcester College, Clarke MSS, v. 114, ff. 70-70v; BL Harl MS 7001, f.189v; HMC *Twelfth Report,* 'Beaufort MSS', 30; John Rushworth, *Historical Collections of Private Passages of State* (8 vols, London 1680-1701)7. 1244-47 (misnumbered).
15. Ibid., 7.1247.
16. Ibid., 7.1244.
17. C[arter], *Most True and Exact Relation*, 191-2.
18. Ibid., 191-5
19. Bodl. MS Fairfax, v.36, ff 6-6v
20. *The Loyall Sacrifice: Presented in the Lives and Deaths of those two Eminent-Heroick Patternes, For Valour, Discipline and Fidelity; The generally beloved and bemoaned, Sir Charles Lucas, And Sir George Lisle* (n.p 1648) 76; Rushworth, 7.1243; *True and Exact Relation of the Taking of Colchester,* 2-3.
21. C[arter], *Most True and Exact Relation,* 195; *The Clarke Papers,* ed. C.H. Firth (two vols in one, London 1992) 2.34-35. Clarke's account begins at the point of their 'first coming into the Castle yard', ibid. 2.31, but some of his passages are very close to speeches that Carter places earlier. Carter may have manipulated the order of speeches in the interest of his drama, but the

substance of both reports, the ideas expressed, and often the language, remain very close. It is unclear whether the issue of jurisdiction arose once or twice. See text below at note 24.

22. Ibid.; C[arter], *Most True and Exact Relation,* 196-7; *Loyall Sacrifice,* 76; Rushworth, 7.1242 (bis).
23. Firth, *Clarke Papers,* 2.31-34; Clarendon, *History,* 3.137
24. Firth, *Clarke Papers,* 2.35-38. The king, in accordance with the terms of his captivity, did not issue commissions in 1648; however, he authorised their issuance by the Prince of Wales. Lucas argued that he had 'fought with a commission from those who were my soveraignes', and therefore could not be guilty of treason. Ibid.
25. Ibid., 2.36-38.
26. Ibid.; C[arter], *Most True and Exact Relation,* 198; *Mercurius Pragmaticus,* no. 23, 29 August - 5 September, 1648 [Ee3v]; HMC *Twelfth Report,* 'Beaufort MSS', 27-28. Walter *Understanding Popular Violence,* 349-50.
27. *Mercurius Pragmaticus,* no. 23 (properly 24), 5-12 September 1648, F3; C[arter], *Most True and Exact Relation,* 198-9; Clarendon, *History,* 3.137. Carter's account follows that of *The Loyall Sacrifice,* 74-81; variations of rhetoric and dialogue are minor.
28. Clarendon, *History,* 3.137; Worcester College, Clarke MSS, v. 114, f.73v; *True and Exact Relation of the Taking of Colchester,* 4
29. C[arter], *Most True and Exact Relation,* 201-2.
30. *Mercurius Aulicus,* [7-21 August 1648], no. 1, 7; no. 2, 11, 13; no. 3, 21; *Mercurius Elenticus,* no. 33, 5-12 July, 1648, 256; no. 40, 23-29 August, 334; no. 41, 30 August - 6 September, 331 (bis); Demophilus Philanactos, *Two Epitaphs, Occasioned by the Death of Sr Charles Lucas and Sr George Lisle, basely assassinated at Colchester* (London 1648), 5-7: *Mercurius Pragmaticus* no. 23, [24], 5-12 September 1648, F3; *Mercurius Anglicus* no.1, 27 July - 3 August 1648, A1.
31. *Mercurius Pragmaticus* no. 23, [24], F3; *The Famous Tragedie of King Charles I, Basely Butchered* (n.p. 1649), 25.
32. Clarendon, *History,* 3.138.
33. Ibid.; HMC *Twelfth Report,* 'Beaufort MSS', 21.
34. John Quarles, *Fons Lachrymarum: Or A Fountain of Tears ... an Elegy upon that Son of Valor Sir Charls [sic] Lucas* (London 1655), 115, 119-21: *An Elegie on the Death of that most Noble and Heroick Knight, Sir Charles Lucas* [London 1648] n.p. (broadsheet); *The Poems of Henry King,* ed. Margaret Crum (Oxford 1965), 102-3; *The Poems and Translations of Sir Edward Sherburne (1616-1702),* ed. F.J. van Beeck (Amsterdam 1961), 136-7.
35. *The Triumph of Loyalty: or the Happinesse of a Suffering Subject* (London 1648), 17 and title page.
36. King, *Poems,* 103; *Famous Tragedie of King Charles I,* 23-24.
37. Quarles, *Fons Lachrymarum,* 119.
38. *Elegie On the Death of that most Noble and Heroick Knight, Sir Charles Lucas,* n.p.; King, *Poems,* 103, 105; Demophilus Philanactos, *Two Epitaphs,* 6.
39. *The Diary of John Evelyn,* ed E. S. de Beer (6 vols, Oxford 1955), 3.177; HMC, *Thirteenth Report. Appendix. Part II. Portland Manuscripts,* vol. 2 (1893), 283. By February 1652, at the time of Ireton's funeral, Evelyn already held him responsible for the executions; Evelyn *Diary,* 3.58. By 1660, his memory was shakier, for he appears to have included Capel among the immediate victims of 'the transaction at *Colchester*', who 'sufferd in cold bloude, after articles of reddition', ibid., 3.250.
40. Philip Morant, *The History and Antiquities Of the County of Essex* (2 vols, Colchester, 1768), 1.68.
41. Ibid., 167-8; Daniel Defoe, *A tour through the Whole island of Great Britain* (two vols in one, London 1974), 1.16. In the early 18th century, 'the grass was kept from growing "by art"', as a tourist attraction. Walter, *Understanding Popular Violence,* 336-7, note 22.
42. Morant, *Essex,* 1.69.
43. BL Harl. MS 2315, ff. 11-12.
44. Worcester College, Clarke MSS, v. 114, f.89v, and see Firth, *Clarke, Pepers,* 2. xiii-xiv. Rushworth, 7.1303-04, gives a confusing variant reading of the last sentence of the relevant passage.
45. J.H. Round, "The case of Lucas and Lisle", *Transactions of the Royal Historical Society,* n.s. 8 (1894), 157.
46. Ibid., 159, 165.
47. Ibid., 180.
48. See e.g. Walter, *Understanding Popular Violence,* 332; P.R. Newman, "The King's Servants: Conscience, Principle and Sacrifice in Armed Royalism" in John Morrill, Paul Slack and Daniel Woolf, eds, *Public duty and private conscience in seventeenth-century England* (Oxford 1993), 241: cf. C.H. Firth, "Fairfax", *DNB*; Thomas Carlyle, *The Letters and Speeches of Oliver Cromwell,* ed. S.C. Lomas (3 vols, London 1904), 1.348.
49. Kingston Lacy, Bankes MSS, no foliation.
50. Magdalene College, Cambridge, Pepys MS 2646.

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Thomas Edwards's Essex: evaluating *Gangraena*[1]

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Gangraena: or A Catalogue and Discovery of many of the Errours, Heresies, Blasphemies and pernicious Practices of the Sectaries of this time, was published by the London Presbyterian lecturer Thomas Edwards in February 1646 and followed within the year by a second and then a third part (Edwards 1646a, b, c). These three volumes amounted to more than seven hundred quarto pages; they were bitterly controversial in the 1640s and have remained so. As his title reveals, Edwards described in horrified detail the pernicious doctrines and outrageous behaviour of radical sectaries in order to demonstrate the necessity of a strict Presbyterian church settlement and the dangers of allowing any liberty of conscience or 'toleration'. For his supporters, Edwards was a new Augustine, a 'faithful friend of truth' in the struggle against heresy; but for the radical London Independent John Goodwin, who featured largely in *Gangraena*, the books spread 'shameless untruths'. Others echoed this view, denouncing Edwards as 'the father of lyes', 'the famous forger of these latter dayes' (Jones 1646, 21; Goodwin 1646, 49; Drapes 1646, 21; *A Letter to Mr Thomas Edwards* 1647, 10). *Gangraena* Part One went rapidly into three editions while Part Two was also quickly reprinted. Edwards's works were widely read or at least much discussed. He was denounced in Milton's Sonnet 'On the New Forcers of Conscience under the Long Parliament' and his smears became an army grievance in 1647 (Woolrych 1987, 83, 92).

There are sharply divergent approaches to *Gangraena* amongst modern scholars. Many have used Edwards as evidence for the religious radicalism he condemned. For Murray Tolmie, *Gangraena* is a vital source for Independency, while Christopher Hill and Barry Reay have used it extensively as a framework for analysing more radical sectarianism. On the other hand Colin Davis and Mark Kishlansky have as decisively rejected *Gangraena* as tainted testimony, Kishlansky disavowing any reference to Edwards amongst other 'obviously biased informants' (Hill 1975, passim; Tolmie 1977, 134; Reay 1984, 14; Davis 1986, 116, 126-9; Kishlansky 1979, Preface).

Despite the impression given by its sub-title of 'catalogue', *Gangraena* was not a comprehensive or systematic treatment of heterodoxy in the 1640s. Edwards insisted from the beginning that he was concerned with those areas under parliament's control (and thus their responsibility) 'in London and the counties adjacent, in the Parliament's Quarters' (Edwards, 1646a, 2). Even within parliamentarian England Edwards was dependent on such information as came his way and inevitably most of his material concerned London. Beyond the capital Kent and Essex were the most thoroughly treated counties (Hughes 2004, Table 3.1). Letters from informants were a crucial source for Edwards who printed many verbatim in his three volumes, and his most prolific correspondent was Robert Harmar, one of Colchester's ministers. Essex therefore makes an excellent case study for exploring important aspects of *Gangraena*. We can, for example, obtain some insights into how he obtained material. Secondly, the rich sources for Essex's history can be used to address the issue most troubling to later scholars: the extent to which Edwards's accounts can be relied on. Finally we can discuss the neglected but important question of the impact of Edwards's vivid polemic.

A brief outline of the Essex material included in *Gangraena* will form the basis for these discussions. Colchester predictably loomed large - a series of alarmed letters from Harmar (Edwards, 1646a, 63-70, 2nd sequence) was reinforced by other contacts and apparently by Edwards's own visit to the town. Harmar informed Edwards in July 1645 that some in Colchester had begun to keep the Jewish sabbath as in Amsterdam 'with windows shut', but worse, 'we are gone beyond Amsterdam, and are in our high way to Munster' (Edwards 1646a, 63). Mr E. (John Ellis) the town's chief independent preacher, 'undertook to confute' Edwards's views on church government in a series of sermons justifying the gathering of independent congregations. The Lutherans and Calvinists had separated from the popish church and the Scots from English episcopalianism without being condemned, so why, Ellis asked, could English Independents not form churches? 'My heart is heavy', Harmar complained, 'my body weak, my imployment great, the Magistrates divided, my Brethren tender and delicate, loth to ingage, mischief growing on apace, what shall I do but beg your Counsels and prayers?' (Edwards 1646a, 64). A few days later Harmar offered more alarmist description of Ellis's preaching and a new threat from 'an Independent Apothecary Physitian'. This was Giles Firmin who had recently returned from New England and preached the Wednesday sermon in Ellis's place. Firmin described New England church practices in what, even on Harmar's own account, were distinctly moderate terms. Firmin quoted a Mr N (probably Philip Nye, the

Independent) to argue `how near the Independents and Presbyterians were come', and concluded with exhortations to peace. Nonetheless, Harmar insisted the Presbyterians were abused in an `unsufferable' fashion by this preaching and prayed that `God uphold our Spirits in these broken times' (Edwards 1646a, 69). Edwards also printed a set of queries presented to Colchester Independents at Firmin's sermon, arguing that Independents had broken the peace and attacked the authority of the Westminster Assembly through their gathering of congregations (Edwards 1646a, 68)[2]. In very similar vein, two weeks later, Harmar denounced Firmin as `an Apothecary Physitian of New England, who is not in orders, nor ever Preached, as he confesseth, but on Shipboard as he came over'. He acknowledged that Ellis and Firmin had visited him to declare `they should Preach controversies no more, that they desired nothing but peace, and the glory of God in this'. But Harmar dismissed these overtures as crafty `pranks' designed to get possession of `our' churches and declared `We will not be fooled' (Edwards 1646a, 69-70).

Firmin was not the only outsider to trouble the orthodox of Colchester. It was presumably through Harmar that Edwards obtained his account of the activities of a young Wiltshire man, Thomas Webbe who had become prominent in London sectarian circles and was a tireless evangelist in Suffolk, Kent and Essex. The Colchester material was thus part of a longer denunciation of Webbe's activities and opinions. In `one Sparrow's house' in Colchester, Webbe preached `severall Antinomian Doctrines; and said, I should here speak to you of other points, but that Wolves creep in among the Fold' (which Edwards took to be a reference to his own visit to the town). He also `expressed himself against all Baptisme by Water; as also, for him to say he was equall to Christ was no robbery ... This Web, also speaking with a judicious godly Christian of Colchester, said, We might not use these expressions, God the Father, God the Son, God the Holy Ghost, for that was to make three Gods' (Edwards 1646a, 74-5 (second sequence)).

Besides his accounts of Firmin, Webbe and Ellis, Edwards included more miscellaneous Colchester stories: sectaries there were apparently awaiting the imminent day of judgement, to be heralded by an earthquake, and had denounced ministers who preached against schism as enemies of God's people (Edwards 1646a, 89, 107-108). *In The Second Part of Gangraena*, Edwards recounted a stereotypical horror story of God's providential judgement on two Colchester sectaries. This small portion of text was advertised along with more weighty matters on the title page. The `learned and Godly Minister in Colchester' who had transmitted the story was again, presumably, Harmar. Still-born twins had been born to an anabaptist couple: `the one a perfect child, the other was born without a head... the Mother ... resolved heretofore, that if ever shee had any more children, they should never be baptized'. The mother's wish had thus been fulfilled, in suitably grotesque fashion (Edwards 1646b, 4-5, Title page).

Beyond Colchester, Edwards's account of Essex focused on two very different men, the relatively respectable Independent minister William Archer of Halstead, and the extremely unrespectable general baptist evangelist Samuel Oates, a Norwich weaver baptised by the London sectarian leader Thomas Lambe in 1642. An early letter in Part Two from `a learned and godly Minister in Essex' (perhaps Harmar) dealt with both. Oates, `whom you mention in your Book' had `seduced hundreds and dipped many in Bocking River' during five weeks in Essex; Archer, `preaches boldly against Parliament, Assembly, Directory, Ministery and all: I pray you let me hear whether there be any hope of light shining out of darknesse' (Edwards 1646b, 3-4). As this letter suggested, Oates had already featured largely in *Gangraena*. In the postscript to Part One, Edwards reported that on 3 February `Oats an Anabaptist and some of his fellows' had interrupted Mr Smith, the `Tuesday' lecturer at Billericay, saying to the people, `they were under Antichrist, and in Antichrists Way'. Many of Oates's company carried swords and had been later indicted for riot at Quarter sessions. The Appendix found in some editions of Part One drew on a letter of 19 February (from an Essex minister to a London minister) to describe similar activities in Bocking. `Our Magistrates are afraid of them', declared the Essex man, and hoped for some encouragement from `the courage and constancy of the Ministers and Citizens of London ... under the Parliament ... the onely instruments of our good' (Edwards 1646a, 182, 120 (*recte*, 220)).

Parts Two and Three presented Oates in a more dramatic light. `A godly Minister who came out of Essex' told Edwards how he moved from town to town, `sometimes at Tarling, sometimes at Bocking, sometimes at Braintry', preaching anabaptism and arminianism and being followed by `many loose persons of the Country ... Whoremongers and Drunkards' (Edwards 1646b, 10). A longer narrative of `one Samuel Oats a weaver who being of Lams Church, is sent out as a Dipper and Emissary' repeated the Essex itinerary with salacious detail: `This is a young lusty fellow, and hath traded cheifly with young women and young maids, dipping many of them'. Many women `were call'd out of their beds to go a dipping in rivers, dipping many of them in the night, so that their husbands and Masters could not keep them in their houses'. He charged for dipping on a sliding scale, 10s for the rich, 2s 6d for the poor, and in the process had himself `grown pursie'. One young woman, Ann Martin, had died within two or three weeks of being dipped in cold March weather. For this Oates was bound over at the Chelmsford sessions, on 7 April, and committed to jail at Colchester, as the coroner had not yet finished his enquiries; meanwhile the `great and mightie resort to him in the prison, many have come down from London in Coaches' (Edwards 1646b, 146-7). *Gangraena* Part Three recorded Oates's acquittal, and the appropriate response from the inhabitants of Dunmow who shortly afterwards `threw him into the river, thoroughly dipping him' (Edwards 1646c, 105-6).

When we move on to consider how Edwards obtained this miscellaneous information about religious conflict in Essex, the obvious place to start is with his own discussions. It was a crucial element in Edwards's 'truth-telling' techniques as a chronicler of heresy that he did not simply present his stories, but sought to validate them, to make them credible, through elaborately detailed accounts of how the material had reached him. 'A godly Minister of Essex coming out of these parts related' the story of Oates and the unfortunate Ann Martin; another godly minister told Edwards a story of Oates 'dipping' a woman and then blowing into her mouth and informing her she had received the holy ghost. His trial at Chelmsford was testified to by 'three persons that were eare and eye witnesses, two godly Ministers, and the other a Gentleman of great worth and quality' while the aftermath was recounted in 'a Letter ... from a Minister in Colchester, sent last week to a friend of his in London' (Edwards 1646b, 147-8). These respectable, godly, but unnamed figures cannot be identified, but the process described is perfectly plausible and gains added credibility from the Harmar letters. All letters were printed anonymously in Part One of *Gangraena*, but this attracted much contempt from Edwards's opponents, notably John Goodwin who alleged they were forgeries and specifically denounced the material about Ellis of Colchester: 'How his Pen hath abused Mr Ellis of Colchester, and other faithfull servants of God in those parts, with base calumnies and slanders the world (I conceive) will shortly understand (Goodwin 1646, 43-4). As Edwards had it, Goodwin 'goes on vaporing and forging in his hereticall brain certain Reasons of my concealing the names of the names of the Authors of the letters' alleging 'jugling and forgery'. Consequently Edwards disclosed all the names, adding a further letter from Harmar of April 1646, where he insisted he could justify all he had written about Ellis and Colchester, 'attested under the hands of many sufficient witnesses' (Edwards, 1646b, 52, 54-5). Edwards thus relied on material sent to him by godly informants, reinforced in the case of Colchester by his own visit to the town.

Robert Harmar had been a contemporary of Edwards's at Cambridge, although at a different college. Harmar, of St Johns, had graduated BA in 1630, MA in 1633. He had been appointed general lecturer in Colchester in the late 1630s, required to preach every sabbath and every Wednesday morning and on major festival days, receiving the substantial stipend of £100 per annum. In May 1640 he subscribed before the Bishop of London, as vicar of St Peter and St Botolph Colchester (ERO, (Colchester), D/Y 2/2, 127; GLMS 9539A/1, f 130v). Patronage of the lecture was contested between the bishop of London and the corporation for much of the seventeenth-century but most appointments in the period before the civil war were of mainstream Puritans and Harmar certainly fits this description (Webster 1997, 40-41; Walter 1999, 161-6). Why did Harmar take the trouble to write to Edwards? Religious divisions within Colchester must be an important context. Colchester had a long-standing reputation as a religiously divided town where orthodox Puritans like Harmar were troubled by both the hostility of religious radicals and the obstructionism of the 'profane'. Giles Firmin, Harmar's 'apothecary physician', complained to John Winthrop in July 1646, that 'Providence hath placed mee in one of the worst places in the kingdome for opinion' (Winthrop 1947, 89), a view that casts doubt on the picture of Firmin presented in *Gangraena*. At the election of Colchester's Mayor in 1646, the Recorder Harbottle Grimston complained that 'the unhappy jarrs and differences here at home amongst yourselves, is a greate reprooch and scandall to your towne'. He feared 'wee here in this towne are sick of the Corinthian disease; wee are rent a peeces and have wounded one another'; the Corinthians 'had abundance of knowledge, but wanted love'. In 1652, Colchester was described by its own Dutch Calvinist church, as 'consisting mostly of Independents, Anabaptists and Separatists ... the Magistracy and its Ministers and most of the inhabitants are great Independents who hate and despise even the name of Presbyterian Government', and there was, indeed, no enthusiasm for establishing classical elderships in Colchester (Walter 1999, 164). There was much to alarm Harmar then, and to incline him to seek contacts with zealous London Presbyterians. Besides his links with Edwards, he was acquainted with Thomas Cawton, a younger Puritan who had attended Edwards's Cambridge College (Queens) and was one of the most determined of all London's Presbyterian clerics. In the 1640s Cawton often preached for Harmar, 'where there was a nest of sectaries' (Cawton 1662, 19).

But why did Harmar (and the anonymous oral informants) send their material to Edwards in particular? Harmar and Edwards may have been old Cambridge acquaintances but an important further clue is found in a letter amongst the sequence about Colchester in *Gangraena* Part One, although it is not certainly from Harmar, 'though my acquaintance with you should go before my expecting any favour from you; yet since I am well acquainted with your *Antapology*, in which I see your conscience...' (Edwards 1646a, 66-67).

By 1645 Edwards had a striking reputation as a 'hammer' of sectarians and Independents, partly through his rousing London lectures, but most clearly through *Antapologia* (Edwards 1644), his published polemic against the Independents' *Apologeticall Narration*, their deliberately moderate account of their 'church way'. Ellis's confutation of Edwards's views was also presumably a response to *Antapologia*. Harmar himself had been writing to Edwards for months before *Gangraena* appeared, but Part One itself generated much of the information reproduced in the subsequent volumes. Edwards overtly solicited readers' contributions, asking them to 'communicate to me all the certain intelligence they have, of the Opinions, wayes and Proceedings of the Sectaries' (Edwards 1646a, 42); the reference above to Oates being 'in your book' reveals some of the response from Essex.

Godly networks of clerics and lay-people were of course of long-standing, nurtured through kinship, neighbourhood, university links, patronage and preaching rotas and Edwards's compilation of *Gangraena* was made possible by these complex connections, dramatically extended and transformed in the 1640s. The circulation of printed religious controversy made Edwards and his views familiar to people who had never met him. In London the parliament was in more or less permanent session as was the Westminster Assembly, a synod including clerical representatives from all the English counties, charged with reform of the church. Contacts with London were both easier and more necessary than before; they are revealed in Edwards's frequent references to material delivered by godly men from Essex (and elsewhere) while visiting London.

The men (in Essex, as elsewhere they were all men) who sent information to Edwards shared his hostility to toleration and his commitment to a strict Presbyterian settlement. They were not disinterested observers and their testimony has to be treated with caution. The lack of verifiable detail in some of Edwards's narratives, the patchy survival of sources and the sheer scale of the enterprise make it impossible to offer a full assessment of Edwards's accounts of Essex. A sample of alternative sources, printed and manuscript, personal and institutional, can nonetheless offer illuminating insights into Edwards's perspectives. The orthodox, but less committedly Presbyterian Ralph Josselin gives a very similar account of the bold preaching of William Archer of Halstead and John Ellis of Colchester. On a trip to Colchester in July 1644 Josselin had conference with Ellis whose arguments for Independency are very similar to those described in Harmar's letters: 'he told mee separacon from the true church was lawfull in some cases, as being not rightly constituted, so did Luther from the papists and yett there was a true church among them, wee from the Lutherans, whom wee owne as churches, and so the independents from us'. In March 1646 Josselin was dismayed by Archer's hostility: 'Mr Archer preachd as if the Presbyterians were all of them proud conceited persons, upon which I asking him whether he meant so, he sayd he would not answer mee, but gave mee very unkind words' (Macfarlane 1976, 20, 56).

We have already indicated that general accounts of Colchester's religious character help to explain Harmar's anxiety and, to some extent, justify his descriptions. In his printed response to *Gangraena*, Thomas Webbe confirmed that he had discussed religious affairs with sympathisers in Colchester, 'It's my delight to converse with Zions lovers, and indeed many I did converse withall while I was at Colchester, but not to any of them did I so deliver my self' - denying he had denounced the Trinity, as alleged, or that he knew Edwards was then in the town (Webbe 1646, 7-8). Webbe was not likely to confess to anti-Trinitarianism at a time when the parliament was debating a capital sentence for the anti-Trinitarian Paul Best (Tolmie 1977, 134), and his response at least indicates that *Gangraena* was not simple fabrication. 'Zion's lovers' were probably members of a long-standing 'anabaptist' congregation in the town, whose existence is revealed in Borough Court Records. This group was closely connected with the London General (or Arminian) Baptist Thomas Lambe, a soap-boiler, pastor of a notorious London congregation and energetic evangeliser in the south-east from the later 1630s (Tolmie 1977, 71, 75-8, 80-2). In 1638 it was alleged in Colchester that Lambe had declared 'he did wish that all churches were layd in the dust'; two years later Richard Lee, a tailor, urged to a congregation meeting in St James Parish, that everyone ought to reveal 'that guifte or light which hee receive from the Scriptures'. An argument over Harmar's preaching was reported to the court in October 1645. Martha Pitman, wife of a Colchester weaver, had been convinced by Harmar of the validity of fast days but Mark Hedge also a weaver, retorted that Harmar preached such 'horrable blasphemy that he could heare him noe longer' . The argument took place in the house of a woman who had recently been baptised by Lambe. (ERO (Colchester) D/B 5 Sb 2/7: 1619 - 1645, ff 280r-282r; Sb 2/8, 1645 -46, fol 2v). Thus Edwards (and Harmar) did not exaggerate the religious divisions or speculation in Colchester in any straightforward way. Indeed Edwards did not mention the indigenous 'anabaptists' except in the grotesque story of the monstrous birth, concentrating on prominent or provocative individuals such as Ellis, Firmin, and Webbe.

Similarly, Edwards's focus on the lusty and peripatetic Oates, obscures the role played by the local people who welcomed and supported him, described only as 'some of the Town of that faction' (Edwards 1646a, 182). The Quarter Sessions records, for example, do mention an attack on Smith, the lecturer at Billericay, but those convicted were local people, amongst them Joseph Salmon, cordwainer and others of Great Burstead. Also at the Epiphany 1646 sessions, Samuel Bridge and 19 male inhabitants of Great Burstead, petitioned:

> that there hath unhappily of late sprung up amongst us a dangerous sect, separating from our congregation, holdinge meetings off their owne with the admittance of all comers even in the time of publiq worshippe; setting up mechanicks for their preachers, who brand the order offe our church, ministry, & ministers as Antichristian, administering the sacrament of the supper, rebaptising men and women, venting the poyson of unsound opinions, as universal grace, abrogation of the Law, the sinfullnes of repentance, & such like licentious Errors... they have boldly attempted to disturbe us in the publique worshipp, & in the face of the congregation to quarrell att the truth delivered; to the seducing offe the people, the scandall offe many, the distraction off all, & the great indangering off the publique peace. (ERO, Q/SR 327/12, 23, 76 -78; 107; Q/SBa 2/59).

Salmon was to become notorious as a 'Ranter' in 1649/50, but neither he nor his companions rate a mention in *Gangraena*. Bridge, if he was the drafter of the petition, had a line in alarmist rhetoric that was easily the equal of Harmar's or Edwards's, but he delivered his evidence to the local authorities, not to a London polemicist.

Other sources do confirm many of Oates' activities, although in less lurid terms than Edwards's. Oates was summoned to answer at the Chelmsford sessions on 7 April 1646 for the disorder he had caused in Braintree and Bocking, but the records are silent on the matter of Ann Martin. In October he was presented for a riotous assembly at Sandon, just outside the church 'under colour and pretext of an exercise of religion' (ERO Q/SR 328/ 75, 102; Q/SR 330 Michaelmas, 6 October 1646)[3]. Two well-known Essex ministers also mentioned public disputations in 1646 with Oates. Josselin recorded a well-mannered debate over the ordained ministry with Oates in June, and about the same time John Stalham of Terling preached against Oates's arguments for universal redemption. Oates had spread his errors to Stalham's 'ordinary hearers and fellow members' and, according to Stalham, challenged him on two occasions to print his refutation, once by letter from Colchester gaol and again 'at Chelmsford Assizes to my face in the Market-place' (Macfarlane 1977, 63; Stalham 1647).

Thus Edwards did not invent any of his Essex stories and he did not simply exaggerate the *amount* of heterodoxy in Essex for he missed much local speculation and controversy even in a town like Colchester where he had good sources of information.[4] He was inevitably dependent on his random contacts, and was in any case more interested in the impact of London emissaries than in the local congregations as such. Edwards was convinced that the provinces had been 'infected' with error by vicious 'emissaries' sent out from the London churches headed by dangerous men like Thomas Lambe who spread 'Sectarisme like a universal Leprosie over-spread this whole Kingdom'. As a London lecturer Edwards had seen these trouble-makers at first hand, although it is also clear that he wrote within a historical framework derived from the sixteenth- century 'radical reformation' in which charismatic peripatetic preachers such as Sebastian Franck or Caspar Schwenckfeld had spread anabaptist and other dangerous errors throughout Europe (Edwards 1646a, 65, 93, 172; 1646b, 179). In other counties he attributed the spread of error to the evil of wicked books, but this is not a prominent theme in his account of Essex. Here as elsewhere, however, he failed to grasp that ordinary men and women through their own initiatives could develop heterogeneous ideas and independent actions, and might indeed invite men such as Webbe or Oates to preach to them.

In a crude numerical sense then, Edwards may well have underestimated the religious unorthodoxy in Essex because he saw it as a contagion from 'outside', introduced by men like Oates or Webbe with whom he was already familiar from their activities in London. On the other hand he frequently misunderstood or misrepresented the degree of heterodoxy amongst those he did highlight, as we can seen most clearly through returning to the apothecary-preacher Giles Firmin, newly returned from New England. That Firmin himself regretted the religious diversity in Colchester has already suggested doubts about Edwards's and Harmar's account. In the letter to Winthrop already quoted, Firmin criticized a fellow New England returner, the leading Independent Hugh Peter: 'I could wishe hee did not too much Countenance the Opinionists which wee did so cast out in N. England. I know he abhors them in his heart, but hee hath many hang upon him, being a man of such use' (Winthrop 1947, 89). Although Firmin was sceptical of the labels of either Independent or Presbyterian, he was in fact licensed as a Presbyterian preacher under Charles II's Declaration of Indulgence in 1672. While Edwards and Harmar denounced Firmin's (and Ellis's) peace-making overtures as 'jesuit-like', a modern scholar more credibly sees him as working for peace and godly unity. Firmin indeed claimed he had been singled out by Edwards precisely because he did not fit the radical New England stereotype (Moore, 1996; Edwards, 1646a, 68-9 (second sequence)). Edwards mentions the apparent moderation of Firmin and Ellis only to dismiss it and presents a seriously misleading, undiscriminating picture of religious unorthodoxy in Essex. Firmin and Ellis are as dangerous as Oates or Webbe. No clear distinctions are made between the moderate Giles Firmin, the beneficed Independent John Ellis, and much more radical figures such as Webbe or Oates.

It is important to move beyond an evaluation of Edwards's *Gangraena* as a source towards a broader discussion of the impact of Edwards's enterprise on religious and political divisions in England in the mid-1640s. The preaching of John Ellis in Colchester shows that Essex towns were exercised by the national, indeed trans-national debates on church government that hampered reformation of the English church throughout the 1640s. As *Gangraena* Part One came out 'Divers Ministers about Colchester in the County of Essex' wrote to the Assembly of Divines in February 1646, as their brethren of London had done some weeks earlier in the hope that 'a blessed Reformation may be endeavoured against an intolerable Toleration' (*A true copy of a Letter*, 1646, signed on 11 February and printed on 7 March). But Edwards did not merely reflect religious divisions, his work had an impact on them. The publication of *Gangraena* stimulated a significant intensification of Presbyterian networking and activism. The material included, the resulting controversy over it, and the collective activity of providing evidence for Edwards, contributed enormously to orthodox Puritan or 'Presbyterian' campaigns against error and toleration. Edwards's *Gangraena* presented in print and helped to construct in practice a union of London and provincial ministers against error. (It also of course encouraged an alliance

between the previously unacquainted John Goodwin, the London Independent, and John Ellis, the Colchester lecturer (Goodwin 1646)). Edwards's letters and stories stressed the unity of purpose amongst the orthodox, in city and country, and unmasked their common enemies, in the process helping to bring about the alliances he optimistically described. A letter printed in Part One, `lately written' (in January 1646 and probably from Harmar) claimed, `I am much comforted, and so are all with us, that pray for the peace of Jerusalem, that the City [of London] both Ministers and people, are for the greater part so united in their desire of government, and for the suppression of Schisme, that gangrens our Church and State'. On the other hand a neighbour, `One of our gravest Lecturers, (I wish I could say discreetest) hath ever since our meeting about Classical Assemblies, opened himself with much bitternesse against the Parliament; Assembly and Scottish Government, calling the Parliament stout-hearted, the Assembly a rotten company, the government Ecclesiasticall in Scotland a filthy stinking government ... Oh what promises have we had of Uniformitie in Religion, both in Doctrine and Discipline! but the sons of Zerviah are too strong for us'. Another Essex minister writing to a London colleague on 19 February 1646 about Oates at Bocking, praised, as we have seen, `the courage and constancy of the Ministers and Citizens of London' (Edwards 1646a, 101-2, 120 (*recte* 220))[5].

The Essex ministers' direct experience of sectarianism was no doubt compounded by reading *Gangraena* and other alarmist printed material. Their cooperation in sending information to Edwards was part of a wider programme of collective action, often linked to London initiatives. On 29 May 1646 at the height of controversy over a London Presbyterian remonstrance, a petition to the House of Lords from some three hundred ministers in Essex and Suffolk called for the establishment of church government, and action against separatism. The ministers described how, `Schisme, Heresie, Ignorance, Prophaneness and Atheisme, flow in upon us, Seducers Multiply, grow daring and insolent, pernicious Books poyson many souls'. They demanded action against `Scismaticks, hereticks, seducing teachers, and soul-subverting Books', and associated the orthodox of those counties with the expectations of the foreign reformed churches, the `longing desires' of the brethren of Scotland and the petitions of the Assembly and the `great City' of the kingdom. Harmar, of course, was amongst the signatories. (*The Humble Petition,* 1646).

Throughout 1648 Presbyterian ministers organized in thirteen counties responses to the London Presbyterian `Testimony' against error published in December 1647. Edwards had called for such an initiative in a call to action at the end of Part One, proposing that ministers `make a Remonstrance of all the Errours, Heresies, Blasphemies, Schisms, Insolencies, Tumults, that have been in England these last five yeers, out of all the Printed Books, publike Sermons, preachings in private Houses, discourses of the sectaries; and with a Petition humbly to present it to both Houses, with hands subscribed of all the Orthodox godly Ministers in this Kingdom' (Edwards 1646a, 165-6). Some 900 ministers signed Testimonies in these months with Essex's one hundred and thirty-two signatures the highest total for any county. The Essex Testimony was not the most decidedly Presbyterian. It confined its sharpest condemnations to the uncontroversial evils of Popery, Arminianism and Socinianism and, slightly ambiguously, judged it `most agreeable to Christianity, That tender Consciences of Dissenting Brethren bee tenderly dealt withall, yet we dare not carry in our bosomes such steely consciences and rockie hearts' as not to mourn the continuing spread of error. Perhaps its relative moderation explains its wide support. But we should also credit Edwards's *Gangraena* with a significant role in the development of Presbyterian solidarity in the face of the sectarian threat. Edwards had publicized that threat as a nationwide phenomenon and urged the orthodox to mobilize against it. We should not be surprised to find amongst the one hundred and thirty Essex signatories, two witnesses of the attack on the Billericay lecturer, Samuel Bridge, the first signatory of the Great Burstead petition against sectarianism, and, of course, Robert Harmar with two other Colchester ministers (*A Testimony*, 1648, 3) (6).

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End Notes:

1 A version of this paper was given in November 2000 at a Liverpool University seminar honouring Dr Brian Quintrell, a distinguished historian of Essex (and elsewhere) on the occasion of his retirement. I am grateful to those present and to the editor of this journal for their encouragement. My research on *Gangraena* has been supported by the British Academy, the Leverhulme Trust and the Humanities Research Board and greatly enriched by the research assistance of Dr Kate Peters.

2 Breaking the peace probably refers specifically to the agreement between Independent and Presbyterian ministers made in November 1641 at the house of Edmund Calamy, where all promised to forbear preaching on divisive issues of church government (Webster 1997, 330-1).

3 In April, Oates was described as a Londoner, while in October he was described as a weaver of Sandon. He and other local men met at the house of a William Monke, who later became a Quaker (Davies, 1986, 26).

4 For an example of troubles not noted by Edwards, see the proceedings in connection with Richard Cleyton, minister of Much Easton and member of the Assembly of Divines, who found his attempts to collect tithes obstructed throughout 1645-6 by George Phillibrowne, `a troublesom incendiary', committing `Anabaptisticall misdemeanors' (ERO,Q/SR 326, Michaelmas 1645; Q/SBa 2/57, 58, 60, Midsummer 1645 - Midsummer 1646).

5 The sons of Zeruiah [2 Samuel 3.39] killed Abner against the wishes of King David.

6 The two clerical witnesses to the attack on Smith at Billericay were Nehemiah Holmes, the more `establishment' brother of the London independent Nathaniel, and Samuel Smith of Sandon.

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Women in the marketplace in early modern Essex

Amanda Flather

To date, the picture we get from historical writing about women in the marketplace during the early modern period is rather bleak. It has been concluded that women's marketing activities were predominantly small-scale, informal and marginal to the male world of organised enterprise. According to Roberts, for example, female traders were tolerated, but treated by men with disparagement, because market women offended patriarchal notions about women's unsuitability for work outside the home. In similar vein, Shoemaker has concluded that, 'women were largely excluded from markets, where ... a large proportion of food and livestock were sold'. Economic and social historians, discussing the rise of the market economy, argue that economic change and growing regulation further narrowed women's opportunities over the course of the period, since small-scale traders were pushed out, once the market became dominated by larger scale enterprise requiring more capital investment.[1]

Although this approach is gradually being undermined, as historians begin to recognise the diversity of female experience of economic change, it is the contention of this article that women's role within the early modern marketplace is still not properly understood.[2] This is in part because empirical research is still at an early stage. It is also because the field has been dominated by research on the labouring poor and so the commercial activities of women slightly higher up the social scale has been neglected. But it is also because of historians' choice of sources. Too often the subject of female labour is approached in terms of exclusion from a male-dominated sphere, because studies tend to rely on sources such as wills, account books and tax listings, records in which women's work often went unrecorded and so its significance is missed. Whilst acknowledging that customary and legal boundaries placed women at a fundamental disadvantage, the article will argue that gender did not automatically marginalize women from involvement.[3] Research reveals important variations in women's roles, experience and power according to age, marital and social status, geography and occupation. In ways which historians have underestimated, many married women of the middling sort, broadly defined, were active as retailers and consumers, managing family businesses and directing campaigns for fair trade. Their marketing activities were multi-faceted and varied extensions of traditional female roles in a pre-industrial family economy. Their participation was expected and accepted; moreover, economic change offered opportunities as well as problems for many.

The study will attempt to elucidate these themes through sources that have not previously been exploited for research into women's involvement in marketing. They come from the ecclesiastical and secular courts of the county of Essex, from the presentments, depositions, informations, examinations and confessions of ordinary people.[4] These sources reflect ordinary people's daily life in fascinating detail and enable us to piece together information of day-to-day behaviour that allows us to move beyond the restrictive vocabulary of legal and fiscal identities, to explore the multiplicity and diversity of women's economic activities.

I

This evidence is not unproblematic. Historians have long recognised the complex mediations through which these records were composed. Some attention to the circumstances surrounding their production is necessary to make sense of them as sources. First of all, it must be emphasised that these documents vary both in content and in tone, being produced for different reasons in different jurisdictions. The depositions of the church courts were the end product of a complex series of legal procedures. The testimonies of witnesses were usually given in private to a clerk and in answer to questions posed by the plaintiff's statement of the case, technically known as a 'libel', constructed under the direction of lawyers known as proctors. Unlike other courts, there was no jury to interpret the testimonies of witnesses or litigants. Material went straight to the judge.[5] The examinations and depositions surviving for the borough courts and court of quarter sessions were slightly different. They were essentially 'verbatim' accounts of evidence given by plaintiffs, defendants and witnesses recorded by the examining magistrate before committing suspected felons or witnesses to bail or suspected felons to prison.[6]

Thus, all these documents are in some way edited and re-worked versions of the original oral testimony. This generates some problems of interpretation. In the case of the church courts, the information is filtered and potentially distorted, first by the questions constructed by the lawyers, to which witnesses responded and second, by the clerk who wrote them down. Not all witnesses, plaintiff or defendant's words were

necessarily recorded, and their testimonies were framed by legal language.[7] Equally, the magistrates who recorded the examinations and depositions of the quarter sessions and borough courts would identify which elements of the testimony were important and would prioritise information according to legal requirements. Any unnecessary details might be eliminated.[8] The pioneering work of Natalie Zemon Davis and Laura Gowing has also drawn our attention to the ways litigants themselves shaped their testimony including some details, excluding others, emphasising some points, suppressing others - to gain legal advantage.[9]

Yet these problems of distortion can be exaggerated. In the first place, censorship is not thought to have been widespread and, while testimonies cannot be taken as absolutely accurate transcriptions, many are notably individual in content, vocabulary and tone. Some depositions are clearly redrafted versions of statements provided by the plaintiff or witnesses where the description of events is ordered and repetition and inconsistencies are largely eliminated. More typically, many contain disorderly, repetitious and confused accounts of events, with additions added in the margin or at the end that look as if they were written down rapidly as they were heard.

Most importantly for the purposes of this study, what Natalie Zemon Davis meant when she argued that she had found fiction in the archives was that she had found evidence that 'authors shape the events of a crime into a story' and that the purpose of this shaping was to provide a testimony that would be believable to their readers, because the activities and patterns of behaviour were unremarkable and conventional.[10] For this reason these documents can provide us with a very useful source for the study of social behaviour. Moreover, the wealth of detail about work found within the depositions was often (though not always) incidental, rather than central, to the crux of the matter before court.

The variety of these documents, drawn from the ecclesiastical and secular courts, and dealing with marriage, family and neighbourhood disputes, as well as criminal matters, means that they introduce people from a wide social range. Some cases in the courts of quarter sessions concerned members of the gentry, although they rarely appeared in church courts business. The poorest members of society, paupers and day labourers, were equally unlikely to be appear before the Archdeacon, but they feature regularly before the justices as defendants in cases of petty crime or vagrancy. Servants and apprentices appear as witnesses, defendants and occasionally as plaintiffs in both courts. However the members of society best represented in the records of both jurisdictions were men and women of middling status - tradesmen, craftsmen, husbandmen or yeomen and their wives.[11,12]

The proportion of female litigants at the court of quarter sessions was very low due to the numerous disincentives to litigation, most importantly the law of *coverture*. There is also the possibility that women's testimony at court was less likely to be taken as seriously as men's and so women witnesses may have been called less often than men. However at the inferior borough courts and, above all, in the ecclesiastical courts, which were outside the common law, female participation was much higher.[13] Thus, although women appeared less often than men, this range of documentation reasonably represents them.

The article concentrates on the county of Essex. It does so for three main reasons. First of all our knowledge of women's involvement in marketing in the region remains relatively obscure. Second, archival evidence is rich, since depositions are extant for all jurisdictions for the period. Third, the distinctions of the local regional economy and culture, in terms of the dominance of the cloth trade and proximity to the economic and intellectual influences of London, meant that the well-attested social, economic, religious and cultural changes of the period were especially pronounced in Essex.[14] By concentrating on this county, the article offers an analysis especially sensitive to the influence of these social, economic and cultural forces. The intention is to explore how women in a particular regional, social and economic context interpreted their roles and responsibilities within the marketplace and how they responded to processes of economic and social change.

II

The first observation to make from the records is that Essex marketplaces were filled with women of all ages and social types. The market place was the geographical, as well as commercial centre, of most market towns.[15] There is no evidence in the records to suggest that access was precluded by gender, age or status. Indeed the social homogeneity of the market may explain the contemporary usage of the term 'publick' to describe these spaces. Male and female servants worked as assistants in their master's shops.[16] Errands to the market provided opportunities for meetings with friends and family or for courtship and sexual encounters in taverns and alehouses close-by.[17] Market-day crowds were attractive to pickpockets, 'masterless' petty thieves and prostitutes, hence the seventeenth-century proverb, 'going to Romford market to be new britched and new bottomed'.[18] For individuals of both sexes and all classes, from the surrounding countryside as well as the town, coming to market provided an opportunity to meet with neighbours, exchange information and news of local and national events. The social importance of the market for men and women is indicated by the fact that 15% of defamation disputes which came before the church courts during the period involving Essex litigants were staged in or near to the market and on market day. Over half of these disputes were between women.

The market place also offered religious and political diversion. By 1620, weekly or monthly sermons were established in Romford and Chelmsford on market and fair days.[19] Delivered in dramatic style by such popular

preachers as Thomas Hooker, they must have provided entertainment as well as spiritual solace. The public buildings, which stood in or beside the market, had a number of legal and political functions. In Romford the manor court was held in the market house on a Thursday, while the archdeacon's court was held in the church overlooking the high street. The assize judges on circuit and justices of the peace occupied the building in Chelmsford simultaneously known as the 'cornemarkette', the tollhouse and the 'markett Cross' during sessions. A brutal judicial public show was regularly provided by the whipping of petty offenders, men and women, at the cart's tail, 'till the back be bloody' at high market, either 'about the town' or, in Chelmsford, from gaol to market cross and back again.[20] Moral offenders of both sexes were ordered to stand for several hours in full view of the market, dressed only in a white sheet, bare-headed and bare-footed, holding a distinctive white rod.[21] The market place was also the site of recreations of several types. Bull-baiting was perhaps the most popular market day sport. Indeed it was illegal for a butcher to sell the flesh of a bull before it had been baited. In all these ways the market helped to integrate women and men into a broader cultural and social community.

But, above all, the market remained the centre of the commercial life of the town and surrounding region. The picture presented by legal records and rents paid for stalls, standings, shops and pentices in early modern Essex is of a male dominated world with very few women present, apart from a small number of widows and small-scale female traders, as Wendy Thwaites found for eighteenth-century Oxford. At the weekly market held in Billericay in 1706 and 1708 most of those who paid tolls for the more expensive stalls in the 'Markett house and Butcher's shopps' were male traders. Widow Ashcroft was the only woman who paid for a standing under the market house. Other women, such as Goody Smith, described as a 'gardiner' or Anne Goddard 'gingerbreadwoman', paid rent for cheaper, temporary 'tilted stalls' or carts.[22] In Saffron Walden in 1650, out of 34 traders who paid rent for stalls, standings or shops, 32 were men. Of the two women listed, Mrs Anne Herbert paid 1d.for her 'house' and Mary Cornell paid 2s.for 'a shopp neere the butchers row'. In 1713 a widow Powell rented two shops on butchers row, Susan Turner paid toll for a standing and a Mrs Gosuck paid rent for three stalls. Again, all the rest of the traders were men. At Grayes Thurrock in 1635, all the shops were rented to men. The only women listed were 'Joane the nailwoman' and the 'butter weomen' who paid much lower tolls for 'standings'.[23]

Yet a wealth of evidence from the depositions shows that women made many and more varied contributions to the commercial life of Essex markets than these legal listings suggest. Most consumers were women. Early modern people had no way of preserving fresh food and so married women, or their female servants, went to the market every day to shop.[24] The poor of Chelmsford in 1647, for example, petitioning in a year of dearth, pleaded that, 'when the market day comes we send our wives to the Market Crosse to buy a peck of corne, and we can have it according to a great rate'.[25] The wives of gentlemen and yeomen from the surrounding countryside also made weekly visits to market to shop, to meet friends and to catch up with news and gossip.[26]

Close inspection of the court records also reveals that many women were involved in the day-to-day running of retail businesses.[27] Some appear to have exercised more power than others. Many male traders had their wives and sometimes their daughters or female servants working with them as shop assistants. But there are also numerous examples of married women running shops or stalls, nominally owned by their husbands, but over which they wielded a good deal of day-to-day power. In early modern Essex, as in early modern Oxford, while it was necessary for businesses to be legally framed as owned and run by a man, the law was not broken if a married woman traded in the name of her husband.[28] It was often married women, for example, who reported cases of theft, indicating that they had some sort of managerial role. In 1639 Mearion, wife of John Fowler, miller of Colchester, reported that on Saturday 27 April, 'she had stolen awaie from her one bagge w[i]th halfe a bushell of wheate ... from her husbands bagges w[hi]ch then did lye under Mr W[illia]m Cooks poye ... and that they had lost divers bagges of corne dyvers tymes formerlie'.[29] In 1651, Susan Austen, wife of Edward Austen, kember of Colchester informed the borough court that, 'att the stale of W[illia]m Turner of Nailand amongst the country butchers stales [she] bought meate of Turner's wife' and afterwards had her pocket picked.[30] Elizabeth Hartley, wife of Thomas Hartley of Hadleigh , Suffolk suffered a similar fate in April 1686, 'standing at *her* stall in Colchester sellinge of meate'.[31] In 1591 Christopher Welford, 'deputy purveyor' to the crown, was indicted for 'taking 37lbs of butter worth 15s. belonging to John Grove, without the consent of Joan Grove, his wife in whose keeping the butter was, without paying anything for the same, at Romford'.[32] One market day in Chipping Ongar in 1636, there was an altercation between the wife of one Grange and Anthony Harwood. According to witnesseses 'the wordes were spoken (she the s[ai]d Grange being in her husband's shopp) and he the s[ai]d Harwood being on the outside of the s[ai]d shoppe leaning over the stall'.[33] Elizabeth wife of William Stace of Epping was clearly actively engaged in her husband's meal business. In 1707 she wrote to the county bench:

> I humbly desire you that you wold for gitt my Bisness about the Licence of William meal man of Epping. I wold have wated upon your worship but I did not know the sessions were so nigh while this day and my husbon is gon to London so I made bold to troubel your worship with these few Lines myself from your humbel servant to command Elizabeth Stace.from Epping January ye 13th 1707.[34]

Disputes between stall-keepers brought before the

courts indicate the close ties developed between market people who worked side by side, usually selling the same product. Elizabeth Wootten of West Ham, for example, was confident in her support of the reputation of Agnes Marshall, because she knew her, 'verie perfectly this 20 y[ea]res and she came first acquainted with her in regard she selleth oatemeale nere her place where this r[esp]ondent useth to sell the same commodities'. One George Fryer, who was also called as a character witness for Agnes Marshall, explained that he had known Agnes for 10 years, becoming acquainted with her in Leadenhall market where she sold oatemeal while he was selling bread.[35] Such familiarity and friendship suggest that many women who worked in the marketplace developed a sense of work identity nearly as strong as that of men.[36]

On the whole, the Essex records create a picture of a more socially mixed commercial environment than may have been the case elsewhere. Details gleaned from the court records, which refer, often indirectly, to trading activities, have been collated to provide some idea of the percentage of female and male traders present in Essex markets during the period, and the commodities that they sold. This information is presented and summarised in table 1.

Table 1 Commodities traded by men and women in Essex market places c. 1565-1720

	Wives	widows	spinsters	*u.m.s.	% female traders	men
Fruit	18%	44%	0	0	61%	39%
Eggs	33%	22%	0	0	55%	45%
Cheese	18%	18%	12%	5%	53%	47%
Butter	18%	19%	1%	4%	42%	58%
Haberdashery	14%	21%	0	5%	40%	60%
Fish	18%	8%	0	4%	30%	70%
Poultry	14%	14%	0	0	28%	72%
Grain	3%	11%	0.5%	0	15%	83%
Chandlery	1%	6%	0	0	7%	93%
Meat	1%	2%	0	0	3%	97%
Livestock	0	0	0	0	0	100%
Wool	0	0	0	0	0	100%
Hops	0	1	0	0	0	100%

*u.m.s.: unknown marital status.
Sources: ERO Q/SR 5-560; Q/SBa 2; D/AED 1-8; D/ABD 1-8; D/ACD 1-7; D/AXD 1-3; CRO D/B5 Sb2/2-9; LMA DL/C/211-258; GL MS 9189/1- 2.

What is particularly interesting is the high proportion of female traders over the whole period. Indeed the variety and extent of women's involvement is very striking. Nevertheless, it does appear, when one looks at the types of trade in which women in Essex were involved, that gender may have influenced choice or opportunity to trade in certain commodities. The livestock market appears to have been a male dominated trade.[37] Women did sell meat. Widows of butchers in Colchester were permitted to carry on their husbands' businesses.[38] But, according to the evidence from the depositions, female butchers were a small proportion of traders. The hop and wool trades were also male preserves. Since in most Essex markets by the late sixteenth century, those selling each sort of produce were concentrated in one area, in some cases only on certain days, this meant that certain sectors of the market were more markedly gendered. In Colchester, for example, the fish market was held on the south side of the high street, the corn market at the west end of the High Street, the butter market in front of the moot hall, while the butcher's stalls were at the east end. Corn was sold every day but Thursday; Wednesday was the market day for fruit, fowls and country goods; Friday was the principal day for fish, and Saturday for meat and all kinds of provisions. The wool market was held in a room above the poultry market on Tuesdays and Thursdays.[39] The St. Dennis Fair in Colchester, held on the eve and feast of St. Dennis (9 October) and on the six following days, began under East Gate and extended along both sides of the high street as far as the town well. By 1563 the fair was attended by at least 26 different sorts of traders, and orders were enacted for the organisation of those selling each sort of produce to be grouped into specific areas.[40] Similarly in Chelmsford, the butchers' shambles and the poultry market were situated on the west side of the high street, the fish and leather markets in the middle of the high street, the corn market on the east, and the cattle market on the south side of the market place.[41] In Romford in 1593 the butchers, shoemakers, glovers and smiths each had a section by the mid seventeenth century; the Tuesday market focussed on livestock and the Wednesday market on grain and miscellaneous goods.[42] We can conclude that this specialisation in the timing and topographical layout of markets meant that that the hop, livestock, meat and wool markets were predominantly male arenas.

The latter case raises interesting questions about the impact of proto-industrialisation on female status in the region.[43] Despite the importance of women's work in spinning to their families and to the regional economy, it did not improve their position in the market place.[44] Existing evidence suggests that the wool and cloth markets remained male-dominated spheres. If anything, the sexual division of labour within the industry reinforced patterns of inequality. Production in Essex operated under the putting out system and was controlled by clothiers. Most clothiers were men who controlled the organisation of the trade and were responsible for the purchase and distribution of wool. Women were predominantly employed as spinners. Unlike women spinners in Norfolk, Essex women did not generally have access to the market to buy their wool and to sell their yarn.[45] Usually clothiers' servants took wool to a village shop or alehouse to be collected by the women spinners, who spun it at home and handed it back as yarn when they obtained their next supply of wool. There are several references in the records to women delivering 'dutche worke' to houses, to shops and to inns.[46] These women were sometimes paid in

goods, known as truck, rather than money wages, a custom which further magnified the spinners' dependence on the clothier and their isolation from the open market. In 1574 the parishioners of Sible Hedingham complained that:

> William Braggs of Sible Hedingham sells oatmeal corn to poor people above the price of the market, and the poor people are enforced to take it at his price, for that said Braggs to spin, and the poor can get no money for it but as they take it out in corn.[47]

Further research into equity court records, notably the court of Requests, may reveal a larger role for women as organisers of production.[48] There are hints that some women may have had a managerial role in some businesses. In 1665 Elizabeth Hatcher, daughter of a Colchester weaver, described a journey she took from Colchester to Rotterdam, 'about makeing accomptes concerning some trade she had formerly had there'.[49] Alice Clark recounts the role of a Mrs. Cocks, wife of a clothier of Crowle, in Lincolnshire, who was a virtual manager of his business, engaging and directing her husband's work people.[50] In another case from outside the county, the wool sales of a Barnet glover and woolman were arranged during his absence in Norfolk by his wife, who herself travelled to Harborough Fair to meet him with news of her bargaining.[51] There are also cases of embezzlement in the records that show independent, if illicit, female trade.[52] But overall, evidence suggests that the sexual and spatial division of labour within the industry in Essex effectively barred women from access to large-scale trade in wool and cloth.

In Essex, however, unlike Oxford, the corn market was not entirely male dominated. 15% of references referred to female grain traders. Women seem to have dealt in a narrower range of types of grain than men, trading predominantly in meal and wheat, oats, barley and malt. They also mostly operated on a smaller scale. A significant proportion of female grain traders were listed as mealwomen.[53] The great majority, 80%, were widows and probably small scale traders, although apparently mealmen and presumably women could become quite prosperous.[54] Sarah Strutt of Chelmsford, variously listed as a widow, miller and mealwoman, was involved in dealing in meal and wheat of reasonably substantial quantities.[55]

Yet just as the corn market was not an exclusively male trading area, the poultry, butter, cheese, fish and fruit markets, traditionally regarded as a female preserve, were not exclusively female spaces. The nostalgic picture of an early modern small produce market generally depicts a semi-casual, small-scale affair, dominated by the wives and daughters of countrymen who travelled to town every week to sell their surplus butter, eggs and poultry. But in reality many different types of traders of both sexes were involved in these areas of the market. It is hard to tell how typical this region was in comparison to other provincial areas in the country.[56] The proximity of the London market probably attracted more small and large-scale male dealers in poultry, eggs, butter, cheese, fruit and fish to the markets of Romford, Chelmsford, Braintree, Epping and Colchester than may have been the case in other parts of the country.[57] Essex women's involvement in these commodities did not disappear despite an apparently more masculine presence. Women dominated the cheese market, comprising 53% of traders. They had a strong hold on the butter market, comprising 42% of traders, and they predominated in the sale of eggs and had a significant hold on the fruit, fish and poultry markets. (table 1).

A complex combination of factors - age, marital and social status, occupation and location, determined that some women had a closer and more regular connection with the market than others. The predominance of married or widowed women traders is striking in the records: 33% of vendors of fish and 18% of cheese and butter traders were married women (table 1). Most market women were the wives of craftsmen or husbandmen. Margery Towles, who sold butter in Chelmsford market, was married to a husbandman; Elizabeth Smith and the wife of Anthony Dent, who sold butter in West Ham, were the wives of labourers.[58]

There were also geographical as well as social distinctions. Female fruiterers predominated in the fruit-growing area around Chelmsford. Women from the dairying district around Epping or the marshlands on the coast had a more major involvement in the butter and cheese market than their counterparts in corn-growing areas further north around the Rodings. Norden refers to women in parts of Essex and other counties adjacent to London selling their surplus milk, butter, cheese, eggs and fruit in the capitals' markets in the early seventeenth century.[59] Almost 40% of references to female traders in cheese and butter involved women from Loughton, Epping, the Theydons, or from Leigh, Rochford or Rayleigh. The lucrative profits offered by the proximity of the London market also meant that these women were prepared to travel further and more regularly to market to take advantage of regional price differences.

An analysis of distances travelled by men and women to market, (table 2) shows that the average journey for both sexes was no more than ten miles. Women from the dairying districts in the south and east, on the other hand, regularly rode fifteen miles to London to sell their produce every week during the summer. It was the regular habit, for example, of Anne Sibley, wife of William Sibley of Theydon Garnon, Malen Clark, widow of Lambourne and Jane Casse, wife of Richard Casse, husbandman of Stapleford Tawney, to ride up to London, 'in the somer tyme to sell commodities'.[60]

Table 2 Distances Travelled by Essex men and women to market c. 1565-1720

	0-5m.	6-9m.	10-19m.	20+
women	57%	21%	10%	12%
men	54%	16%	15%	15%

Sources: ERO Q/SR 5-560; Q/SBa 2; D/AED 1-8; D/ABD 1-8; D/ACD 1-7; D/AXD 1-3:
CRO D/B5 Sb2/2-9; LMA DL/C/211-258; GL MS 9189/1-2.

Differences imposed by region, occupation and social status also created contradictory experiences of processes of economic change. The intensifying activities of official authority undoubtedly made trading increasingly difficult for some women. Regulation of the crowded open areas of the market used by small-scale traders became stricter during the difficult economic conditions of the late sixteenth century. Innumerable orders and by-laws were passed to limit where, when, and how goods were to be sold. Penalties and procedures for trade in Romford and Chelmsford market were elaborated and enforced around 1596, as the numbers of stall-holders were restricted and petty trading was moved away from the central market area.[61] At Halstead in 1585, stallholders were forbidden to set up stalls in the market house, 'to the nuisance of sellers of victuals'. In 1586, 'all having removable stalls' in Epping High Street were instructed to carry them away at the finish of the market, or on the following Sunday, to stop their being a nuisance to the inhabitants.[62] Similar orders were issued in Chelmsford against moveable fish traders, and leather stallholders. Fish-sellers were fined 6s. if they threw straw under their stalls or if they left behind a stinking heap of fish guts.[63] Petty traders were regularly prosecuted for obstruction of the highway, for using false weights, or for selling unwholesome food.

The interests of small-scale retailers of both sexes were damaged by this kind of increased regulation. But, as Ian Archer has argued, women's dominance of this area of the market meant that they were especially and adversely affected.[64] Yet the court records nonetheless illustrate that growing restrictions did not mean that *all* women left the market entirely or had no impact on economic development. Change had positive as well as negative effects. The commercialisation of the regional economy, stimulated by the proximity of the growing London market, as well as the expanding army of industrial workers employed in the cloth industry, generated possibilities as well as problems for women. A significant proportion of the growing number of professional provisions dealers variously listed as 'badgers, higglers, kidders, laders and carriers' of corn and other foodstuffs, supposed to be licensed by the county bench, were female.[65] Symptomatic of the growth of private marketing, these traders purchased produce principally at markets, as well as farms and estates, and took it back to their villages where they set up 'shop' informally in an open space. They are well described by David Rollinson as the early modern equivalent of mobile shopkeepers. Some 22% of individuals involved in this type of dealing in corn, butter cheese and eggs, brought to the attention of the courts during the period, often for operating illegally, were women. The marital status of 36% of the women is unknown; 37% of women were described as widows, 27% were married. Interestingly, however, 10% were single, providing evidence of opportunities offered by the trade for female independence.[66]

Many customers of these mobile shopkeepers were concentrated in the urbanised parishes close to London. In 1707, for example, two men and eight women, seven described as widows and 'badgers, laders and carriers of corn', were brought to the attention of the courts for trading without a licence. Two of the women were from West Ham, three from Barking, one from Woodford and three from Dagenham. But female traders also operated out of isolated villages where significant numbers of poor cloth working households no longer produced their own food, and purchased most of their produce.[67] In 1651, for example, the inhabitants of Blackmore petitioned the court of quarter sessions to plead for the widow Jane Parkis to be allowed to continue to trade, 'being remote from anie markett [and to] the benefitte and ease of the poore'.[68] A similar plea was made by Alexander Cakebread of Tollesbury in 1637 on behalf of his wife, 'being known to have vended certaine commodities to ye great benefit and ease of ye poorer sort of people who cannot so well spare ye time to go to marketts 7 or 8 miles of said place'.[69]

The proximity of the London market also encouraged women from the suburbs nearest to the capital to travel further into Essex to buy up produce to take back to London. Women from Plaistow, West Ham, Barking and Walthamstow were regularly brought before the courts with their male trading counterparts for engrossing Essex markets in buying up of poultry, butter, cheese and eggs.[70] Trade was often on a relatively large scale. Judith Townsende, for example, widow of West Ham, was indicted in 1599, for engrossing 20,000lbs of butter worth £300 at Brentwood market, with intent to 're-sell the same', presumably in London.[71] In 1647 the inhabitants of Chelmsford and Moulsham complained that characters such as Goodwife Fisher and Goodwife Canan of West Ham were prepared to travel over 20 miles to buy 'a horseload of butter, corn and eggs every market day' to carry away to London to re-sell.[72] In 1590 John Webster's wife of Romford was indicted for forestalling at Chelmsford market, 'in buying of wheat in great somes of mault'.[73] The Websters were professional and sometimes illegal, grain dealers. That same year John Webster bought 320 bushels of malt and wheat in the markets of Brentwood and Ingatestone for a total price of £47, later bringing the same back into the markets of Romford, Chelmsford, and Brentwood for sale at a higher price.[74] Later, in 1696, Margaret Thorpe of Prittlewell and Sarah Dowsell of Braintree were brought to the attention of the authorities because, 'between the 17 September and ... 6 October [they] bought and engrossed in Braintree market, divers quarters of wheat'.[75] Both women were also indicted for keeping false weights in their premises at the market.[76] One 'Mrs. Day of Altoupe Rouding' proved an even more persistent offender. She was indicted for attempting to by-pass Chipping Ongar market altogether, 'for refusing to get her malt in the market place of Ongar and carrying it to an inn yard and [for having] sold it before the bell did ring'. More dramatically, on two further occasions, she was prosecuted for selling wheat 'to the

value of 5 seames' and a 6 further 'seames' of malt 'violently in an inn yard'.[77]

Records of merchants who acted as shippers of commodities out of Essex ports during the seventeenth century, provide glimpses of female involvement in larger scale marketing. Between 1592 and 1693 the Maldon port books record details of 1728 cargoes of various types including grain, tobacco, cheese, butter and coal. Of these 20, that is 1%, were shipped in or out by female merchants. At least 8 of these were widows who had been left in charge of the family business. In 1597 Johanna Saywell widow of Burnham shipped out 20 firkins of cheese and butter to London to supply 'the navy of the Queen'. Over the next year she shipped three further cargoes of cheese and butter of a similar size. In 1643 Suzanne Paynter of Maldon shipped out £100 worth of cargo including wheat, oats, and pears. [78] Whilst the numbers of women involved was relatively small, and their business activities of these women apparently only lasted for one or two years, we might speculate that the women's involvement was more continuous but remained hidden, when they were not in formal or overall charge.[79]

Women were vendors of ready cooked food in the markets of cloth-producing towns of north and central Essex, catering for young migrant workers who had neither time, space nor equipment to cook for themselves.[80] They worked in, or ran, small retail outlets, supplied by the market and having close ties with market trades. Women comprised 34% of commercial bakers, 17% of grocers, and 24% of victuallers brought to the attention of the court of quarter sessions during the period.[82] They also owned and/or ran several of the inns, taverns and alehouses located close to the market place. At the end of the sixteenth century, women owned four of the inns, which served Chelmsford market. Elizabeth Brown ran the Cock Inn on the east side of Chelmsford High Street, while the Three Arrows was owned and run by the widow Thomasine Monk.[83] The Swan in Colchester was owned and run by a Mrs. Maynard, and Margaret Thunder of Romford was an innkeeper and brewer in Romford during the 1560s and 1570s.[84] The Blue Boar Inn in Barking was owned by William Barfoot in 1630, but his wife Francis helped run the business on a daily basis.[85]

It should be emphasised that it is not the purpose of this discussion to present a picture of a 'rough and ready' economic equality between men and women in the marketplace or to try to locate the elusive 'golden age' of women's work in the early modern past. The records of the courts demonstrate that although conditions for working women in Essex markets were not uniformly grim, male and female experience was not the same. The inferior physical strength of women, as well as their gender, could put them at a disadvantage in confrontations with men. A dispute over a false measure provides an example. In 1609, Rose Hearse, a poor woman living in Maldon, walked around eight miles each week to Chelmsford to sell oysters and fish. She accused a fellow dealer, Benjamin Fynche, of using false weights. According to Fynche she threw 'durte and other filthe in his face,' whereupon he beat her, accused her of being mad and drunk, and had her put in the stocks.[86] There is also evidence to support Michael Roberts's impression that the popular association between market women and sexual immorality could restrict women's freedom of movement and ability to trade. Derision was probably part of daily experience. In 1610 Bridget Newton of Brentwood, speaking of Mary, the wife of John Redriffe, said, 'the puritaine his wife was occupied under a stall'.[87] Anne Poos slandered Mary Rogers in Witham in 1723, saying she 'was common and wolde lie down in the market place'.[88] Proverbial wisdom taught that market women were the most garrulous and gossipy of all of womankind. The weaker sex was warned that when they scolded, they were like 'so many butter-whores or oyster-women at Billingsgate'.[89]

However, while not wishing to underestimate the negative impact of insult, it is important to make a distinction between the alleged language used in libel and slander and what the dispute was actually about.[90] Local conflicts over trade were often at the root of defamation; moreover the women who were most likely to be involved in this type of litigation were not marginal to the local community. They were probably significant actors within local society, well integrated into local networks of work and sociability.[91] The participation of women in this type of controversy indicates that the market was central not marginal to their material and social world. As such, the place they occupied in it was vitally important to them. The ferocity with which they fought to defend their public status reflected and reinforced their social and economic stake in the community as traders, consumers and householders.[92]

IV

Recognition of these variations in female experience, I would argue, is also important because it changes the way that historians approach and interpret women's informal role in the regulation of trade in the pre-industrial past. The significance of women's involvement in this kind of campaign has not gone entirely unnoticed by historians. But attention has tended to focus on their participation in exceptional episodes of popular protest over the price and availability of grain during periods of acute economic distress.[93] The Essex records furnish several examples. In Colchester in early 1629, when a Suffolk yeoman attempted to export grain during a time of industrial slump and dearth, a crowd took grain off his cart as he went through the town. Eleven people are mentioned in the examination: four men, six women and one boy.[94] The well-documented and now well-known crowd action that occurred in Maldon in 1629, again during a period of dearth and industrial slump, provides another notable example. Two consecutive disturbances occurred in the port and were followed by differing reactions from official authority. First a group of women led by Anne Carter boarded a ship known to be bearing

grain out of the area and took the cargo before it left the port and the event passed without criminal proceedings. Indeed, local magistrates used the attack to warn local merchants against the dangers of speculation in grain and greed for profit at the expense of the poor and political stability. However, a second protest in May prompted very different reactions from authority. Anne Carter, assuming the title of captain, employed a man to write letters for her and herself toured the surrounding cloth towns to raise the support of a crowd of around 200 to 300. Collective action on this scale could not be countenanced and Anne Carter was sent to the gallows, along with two male protestors.[95]

Historians have interpreted these actions as political, since crowds were expressing political opinion and exerting political influence, even if by informal and sometimes illegal means. Nonetheless, until recently emphasis has been placed on the limited aims and impact of these protests. Scholars have tended to argue that while women's presence was important, it was more a measure of local and acute distress and a desire for a rapid resolution, than an indication of political awareness. Essentially it is argued that this form of female agency was an exceptional female intervention into a male political and economic sphere.

This interpretation is now in need of serious revision. Recent research stresses the need to see crowd actions as exceptional episodes within a process of continual negotiation between rulers and ruled around an everyday politics of subsistence. The limited forces of repression available to elites in early modern England encouraged them to avoid confrontation and to enter into negotiation over popular grievances wherever possible. This relative weakness within official structures of power also meant that hints of demonstrative violence, expressed in everyday grumbling and cursing in the market place, as well as in more formal forms of complaint such as appeals and petitions, proved effective weapons in the hands of the politically weak. That elites were sensitive and responsive to such criticism is indicated not only by their prompt punishment of offenders, but also by the active implementation of measures designed to relieve the pressures and problems of dearth.[96]

Given their integral role in day-to-day dealings in the marketplace, married women were almost inevitably actively and *continually* involved in this type of infrapolitical negotiation.[97] It is also evident that men accepted, and perhaps even expected, women to challenge them with their grievances, in some cases with positive results. In March of the crisis year of 1630, for example, two women were committed to Colchester's house of correction for 'making a Turmoill in the m[ar]ket place about the price of corn'.[98] A Dorchester widow was prosecuted the same year for a similar offence. When she attempted to buy some wheat, but found that it was all sold, she threatened, 'that yf they were served aright they should be served as they were in france to cutt holes in their bagges for that they sold to the millers'. The same woman censored the local minister John White, for his failure to ensure provision for his parishioners. She complained that, 'he did starve the Cuntry & did ioyne with the divill for mony & would be a merchant and fearmer for his profitt' adding audaciously that White's organisation of provision for New England was a devious device to disguise personal profiteering from export to Spain.[99] More seriously in March 1673, during a difficult period of down-turn in the cloth trade, a Colchester woman made a more violent threat. According to William Clarke he was driving on his cart towards the port of Hythe, when his sacks were taken by 'divers lewd people ... one Elizabeth Alston came up to him in a furious manner and said if they would be ruled by her the next yt came by w[i]th corne theie woulde be theire Butchers'.[100]

Since women were traders, it is not surprising to find that some were also targets of attack. Too often it is assumed that resentment was directed against middle*men*. Petitioners of Chelmsford, for example, against middle*men* in the dearth of 1647 complained that prices at the market were excessive because corn, butter and eggs were being carried away to London. They failed to acknowledge that two of the main targets of complaint were middle*women*, Goodwife Fisher and Goodwife Canan of West Ham, 'who each of them buy a horseload or more every market day'. They had been ordered to stay away but continued to come each week nevertheless.[101] In London in 1595, young male apprentices attacked women traders in fish and butter.[102]

More often, of course, women verbally and/or physically assaulted male traders, male officials and middle*men*. Historians have rightly concluded that women were not challenging traditional structures of patriarchal authority in these contexts. They consciously manipulated patriarchal doctrines of female inferiority and dependence to legitimise their agency.[103] But recognition that gender equality was not a conceptual or practical option in early modern society should not suppress our knowledge of, and interest in, what women *could* do. Women did raise their voices to participate actively and continually in a political dialogue with authority and in doing so, as John Walter has pointed out, in times of dearth, they claimed a right to 'criticise publicly men who officially controlled the market in food'.[104]

V

The true position of women in the early modern Essex marketplace was far more complex than literature, law and custom suggest. Social, economic and gender historians alike have tended to view women's role in marketing as secondary, and increasingly unacceptable in a male working world. By taking as representative occupational listings in legal and fiscal records, they have failed to identify the continuity and diversity of female experience or to see it in its social, economic and political context. Women's role and economic standing was very varied and depended upon a complicated interplay of several factors - age, occupation, and location, social and marital status. Married women of

middling status were intimately involved in the organisation of family businesses, and many took day-to-day charge; moreover as traders and consumers contemporaries recognised their informal economic, social and political influence and their right to wield it as they saw fit. The open involvement of these women was not exceptional or unacceptable; rather, it was a logical, and accepted extension of the traditional responsibilities of women whose families depended on their many, varied and expected contributions to their household's commercial life.

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Endnotes

1 For local studies of women and marketing, see the Bibliography below.

2 See for instance H. Barker and E. Chalus, eds., *Gender in Eighteenth-Century England, Roles, Representations, Responsibilities,* London, 1997; Amanda Vickery, 'Golden age to separate spheres? A review of the categories and chronology of English women's history', *Historical Journal* 36 (1993), pp. 383-414; Joanne Bailey, *Unquiet Lives, Marriage and Marriage Breakdown in England, 1660-1800,* Cambridge, 2003

3 Where markets were owned by lords of the manor, and not corporations, then a woman could own market rights if she inherited her husband's estate. In Walthamstow in 1590, for example, the market was owned by the widow of Edward, Earl of Rutland, lord of the manor. In Essex as in other regions, markets and fairs were regulated by a variety of different bodies. Each market had a company of market officers overseen by the clerk of the market, who regulated the purity, weights and measures of a variety of products. These officials were chosen from the male tenants of manors and burgesses of boroughs. The enforcement of market regulations was the responsibility of the manor and borough courts, although by the seventeenth century, as the importance of local courts declined, an increasing number of marketing offences came before the county court of quarter sessions. Jurors and justices in all of these courts were adult males: F. G. Emmison, *Home, Work and Land,* Chelmsford, 1991, pp. 190-1; Nigel Goose and Janet Cooper, *Tudor and Stuart Colchester,* Chelmsford, 1998, pp. 79,81, 83,111; M.K. McIntosh, *A Community Transformed: The Manor and Liberty of Havering, 1500-1620,* Cambridge, 1991, pp. 151-2. For a general account of the regulation of markets by local authorities, see A. Everitt, 'The marketing of agricultural produce', in J. Thirsk, (ed.), *The Agrarian History of England and Wales, IV. 1500-1640,* Cambridge, 1967, pp. 486-8.

4 The core sources of the study were all extant presentments and witnesses' depositions made at the archdeaconry courts of Essex, Colchester and the bishop of London's commissary in Essex and Hertfordshire between 1580 and c. 1720. All extant Essex witnesses' depositions made at the bishop of London's consistory court between 1580 and 1720 were also examined, together with a sample of presentments. In addition all extant witnesses' informations, examinations and confessions made between 1580 and 1689 at the Essex court of quarter sessions were looked at, together with all extant examinations made between 1573 and 1687 at the borough court of Colchester. The Maldon borough court books were sampled for the period 1557-1623. In addition, Essex witnesses' depositions made at the equity court of Star Chamber were sampled and a preliminary survey was undertaken of Essex witnesses' depositions made at the courts of Exchequer and Requests. While the issues addressed in the thesis relate to the time-frame 1580 to 1720 and evidence has been used wherever possible to examine trends within this broad chronological framework, detailed archival work has had to focus on the years from 1580 to 1680, since depositional evidence is less plentiful after these dates.

5 Martin Ingram, *Church Courts, Sex and Marriage in England 1570 1640,* Cambridge, 1997, p. 48; Laura Gowing, *Domestic Dangers: Women Words and Sex in early modern London, Oxford, 1996,* pp. 42-47.

6 J.A. Sharpe, *Crime in Early Modern England, 1550-1750,* London, 1984, p. 35.

7 Gowing, *Domestic Dangers,* p. 47.

8 J.M. Beattie, *Crime and the Courts in England, 1660-1800,* Oxford, 1986, pp. 268-271.

9 N. Z. Davis, *Fiction in the Archives,* Oxford, 1987; Gowing, *Domestic Dangers,* pp. 232-9.

10 Davis, *Fiction in the Archives,* p. 2.

11 Gowing, *Domestic Dangers,* pp. 48-53; Sharpe, *Crime in England,* pp. 94-120

12 A series of articles by Keith Wrightson discuss the problems in assessing social structuring in early modern England : Wrightson, 'The social order of early modern England: three approaches' in L. Bonfield, R. M. Smith and K. Wrightson (eds.), *The World We Have Gained: Histories of Population and Social Structure,* Oxford, 1986, pp. 177-202; 'Estates, degrees and sorts: changing perceptions of society in Tudor and Stuart England', in P. Corfield ed., *Language, History and Class,* Oxford, 1991, pp. 28-51.

13 Shoemaker, *Gender in English Society,* pp. 293-294.

14 For the classic account of these changes, see K. Wrightson, *English Society 1580-1680,* London, 1982.

15 Despite the beginnings of expansion of private trade, in Essex by 1640 there were 27 market towns, each with their official market day or days and fairs, and most of these continued to prosper until the middle of the eighteenth century: A. F. J. Brown, *Essex at Work, 1700-1815* (Chelmsford, 1969). p. 96; W. Walker, *Essex Markets and Fairs,* Chelmsford, 1981, p. 10.

16 For examples, see CRO D/B5 Sb2/7 f. 226; CRO D/B5 Sb2/7 f. 254.

17 For examples, see CRO D/B5 Sb2/5 f. 116; CRO D/B5 Sb2/6 f. 124; CRO D/B5 Sb2/7 f. 62.

18 McIntosh, *A Community Transformed,* p. 70. For examples of male and female petty thieves who operated in and around the marketplace, see CRO D/B5 Sb2/7 f. 3; CRO D/B5 Sb2/5 f. 7; CRO D/B5 Sb2/7 f.100; CRO D/B5 Sb2/9 f. 127.

19 H. Grieve, *The Sleepers and the Shadows. Chelmsford; a town, its people and its past. Volume 2. From Market town to Chartered Borough 1608-1888,* Chelmsford, 1994, p. 38

20 Ibid., p. 108.

21 ERO D/AEA 1 ff. 5, 57v.

22 ERO D/DP M (2): W. Thwaites, 'Women in the marketplace: Oxford 1690-1800', *Midland History,* 9, 23-42.

23 ERO T/A 771/1; ERO D/DB E21. See also: ERO D/DDc M139/3; C. Johnson, 'A proto-industrial community study: Coggeshall in Essex c1500-1750', (University of Essex, Ph.D. thesis, 1990), p. 111: at the Coggeshall fair of 1707, a list of 43 stall-holders includes 9 women. There were essentially two categories: one was a group who paid between 1s 6d or 2s 2d per stall and another who paid lower sums of between 2d and 8d. 4 women, all widows, rented the more expensive stalls. The remaining 5, of whom I was a widow and 4 whose marital status is unknown, were amongst those who paid lower sums

24 There were occasional references to men purchasing food for the household. For examples of men buying meat and grain for the family, see ERO Q/SBA 2/30, ERO Q/SBA 2/74.

25 ERO Q/SR 332/106.

26 For examples, see Warwick c. Marshall (1742) ERO D/AXD 2 f. 144; Rule c. Rule (1675) LMA DL/C/237 f. 334.

27 Studies of surviving wills in Essex as in other regions, prove that widows who did not have elder sons were regularly entrusted with the family enterprise, suggesting a high level of experience and competence in business affairs. Examples include H. Grieve, *The Sleepers and the Shadows. Chelmsford: a town, its people and its past, Volume 1. The Medieval and Tudor Story* (Chelmsford, 1988), p. 161. McIntosh, *A Community Transformed,* p. 136.

28 Sharpe, *Adapting to Capitalism,* p. 12.

[29] CRO D/B 5 Sb2/7 f. 272.
[30] CRO D/B5 Sb2/9 f. 61.
[31] CRO D/B5 Sb2/9 f. 188. (My emphasis).
[32] ERO Q/SR 119/40.
[33] Harwood c. Grange 1636 LMA DL/C/234 f. 173v. Further examples of defamation cases staged in 'shopps' apparently managed by married women include: Smith c. Went (1638) LMA DL/C/ 234 f.262v; Cuff c. Williamson (1702) LMA DL/C/248 f. 27v.
[34] ERO Q/SBb 40/36. One Honor Stace, spinster of Epping, perhaps a member of the same family, variously described as a mealwoman, badger, and grocer of Epping, was operating in Epping market in 1712: ERO Q/SR 42/42; ERO Q/SR 553/9.
[35] Marshall c. Bradocke (1619) LMA DL/C/226 f. 26.
[36] Mendelson and Crawford, *Women in Early Modern England,* p. 210.
[37] This was also the case in Oxford, Thwaites,' Women in the marketplace', pp. 23-42.
[38] Goose and Cooper, *Tudor and Stuart Colchester,* p. 79.
[39] VCH. Essex. Vol. 9, pp. 270, 272.
[40] CRO Man Lib Dep et Ord. 1550, 1561-1573, ff. 89v-90. 16 November 1562. Thanks to John Walter for this reference.
[41] Grieve, *Sleepers 1,* pp. 171-4.
[42] McIntosh, *A Community Transformed,* p. 146.
[43] Several historians, notably Hans Medick, have argued that in industrial regions like Essex during the early modern period, where there were extensive opportunities for work for women in the cloth trade, relationships between men and women were more egalitarian. This 'higher' female status was reflected and reinforced by women's greater access than in other regions to 'male' dominated trades and markets. Gay L. Gullickson, by contrast, has found that in eighteenth century Auffay, an area of Normandy in France in some ways comparable to early modern Essex. where individual women, rather than whole households were employed in the cloth industry, there was no comparable 'increase' in female status reflected in and reinforced by greater female access to these spaces. H. Medick, 'The proto-industrial family economy: the structural function of household and family during the transition from peasant society to industrial capitalism.', *Social History,* 3 (1976), pp. 291-315 G. Gullickson, *Spinners and Weavers of Auffay: Rural Industry and the Sexual Division of Labour in a French village 1750-1850,* Cambridge, 1986.
[44] For the importance of spinning for women in Essex, see A.F. J. Brown, *Essex at Work 1700-1815,* Chelmsford, 1969, p. 3; Sharpe, *Adapting to Capitalism,* p. 30.
[45] Clark, *Working Life of Women,* p. 107.
[46] ERO D/B5 Sb2/6 ff. 9-10; ERO Q/SR 400/131
[47] ERO Q/SR 48/61. For a similar system of payment in Southampton in 1666, see Clark, *Working Life of Women,* p. 118.
[48] Constraints of time did not permit a thorough investigation of the records of the Court of Requests, but a preliminary examination suggests that these sources would be fruitful for the study of women and marketing.
[49] CRO D/B5 Sb2/9 f. 143.
[50] Clark, *Working life of Women,* p. 102.
[51] A. Everitt, 'The marketing of agricultural produce', in J. Thirsk (ed.), *The Agrarian History of England and Wales. Volume IV. 1500-1640,* Cambridge, 1967, p. 513.
[52] In 1678, for example, Abigail Russel of Colchester confessed that she 'put out as much of her...master's yarne as did make her husband a pair of stockings and last weeke as much as knit a pair of childs stockins and stockt a paire for her selfe': CRO D/B5 Sb2/9 f. 240. For further details on embezzlement, see J. Styles, 'Embezzlement, industry and the law in England 1500-1800', in M. Berg, P. Hudson and M. Sonnescher, eds, *Manufacture in Town and Country before the Factory,* London, 1983, pp. 173-208.
[53] For examples, see ERO Q/SR 498/36; ERO Q/SR 442/35.
[54] Everitt, p. 548
[55] ERO 465/45; ERO 465/52; ERO 497/39.
[56] See for example, Bernard Capp, *When Gossips Meet. Women, Family, and Neighbourhood in Early Modern England,* Oxford, 2003, p. 53-4.
[57] For examples of male poulterers, see ERO Q/SR 42/24, 40/52, 416/3,4. For male cheesemongers, see ERO Q/SR 256/110,111, ERO Q/SR 252/132. For male fruiterers, see ERO Q/SR 482/46. For male butter dealers, see ERO Q/SR 40/49, 39/9. For male dealers in fish, see ERO Q/SR482/42; ERO 498/47; 548/15. For male dealers in eggs, see ERO Q/SR 252/137.
[58] ERO Q/SR 278/23; ERO Q/SR 537/9,10,11,12.
[59] Cited in Sharpe, *Adapting to Capitalism,* p. 94.
[60] Rogers c. Lake (1619) LMA DL/C/226 f. 26
[61] Grieve, *Sleepers 1,* p. 87; McIntosh, *A Community Transformed,* p. 146.
[62] Emmison, *Home, Work and Land,* p. 303.
[63] Grieve, *Sleepers 1,* p. 87.
[64] I. Archer, *The Pursuit of Stability: Social Relations in Elizabethan London,* Cambridge, 1991, p. 203.
[65] According to Everitt, badgers, laders, kidders and carriers only developed slowly over the century into separate commercial species: Everitt, 'The marketing of agricultural produce', p. 553.
[66] ERO Q/SR 5-560; Q/SBa 2.
[67] D. Rollinson, 'Trails of Progress. The reorientation and intensification of traffic, 1600-1800', in his *The Local Origins of Modern Society. Gloucestershire. 1500-1800,* London, 1992, p. 53.
[68] ERO Q/SBa 2/73.
[69] ERO Q/SBa 2/30
[70] For examples, see ERO Q/SBa 2/28; ERO Q/SR 118/74; ERO Q/SR 131/88; ERO Q/SR 132/46; ERO Q/SR 135/62.
[71] ERO Q/SR 146/45
[72] ERO Q/SR 332/106, 39/9, 493/65, 449/45, 132/46.
[73] ERO Q/SR 114/66. The term forestaller was applied to people who attempted to purchase privately foodstuffs before the market bell had been rung usually for the purpose of re-sale elsewhere, in particular in London.
[74] ERO Q/SR 114/65. For biographical details of John Webster, see McIntosh, *A Community Transformed,* p. 149.
[75] Engrossing involved buying up wholesale corn in order to retail it or to hoard it for resale at a higher price
[76] ERO Q/SR 491/79; ERO Q/SR 488/35b.
[77] ERO Q/SR 349/20; ERO Q/SR 332/106.
[78] Thanks to Bronwen Cook for these references and for allowing me to read her transcripts of the Maldon Port Books 1580-1693: PRO E /190/592/11; PRO E 190/593/12; PRO E 190 595/2; PRO E 190 596/26; PRO E 190 597/12; PRO E 190 598/4; PRO E 190/605/11; PRO E 122/232/12; PRO E 122/232/10; PRO E 190/611/14; PRO E 190/616/4; PRO E 190/616/2. It is perfectly possible that these female traders were avoiding the open market and trading directly with factors in London. Essex was a principal area for the supply of wheat and dairy produce to the army and navy, see Everitt, 'The marketing of agricultural produce', pp. 506-516, 519-520.
[79] Research into the significance of widows in economic life is still at an early stage. Peter Earle found that many London widows who carried on their husband's trade gave up the business fairly quickly, Earle, 'Female labour market', p. 339. Hannah Barker's study of women's involvement in the printing trade in the eighteenth century, however, provides a more optimistic picture. H. Barker, 'Women, work and the industrial revolution, c. 1700-1840', in Barker and Chalus, *Gender in Eighteenth Century England,* p. 86.
[80] Johnson, 'A proto-industrial community study', pp. 46-48.
[82] ERO Q/SR 5-560. For details of the development of the retail trade during the period, see Brown, *Essex at Work,* pp. 65-66.
[83] Grieve, *Sleepers 1,* pp. 169, 175.
[84] CRO D/B5 Sb2/9 f. 215; McIntosh, *A Community Transformed,* p. 136.
[85] Hyde c. Rook (1630) LMA DL/C/232 f. 198.
[86] ERO Q/SR 188/31, 33.
[87] Redriffe c. Newton (1610) LMA DL/C/219 f. 270.
[88] Cox c. Poos (1702) ERO D/AXD 2 f. 73.
[89] Cited in Roberts, 'Words they are women', p. 154.
[90] For examples, see Marshall c. Bradocke (1619) LMA DL/C/226 f. 26; Maynes c. Draycott (1626) LMA DL/C/230 ff. 96-7.
[91] A. Shepard, Meanings of Manhood in Early Modern England,

with Special Reference to Cambridge, c.1560-1640', (University of Cambridge Ph.D. thesis, 1998), p. 62; L. Gowing, 'Language, power and the law: women's slander litigation in early modern London', in J. Kermode and G. Walker (eds.), *Women, crime and the courts in early modern England,* London, 1994, pp. 33-4.

[92] For the significance of disputes for the strength of local ties, see J. Bossy (ed.), *Disputes and Settlements: Law and Human Relations in the West,* Cambridge, 1987.

[93] For women's involvement in food riots, see, J. Walter, 'Grain Riots and Popular attitudes to the Law: Maldon and the Crisis of 1629', in J. Brewer and J. Styles (eds.), *An Ungovernable People. The English and their law in the 17th and 18th centuries,* London, 1980; R., Houlbrooke, 'Women's Social Life and Common Action in England from the Fifteenth Century to the Eve of the Civil War', *Continuity and Change,* 1 (1986), 339-52. S., Mendelson, and P., Crawford, *Women in Early Modern England,* Oxford, 1998, pp. 380-394.

[94] Cited in, Walter, 'Grain Riots', p. 73.

[95] Ibid. p. 70.

[96] J. Walter, 'The Politics of subsistence in early modern England', in M. J. Braddick, and J. Walter (eds.), *Negotiating Power in Early Modern Society Order Hierarchy and Subordination in Britain and Ireland* (Cambridge 2001), pp. 123-148.

[97] Walter,'Politics of subsistence', pp.129,139; Braddick and Walter, 'Grids of Power', p. 40.

[98] Cited in Sharpe, *Crime in England'*, p. 79. Sharpe wrongly records 'corne' as 'coale'.

[99] Walter,'Politics of subsistence', pp.129, 139.

[100] CRO D/B5 Sb2/9 f. 271.

[101] ERO Q/SR 332/106.

[102] Thanks to John Walter for this information.

[103] N. Z. Davis, 'Women on top', in her *Society and Culture in Early Modern France,* Stanford, 1975, pp. 124-51.

[104] M. J. Braddick and J. Walter, 'Grids of power; order, hierarchy and subordination in early modern society' in M.J. Braddick and J. Walter eds., *Negotiating Power in Early Modern Society. Order, Hierarchy and Subordination in Britain and Ireland,* Cambridge, 2001, p. 40.

[105] ERO Q/SBb Quarter Sessions Bundles: Later Series, (1688, onwards) contains almost no examinations or depositions. It consists mainly of Petitions, removal papers, certified accounts for bridge repairs and other papers of no direct relevance to this study.

[106] All records were searched for references made to Essex inhabitants.

[107] All records were searched for references made to Essex inhabitants.

[108] All records were searched for references made to Essex inhabitants.

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D/ACD 1-7 Depositions 1587-1641
D/ACV 5 Visitation 1633

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Treasure in Heaven? The Social Status of Essex Clergymen, 1670-1790, as revealed through their Wills[1]

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If thou wilt be perfect, go and sell that thou hast, and give to the poor, and thou shalt have treasure in heaven. Matthew 19.21.

Edward Digby, an Essex clergyman, wrote his will in 1733.[2] He was aged 80 and had been rector of Chadwell on the north bank of the Thames for forty-three years. His will suggests that he lived comfortably. He owned 150 acres in Essex and he distributed over £500 to his legatees. Fourteen individuals are named in the will - friends, kin, other people's children, five clergymen, the lord and lady of Orsett manor and their son who was Reverend Digby's godson. Bequests, including a black horse, gilt spoons and portraits of himself and his wife, suggest he enjoyed a gentrified standard of living even into old age. In comparison with his peers, Mr Digby's situation in life was unusually comfortable for an Essex clergyman in the eighteenth century.

This paper uses 171 of the 258 Anglican clergy wills which went to probate in the Archdeaconry courts in Essex between 1670 and 1789.[3] From 1700, hardly any Essex clergy wills are to be found in the Prerogative Court of Canterbury's records.[4] The main difference between these two probate courts was to do with the size of the testator's estate. The Prerogative Court of Canterbury proved the wills of testators who left considerable goods in more than one diocese or deanery, so we would expect these to represent the wealthier testators (Hey 1996). For the purposes of this paper, I have sampled 66% of the available Archdeaconry court wills. The testators are identified by the parish where they lived when they wrote the will - and by the date on which they signed their name. So, the wills under discussion in this paper represent clergymen resident in an Essex benefice or curacy, whose executors considered their estates only required the services of the local probate court.

The Anglican Church maintained a close interest in wills. Whether or not the local clergyman actually wrote or witnessed the will, the executor had to apply to an appropriate ecclesiastical court to register it and to receive authorisation to carry out the testator's instructions (Spufford 1974, 320-334). The Archdeacon appointed local clergymen to act for him in his probate court. Parish clergy were central in the business of deathbeds, funerals, funeral sermons, burial and the process that permitted an executor to act. When writing his own last will and testament, the clergyman was constrained by the document's structure and significance just as he was when writing answers to the questions sent out before the visitation of a bishop or an archdeacon. But, whereas the answers in a visitation return often demonstrated clergymen's lack of freedom to make choices in the parish, their wills suggest that they were able to make choices in their more personal and private dealings (Pearson 2003). This ability to choose, to escape the dead hand of custom and tradition, betokened an independence and a freedom to operate without constraint that, in eighteenth-century terms, was one of the foundation stones of power and authority. In terms of wills, it expressed a power over dependents that was intended to extend over future generations, a power based on possession of property obtained from parents, from patrons, through marriage, through professional fees, financial speculation and estate management. A man's will in this period expressed an attitude to property as an emblem of status in the community and the family.

Much has been written on the church as a profession in the eighteenth century and the story has, generally speaking, been discreditable.[5] Clergy who used the church patronage system to claw their way to power, influence and the status of a gentleman brought the profession into disrepute. Pluralism and absenteeism were just two of the failings used to exemplify a greedy, uncaring, snobbish and, by extension, *unchristian* profession. However, the patronage system itself ensured that eighteenth-century clergy as a whole endured, at best, an equivocal social status. The normal career progression was slow and there was no guarantee at the outset that a secure living would be obtained. The 94 Essex clergy testators, whose careers from ordination to first benefice have been traced, served an average of six years as curate, with all that that implies for poverty, loneliness and unfulfilled desires.[6] In addition, many who then *did* achieve a benefice in Essex found their income had only slightly improved. To increase their income, some curates and beneficed clergy took on extra curacies or turned to teaching or medicine or took a career break. Some also sought extra benefices, which, if the parishes were close enough together, they served themselves. Otherwise they paid a local curate or resident clergyman to serve their extra parish. It seems unlikely that such contrivances would have enhanced their social status locally.

In order to get some measure of the relative social status of these Essex clergymen, I have also used 242 wills of the same period, written by Essex testators calling themselves 'gentleman' and 'yeoman' or 'farmer', and selected at random from the Archdeaconry Court

Wills Index (Emmison 1961). The first part of the paper compares the wills of eighteenth-century Essex clergy with these sampled wills of their farmer and gentry neighbours. The aim is to discover the extent to which the relative social status of the clergy testators can be gauged from such evidence and to uncover differences and similarities among the three testator groups. The second part of the paper will discuss the evidence of the wills in the context of what is known about eighteenth-century clergy from other sources.

Traditionally, wills begin with a religious preamble and a statement referring to burial. Until the 1750s the majority of testators in the three status groups wrote a preamble. But it was a tradition that was already declining and each testator group followed the trend. As for burial instructions, so many clergy testators wrote that they wanted no pomp or parade at their funeral that we might expect a similar rectitude on the subject of burial. However, a surprising number - around 25% - were unable to trust their executor (or, perhaps, their doctor) to manage the task properly and gave instructions that are sometimes too 'nice' in the eighteenth-century meaning of that word to be altogether nice now.[7] Given that parish clergy performed funerals regularly as part of their duties, their wish to specify conditions might be seen to be nothing more than professional interest. Clergy testators' preferred site for their own burial was in the chancel. 5% of all clergy testators specified an existing grave or vault to which they wanted their corpse to be added.[8] Others chose a particular spot in the churchyard - its west end, under the east window, against the north window of the vestry. This need to give burial instructions was very much a clergy habit. Half as many of the testators in the farmer and gentry sample specified place of burial and none gave interment instructions. If parish gentry and farmers could trust their executors to organise the funeral and burial, why were clergy so specific? Was it a territorial or a status issue? Thomas Holden minister at Tilty wrote in 1686 that he wanted "burial in my own chancel" which certainly sounds territorial. The clergy were responsible for the upkeep of the chancel and also exercised proprietorial rights in the churchyard. These rights ranged from forbidding the grazing of animals there and compelling parishioners to repair the fence, to leasing the grazing, and harvesting the produce which either grew naturally in the graveyard or which the clergyman, himself, occasionally planted there (Dymond 1999). Fancy marble slabs and tombstones, which only three clergy testators specified, were typically a piece of gentry territoriality. 30% of the clergy testators specifying special burial were sons of gentlemen or clerics.[9] However, clergy as a whole were much more likely to specify these wishes than were gentry or farmers.

My explanation for this finding, however, is less to do with territoriality than with the insecurity of the clerical profession in this period. The fact is that most of the clergy who made these burial plans were, in particular ways, insecure. The vicar of Great Sampford, James Alders, wrote in 1735, "my body to be decently buried in the parish church of Little Easton in the county of Essex *if it can be*, if not in the parish church of Hempstead by my executors hereafter mentioned". Thomas Buck of Wimbish asked for burial in Saffron Walden churchyard "if I die in the parish".[10] Most of the others who specified these details were unmarried or widowed. The likelihood is that they felt the need to empower their executor; and that they were worried that, after their death, their executor needed this kind of a boost effectively to convey the request past the wishes of the patron, vestry and the next incumbent. The clergyman's stake in the parish generally lasted as long as his incumbency and no longer. Only four referred to a family vault in an Essex church or churchyard. 61% of the sample, whose origins I have traced, were not born in Essex. Unlike gentry and the more affluent farmers whose gravestones formed little communities along the path to the church porch, the incumbent's family and descendants usually moved away or married into the trader/husbandman level of the village hierarchy. The clergyman, whose own social status was not assured, may have been making a last ditch effort for gentry respectability by specifying a special burial site.

The next section of the will generally attended to the testator's real estate - his ownership of land, houses, businesses, and leases. Hardly any of these clergymen owned a benefice and we learn almost nothing about their glebe estate from their wills. However, apart from the tithes and the glebe and the service fees, which traditionally supported the parson, some also owned land of their own. For most of the period studied, around half of the clergy testators specified real estate in their wills.[11] Wills generally record the testator's approximate economic position as it was when he wrote the document. The fact that the other half of clergy testators had no land or houses to bequeath does not mean they had always been landless; some had already given such possessions away, perhaps on the marriage of their children, some had lost property through misfortune, and some were too young to have yet inherited or invested in land. But all wills suffer from this 'moment in time' disadvantage. When the clergy real estate bequests are compared with the other two sample groups of farmers and gentry the results suggest that clergy testators in eighteenth-century Essex were less likely to bequeath real estate than were the sampled gentry and farmer testators which probably means they were generally less significant as local landowners than were their farmer and gentry neighbours.[12]

Clergy had use of the glebe which, in some parishes was a moderate-size farm, but, unlike their farmer and gentry neighbours' real estate, the glebe was not land they could pass on to their children. If they wanted to provide for their sons and daughters in this way clergy were dependent on land they bought, inherited or attained through marriage. However, only 30% of clergy testators with land to bequeath actually gave it to their children. 38% gave their remaining land holdings to their wife, sometimes making reference to marriage

bonds. 16% instructed their executor to sell their land. In some cases they had, of course, provided for their children already. But some of the clergy's land bequests have to be seen in the context of a profession that tended to marry later in life or not to marry at all.[13] Of the landholdings described in the clergy wills, only 29% lay in the home parish of the testator.[14] By contrast 50% of farmer landholdings and 52% of gentry landholdings lay in their home parish.[15] Clergy land, other than the glebe, was more likely than their neighbours' to lie outside their home parish and outside the county, which, to some extent, reflects their professional wanderings in search of a benefice. Thus Thomas Holden, minister of Tilty in the late seventeenth century, left thirteen acres in Pinchbeck, Lincolnshire "the town where I was born".[16] Henry Cook of Chelmsford, writing his will in 1710, bequeathed a farm in Northumberland tenanted by his brother-in-law.[17] Thomas Knott of Great Dunmow instructed his executor to sell "all my real estate in Ambleside, Westmoreland, and all the stock of sheep thereon which shall belong to me".[18]

Thus it is likely that around two thirds or more of the clergymen who owned land were landlords or were retaining (or losing) their interest in family land in a distant place. Most of the relevant testators named their tenants and some left them a memento. However, we should not make too much of these landholdings perhaps since over half of the 171 Archdeaconry wills in the sample made no mention at all of real estate. Thus the evidence of the wills is that clergy landholdings were, as often as not, unavailable as a basis of local social status. Whatever rental income they brought in, the tenant was often at too great a distance for the clergyman to be able to oversee his possession in the way his gentry and farmer neighbours could.

In most wills, once real estate had been dealt with, the testator turned to monetary bequests and to gifts of other pieces of personal estate, either of which might be substantial bequests or mere tokens. Joseph Massie, compiling estimates of average family incomes in England and Wales in 1759, wrote of 2,000 'superior' clergy families with an annual income of £100 and of 9,000 'inferior' clergy families with an income of £50 (Picard 2000, 205). Forty-three years later, Colquhoun's income tables similarly divided Anglican clergy into 'eminent' and 'lesser'. The average income for the eminent was £500 and for the lesser £120 (Jackson 1999). For Essex, with around 400 parishes, Massie's classification would logically suggest 73 parishes - a mere 18% - capable of satisfying a 'superior' clergyman and 327 (failing) to support properly the 'inferior' kind of clergyman. The Bishop of London's Diocesan Book, which includes Essex and covers the years from 1747 to 1761, gives what it calls the 'real value' for most of its parishes.[19] In Dengie deanery, for instance, 75% of its twenty parishes had a real value of less than £100. In Chelmsford deanery the figure was 50%. Any notion of 'superiority' was thus not only uncommon but also unevenly spread among the deaneries of the county.

Did clergy wills indicate how many of these testator clergy were of the 'superior' type, enjoying incomes of more than £100? Did clergy testators leave substantial cash bequests? Obviously, no will describes the totality of a testator's property. In addition, it was usually rewritten after a major change in the testator's economic prosperity, such as a daughter's marriage or an inheritance. Nevertheless, when compared to the wills of gentlemen and farmers, whose wills were similarly subject to personal situations at the time of writing, some interesting differences are apparent. Gentry testators, on average, bequeathed more cash than either clergy or farmers. While the average clergymen and farmer bequest for the whole period were £150 and £120 respectively, gentlemen, on average, bequeathed £331 - more than twice as much as their clergy and farmer neighbours. Only in the last decade under discussion did clergy testators leave substantial amounts of cash. If this decade is left out of the calculations, clergy testators are almost indistinguishable from farmers in this respect.[20] Not surprisingly, therefore, a greater percentage of gentry left £100 or more in their bequests. In terms of the property *ownership* basis for social status, then, as revealed through their wills, eighteenth-century clergy testators are closer to farmers than to gentry. But, in some parishes, a generous glebe farm could provide the opportunity or the collateral to step onto the property ownership ladder even though the glebe was not in the clergyman's gift. The likelihood is, then, that the archdeaconry wills do not represent many 'superior' clergymen.

It is surprising, then, to discover that consumer goods were more evident in the clergy wills than they were in the gentry or farmer wills. When the occurrence of categories of items of moveable property specified in wills - furniture, silver, books and pictures, clothing and linen - is compared, it appears that clergy compare favourably with gentry. But, when the *type* of movables is scrutinised, it becomes clear that, with books removed, clergy resemble farmers rather than gentry in the valuable goods they choose to leave to individuals. In other words, it is books alone that give these clergy testators as a group any significance as consumers. In addition, it is also clear that many of these testators saw such property as saleable rather than inheritable. There are many examples of clergy testators instructing their executor to sell property - personal as well as real estate - in order to settle debts. Books were special enough to be bequeathed as items in 25% of clergy wills. In some cases they were clearly of great personal significance, being bequeathed by title to special people as a mark of friendship and intimacy (Macfarlane 1970). Robert Asty of Dedham, for instance, gave "all my library of books to my son Robert with the shelves they stand on, excepting those English books that Ellen my beloved wife shall think good to take out of it for herself and my daughters".[21] John Brown of East Hornden left all his books including some he had lent to his son, to a loving friend and neighbour.[22] Reverend Sherman left his "polyglot bible in six volumes" to Robert Rogers, rector

of Dedham..."which I beg his acceptance of".[23] However, nine years later, Rogers instructed his executor to sell his books to pay his debts. Thomas Shaw did likewise to provide an income for his widow. So although there were a few clergy testators who expressed pride in some special, family, possessions, there is little evidence in the wills for acquisitive or consumerist tastes other than the possession of books.

Having bequeathed the bulk of their property, some testators then considered legacies to people outside their immediate and extended family. These bequests encompassed godchildren, servants, the poor and specified charities and friends. Taking the whole period 1670-1789, 42% of clergy testators made bequests to reach beyond their family in this way. This compares with 41% of the sample of gentry testators and 17% of the farmer testators. In general such bequests were tokens, rather than substantial legacies, suggesting that distinct cultural messages associated with status rather than practical assistance were being conveyed. However, within the categories of extra-family legatees, some differences are apparent which have a bearing on clergy status relative to their neighbours. For instance, around 13% of gentry and clergy testators - but only 5% of farmers - remembered servants in their will. However, this behaviour changed over time. In the last quarter of the seventeenth century, the Essex clergy testators acted like farmers, rarely remembering servants in their wills. But, from the second quarter of the eighteenth century, clergy outstripped both gentry and farmers in bequests to servants.[24] What did these bequests to servants consist of? Were they a modest memento, enough to buy mourning, or were they a substantial legacy, rewarding years of faithful service? The likelihood is that years of faithful service were an unusual achievement for a gentleman's servant in this period. Many of the clergy and gentry testators used the phrase "if she be living with me at my death", suggesting that a high turnover among servants was the norm (Vickery 1998, 135-139). Nevertheless, both types of bequest were written. Thus, while John Walford, vicar of Great Bardfield, dying in 1770, left his servant and three nurses half a crown apiece,[25] Henry Ridlington, vicar of Wethersfield, left £15 to his servant Robert Ward "being as I compute it twenty shillings a year for every year he has worked with me".[26] Philip Hatton, rector of Heydon, wrote

> "To my old servant Elizabeth Jee, if living with me at my death, ten pounds and she to be paid one year's wages at my death including what may then be due and the bed and bedsteddle in her room whereon she lays and all the furniture thereunto belonging and two pairs of coarse sheets and four old tea spoons used in the kitchen and as much household furniture as she shall select and choose to the value of ten pounds." [27]

In other words, this widowed clergyman ensured that his elderly servant would not suffer immediate want when he died. 40% of clergy bequests to servants were of this type. Farmers, as we have noted, were much less likely to remember a servant in their will, but when they did their bequest averaged £21 - more than twice the average servant bequest given by clergy or gentry. Such bequests, rare but generous, are not the status-enhancing mementoes commonly found in clergy and gentry wills, but genuine starts in life for a favoured servant. Over the period as a whole, 32% of clergy testators and 27% of gentry testators remembered the poor in their wills. But their philanthropy through this route reduced considerably from the mid eighteenth century. Farmers never approached their level and, from the beginning of the eighteenth century, less than 10% left money to the poor. So clergy testators, during this period, just like gentry, increased their bequests to their servants and decreased their bequests to the poor.

For clergymen, a much more important category of non-family legatee was *friend*. Friends were mentioned in wills either for their own sake or because they had been asked to fulfil some duty - executor, guardian or trustee for example. Around 15-20% of clergy testators mentioned friends in connexion with legacies. But friends were also engaged as executors, guardians and supervisors.[28] In addition, there were references to clergy colleagues and their families too, although the word *friend* was not necessarily linked to their names. These friends were often spread around the county. Reverend Digby of Chadwell mentioned legatees who lived in Broomfield, Orsett, Maldon, and Bradwell on Sea, and directed charitable giving in Chadwell, Burnham, Colchester and Maldon, which suggests his interest and influence was not at all parochial or restricted to Chadwell. He also named five fellow clergymen of Steeple and Maldon in the Dengie, Stock and Broomfield in Chelmsford deanery, and Stanford le Hope in Barstable deanery. The habit of leaving bequests to friends was, for my sample, consistently a clergy habit. In addition, the leaving of mementoes - items worth a guinea or less such as rings or gloves - seems to have been especially prevalent among clergy after the middle of the eighteenth century. In other words, clergymen's wills suggest that for them in particular, friendship was of especial and enduring importance. Friends were much rarer in the wills of the farmer and gentry testator sample.

So far then we have followed the general format of the wills and considered how the broad categories of bequest compared between the three testator groups. We have not yet examined how the clergyman's nuclear and extended family fared as legatees. This choice, as exercised by male property owners, is one indicator of social status and domestic style. A testator has a cultural choice and a personal choice. His culture may dictate that all children be provided for but he may nevertheless decide to favour or to punish one of his children through his will. His culture may dictate that he charitably support the weaker members of his family, household and community but he may nevertheless decide not to do so in his will. His culture may dictate that property division is the business of men but he may, nevertheless, decide to give the task to his widow. In these respects, did clergy wills resemble more closely the wills of gentry or the wills of farmers?

Around 40-50% of farmer and clergy testators only left bequests to the nuclear family - their wife, children and grandchildren. Gentry were consistently less likely to restrict their bequests to their nuclear family. Furthermore, clergy were much more likely than farmers to leave their estate to only one member of their nuclear family. Thus Zacharia Fitch of Romford, who wrote his will in 1684, left all bills, bonds, writings and library of books and the rest & residue of his personal estate to his loving son-in-law and executor, Richard Young. Likewise, Joseph Richards, vicar of Manuden, who wrote his will in 1761, specified a frugal funeral and left all to his beloved wife and executor Anna, asking her to burn his manuscript sermons. About 20% of clergy testators wrote this sort of will.[29] For farmers and gentlemen, this choice was much less common - 3% and 6% respectively.[30] 68% of these single legatee clergy wills specified no real estate and no cash and in 74 % of them, the sole legatee was also the executor. In fact, many of these simple wills were written by testators who had little of value to leave. 52% of them lived in the poorer deaneries. Either they were working in one of the many poorly endowed Essex parishes, or they were elderly and living in semi-retirement, having given most of their property away already. In a few cases they were young, unmarried and without significant property.

In summary, this cohort of eighteenth-century clergymen whose wills were lodged with the Archdeacon's probate court do not, on the whole, look much like the sample of gentlemen testators who also used the Archdeacon's court. Only in the pattern of their bequests to their servants and to the poor do these two groups resemble each other. In some respects, the clergy cohort more nearly resembles the farmer sample of testators. Clergy and farmers were alike in their tendency to leave their whole estate only to their immediate family. Their general lack of personal estate bequests - of cash and non-book valuables - were also similar, as were the infrequency with which rooms in the house were named in their wills, their declining interest in legacies to god children, and the smaller number of legatees per will. But there were also ways in which clergy testators were unique. They were less likely than gentry and farmers to leave real estate in their wills and their land was more likely to be out of the parish and out of the county. Clergy were much more likely than the other two groups to leave their entire estate to just one member of their nuclear family. Perhaps, as I have suggested, these were the less affluent testators, but they may also have been those living at a distance from their kin. 61% of the Essex clergymen whose county of birth could be traced had not been born or raised in Essex. As one testator mournfully commented "I have no relatives but those that live at a great distance".[31] Some of the others perhaps compensated for this by their anxiety to specify place and manner of burial and by the greater importance of friends and servants in their wills. Judging from results so far, it seems that, of all the three groups, the clergy had the most inward-looking domestic group in that half of them left their property *only* to their nuclear family and one fifth to only *one member* of that family. In terms of social status, the suggestion is that clergymen whose executors proved their wills in the Archdeaconry court were economically on a par with farmers, especially if they enjoyed a farm-size glebe, and were both less affluent and of less use to their wider family as testators than the gentry testators in my sample. Whatever evidence there is for a change in this state of affairs is only evident in these wills towards the very end of the period under discussion.

This is not the kind of image usually connected with the eighteenth-century clergyman. We are more likely to think of him as an academic, scholar parson as represented by the well-known portrait of Philip Morant perhaps in which his small, aquiline profile struggles to dominate an acreage of severe black cassock (Morant 1748); or, if not a scholar then a leisure-loving wealthy gentleman surrounded by the accoutrements of gentility; docile wife, sun shade, garden vista and friendly conversation. Even if he lacked the social position that wealth brought, a witty clergyman would always be accepted into genteel company. Thus we have light-hearted images - the urbane wit of Sidney Smith or Henry Raeburn's clever portrait of the Reverend Robert Walker skating on Duddington Loch, skimming past at speed while standing precariously on one leg. Alternatively there are images which are, in the words of lawyer Blackstone, 'familiar and clownish'. Examples include the satirical prints and cartoons in which the clergyman is seen succumbing to one temptation or another, or failing to excite his congregation, or dealing with the Methodist threat or extracting too much tithe money from his neighbours. Parson Woodforde's enjoyment of a good dinner, and, from Jane Austen's discriminating pen, the socially inept Mr Collins in *Pride and Prejudice* embarrassing his genteel connexions, are also vivid images that remove the clergyman from the majority of his congregation and - I would argue - from the majority of his colleagues. Most of these images are undoubtedly gentlemen or men well on their way to becoming accepted as gentlemen.

The evidence of the Archdeaconry court testators has not included many clergymen who succeeded in achieving this status. The expectation that most of the clergy testators would have been more or less indistinguishable from gentry testators has not been fulfilled. *En masse*, they have more of the appearance of poor relations. Only around 17% wrote wills similar to the wills of their gentry neighbours in Essex. The remainder varied from the impoverished curate or elderly widower living in lodgings with few possessions to call his own to the yeoman parson, itemising the contents of his barn and tool shed and worrying about his apprenticed sons and grandsons. Morant describes the predicament of inadequately funded parishes in Colchester as "not a tolerable maintenance for a clergyman" in respect of St James and as "an income not proportionate to the duty" in respect of St Peter's (Morant 1748). Given that, even in the most favoured Essex deanery, only 50% of the livings were adequately

funded and that the majority of Essex clergy were not the younger sons of landed gentry, the social status of the average parish clergyman in Essex is not adequately portrayed by fashionable ease and genteel leisure. The clergy wills are more suggestive of middle sort status and, as such, fitting Defoe's definition - "not exposed to the miseries and hardships, the labour and sufferings of the mechanick part of mankind, and not embarrassed with the pride, luxury, ambition, and envy of the upper part of mankind" (Earle 1994,142).

So, if the majority of these testator clergy were impoverished, how representative were they of Essex clergy in general? How many Essex clergy did these Archdeaconry wills represent? Essex had about 400 Anglican parishes, excluding peculiars. Visitations of the second quarter of the eighteenth century suggest that about 250 clergymen were resident and caring for these parishes either as incumbent or as curate. A sample of 72 of these clergymen reveals that the average length of time they held the benefice in which they died was 32 years. Thus, assuming an incumbency of thirty years, for the 120 years under consideration here, Essex would have needed a notional total of around 1600 clergymen to cover its parishes in the period under discussion. So the 258 wills in the ERO probably represent, at the most, 25% of Essex clergy in my period.[32] There may have been 500 or more clergymen passing through Essex parishes as curates, upwardly mobile incumbents or dying in post, their will unwritten because they were young, or without significant property or superstitious. That a large percentage of Essex clergymen were just too poor to write a will is suggested by the geographical distribution of testators. The Archdeaconry clergy testators in Essex tended to live in the central and north-western deaneries of the county. 49% of the Archdeaconry clergy testators lived in the four deaneries of Chelmsford, Headingham, Dunmow and Sampford. By contrast, Tendring, Dengie, Rochford and Barstable, four of the coastal deaneries, were home to 21% of this clergy cohort. Visitation returns show quite clearly that curates and incumbents were resident in these coastal deaneries, if not in every parish. But few were writing probate wills. For this reason I anticipate that probably the majority of the Essex clergymen whose testators did not deposit a will in the Archdeacon's court were the ones struggling to make ends meet as curates and incumbents of the poorly endowed parishes which were concentrated in the south and east of the county. These men would not have carried the status or the income of gentleman.

Defining a gentleman has never been easy. Dr Johnson defined him through his birth, his being raised above the vulgar by character or post, adding that it was a term of civility. To this we would want to add a certain income, an education, the ability to display genteel tastes and manners, and a life free of manual toil. The wills we have examined suggest that there were several reasons why many of the clergy testators were not able to pass through these hoops to gentility. Firstly, many did not possess that certain income. Secondly, many were actively farming their own glebe. There is the strong connection between clergymen and the land in the seventeenth century. A well-known example is Ralph Josselin, vicar of Earls Colne from 1641 to1683, who was a very successful farmer.[33] Alan Macfarlane identifies Josselin as being dependent on the patronage extended by two local gentry families, to the extent that "he could not have prospered without their good will". Macfarlane adds, without further explanation, that there is some evidence in the diary that Josselin's relations with the Harlakendens were composed of more than subservience and gratitude (Macfarlane 1970). Nevertheless, Josselin was not a gentleman; Macfarlane calls him a "yeoman priest". Josselin was not exceptional in this. He had many clergyman neighbours who ran small farms of their own together with the glebe of their parish. John Pruett's view, based on clergy inventories from Leicestershire, is that "most late-Stuart parsons...did farm their own glebes, though the inclination to lease may have been increasing by the turn of the century" (Pruett 1978). However, Pruett's research also reveals that 68% of Leicestershire livings were worth less than £100, which he estimated would have been an endowment of less than forty acres - comparable to the average yeoman's farm. Further research would, no doubt, reveal yet more evidence of the intimate and hands-on connection that seems to have existed between clergymen and the land in the seventeenth century and which was not compatible with gentry status in the eighteenth century. John Rule points out that 'inevitably a broad definition of an elite invites problems at the margin'. I would suggest that large numbers of clergymen were crowded into these margins. Indeed, Rule uses the late eighteenth-century diary of a clergyman - William Holland, who worked on his farm alongside his servants - to reveal the problematic margins (Rule 1992).[34]

Thirdly, whether or not he was a gentleman, the clergyman was, by virtue of his ordination, a professional man. As Penelope Corfield has pointed out, "the professions were credited with mysterious powers...by virtue of their command of professional knowledge." They challenged the existing overlapping, but competing, claims to social authority - land, wealth and titles - allowing some men who were not born into this sphere to attain it through applied education.[35] So long as they looked like gentlemen they were treated as such. But there must have been periods in the average clergyman's life when it was very difficult for him to look the part. One is reminded of the glimpse we are given of Mr Collins in *Pride and Prejudice* digging his own garden and running errands in the village for his patron, Lady Catherine. Peter Earle, writing about the middling sort of people in London, found professionals very difficult to place in the social hierarchy, simply because their incomes ranged from the obscene to the paltry while their attitudes, aspirations, family backgrounds and education were comparable. Clergymen, military men, junior lawyers, writers and schoolmasters were all in this position. Only upward mobility would rescue them from the ill-paid lower

reaches of their profession and many, including clergymen, would only achieve this aim in middle age. Earle makes the point that, to contemporaries, 'middling' had a vague social structural meaning. It also had a life-style connotation - comfortable, *educated*, polite, well-fed, respectable, exalting work yet valuing idleness, uncertain about the competing attractions of worldliness on the one hand and a moral code likely to lead to salvation on the other (Earle 1994). In the cohort of Archdeaconry testators, there is considerable evidence to support the important family connections that Essex clergy had with people of middling status and their willingness to provide their children with apprenticeships in trade. In addition, Venn gives the parental status of about half of the traceable testators and the undergraduate status of nearly 90% of them (Venn and Venn 1827). Those who could afford it were 'pensioners' during their college years, waited upon by 'sizars' who could not afford to be pensioners. Half of the sons of gentry, but only 39% of the sons of clergy, were 'pensioners'. By contrast, 20% of gentry sons were 'sizars,' while 56% of clergy sons were in this position. As we would expect, the sons of trade and farmers were much more likely to be sizars than pensioners.

This paper began with an account of Reverend Digby's gentlemanly will. If he was as secure in his social position as his will suggests, he was probably exceptional among Essex clergy of his generation. In the decade in which his will went to probate - the 1730s - twenty five other Essex parson wills also went to probate. The average total cash bequest per will for this cohort was £75 or £64 if Digby is excluded. The £535 that he bequeathed put his will into the category of Essex gentleman. Similarly, ten of the cohort, excluding Digby, bequeathed real estate, but only one or two approached a holding as large as his 150 acres. If the contents of Digby's will sets him apart from his colleagues, presenting him as a comparatively wealthy old man, was he also exceptional as a clergyman? In a visitation return written eight years before his death, Reverend Digby defines the sort of clergyman he was. He was resident in his parish, he had no other benefice or curacy but, on occasion, he helped a neighbour clergyman who was sick or away from home. Such professional loyalty to his flock was not uncommon at this date in Essex. In these respects, then, Digby, living in his one and only parish, was typical of the early eighteenth-century Essex clergyman, most of whom, whether beneficed or mere curates, lived in or very near the parish or parishes for which they had responsibility (Pearson 2003).

Thus, Reverend Digby is something of an enigma. From one angle he looked like the typical clergyman of his time, devoting his energies to the parish that supported him in church and through tithes and glebe. From another angle, being economically superior to most of his neighbours and fellow clergymen, he would have presented an untypical gentlemanly superiority. But the Archdeaconry wills as a whole suggest that Digby was not typical of his peers. More typical, perhaps, was John Bott, vicar of Arkesden who, dying in 1771, left six half crowns "to be given to the men who carry me to the grave" and "anything I die possessed of...to my servant maid Ann Norris".[36] Bott had been brought up in wealthy circumstances, the son of a London miller, and went to Trinity as a waited-upon pensioner student. But, ten years after ordination he was working as a curate in Fyfield parish. When he wrote his will, aged sixty, he still had not achieved the pinnacle of his career - a vicarage in Arkesden in one of the poorest deaneries in Essex. While he was poorer than the average Archdeaconry testator, I feel he, rather than Digby, more nearly represents the profession as a whole in Essex in the eighteenth century - the large numbers of resident incumbents and curates juggling their parish duties Sunday after Sunday, dutifully completing their visitation questionnaires and other paperwork, putting up with sub-standard housing, meagre stipend, late marriage and fading prospects in the poorer parishes whose lacklustre congregations failed to inspire best efforts.

This impoverishment and disappointment is, perhaps, what the satirical cartoons, the church monuments, the fine portraits, the renovated parsonages and the uncomplaining majority of visitation returns was screening from view. It cannot be denied that the slippery, greedy, socially ambitious buffoon remains the familiar image of the eighteenth-century clergyman. Clearly, as Penelope Corfield (1995) has pointed out, "satire was one of the most pungent forms of eighteenth century communication...foibles were liable to public mockery". But such satire was not claiming that *all* clergymen were to be mocked. It was merely alerting the intelligent consumer of the need for vigilance and also attempting to check and demystify professional power.[37] To do this, it generally chose the image of clergyman as gentleman. The Archdeaconry clergy wills are generally modest in terms of possessions, family and what might be called testator pretentiousness. But, behind each testator was around ten years of expensive education paid for by a parent who anticipated that his son would not lose - and might yet improve - the social status he had been born into. Ten years in school and college was followed by six more years as a bachelor curate attempting to catch a patron's eye while working for a meagre stipend in the depths of rural Essex. Perhaps by his early forties he would have found a suitably endowed parish, a suitably endowed young wife, assistance to gentrify his parsonage house and garden and some leisure to enjoy the fruits of his education and his social standing. The Archdeaconry wills suggest that in Essex, for most of the eighteenth century, such clergymen made up the fortunate minority.

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Endnotes

1 A version of this paper was presented at a conference entitled *From Athens to Archives* held at the University of Essex in March 2001 to celebrate the interests of Dr Arthur Brown.

2 Essex Record Office (hereafter ERO) 317BR21.

3 All can be read on microfiche at ERO. Peculiar parishes and nonconformist clergy wills have not been included.

[4] The Index to PCC Wills and Administrations (Friends of the PRO, 1998) lists 545 clergy wills for the period 1701-1749. Of these, only 7 (1%) are from Essex.

[5] A notable exception to this discreditable approach is Collins 1994.

[6] 26% waited one year, 34% two to six years and 38% more than seven years. Half of the last group were sons of clergy or gentlemen, which suggests finding a patron may not have been their first choice after ordination (Venn and Venn 1827).

[7] For instance, Reverend John Bott wrote in his will dated 1771, 'I desire my body may be kept six days before it is put in the ground if the weather will permit and the coffin to be elm' (ERO 177CR17). By contrast, John Pick, incumbent of Sandon, wanted 'to be interred soon after my decease' (ERO 266BR25).

[8] In five cases the wife's and in four cases the clergyman's parents or siblings.

[9] Just over half of the 94 clergy testators whose details could be traced were sons of gentlemen or clergymen.

[10] (ERO 381BR21 and 33MR10). Italics added.

[11] Real estate included two oyster layings, an inn and a fishing smack.

[12] The overall percentages of testators bequeathing real estate were gentry 89%, farmers 66% and clergy 48%.

[13] 25% of clergy testators were not married. This compares with 17% of the gentry and 20% of the farmer testators.

[14] Nearly half (42%) lay elsewhere in Essex; 18% lay outside Essex and 10% was of unspecified location. Only in the last of the twelve decades of the period under discussion did more than half the clergy testators bequeathing real estate own land in their home (benefice) parish.

[15] 30% of farmer holdings and 39% of gentry holdings referred to in their wills lay in Essex outside their home parish. 1% of farmer landholdings and 5% of gentry landholdings lay outside Essex.

[16] (ERO 83BR12).

[17] (ERO 267BR16).

[18] (ERO 73MR12). The proceeds were to be invested for his wife's use. He also had a reversionary interest in an estate in Sawbridgeworth through his wife's uncle.

[19] London Guildhall Library Ms 9556; Diocese Book listing incumbents and patrons 1747-1763.

[20] For the period 1670-1780, clergy testators left, on average, £116.

[21] (ERO 410BR8).

[22] (ERO 48ER25).

[23] (ERO 233BR21).

[24] Only in bequests to godchildren and to the poor did clergymen align closely with gentry or farmers. From 1700, godchildren consistently featured more in gentry wills while, from the same date, the percentage of both clergy and gentry leaving bequests to the poor or to named charities declined steadily.

[25] (ERO 206BR26).

[26] (ERO 244MR12).

[27] (ERO 580BR26).

[28] In some cases the word *friend* was linked to a task, such as supervisor or executor; in other cases a legacy was left to a named individual who was probably a friend. Such cases are not included in the 15-20% sample quoted above.

[29] In terms of their average age at death (61 years) and their average length of time in their last benefice (35 years) they are within the norm.

[30] 68% of clergy wills with just one legatee specified no real estate and no cash in the will. The four gentry testators leaving this simple will also specified no property as did seven of the nine farmer testators in this category.

[31] (ERO 113BR18).

[32] Visitation returns of the mid century reveal that Essex had about 14% more Anglican clergy than it needed to ensure one per parish (Pearson 2003).

[33] Some analysts of Josselin's diary put his abilities as a farmer above his vocation. (Brander 1981, p28).

[34] Ayres, 1995.

[35] During this period, some of the professions were developing their own bodies of knowledge and expertise, including how to attract clients and what constituted appropriate client relationships. The Anglican Church was involved in this kind of self-assessment, being forced to respond to Methodism and nonconformity and to the insufficient funding of many parishes. (Corfield 1995).

[36] (ERO 177CR17).

[37] The modern definition of profession was included in Dr Johnson's dictionary in 1773.

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Rayner Taylor (1747-1825), Chelmsford's first organist

Olive Baldwin and Thelma Wilson

In 1793, Rayner Taylor's song *Chelmer's Banks* was published in Philadelphia, U.S.A. It is the lament of an Essex girl whose lover has deserted her for the delights of London:

'O haughty Thames to thee he flies,
Nor heeds my tender plea;
Alas! his fickle heart denies,
The Chelmers Banks, and me'.

Taylor had emigrated with his family a year or two earlier, and by 1793 had settled in Philadelphia, then the capital of the United States. He lived there until his death in 1825 and is considered one of the leading figures in American musical life of this period. Taylor earned his living there as a church organist, a composer and arranger for the musical theatre, and a teacher of music. John Rowe Parker wrote in the Boston periodical, *Euterpeiad: or Musical Intelligencer and Ladies' Gazette* of 5 January 1822 that as an organist Taylor was second to no one: 'After church service, when he has obliged a favoured few who remained for the purpose with extemporaneous effusions, a never failing strain of harmony and science would burst upon the senses. His ideas flowed with wonderful freedom in all the varieties of plain chant, imitation and fugue'. This was the musician who, in the 1770s, was Chelmsford's first church organist.

Rayner Taylor, the son of William and Susan Taylor, was born in London on 27 November 1747 and was baptised at St Anne's Soho two days later. He became a boy chorister in the Chapel Royal, where he received a thorough musical education under Dr James Nares. Taylor sang at the funeral of George II and at the marriage and coronation of George III, but it was Handel's funeral in 1759 which he was to remember most vividly, relating that his hat had accidentally fallen into the composer's grave and been buried with him. In the summer of 1764 the 16-year-old Rayner Taylor, described as 'late of His Majesty's Chapel Royal' (Sands 1987), appeared as a singer and song composer at Marylebone Gardens. In the following year he was joined as a singer at Marylebone by Mrs Taylor. Her identity is a mystery. It would appear that Taylor was married before he was 18, since it seems unlikely that the singer was his mother. Rayner Taylor played an organ concerto at Marylebone in 1767 and a number of songs composed by him were published as sung there. He appeared at the Gardens every summer until 1768, by which time he was being paid half a guinea a night. He spent some time in the Chichester Cathedral Choir in 1767-8 for 'Mr. Rayner Taylor, of the Cathedral Chichester' subscribed to George Philip Tousey's *Flights to Helicon: or, petites pieces in verse* (1768).[1] This included the words of several songs performed at Marylebone Gardens, including two sung by Taylor, 'Bacchus God of joys divine' and 'The lark now warbled forth his strains'.

We next hear of Rayner Taylor in Scotland, for on 7 June 1769 an advertisement in the *Edinburgh Evening Courant* announced that he had been engaged to play the harpsichord at the theatre for the coming season and was now settled in Edinburgh and available to teach harpsichord, singing and thorough bass. In a second advertisement, on 24 June, he described himself as 'regularly bred to Music' and gave his terms as a guinea for 12 lessons and a guinea a quarter for schools. He was lodging 'next door to Mr Shean Harpsichord-maker, upper Playhouse Close, Canongate'. The Italian castrato Giusto Ferdinando Tenducci was working in Edinburgh at this time and on 21 June Rayner Taylor sang with him in a concert at St. Cecilia's Hall. In July Mr and Mrs Taylor joined Tenducci in a performance of Arne's opera *Artaxerxes*, with Tenducci repeating the role of the young hero Arbaces, which he had created in London. Mrs Taylor sang the demanding soprano role of the heroine, Mandane, and Taylor took the title role, written for the contralto castrato Niccolo Peretti. Taylor may have sung the role an octave down, but it is more likely that he sang as a falsetto alto, for we know that he sang at this pitch (for comic effect) in America many years later. Mrs Taylor was employed as one of the singers at the theatre and she figures in *A New Rosciad* (1770), an anonymous verse critique of the company at the Edinburgh Theatre Royal, which shows her to have been a better singer than actress:

Possess'd of ev'ry happy art,
To sooth the ear, and touch the heart;
Of the judicious plaudit sure,
She, the inchanting note can pour:
And though in speech and gesture wrong,
T-Y-R is still admir'd in song.

Rayner Taylor does not appear in *A New Rosciad*, so in the theatre he must have been confined to the orchestra

pit; he probably also arranged and directed the music. David Ross, the proprietor of the newly built theatre, made heavy losses in the 1769-70 season and the Taylors do not seem to have been re-engaged. The last record of them in Edinburgh is their benefit concert, given at the theatre on 10 April 1770. On that evening, both the Taylors sang and the 13-year-old Alexander Reinagle, one of Taylor's Edinburgh pupils, played a harpsichord sonata. Reinagle was to emigrate to America in 1786 and was soon playing an important part in American musical life. By 1791 he was closely involved in the building of a new theatre in Philadelphia and this may well have had some bearing on Taylor's decision to settle there two yeas later. The Edinburgh concert ended with Taylor's little comic opera for two singers, *Capochio and Dorinna*.[2] Taylor sang the part of an Italian opera director who falls in love with a prima donna (Mrs Taylor) who is seeking a position in his company. *Capochio and Dorinna* was another musical piece that he was to take to America.

When Taylor published his *A collection of Favorite Songs and an Overture adapted for the Harpsicord ... Book 1st*, he was back in London, since the title page informs us that the book could be bought from Longman, Lukey & Co. and from 'Mr. Taylor's in great Maddox Street Hanover Square'.[3] The 24-year-old musician was soon to move again, for the *Chelmsford Chronicle* of 24 January 1772 informed all lovers of music: 'There is come to Settle at Chelmsford, Mr. Taylor, a Musician, who teaches the Harpsichord and Singing, at moderate Prices, and will be ready to attend such Gentlemen and Ladies as shall desire his Instructions.' Three weeks later, on 14 February, the advertisement was repeated with the addition: 'Enquire at Mr. BLAKELY's, near the Coach-house'. It seems almost certain that Taylor had moved to Chelmsford because he knew someone involved in the acquisition of an organ for St Mary's, the parish church (now the cathedral), and had been offered the post of organist there.

On 7 February 1772, the *Chelmsford Chronicle* reported that Daniel Matthew had contributed 100 guineas 'towards the purchase of an elegant organ, for our church, which, with the liberal benefaction of Peter Muilman, esq. will soon be compleated'. Matthew, who had estates in the West Indies and lived at Felix Hall, Kelvedon, was nursing political ambitions at this time. Peter Muilman, a wealthy London merchant with an estate at Kirby Hall, near Castle Hedingham, was the leading figure in the scheme for an organ for Chelmsford. In his *A New and Complete History of Essex* (Muilman 1771) he had written of 'a vacancy, which seems originally to have been designed for an organ' at the west end of the church, and continued: 'So necessary an addition would render this place of public worship more completely awful, and do a lasting honour to the numerous and respectable congregation'. On 10 February 1772 a committee was appointed by the parish vestry to organise the erection of a gallery for the organ and the construction of pews beneath it. The *Chelmsford Chronicle* of 14 February carried a report of the meeting. Muilman acknowledged Matthew's help over the organ and announced that he had 'luckily bought a large and beautiful one' and was inviting contributions to enable it to be installed. The parish paid nothing for the organ itself, but undertook to bear the cost of the gallery and pews, to be built by Mr George Shakespeare of the parish of Hanover Square, London. However, work estimated at £278 finally cost £435.18s and extras including carriage of materials, payment for bricklayers and the re-positioning and re-gilding of the Royal Arms brought the total up to £575. 19s.5d. There was an unsuccessful rebellion among parish rate-payers when the 1773 churchwardens' rate had to be fixed at 2s 8d in the pound, as opposed to 4d in 1772 - a 700% increase (ERO D/P 94/5/3).

The original plan was to open the organ on 17 and 18 July, the second and final days of the Chelmsford Races, with the performance of two sacred oratorios, 'the grandest of any thing of the kind ever seen in this county' (*CC* 5.6.1772). There were no further advertisements and these July performances did not take place. The organ, built by Crang and Hancock, was not inaugurated until Sunday 6 September, at the annual services for the benefit of the Chelmsford Charity School. A celebrated organist was imported from London, James Hook, the organist of Horsley Down, Southwark, who was also a prolific composer of songs for the theatre and pleasure gardens. Taylor had performed songs by him at Marylebone in 1768. Eminent singers from the London choirs took part and over £80 was raised for the school. However, the organ scheme aroused a great deal of ill feeling and Muilman's opponents accused him of selling the instrument to the town at £50 profit. On the day after the inauguration Muilman sponsored a grand concert at the Black Boy Inn, and in the interval 'addressed himself to the company in a pathetic speech, in which he lamented that his good intentions for the town of Chelmsford had been both misunderstood and misrepresented' (*CC*, 11.9.1772). He was thanked by the rector, his health was drunk and the concert was followed by a crowded and brilliant ball. The concert employed several of the London performers who were to have been in the July oratorio performances, including the singer Frederick Charles Reinhold. Reinhold, whose father had created bass roles in many of Handel's oratorios, was well known in Chelmsford. He had been an organist in Colchester in the 1760s and organised the annual concert for the Chelmsford races from 1764 to 1769.

Taylor was not paid by the church vestry for his services as organist, but he may have received some payment from the organ sponsors and he would certainly have received fees for funerals, etc.. The bulk of his income, in Chelmsford as in Edinburgh and Philadelphia, came from teaching. John Rowe Parker's 1822 *Euterpeiad* article refers to Taylor's many years in Chelmsford, 'where he was organist at the church and had an immense round of teaching, both at the principal female academies, and in private families'. It is likely that Taylor's fees rose from the guinea for twelve lessons

he charged in Scotland towards the 'two Guineas Entrance and a guinea for six lessons' which R.J.S. Stevens was charging in London in the mid 1770s (Stevens 1992). Mrs Taylor also contributed to the family income by taking singing engagements, for we know that she sang in the theatre at Colchester when the Norwich Company performed there in August 1772 and advertised 'Between the Play and Entertainment, a SONG by Mrs. TAYLOR' (*Ipswich Journal*, hereafter *IJ*, 29.8.1772). However, she does not appear to have gone with the company when they moved on to Bury, Ipswich and Yarmouth.

In his second year in Chelmsford, 1773, Taylor was active as a concert organiser in the town, as we learn from advertisements in the *Chelmsford Chronicle*. On 11 June he announced that he was arranging a concert and ball on the second day of the races, because he remembered the disappointment expressed by the patrons of the races when they were deprived of their usual entertainment the previous year. (There had been a concert, followed by a ball, at the Black Boy Inn on the second evening of the races every year since 1759, apart from the previous year, when the oratorios for the inauguration of the organ had failed to take place.) Details of his concert were announced on 9 July:

Mr. TAYLOR's CONCERT.
ON the Evening of Tuesday the 20th
of JULY instant, being the Second Day of *Chelmsford Races,* will be performed,
A CONCERT
Of VOCAL AND INSTRUMENTAL MUSIC, at the
BLACK-BOY INN. The VOCAL Parts by
A YOUNG GENTLEMAN from London.
And Mr. and Mrs. TAYLOR.
INSTRUMENTAL.
First Violin, with a Solo, by a Capital Performer
from London.
Second Violin, by Mr. GIBBS, of Ipswich.
Other Violins, Tenor Violins, Hautboys, French Horns,
Bassoons, Violoncellos, and double Basses,
by several eminent Hands.
PART FIRST.
OVERTURE, (occasional Oratorio) *Handal.*
THE RACE, a New Song, composed and sung by
Mr. TAYLOR.
CONCERTO 6th (Opera Terza) *Avisand.*
SCOTCH SONG, by Mrs. TAYLOR.
Harpsichord SONATA, by Mr. TAYLOR.
DUETT, by TAYLOR, sung by
Mr. and Mrs. TAYLOR.
CATCH, three Voices, "Hark the Bonny Christ Church
Bells.
PART SECOND.
OVERTURE, (the Hermit) *Collet.*
CANTATA by Mr. TAYLOR, sung by Mrs. TAYLOR.
CONCERTO 6th *Stanley.*
SONG, by a young Gentleman.
SOLO CONCERTO on the Violin.
TRIO, "Flocks shall leave the Mountains," (*Acis and Galatea Handal.*)
GLEE, "To fair Fidelia's Grassy Tomb", by Dr. *Nares.*
OVERTURE, by Mr. TAYLOR.
SONG, "The Soldier tired of War's Alarms," by Dr. *Arne.*
Sung by Mrs. TAYLOR.
To conclude with
The ASSEMBLY, a COTILLION, the Words by
A GENTLEMAN.
The Room will be opened at Six o'Clock, and the
Concert begin precisely at Seven. After the
CONCERT will be
A BALL.
TICKETS, a Quarter Guinea each; to be had at the *Black-Boy*, and *Saracen's-Head* Inns; at the *Coffee-House*; at Mr. FROST's, *Bookseller*; and at Mr. TAYLOR'S in Duke-Street.
The Words of the SONGS will be printed and published next Week.

'The Soldier tired' was the show soprano aria from Arne's *Artaxerxes*. The repeat advertisement on 16 July corrected 'Avisand' to Avison and had a second attempt at Handel's name, making it 'Handle'. It named the violinist as Mr. Barthelemon (Francois Hippolyte Barthélémon, one of the best violinists in London) and added that *The Race* was written for the occasion. According to the *Chelmsford Chronicle* (23 July), the company at the concert and ball was 'very numerous and brilliant'. For the Brentwood races on Warley Common in August, the stewards announced that on the second evening there would be a concert and ball at the Crown Inn, Brentwood, under the direction of Mr. Taylor, organist, of Chelmsford (*CC*, 23.7.1773). No details of the programme were given and concerts do not figure in the advertisements for the Brentwood races in later years.

Tickets for Taylor's July concert could be bought from his house in Duke Street and the 1773 churchwardens' rate list shows that he was paying a rent of £9 a year. His first Chelmsford rate payment was the extremely high one resulting from the installation of the organ. (Unsurprisingly, he was not one of the many defaulters.) Taylor wrote a special hymn for the Charity School Anniversary services in September and this was performed by the charity children under his direction (*CC*, 3.9.1773).

In December 1773, Taylor was involved in another aspect of Chelmsford's social life, when local amateur actors gave performances of a comedy, *The Midnight Mistake*, at the White Horse (*CC*, Nov. and Dec. 1773). Seats cost 2s in the pit and 1s in the gallery and gentlemen were not allowed to go behind the scenes or on the stage 'as it would be a hindrance to the Performers, and an Interruption to the Audience'. The play was an adaptation of *The Merry Midnight Mistake; or, Comfortable Conclusion* by David Ogborne, which had been performed by amateurs at the Saracen's Head in 1765, when the play text was printed and sold by Timothy Toft, the publisher of the *Chelmsford Chronicle.*

Ogborne was an artist who had lived in Chelmsford since 1740, when he opened a business selling artists' materials. He had been paid to gild and paint the royal coat of arms in the church when the organ was installed and now painted the new scenes and decorations for the revival of his play. The comedy is set in a Chelmsford inn, where the heroine, Priscilla, the daughter of a lady of quality, has been brought up since babyhood to conceal her from her rakish father. There was one song in this earlier version, a topical patriotic one sung by the landlord, which would have dated by 1773. Taylor provided a new song, *Chelmer's Banks* (Fig. 1), to be sung by the heroine in the first act, and doubtless also oversaw the introductory and act music that was an essential part of an evening at the theatre. *The Chelmsford Chronicle* of 17 December printed the words of *Chelmer's Banks* and gave a generally favourable critique of the first performance: 'Last Monday night [13 December] a new comedy, called *The Midnight Mistake,* was performed at the White Horse, by persons of this town, before a numerous and genteel audience. The performers in general executed the parts allotted them in a manner superior to what was generally expected; and except a little diffidence and delay, which appeared on their coming on in the characters of the entertainment, the whole was pretty well supported, and gave universal satisfaction'. As in the professional theatre, the play was followed by a short farce. The production was evidently a popular success, for the ninth performance of *The Midnight Mistake,* with a different farce, was advertised for 31 December.

For the 1774 races concert John Abraham Fisher, violinist and composer, led the orchestra and played a concerto. The Taylors were joined as singers by two young gentlemen from London and tickets were available from him at 6 Duke Street. The programme was again a varied one and there were more new vocal pieces by Taylor, including *The Rustic Boy*, which he sang himself (CC, 22.7.1774). This song appeared in a London periodical, *The New Musical and Universal Magazine* two months later. 14 further pieces by Taylor were published in this monthly magazine during the next couple of years, including *Chelmer's Banks*, a three-part hymn, a 'Divertimento for the Harpsichord or Forte Piano, with Accompanyment for the Violin, design'd for Young Practitioners' and a number of catches and glees. One of the glees was 'Farewell sorrow, farewell pain', a three-part drinking song which also appeared in the second edition of the second volume of *Essex Harmony*, published in 1777 by John Arnold, the Great Warley composer and music lover.[4] It could well have been the new glee for three voices that was performed in the 1774 races concert.

At this time Taylor was also composing fairly ambitious church music. The first issue of *The Cathedral Magazine; or, Divine Harmony* appeared on 1 April 1775. It was published in London by John French, who had taken over *The New Musical and Universal Magazine* in its second year. Advertisements for the first issues of both magazines appeared in the *Chelmsford Chronicle*, and they were available from local booksellers (*CC*, 21.10.1774 and 24.3.1775). *The Cathedral Magazine* advertised itself as 'a collection of the most valuable and useful ANTHEMS in SCORE; selected from the works of the most eminent authors, both Ancient and Modern'. Fourteen pages of music were published each month and 12 issues made up a complete volume. The magazine ran for three years, and Taylor, described each time as 'Organist at Chelmsford', contributed an anthem to each volume, the only living composer to do so. Over half of the contents were anthems by dead masters, including Purcell, Handel and Locke. We do not know whether Taylor had a choir capable of singing his anthems at Chelmsford. For the Charity School services in 1774-6, the special anthems were sung by performers from choirs in London, and the Waltham Singers were imported in 1781 and 1782. The advance notice for the 1783 service announced that 'during divine service several anthems, and a hymn adapted to the occasion, and set to music by Mr. Taylor, will be sung by the Hornchurch company, accompanying the organ', and two solo boy singers from Braintree were also imported.[5] For many years John Arnold organised a choir at the village church of Great Warley, but he was a gentleman with an independent income. Taylor would not have been able to give time to a choir unless he was paid to do so, and there is no evidence of this in the parish records.

The music for the Sunday of the annual Charity School services, when collections were taken for the upkeep of the school, included anthems performed by imported singers and a special hymn, usually sung by children from the school. Taylor composed the hymn in 1773-5 and the school minutes of 1775 (ERO D/Q 8/3) show that he was paid to teach the children to sing. The 1776 minutes record that Taylor was asked to engage the outside singers 'as last year'. We learn from the *Chelmsford Chronicle* (16.8.1776) that the special hymn for the 1776 Charity School Sunday was composed by Dr Nares, Master of the Children of the Chapel Royal (and Taylor's old teacher). For the next six years the notices for the annual services in the *Chelmsford Chronicle* merely state that the hymn was 'suitable to the occasion'. In 1780 Taylor was paid 5 guineas for arranging for boy soloists from the Chapel Royal to sing and we know he composed the hymn used in 1783. However, in 1784 the special hymn was composed by Mr Rogers, so it seems likely that Rogers had taken over from Taylor as organist some time between September 1783 and September 1784. His tenure was short, since the *Chelmsford Chronicle* of 22 April 1785 recorded the death of 'Mr. Rodgers, organist, of this town' and James Rogers was buried at the church on 24 April. Since there is no mention of payments to Taylor in the church vestry book and the school minutes are not complete, it is impossible to tell exactly when he ceased to be organist of Chelmsford.[6]

Further evidence that Taylor remained active in the area until the early 1780s comes from the publication by subscription of *Six Sonates for the Harpsicord, or, Piano*

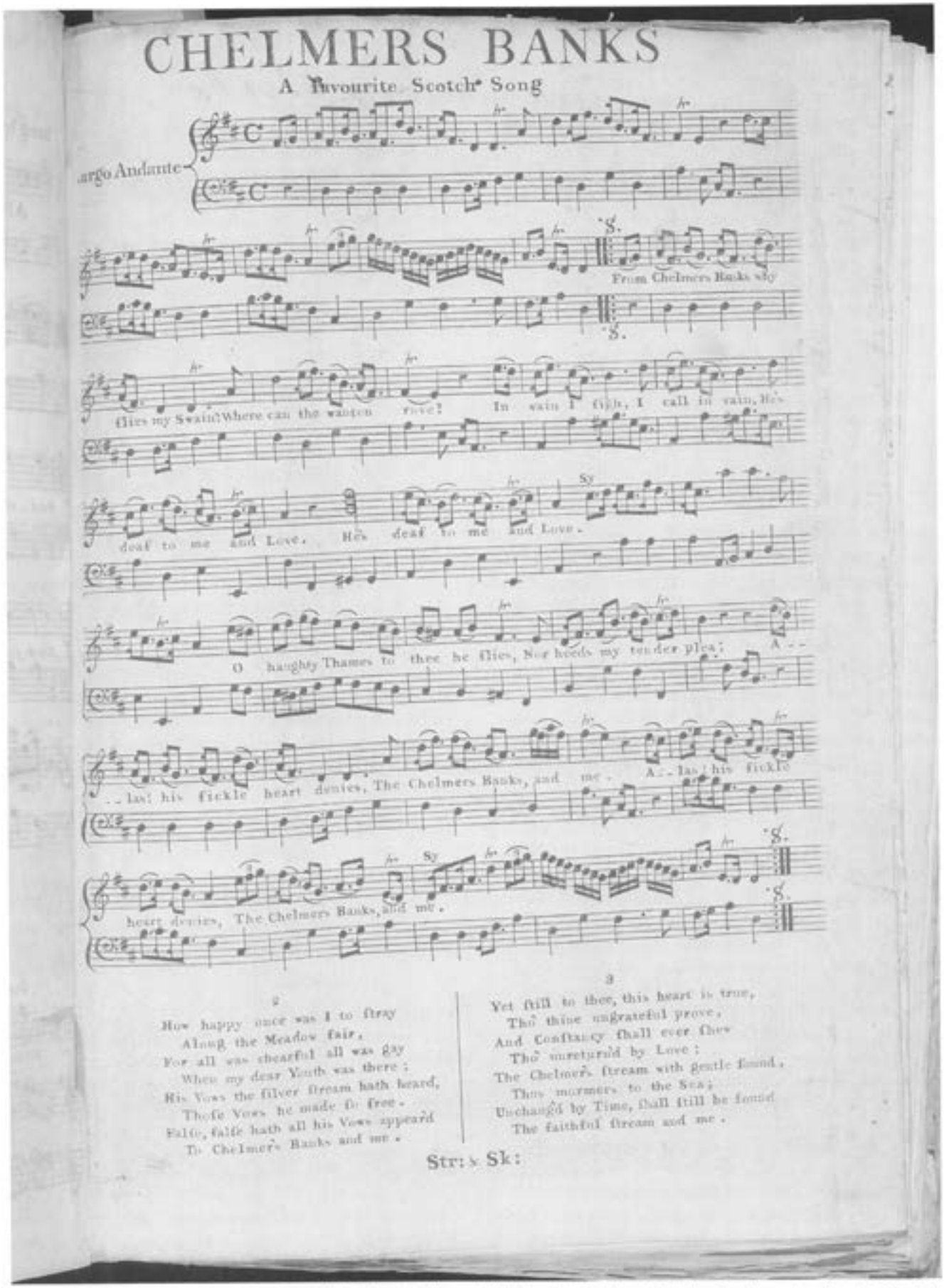

Fig. 1 Songsheet of *Chelmer's Banks* published by Straight and Skillern (Str: & Sk:) of St Martins Lane, London, in the mid 1770s. The tune may have been Taylor's adaptation of a traditional Scottish melody, or called a Scotch song because of its use of the 'Scotch snap'. This popular two-note rhythmic device can be seen on the words 'Chelmer's Banks' and frequently elsewhere. (Reproduced by kind permission of the Britten-Pears Library, Aldeburgh)

Forte. With an accompanyment for a Violin. Composed by R. Taylor, Organist, of Chelmsford. Opera Seconda. The volume cost the considerable sum of 10s. 6d. Among the subscribers was 'Mr. Edmund Ayrton, one of the Gent. and Master of the Children of his Majesty's Chapel Royal'. Ayrton had taken over as master of the children when Dr Nares resigned in July 1780. Dr Nares and Miss Molly Nares were also subscribers, and Nares's death in February 1783 gives us the latest possible date for the subscription list. Another subscriber was 'Master Guest, one of the Children of his Majesty's Chapels Royal'. George Guest was baptised in May 1771 and at the age of 12 was a principal treble at the Three Choirs Festival of 1783. It seems more likely that the boy would have subscribed in 1782 rather than earlier. Rayner Taylor dedicated his *Six Sonates* 'to his Scholars and Friends'. Only 41 of the 119 individual subscribers were male, either Taylor's professional colleagues (mainly organists or members of the Chapel Royal choir) or members of the local gentry and professional class. The 78 female subscribers, 63 of them with the title 'Miss', bear witness to the 'enormous round of teaching' which he remembered many years later. The list included Mrs and Miss Comyns of Highlands House, Lady Waltham of New Hall, Mrs Disney Fitch of Danbury, Miss Hoare of Boreham, two daughters of Daniel Matthew of Kelvedon and Lady Mildmay of Moulsham Hall. The constant travelling and physical and mental effort needed to maintain this extensive teaching load may well lie behind his move to London.

Advertisements for Taylor's concert on the second evening of the races continued to appear in the *Chelmsford Chronicle* until 1777. It was the custom of professional musicians at this time to have an annual benefit concert and the race concerts were effectively Taylor's benefits. In 1775, Mr and Mrs Taylor and two young gentlemen were advertised as singing and tickets could be bought from Duke Street. The concert in July 1776 consisted of several new overtures, songs, and concertos for the violin, oboe and harpsichord, but no performers' names were given. By this time Taylor had moved into lodgings, for tickets were available from him 'at Mr. Rayment's, near the Black-Boy inn' (*CC*, 19.7.1776). Taylor's name does not appear in the Chelmsford rate records after March 1776. His move into lodgings may perhaps be connected with the disappearance of Mrs Taylor from his concert advertisements. In 1777 Rayner Taylor was joined by 'a Young GENTLEMAN from London, and Miss DAYES from Covent Garden Theatre'. Tickets were available from Mr Taylor, who was still living at Mr Rayment's (*CC*, 4.7.1777). Nothing more is heard of Mrs Taylor; as Taylor is a common name and the Chelmsford burial registers give no information about the age or background of those buried, his personal life and the identities of the members of his family who emigrated with him remain a mystery. No children of his were baptised at St Mary's while he was working in Chelmsford.

On 24 April 1772, a few months after Taylor settled in Chelmsford, Thomas Willett took an advertisement in the *Chelmsford Chronicle* to inform the public that he had opened the shop formerly occupied by Toft and Lobb, near the Fish Market. He was selling a wide range of goods from haberdashery, hosiery and perfumery to music and musical instruments. Willett was to be the librettist for Taylor's musical afterpiece *Buxom Joan*, which was performed at the Haymarket Theatre, London in summer 1778. This burletta was based on a song sung by Ben the sailor in Congreve's comedy *Love for Love*. Joan rejects three suitors, a tinker, a tailor and a soldier, and marries 'worthy honest Ben', her sailor lover. All unite in a patriotic finale: 'Huzza! Old England, freedom, laws, / And GEORGE THE THIRD for ever!' Stephen Jones, in *Biographia Dramatica* (1812), wrote that the piece 'considered as a light summer vehicle for a number of pretty airs, has some merit'. The music, by 'R. Taylor, Organist of Chelmsford' was published in London by Longman and Broderip. The advertisement for this music in the *Chelmsford Chronicle* of 4 September 1778 stated it 'may be had of the said R. TAYLOR, at Chelmsford, price 6s.' *Buxom Joan* had a creditable nine performances in summer 1778 and was chosen by the comedian John Edwin, who played the lachrymose tailor, for his 1780 benefit at Covent Garden. It was performed by the Norwich Theatre Company on its touring circuit during the next couple of years and was another piece taken across the Atlantic by Taylor, being given at the New Theatre, Philadelphia in January 1801, entitled *Buxom Joan, or, A Sailor's the Lad.*

By this time, Taylor's reputation as an organist had spread beyond the Essex border into Suffolk. On 8 October 1778 a new organ was inaugurated at St Peter's church, Sudbury, with a morning concert of Handel extracts. The leading orchestral players were from London and Cambridge and the singers from Vauxhall Gardens and the London theatres royal, but the 'New erected Organ' was played by 'Mr. TAYLOR, organist of Chelmsford' who performed a concerto. No doubt he was also involved in the evening concert at the Rose and Crown Inn, which was followed by a ball (*IJ*, 3.10.1778).

Useful though advertisements like the one for the Sudbury concert are, it is dangerous to assume that they give a full picture of an eighteenth-century musician's activities. Newspaper advertisements were expensive and many events took place which were advertised by handbills and word of mouth. Taylor's large circle of pupils meant that he did not need to advertise for subscribers to his *Six Sonates*, or to publish an announcement when the copies were available. It is almost certain that he continued to organise the Chelmsford races concerts while he remained in the town. The press announcement of the race meeting always included the words 'balls and concerts as usual', but presumably Taylor did not find it necessary to pay for a detailed concert advertisement after 1777.

Rayner Taylor had another source of income that does not figure in newspaper announcements. John Arnold's *Essex Harmony* was designed for use by 'the

great Number of Catch-Clubs, &c. which are now established both in Town and Country' (Arnold 1777). These all-male musical drinking clubs met weekly, fortnightly or monthly at a local inn and many of them paid a professional musician to strengthen the amateur part-singing and to perform solo turns. In 1790, Taylor failed to obtain the post of organist at St Andrew Undershaft, in London, despite the strong support of members of the local weekly musical club, of which he was 'a useful and entertaining member'. A contemporary commentator described the election as 'a contest between Church and Tavern' (Boulter 1935) and a 22-year-old female organist, who lived in the parish, won by 64 votes to Taylor's 59. She held the post for 45 years, despite frequent complaints about her playing (Dawe 1983). That Taylor continued to take part in convivial gatherings in Philadelphia is shown by John Rowe Parker's comments on his 'merriment and vivacity in glees and catches of a humourous nature' and his ability to burlesque Italian opera by singing alternately in his natural and falsetto voice.

According to Parker, Taylor left Chelmsford to become musical director of Sadler's Wells Theatre, which at this time was a popular summer venue, open after Easter for about six months. It offered a variety of entertainments each evening, with musical pieces interspersed with acts by tumblers, tight-rope walkers, etc. Its advertisements rarely mention a composer until the late 1780s. In July 1784, *Circe and Ulysses*, a piece with music by Taylor, was performed at a rival summer venue, the Royal Circus (*Public Advertiser*, 6.7.1784). The overture to this piece was published and the damning review of it in the *European Magazine* in May 1785 dwells on the fact that Taylor had previously been working in Chelmsford. (The review reads like metropolitan prejudice against a provincial interloper.) Taylor's *The Gray Mare's the Best Horse*, another piece which later resurfaced in America, was performed at Sadler's Wells in summer 1785, so it would seem he was musical director by that season. In that year Richard Wroughton became the dominant figure in the management of Sadler's Wells and set out to attract a more genteel audience. In 1786 Taylor composed the season's hit, *The Gates of Calais*, based on Hogarth's painting 'The Roast Beef of Old England', and his music for *The Miller of Oxfordshire* was reported by the *Morning Chronicle* (18.4.1786) to be extremely pretty and to do great credit to the composer. Taylor remained as the principal composer at Sadler's Wells until the middle of the 1791 summer season, writing his own music and adapting and arranging other people's tunes for burlettas, topical spectaculars and the harlequinades which provided the finale for each evening's entertainment. Mr Greenwood, the scene designer and painter, was a very important part of the theatre's success throughout Taylor's time there.

In London, Taylor failed to find the equivalent of his Chelmsford organist's position. In 1785 he had been a candidate for the organist's job at St Giles Cripplegate, but, as at St Andrew Undershaft in 1790, a woman was chosen. In the 1780s several London churches appointed a local girl as organist, often against the advice of the appointed adviser, and this trend must have been deeply resented by professionals such as Taylor. He continued to play the organ and performed at the grand opening concert of the 1791 season at the newly improved concert hall in the Apollo Gardens in Lambeth (*Times*, 16.5.1791). Taylor's decision to emigrate could have been the result of his humiliating failure at St Andrew Undershaft in October 1790 or could be connected to Wroughton's withdrawal from the active management of Sadler's Wells in 1791. By this time Taylor would have given up hope of a position at Covent Garden or Drury Lane, the only full time theatres in London, for William Shield was apparently firmly established as musical director at Covent Garden and Stephen Storace was enjoying great success with the Drury Lane company. English actors and singers were being recruited for newly-opening theatres in the United States and churches there offered opportunities to English organists, so a move to America must have seemed attractive.

In autumn 1791 William Shield had a quarrel with the managers of Covent Garden Theatre and left to travel in Europe. William Reeve, who had replaced Taylor at Sadler's Wells in late July, took over at Covent Garden for a year before Shield returned. Many years later Taylor commented that he had lost the chance to become musical director of Covent Garden by going to America and this would seem to indicate that he emigrated in summer 1791. He was certainly in the United States by September 1792, when he gave a concert in Richmond, Virginia with his pupil, Miss Huntley. She had appeared at Covent Garden in the 1790-91 season and it seems likely that she travelled to America as an articled pupil with Taylor and his family. At Sadler's Wells, Taylor had worked with Huntley, an acrobat who performed there until 1788 and Mrs Huntley, a dancer who seems to have lost her job at the Wells in 1787. After a short spell as the organist of Annapolis, Maryland, Rayner Taylor moved to Philadelphia, the commercial and cultural centre of the USA. There he settled into a life very similar to the one he had led at Chelmsford. He was organist of the principal church, had a large teaching round, and took part in concerts and less formal musical evenings. In addition, in Philadelphia he contributed as composer and arranger to the newly built Chestnut Street Theatre, the most splendid theatre in America at that time, with an orchestra pit capable of seating 30 musicians.[7]

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Notes

1. Chichester Cathedral records show a Robert Taylor admitted on 1 August 1767 as a probationer lay vicar for a year in place of Gilbert Burnett. There are no further references to him. In view of the very specific nature of the subscription, Robert is presumably a mistake for Rayner.

2. A setting by Thomas Arne of *Capochio* and *Dorinna* was performed at Marylebone in 1768. Neither Arne's nor Taylor's setting survives.
3. The publishers were in existence from *c.* 1769 to 1775, so the book must have been published shortly before he went to Edinburgh or on his return from Scotland before he moved to Chelmsford. The presence of a Scotch song and a song with words by 'a Gentleman of Whitehaven' make the latter more likely.
4. The preface is dated 1 May 1776.
5. The Hornchurch Company was presumably a choir of adult male singers. Information on the charity school services from *CC*, 12.8.1774, 28.7.1775; 16.8.1776, 5.9.1783 and Charity School minutes for 1781-3 (D/Q 8/3).
6. Hilda Grieve, in *The Sleepers and The Shadows*, ii (1994), 172, is mistaken in stating that Taylor remained in Chelmsford for four and a half years, until August 1777. She would appear to date his arrival from his first rate payment in March 1773 and his departure from shortly after the last Races concert with a detailed advertisement.
7. Detailed studies of Taylor's American career can be found in two articles by Victor Fell Yellin: *American Music,* vol. 1, no.3 (Fall 1983) and vol.4, no.3 (Fall 1986). Taylor's contributions to the American musical theatre are listed in Susan L. Porter, *With an Air Debonair: Musical Theatre in America 1785-1815* (1991).

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Historic building conservation in Essex.

The historic buildings team in the Essex County Planning Department during the latter part on the 20th century

by Peter Richards

Introduction

The 1967 Civic Amenities Act was the trigger for local authority involvement in the protection of historic buildings and areas. Prior to that there had been a process for local authorities to serve protection orders on buildings but it was a tiresome business, the legislation lacked teeth, and there was little or no encouragement from central government. The 1967 Act, for the first time, encouraged serving preservation orders and gave authorities powers of enforcement. For the first time it also provided powers to serve tree preservation orders.

However, the most revolutionary part of the act was the first section which was headed 'Preservation of character of areas of special architectural or historic interest' and described these areas as those *'.....which it is desirable to preserve or enhance and shall designate such areas....as Conservation Areas'*. This statement has enlightened the building conservation movement ever since.

The Essex situation was, in some ways, not typical of the experience of other English counties. Firstly, as is explained below, officers benefited from a far-sighted chief officer and understanding elected members. Secondly the scale, in terms of numbers of historic buildings, conservation areas, and development proposals, was unique. In addition, the 1970s were a special time in conservation terms. The national economy was thriving and there seemed to be a general concern for the historic built environment which enjoyed a support from central government that has since been almost non-existent.

The Essex Planning Department

In 1967 the County Planning Officer was both a planner and an architect. A combination of these qualifications was to lead him to appoint the first conservation officer. At the same time, his concern for the design of new buildings, in particular housing, had resulted in putting together the design team which were to produce the Essex Residential Design Guide (Essex C. C. 1973). This team became part of a branch of the Planning Department, the Environmental Services Branch (ESB), that combined historic buildings and conservation, design, landscape and archaeology. Here overlapping and complementary skills could come together with the objective of *'conserving and enhancing the familiar and cherished local scene'*, a phrase which was to become a mantra for the conservation movement. These skills were not all present in 1974: further expertise was added during the subsequent years and, by 1980, the team could be described as multi-disciplinary.

The 1974 local government reorganisation which established fourteen districts in the county gave the County Planning Officer an opportunity to strengthen the ESB and to offer this wide range of specialist services to the districts. In setting up this branch the County Planner received strong support from elected members on all sides. Local government reorganisation coincided with a new act, the Town and Country Amenities Act 1974, that gave further powers to local authorities, including a direction that local authorities *'.shall...designate conservation areas'*. Also included was control over demolition in conservation areas, a requirement to consider the setting of a listed building when new development is proposed, powers to enforce the repair of listed buildings, and further legislation to protect trees.

The Historic Buildings and Conservation Section

By the end of 1974 the Historic Buildings and Conservation Section (HB&C) comprised ten professionals, plus two administrative support staff. They included two architect/historic buildings advisors (David Stenning and the writer), an historic buildings expert (Mike Wadhams), architects with specialist knowledge of architectural history, architectural historians and town planners. One of the planners was a grants officer, and another member of the team had responsibility for windmills. Early in 1975 Cecil Hewett joined the section, a significant appointment.

Specialist advice

A free specialist advisory service was negotiated with the districts following which all listed building and conservation area applications were referred to the HB&C. The section agreed to give advice within a stipulated time and almost every application required a site visit. The districts were not bound to follow the HB&C advice, but almost always they did.

Colchester Borough employed one of the architects from the HB&C and opted out of the arrangement (that member of staff subsequently rejoined the section). Since that time many districts still use the services of the

section to a greater or lesser extent, although, over the subsequent 25 years, many districts have appointed their own conservation officers.

Specialist advice extended beyond planning applications and became an important input into District Plans. A seminal study prepared by the section, together with Uttlesford District Council, was 'Saffron Walden: A Conservation Study'. Produced with the support of the Historic Buildings Council for England (a forerunner of English Heritage), the foreword, by Dame Jennifer Jenkins, expressed the hope that all districts would use such a study as part of the District Plan when important historic settlements are involved.

The reason that the specialist advice was invariably accepted and the arrangement continued over such a long period was the quality of the advice. The key to that quality was the professional expertise. Officers acted as a team: an architect would consult a planning colleague on planning policy matters and an architectural historian would consult an architect colleague on matters of practical building construction. But the basis of all advice was that of the knowledge of historic buildings, their features, plans, construction and materials. In this area the section was well served by the nationally acknowledged expertise of Cecil Hewett, Mike Wadhams and David Stenning. Their particular expertise was in the study of the timber-framed buildings for which Essex is renowned. The expertise in the section extended wider than the vernacular, with specialists in the polite architecture of the 18th, 19th, and 20th centuries.

During the 1970s, as a result of a great many site visits, it became apparent to section members that the lists of historic buildings for the county were very inadequate. Consequently districts were regularly assisted in the serving of Building Preservation Notices (BPNs) to ensure the urgent protection of threatened buildings. The section's expertise ensured that accurate historic descriptions were provided and buildings were accurately dated, which resulted in almost every BPN being confirmed by the DoE.

During the 80s and 90s many of the districts employed their own conservation officers who were capable of dealing with most conservation area proposals, although few had expertise in architectural history sufficient to deal with the wide range of listed building proposals. Consequently the specialist advisory role of the county team has been retained in much of Essex although on a less formal basis. In the twelve months 2000/2001, local authorities in Essex dealt with 1,066 listed building applications, the third highest in England after Greater London and Kent.

Branch and departmental liaisons

The cross consultation within the section extended across the Environmental Services Branch. Many of the buildings on which consultations are made are on ancient sites where archaeologists and landscape or garden historians have particular interests. During the 1990s the section had an urban archaeologist amongst its number.

A close relationship existed between the HB&C Section and the Essex Record Office. Documentary research is an essential part of all historic buildings study and the last three County Archivists have been supportive friends of the section. In the 1970s and 1980s A.C. 'Gus' Edwards was of invaluable help in the study of historic buildings. He was an early supporter of the revolutionary work of Cecil Hewett in evaluating historic carpentry. Gus's work on the Walker maps was a key to the study of 16th-century Essex buildings (Edwards and Newton 1984). His study of the buildings of Ingatestone High Street where he took an imaginary walk along the street in the 16th-century brought people and buildings to life.

With the development of the Revolving Fund and works to repair of County owned buildings (see below), there was close co-operation with both the Architects and Estates Departments. Later officers of the section were also to advise the County Surveyor on the design of new bridges. This co-operation developed from dealing with a number of listed bridges for which the former Highways Department was responsible. On these matters the County had a corporate approach, breaking down departmental barriers.

Conservation Areas

Prior to 1974 the county team had carried out two rounds of conservation area designation. The first round included those settlements which might be called the 'elite': Saffron Walden, Maldon, Colchester, Thaxted, Harwich etc. The second round widened the range and established criteria for designation, there being no national guidelines. To some extent, the criteria were quite clear: ancient settlements and markets, river crossings, the survival of a large proportion of historic buildings and so on. However other criteria were more subjective, in particular the scenic value. Thus the romantic 'chocolate box' of Finchingfield was not disputed, but more industrial settings such as Manningtree were subjected to closer scrutiny.

With the 1974 re-organisation, the District Councils were given the power to designate conservation areas and most of them were happy for the county team to assist in a third round of designations. This round became more contentious as districts pressed for more marginal inclusions. However consensus was achieved although one Essex district, Castle Point, existed without a single designated area until well into the 1980s.

Section 10 of the Planning (Amendment) Act 1972 made a provision for additional finance for enhancement schemes in conservation areas that were considered to be 'outstanding'. This in effect created Grade I Conservation Areas. In Essex these were initially those of the first round. This central government grant aid developed into the Town Schemes which are referred to later. Section 10 also enabled the financing of additional conservation staff for special projects. The

status of 'outstanding conservation areas' has since been abandoned, quite sensibly, as it became a very subjective issue leading to arguments such as to merits of, say, Halstead versus Chipping Ongar conservation areas.

The Section was instrumental in ensuring that the importance of the Modern Movement was acknowledged. The village of Silver End, established in the 1920s, was a pioneering development by the Crittall family. It was founded to house Crittall workers in new country surroundings in dwellings which were equipped with modern kitchens and bathrooms, all in a planned settlement that was provided with a whole range of community facilities. It was pioneering town planning combined with the best of modern design. Silver End was designated as a conservation area, a Town Scheme was established, and a number of the buildings have been listed. Similarly the Bata village in East Tilbury has been protected.

However, despite the intentions of the 1967 Act and the enthusiasm of the conservation movement, conservation area legislation remains weak. What legislation there is has not been used rigorously by local authorities nor has central government given the support that is looked for. Conservation is seen as a 'good thing' but not a vote winner, and certainly not something to spend much of the taxpayer's money on.

Architectural design

The HB&C Section worked closely with the Design Section of the Planning Department. The Design Section produced the *Essex Residential Design Guide*, a much maligned, but nevertheless influential, publication (Essex C. C. 1973). This design philosophy, which saw realisation in the new development at South Woodham Ferrers, was also the guide that influenced new development in conservations areas, infill sites and proposals that affected listed buildings. Alongside the design criteria went the persuasion of the highway engineers and building control officers to accept less prescriptive rules regarding building lines, road widths and visibility splays, allowing traditional streets to be built and enclosed spaces to be created.

The use of vernacular forms and materials was the basis of the approach which the HB&C Section adopted when consulted by District Councils on development in sensitive places. Roofs, with pitches to suit clay tiles or natural slates, a palette of traditional wall materials, together with vernacular window and door types, were encouraged. Sensitive designers were able, within these constraints, to put new buildings into historic locations that were in harmony with the scene. The joint approach within the Planning Department that was largely accepted by the District Councils (e.g. the Colchester Dutch Quarter) ensured a consistent design philosophy throughout the county.

Windmills

The first mill that Essex County Council acquired was Upminster windmill, purchased in 1937, in order to preserve it. The mill has subsequently been leased to the London Borough of Havering. Following that acquisition the County began to take positive steps towards protecting more of these threatened historic structures which are such significant features in the open landscape of the Essex. The County Council policy has been to repair and restore these buildings to working order, not, as has been done elsewhere, to keep them as landscape objects or, as is often the case, converted to houses. In order to carry out this policy the section was extended to include a county millwright, the first such appointment in the country. Vincent Pargeter, who had been previously practising as a private millwright, worked for the County in this capacity for over 25 years during which time he put five mills into working order. He worked on windmills at Stock (acquired 1945), Aythorpe Roding (acquired 1941), Finchingfield and Mountnessing, and watermills at Thorrington, Beeleigh and Sible Hedingham. All this work was helped by grant aid from the DoE and English Heritage, bodies which saw that the repairs, by putting the mills into working order, as exemplars, was giving the mills a new lease of life. In addition Vincent was also available to give advice to other mill owners, both private individuals and public bodies. Subsequently, as the mills were completed, a mills visits supervisor was appointed to co-ordinate the opening and working of the mills. The completion of each mill was signalled by a small booklet detailing its history and explaining the repairs (cf. Fig. 1), and a practical explanation of the workings of a flour grinding mill. In some cases a video was made which was put together with other information in an education pack for schools.

The millwright's advice was useful in assisting private owners to carry out proper repairs and to obtain grant aid. This has resulted in the continued existence of windmills at Stansted, Thaxted and Baker Street, Orsett. The latter, now floodlighted, is a major feature on the A13 north of Grays.

Not all the stories of Essex mills had happy outcomes. Negotiations were undertaken to acquire Great Bardfield watermill with the widow of the former miller. However, before purchase could be completed, her son set fire to the mill. It was completely destroyed. He was subsequently given a four-year prison sentence for arson. Ramsey windmill, seen by all those travelling by road to Harwich, still remains in a parlous condition. The watermill at Beeleigh near Maldon, although in the County's ownership, still awaits repair, the work having been halted because it is home to several species of bats - one form of conservation can get under the feet of another.

County Council owned buildings

In addition to the windmills the County Council had acquired many historic buildings, for a variety of reasons, not because of their historic interest and importance. Typical of these was the old butcher's shop at Horner's Corner, Rochford, sited at the junction of North, South, East and West Streets (a rare 'set' of streets), a junction that was seen by the, then, County

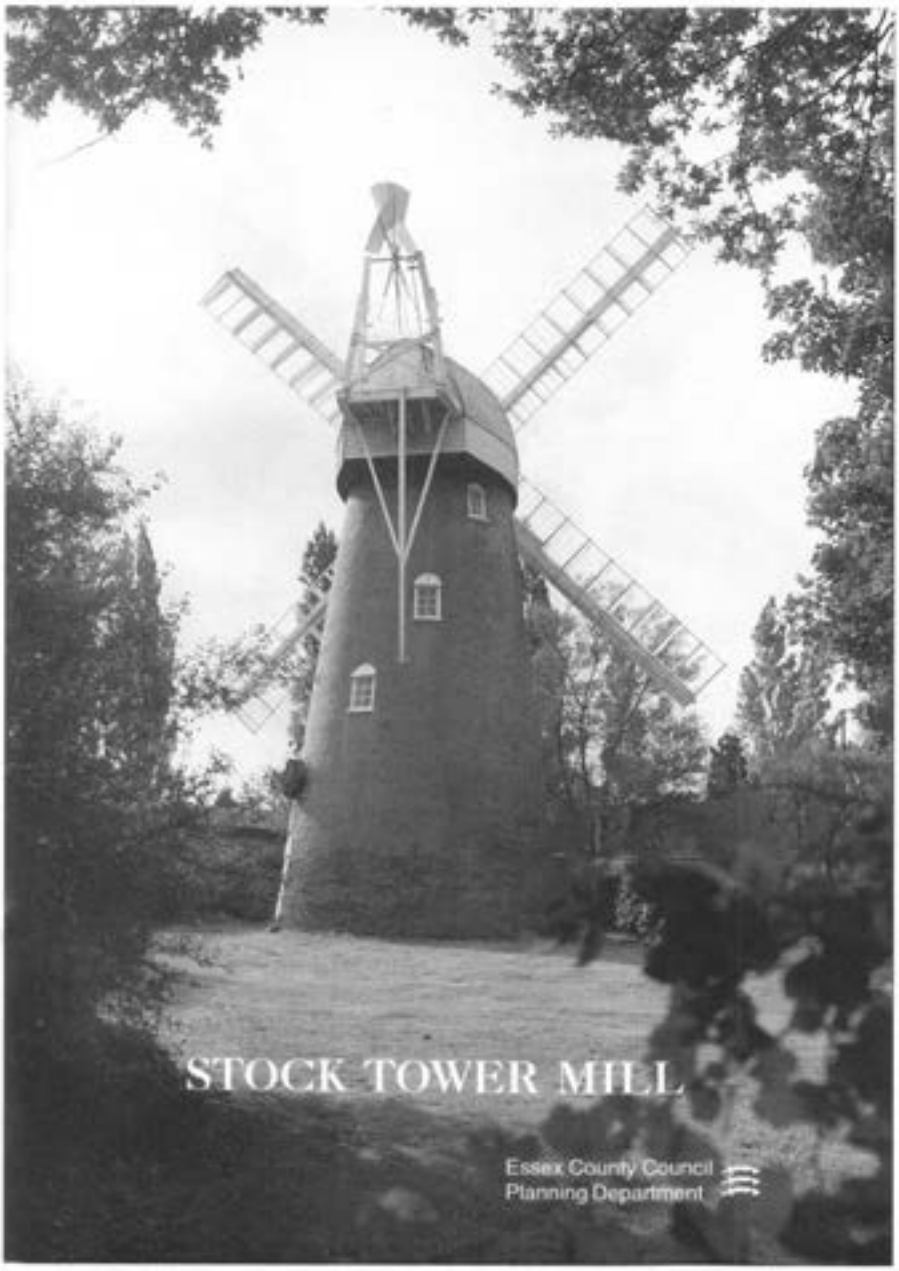

Fig. 1 Guide book to Stock windmill.

Surveyor as dangerous. In fact the problem seemed to be that it is such an awkward arrangement that all traffic needs to stop before negotiating the junction. The highway engineers acquired the building and put forward their solution to the perceived problem; to demolish the old butcher's shop and 'open up' the cross roads and construct a roundabout.

In 1974 the planners, led by the HB&C Section, argued that this would literally remove the heart from the ancient market town, destroying the tightly enclosed historic townscape and an historic building. Much argument followed with joint site meetings with members of the Highways and Planning Committees. Reason won out and the highwaymen went away leaving an empty and abandoned building as an apparent embarrassment to the County Estates Officer who did not see the building as marketable. A survey was carried out by the architectural historians and the main part of the building was found to be a 16th-century timber-framed house with the first floor jettied on the south and west faces that had been covered up with later accretions. The Grade II building was put on the Buildings at Risk Register and eventually a local builder, sympathetic to the structure, repaired and renovated the whole corner with grant aid locally and from English Heritage. Horner's Corner now comprises two shops and a dwelling, a thriving development. Traffic still has to traverse the cross roads; slowly and with extreme care.

Thaxted Guildhall had been in ECC ownership for many years and used as a local library. The Guildhall has long been an icon in the County seen on many a calendar cover. In 1976 a survey revealed that the building had major structural problems, exacerbated by the weight of the books. The final appearance of the building after the repairs were completed became a matter of discussion. It was felt that the exposed timber frame should not be painted black again but should be returned to the way it would have been treated 300 years ago. A consultation document was produced giving five alternative strategies for the final renovation. As a result of the discussions which followed, the exposed frame was limed giving the building a softer, more mellow, appearance.

The Revolving Fund

A problem which became increasingly apparent was that of historic buildings that had been allowed to become derelict by owners who saw them as beyond practical or economic repair and therefore candidates for demolition. HB&C members saw these buildings as opportunities rather than albatrosses. County Members agreed to support a Revolving Fund which was established in 1970, with the help of a loan from the Pilgrim Trust. With the assistance of the County Land agent, threatened buildings were purchased by negotiation, repaired and put back on the market (Essex C. C. n.d.). This was assisted by DoE or EH grant aid. The result was that, over the first few schemes, the County's initial capital investment was repaid.

The first project was 20-36 East Street, Coggeshall. Other successes were listed buildings in Bradford Street, Bocking, Head Street, Halstead, the Dorothy Sayers Cottages, Witham (Plate 1), the Guildhall, Clavering (Grade II*), and Garrison House, Wivenhoe (Grade I).

Plate 1 Witham, Dorothy Sayers Cottages, one of the properties restored under the Revolving Funding programme.

The latter two were acquired from the Society for the Protection of Ancient Buildings (SPAB) who saw the opportunity for the buildings to be repaired to a high standard appropriate for houses of their age. In all there were 15 projects completed under the Revolving Fund. In many other cases, however, the intervention of the Fund succeeded in stimulating local interest and persuading owners to restore their properties. Such cases were the Old Bakers Shop, Southminster, the Coastguard Cottages, Canvey Island and properties in Tillingham, Waltham Abbey, Saffron Walden, Great Dunmow and Maldon.

The high standard of repair and renovation was made possible by the assistance of the County Architect's Department and, in particular, James Boutwood, who was the architect for all the Revolving Fund projects, an architect sympathetic to historic buildings and who has been an SPAB committee member for many years. The relationship with the County Architect also bore fruit with the 13th-century Grange Barn, Coggeshall, where, after years of studied neglect, the barn was finally acquired by the National Trust and, with the advice of the HB&C experts and James Boutwood as architect, was fully repaired.

The Association of Conservation Officers

After the 1974 local government reorganisation, conservation officers from all the east of England counties, Norfolk, Suffolk, Cambridgeshire, Hertfordshire and Essex, formed a regional forum for the exchange of ideas and information. This forum, which was replicated in other parts of the kingdom, developed, under the guidance of David Peace from Cambridgeshire, into a national group which became formalised as the Association of Conservation Officers (ACO). Officers from Essex played a key role in enabling conservation officers, many of whom were working singly in planning departments, to come together and discuss the wide range of issues that they were facing daily.

Counties, such as Essex, which supported teams of experts who could pool their knowledge were in a privileged position and they sought to widen the availability of their expertise to all authorities. Also at this time universities and colleges had awoken to the need for qualifications in building conservation. Members of the ACO, including Essex officers, were able to provide lecturers in courses such as the diploma course at the Architectural Association, graduates from which were subsequently to fill posts in the Essex

HB&C Section. The Association has now changed into a formal institute, the Institute of Historic Building Conservation.

The Accelerated Resurvey

Following the demolition of the unlisted Modern Movement Firestone building in west London over the August Bank Holiday weekend in 1980, the Secretary of State, Michael Heseltine, initiated the Accelerated Resurvey of historic buildings in England. This was an important decision fulfilling a need that was seen as obvious to officers in the field: the existing lists were woefully inadequate. The *ad hoc* listing by means of Building Preservation Notices was a bureaucratic nightmare and small local resurveys could never keep pace with the threats posed by the rapid urban development schemes and changes to buildings in the countryside.

As has been described, Essex was already part of the *ad hoc* resurvey and was anxious to co-operate in the systematic resurvey of the county. Things were set up in a more formal manner. Previously, as with the listing in Halstead, the ministry Chief Investigator had told Mike Wadhams and Cecil Hewett that Grade I and II* buildings should form 10% of the list. Such prescriptive rules were now dismissed and a new format for assessing listabilty was set out, ensuring that, as far as possible, all lists should be prepared on the basis of established criteria and the descriptions set out in a formal manner.

In order that these criteria were understood, the DoE set up a series of short courses for listers. Essex sent six representatives, three experienced officers, two new contract listers and a manager. The two contract listers had very different backgrounds, qualifications and experience. However they both had the abilities which all successful investigators need, interest and knowledge in architectural history, an ability to carry out systematic and methodical research, good self organisation and, perhaps most importantly, a patient and friendly attitude towards building owners.

The costs of the listers were borne by the DoE. For the next four years or more the listers worked single-mindedly. The end result was new lists for almost the whole of the county. The only areas still not resurveyed are the old Chelmsford Rural District, a very significant omission, parts of Epping Forest District and Southend-on-Sea Borough. These were left out due to the reluctance of the central government to extend the survey beyond a stipulated date.

The Essex resurvey was carried out to a higher standard than much of England. From the start the County specialists insisted that a proper understanding of a building and a definitive list description could only be achieved by an internal survey. Long experience had shown that few vernacular buildings exhibit their full story from the outside. The Essex listers did not insist on an internal survey, but almost all owners were willing to allow access, although I do recall one phone call from an agitated farmer who had locked Cecil Hewett in at the point of a shotgun until he was assured of his authority. This insistence on internal access undoubtedly did slow down the survey, but the end results were more complete and authoritative descriptions. In particular it became evident that dozens of buildings, previously listed as 17th and 18th century, proved to have mediaeval structures concealed beneath later outer layers.

As all the listers were from Essex, they had the advantage of local contacts - private individuals, amenity societies and local councils that could help with access. They were not looked at as 'men or women from the ministry'. One thing added to the lister's work over and above the DoE requirements was that they photographed all the buildings for the county's records.

There were many finds and surprises but the majority of the surveys confirmed what had long been suspected; that the longevity and number of timber-framed buildings in Essex had been much underestimated. 'Rare' survivals proved to be not so rare: in particular aisled halls, screens passages, decorative crown-posts, smoke-bays, spere trusses and high-end canopies turned up in numbers that had previously not been suspected. One notable feature of which new examples were found was the timber-framed chimney. Prior to the survey only one was known. The survey turned up four more, two of which were in use by owners who were blissfully unaware of the type of structure; such stacks invariably emerge from the roof with a brick casing. A number of individual studies resulted from the survey, such as John McCann's work on dovecotes (McCann 1991).

Statistically the resurvey increased the number of listed buildings roughly by a factor of three. Essex now has 14,262 listed buildings - the third highest in England after Devon and Kent. The number of Grade I and Grade II* buildings increased in similar proportions. The principal area of increase was that of agricultural buildings, mainly barns, but also including specialised farm buildings such as granaries, stables, horse gins and many cartlodges. One other building type which had previously been rarely represented and was listed in considerable numbers was maltings, a building type exceptionally well represented in Mistley.

The overlap between Listed Buildings and Scheduled Ancient Monuments (SAMs) was critical in the Resurvey. Many buildings that had previously been listed were now considered be SAMs whilst some monuments, such as Rochford Hall Barns, having been converted to houses, became candidates for listing. The confusion resulting was of considerable concern to local authorities due to the two protected types being subject to different Acts of Parliament (i.e. the Planning Act 1990 and the 1979 Ancient Monuments Act). At Rochford Hall Barns, because the conversion to dwellings was carried out while the buildings were scheduled, the conversion work was not controlled by the Building Regulations.

Historic buildings grants and town schemes

The County Council was enabled, by various Acts, to give grant aid to owners for the repair of listed buildings and buildings in conservation areas. To this end there had been a Grants Officer in the section since the 1960s. In a typical year such as 1993/4, forty grants were given. These ranged from £400 for railings around Mistley graveyard to £5,000 for Stansted windmill. In a number of cases the District Council gave matching grants, the scheme being administered by the County.

As stated previously, under Section 10 of the 1972 Act, it was possible in 'outstanding' conservation areas to establish Town Schemes. These were grant schemes jointly funded by the DoE (now English Heritage), County Council and District Council. Thus with a 50% grant, £2 from DoE and £1 from each local authority raised £4 from the building owner. Town Schemes were initially set up in Saffron Walden, Coggeshall, Maldon, Bocking, Harwich and Manningtree. Subsequently there were twelve Town Schemes operating throughout Essex, all administered by the County Grants Officer. For each Town Scheme an explanatory leaflet was produced which was circulated to all households within the scheme.

Buildings at Risk

Lists of historic buildings at risk had been initiated by SPAB some years previously but most of the buildings on their lists were for sale on the market. By the mid 1980s it became clear to central and local government conservation staff that the majority of threatened structures were not on the market: some were simply abandoned, and others were just left to rot by uninterested or deliberately obstructive owners.

As a consequence it was decided in 1984 to produce the first county-wide Buildings at Risk Register (BAR). All classes of buildings were covered: many were dwellings but also included were industrial buildings, maltings, water and windmills as well as churches. However, the largest category of BARs was that of agricultural buildings, primarily barns but also cartlodges, granaries and stables. The purpose of the register was twofold, to encourage owners to look to making use of the building or alternatively to dispose of it to someone prepared to put it to use. To this end the register included the owner's name and address (where known) and set out possible alternative uses which could be considered in order to give the building a new life. The register became a regular feature of the publications emanating from the section.

It soon became clear that, as there were so many agricultural buildings at risk, a separate agricultural list should be produced. By 1996 there were 53 buildings in the agricultural volume and 153 in the other section. By this time the lists included photographs of most of the properties and, as the lists were produced on a district basis, the local authority contact was named.

The Stansted airport inquiry

When it was decided to hold a public inquiry into the extension of Stansted Airport, the three County Councils affected, Essex, Hertfordshire and Cambridgeshire, agreed to share resources. Part of this agreement was that the Essex HB&C Section would produce all the historic building and conservation area evidence for all three councils. As a result Susan Ikin and the writer spent most of their time over two years preparing information on these aspects of the area within about a 15 mile radius around Stansted. This culminated in giving evidence to the inquiry held at Quendon. However, most of the evidence, which was in the form of a series of written reports, was 'taken as read' by the inspector. The Section felt that the decision to extend Stansted had been a foregone conclusion and the preparation of all the evidence was a virtual waste of time and expertise. Five listed buildings to the north of the airport were eventually demolished. The largest, Great Coopers Farmhouse, was rebuilt at Battlesbridge and two small cottages were taken to the Wat Tyler Country Park at Pitsea.

The latest statements from the Department of Transport seem to indicate that another Stansted development is likely in the future. If it goes ahead it will almost certainly threaten more historic buildings and settlements and make life in large parts of Essex, Hertfordshire and Cambridgeshire less desirable.

Historic barns. A planning appraisal

From the outset publications were seen as a vital part of the work of the Environmental Services Branch. Probably the most influential of these was the *Essex Residential Design Guide* but in conservation terms equally important was *Historic Barns: A Planning Appraisal* (Essex C. C. 1979; Fig. 2). As has already been noted the barn was the building type which was most commonly at risk. The 'barns book' as it came to be known, became an influential publication nationally. It first set out the importance of ancient barns, a building type which had not been generally recognised to be of interest because of its (perceived) lowly status. The work of a number of architectural historians, not least Cecil Hewett, proved this to be a mistaken view. The resurvey had confirmed this by dramatically increasing the number of listed barns, not only in Essex but throughout England. The historical/architectural sections of the book are clear explanations of the agricultural context and the chronology of the carpentry development.

The book proceeded to examine possible alternative uses discouraging the most popular one, residential use, and recommending those uses which caused the minimum intervention to the structures whilst retaining their internal spatial characteristics. It was followed in 1982 by a similar publication from SPAB, called the *SPAB Barns Book*, to which both Cecil Hewett and the writer contributed (SPAB 1982). Even later, the Council for the Protection of Rural England produced their own book which sought to set down criteria for residential conversions.

It is now clear that, due in the main to the lack of firm policies by local planning authorities and support from central government, the arguments against

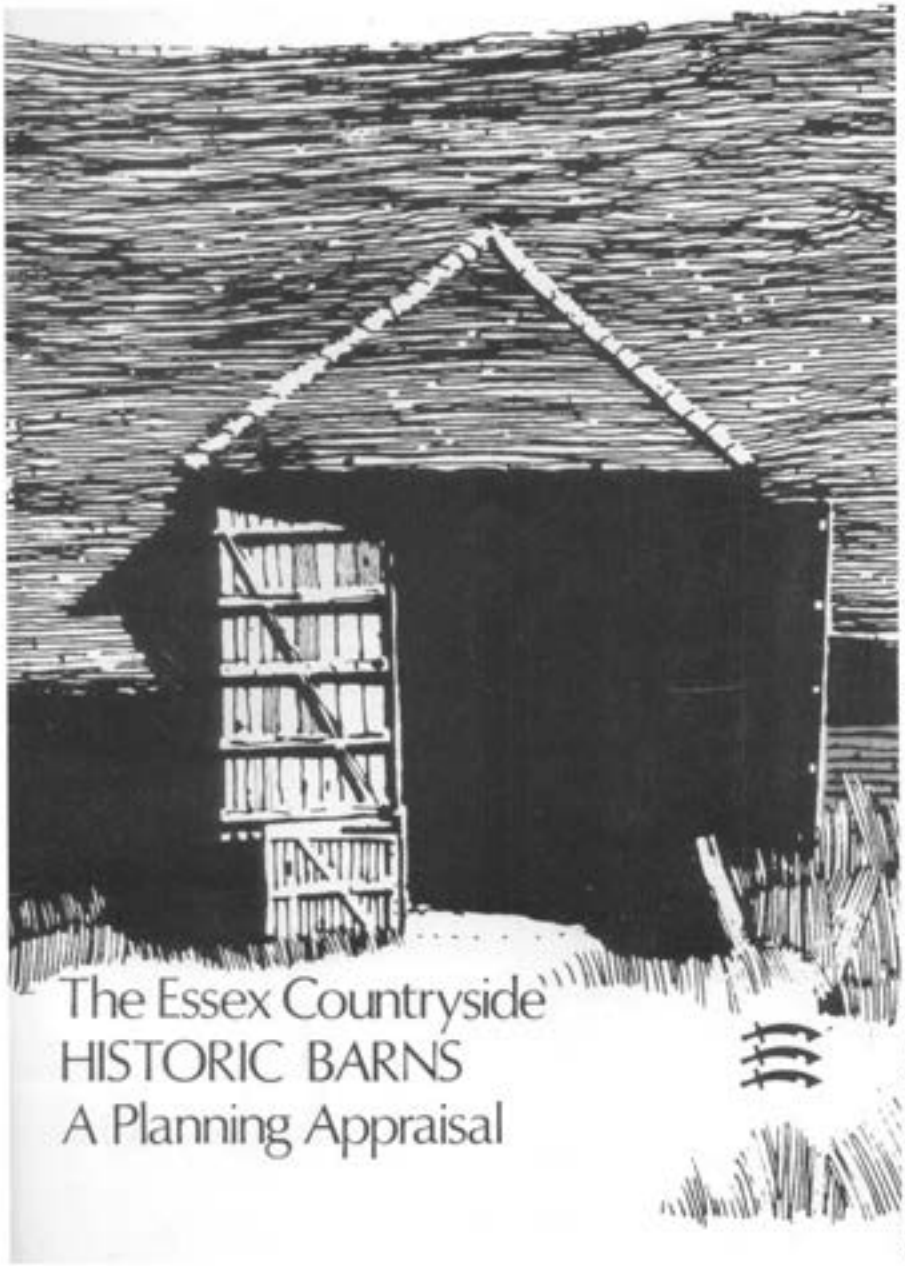

Fig. 2 The 'barns book'.

residential barn conversions were either ignored or watered down. One of the reasons for this was the power of the farming lobby which was particularly strong in those rural areas where most of the barns were sited. The book probably did ensure that many conversions did not cause as much damage to the fabric they might otherwise have done but the internal spatial beauty is always compromised in changing a barn into a house.

In retrospect it is clear that, in the early years, residential conversions were given consent too easily. Thereafter, adopting a more rigorous approach became difficult. The 'barns book' might now be seen to be an heroic failure. A lesson may be learned; when faced with a seemingly insoluble conservation problem, do not give way to compromise. Once a compromise proposal is agreed it becomes a datum by which subsequent proposals are measured.

Change to churches

Listed churches in use are exempt from the secular listed building legislation, the control being vested in the church authorities. The Church of England, which has the care of almost all of our ancient churches, has an internal system of Diocesan Advisory Committees (DACs) which control changes to all churches, not just those that are listed. Local planning authorities are represented on these committees by archaeologists and conservation officers. In 1990 the Chelmsford DAC in conjunction with the County Council prepared a booklet, *So you want to extend your church?* (Chelmsford DAC and Essex C. C. 1990), which was, in this area, as influential as the 'barns book'. The booklet was a joint publication and signed by the Bishop of Chelmsford and the Chairman of the County Council. It was written by clerical and secular members of the committee and established a policy that has been used by the committee in assessing all major changes to listed churches since that time. Within two years English Heritage produced its own advisory statement on the subject which reiterated much that the Essex booklet said, and even used some of its illustrations. The Diocese and the County Council have subsequently prepared a replacement book, based on, and bringing up-to-date, the earlier publication, with an emphasis on adapting churches as centres of worship and mission whilst preserving their historic character (Diocese of Chelmsford and Essex C. C. 2002).

Previously, in 1974, a booklet had been produced jointly by the Archaeology and Historic Buildings Sections which looked at the problem of redundant churches in the County. As well as studying the general problem of redundancy the booklet set out the complex procedure for redundancy and looked at suitable alternative uses for churches no longer in use, illustrated by examples.

Timber bellframes are one feature of most Essex mediaeval churches that had never been fully studied. Many are known to be of considerable age but little was known of them and there was no record available to establish which were common types and which were rare examples. With grant assistance from EH the Section carried out a survey of bellframes in 1994-6 from which assessments can be made when there are proposals to alter or to remove one (Watkin 1996).

Cressing Temple

The Barley Barn and Wheat Barn at the manor and farmstead of Cressing Temple, near Witham, had been identified by Cecil Hewett in the 1960s as having been built in the 13th century. The farming owners, the Cullen family, had acknowledged their importance although, as they did not wish to seek grant aid, by 1985 both barns needed major roof repairs as well as repairs to the timber frames. The site is ancient, 'Temple' coming from its one-time owners, the Knights Templar. Earlier occupation of the site has left remains from the Bronze and Iron Ages and the Roman period.

In 1985 Mr Cullen decided to leave Essex and the whole of the land was put on the market. However he realised that the Cressing Temple farmstead was something different from the remaining agricultural holding, so the barns together with the farmhouse and other farm buildings were marketed separately. Mr Cullen made it clear that his favoured option was to have the site put into public ownership but at the same time wished to sell it at market value. Offers were made by private concerns most of whom wished to develop the land using the barns as houses, restaurants or other unsuitable conversions. However, both barns are listed Grade I, the site is a Scheduled Ancient Monument, and there are three other listed buildings on the site. Consequently Braintree District Council made it clear to prospective purchasers that dramatic changes of use were not acceptable.

Early in 1987 Essex County Council started negotiations with Mr Cullen. The County Council had never taken on anything like this before. The Revolving Fund was one thing but this was permanent acquisition of a large site with long-term funding required, quite a different responsibility. In addition the county was, as ever, short of cash. A large proportion of the purchase price had to be found in grant aid. Here the National Heritage Memorial Fund and English Heritage were of great assistance, realising that Essex County Council's major commitment was that of putting the barns into repair and making the site available to the public. This had to be achieved with a long-term programme of repair and development. Eventually the offers of grant aid were such that the cost of purchase to the County Council was no more than the price of a three-bedroom house in Chelmsford.

The deed of purchase was signed on 29th September 1987 and the first priorities for the site were a detailed condition survey of the buildings. Two weeks later, on the night of the 16th October, the Great Gale struck and all the best laid plans were as nought. The retiling of the roofs of the barns had been proposed to be phased over ten years. In the event the work had to be completed in a third of that time.

That the purchase went forward and that subsequent uses and development have been so successful, is due to the unanimity of view by elected members, all of whom saw the opportunity that was offered to save one of Essex's major monuments and develop a site for education and enjoyment. Subsequently the Cressing Charter was set down which committed the County Council to use the site as a focus for the county's heritage:

- to preserve, explain and demonstrate the skills and craft used in the creation of the buildings, gardens and landscape;
- to make the site available to the public;
- to take advantage of the education and research opportunities offered by the site for future generations studying the history of Essex.

In 1996 the Cressing development programme moved forward with the installation of a permanent exhibition in the Wheat Barn. The Section was influential in developing this exhibition which illustrates the history of the manor, the Templars and Hospitallers and the historic carpentry and timber-frame traditions. In 1993 a major national conference was held at Cressing, the papers from which were published by the County in *Cressing Temple: A Templar and Hospitaller Manor in Essex*. This established a pattern of occasional Cressing conferences on allied subjects, e.g. the Essex landscape (Green 1999), mills, tree-ring dating, and timber-framed buildings (Stenning and Andrews 1998). Related events such as the listed home shows are also held at Cressing.

Since then, as explained elsewhere, Cressing Temple has become a major centre for all types of events in the county. The barns were always favoured for dances and local events. Now dramatic events, concerts and operas, are held as well as the educational uses. Daily visitors enjoy the site and its restaurant and shop.

Without the enthusiasm and expertise of the HB&C Section the energy to acquire Cressing Temple for Essex would not have been generated. The site is seen by members of the section as in some small way 'theirs', and it is fitting that an oak tree has been planted there to the memory of Cecil Hewett (Plate 2).

Advisory publications and education

Education was always been seen as part of the Section's responsibilities. Only by explaining the importance of historic detailing, materials and methods to owners, builders and professionals, could the historic building stock be kept in proper repair for future generations to enjoy. To this end a series of leaflets and booklets under the general title of *Conservation in Essex* has been written. They have ranged from a general paper explaining the philosophy and practice of building conservation to very specific papers on weather-boarding, brickwork, shopfronts, signs and lettering, and the advisability (or not) of adding conservatories to listed buildings. The booklets have taken on such controversial subjects as that of restricting the size of extensions to small listed cottages (*Our house isn't big enough!*; Fig. 3) and infill buildings in historic settlements (Essex C. C. 1994 and 2000). Advisory leaflets under the general heading of *Conservation Practice* have dealt with such subjects as repointing old brickwork, plastering and limewash and the cleaning (or not) of old brickwork and timber.

The acquisition of Cressing Temple gave the section a location for practical demonstrations and a site where advisory lectures could be given. It is an ideal site, situated near to the centre of the county, with a number of historic buildings that can be used as exemplars and which are also suitable for use as lecture halls. There are also plenty of outdoor areas that can be used for demonstrations.

Now, nearly 20 years after the acquisition of the site, and with the conversion of an 18th-century barn to include a heated workshop, Cressing Temple is a regular venue for an annual series of practical courses devised by the Section. These cover a wide range of subjects and problems faced by owners, builders and conservation officers dealing with the repair and renovation of old buildings. Most of the courses focus on building types found in Essex, with timber framing being a major priority. However, other subjects such as brickwork, weatherboarding, leadwork, lime plaster, joinery repairs, wattle and daub, and flint walling are also tackled.

Amenity awards and blue plaques

The section was closely involved in the establishment and running of the Essex Amenity Awards, a biennial event for outstanding efforts in all aspects of environmental improvements and enhancements. Many local organisations and individual owners have had their efforts rewarded. Subsequently a number of District Councils established conservation awards in their area. The longest running one is the Maldon District Conservation Awards Scheme and a member of the Section has been on the judging committee since its inception. Undoubtedly these schemes help to publicise good conservation efforts to the public and show that local authorities are determined to ensure high standards of repair, conservation and design.

Like other councils Essex County has celebrated local and national figures that were born in the county or lived or worked there by the installation of blue plaques. People such as Dorothy L Sayers and the 'Red' Vicar of Thaxted, Conrad Noel, have been celebrated.

The future for historic building conservation

Since the 1967 Act much progress has been made in the ways in which we care for and protect our historic buildings. Old crafts have been revived, thatching, lime plastering and building in green oak are now relatively commonplace. Technical study has led us away from plastic repairs and proved that the old 'natural' methods still work. There is no doubt that owners, builders and architects have plenty of information available to enable repairs and alterations to be carried out in the most sympathetic ways. Furthermore there is now a much wider range of suitable materials on the market. Twenty years ago, new handmade bricks, oak shingles, long straw for thatch, handmade clay roofing tiles and flooring pammets were all difficult, if not impossible, to obtain. Now they are all relatively easy to get and, even

Plate 2 Pat Hewett and Cllr Joe Pike, chair of Essex C. C., look at the oak tree planted at Cressing Temple in 2002 in memory of Cecil Hewett.

Fig. 3 Design guidance leaflet on extensions to historic buildings.

if the price may be high, they are quality materials which will outlast most modern alternatives.

Following the Planning (Listed Buildings and Conservation Areas) Act 1990, the issue of the DoE Planning Policy Guidance (PPG) 15 in 1994 was a major piece of government advice. In setting down guidelines and policy statements the PPG strengthened the arm of the conservation officer in many ways. The PPG followed extensive consultations which had included a working party on the reuse of redundant listed buildings. Members of the section made a major contribution to this which was published as Britain's *Historic Buildings: A Policy for their Future Use* (the Montague Report, 1990).

However since PPG 15 central government has shown little enthusiasm for any conservation issues. Indeed there is a strong movement, led by many architects, for dropping the 'presumption' in favour of historic buildings, preferring them to be replaced by 'good modern design'. Perhaps the best friends that the conservation movement has are in tourism where 'heritage' is seen to be a good thing. Although this support is welcome, the philosophy of 'olde worlde' is not the reasoned support that is needed for the protection of historic buildings and areas. It may help to protect the picturesque rather than the good.

Organisations such as the national amenity societies and the Institute of Historic Building Conservation will need to lobby hard to ensure that their aims are acknowledged by moral and financial support from Whitehall. It is not good news to hear that the Chancellor of the Exchequer is currently considering reducing the funding for the National Heritage Memorial Fund, established after the Great War as a memorial to those who died in that conflict.

In part, the lack of funding for English Heritage also accounts for the lack of any progress in re-assessing the lists for those parts of the county that were not covered by the Accelerated Resurvey. Grants for historic building repairs are now virtually non-existent and even where listed building owners are fortunate enough to receive grant aid, it often no more than covers the VAT bill. The government is still ham-strung by European rules which make it impossible for repairs to listed buildings to be free from VAT.

Ever since William Morris founded the Society for the Protection of Ancient Buildings, conservation has been fighting a rearguard battle. The rapid progress characteristic of all aspects of modern life is not conducive to the careful consideration which threats to historic buildings and settlements require before irreversible decisions are taken.

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Essex Archaeology and History 34 (2004), 228

Shorter Notes

A shafthole adze from Starlings Green, Clavering

Hazel Martingell

A complete shafthole adze was recovered from a garden in Starlings Green (Fig. 1). It is symmetrical in outline with a cylindrical shafthole, the lower edge of which has been expanded. The object measures 100mm (L) by 57mm (W) by 20mm (H). The sides and butt end are bevelled and the lower end is narrowed in section to form a blade. Although this implement does not appear capable of cutting materials such as wood, it would be more suitable for tilling the soil. This adze is made on banded, dark brown stained stone and is a particularly fine piece (the small area of damage is recent). On one surface there are areas of concretion.

All shafthole implements are known, traditionally, as maceheads. In recent years, a more practical use has been attributed to them, and so names that describe their form rather than a possible function have been adopted (Roe 1979). There are five groups: battle axes, axe hammers, maceheads, shafthole adzes and pebble hammers. Shafthole adzes have been recovered from contexts dated between c. 1650 - 1250 BC, which places them in the Bronze Age.

Acknowledgements

My thanks to Mr and Mrs Connelly, owners of the shafthole adze and Saffron Walden Museum for permission to publish this find.

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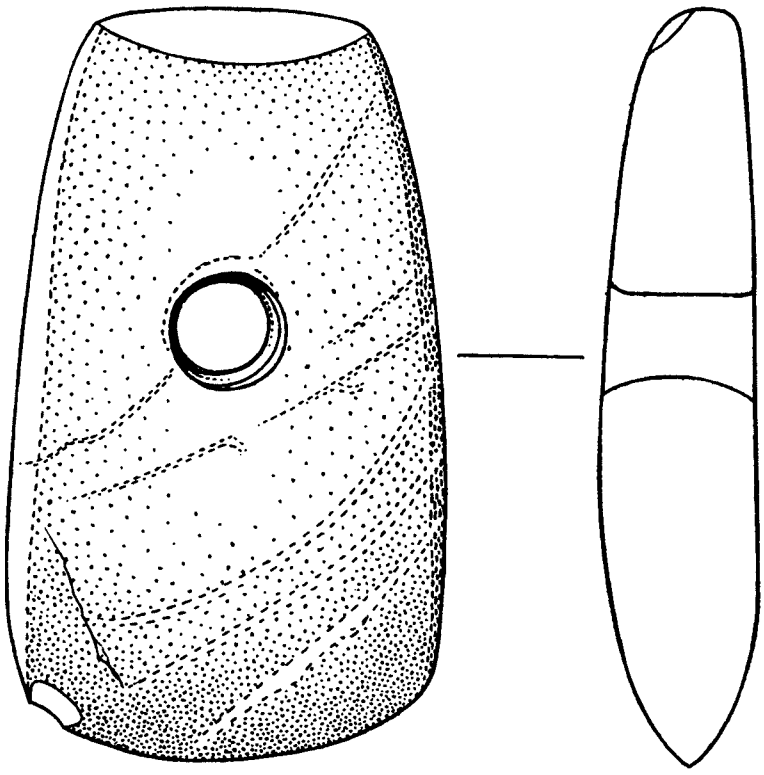

Fig. 1 Shafthole adze from Starling's Green (100mm long)

Essex Archaeology and History 34 (2004), 229-251

Archaeology in Essex 2002

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 196 projects were reported to the Essex Heritage Conservation Record, 107 of which are reported here (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 illustration is by Alison Bennett.

The original summaries, and any associated limited circulation reports, have been added to the Essex Heritage Conservation Record (EHCR) held by the Heritage Conservation Branch at Essex County Council, Waste, Recycling and Enviroment, 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 2002

Introduction

This year a total of 197 summaries were submitted to the EHCR, of which 90 may be considered to be negative, in that no archaeological features were revealed. The remaining 107 projects are reported here. This is just two less than last year. There are 38 evaluations, a drop from the 52 of last year but still higher than the 27 of the previous year. Excavations have risen from 15 last year to 21. 20 projects followed on from work in previous years. This year three projects have been carried out by individuals and four by local societies. Only the most significant summaries are mentioned in the following period paragraphs.

Prehistoric

Examples of environmental evidence came from several sites, including a palaeochannel at Canning Town (14) and an erosion/river scour event dating to the Iron Age at Newham (68). A Neolithic causewayed enclosure, a Middle Bronze Age cemetery and village were discovered at St Osyth (88). Bronze Age settlement evidence was found at several of the sites along the A120 (1). Middle Bronze Age burials came from Great Tey (48), and evidence for a possible Late Bronze Age tumulus was found at Rainham (76). Evidence for Middle to Late Iron Age settlement also came from sites along the A120 (1). A Middle Iron Age salt working site was discovered at Great Wigborough (49). A Late Iron Age enclosure was excavated at Witham (105).

Roman

More of a high status Roman residence of the 2nd to 3rd century was revealed at Colchester (26). Other sites of interest in Colchester include buildings (29) and inhumation burials (20) and (29). A late Roman well was found at Helions Bumpstead (53). There was evidence of a possible villa at Takeley (98), and a probable farmhouse and cremation burials came from Witham (105).

Saxon

A Saxon ditch was recorded at Clacton (18). Saxon buildings were found at Heybridge (54) and Witham (105). A Saxon farmstead and evidence of contemporary reuse of the landscape came from Rainham (72).

Medieval

Medieval pottery kilns were found along the A120 (1) and at Takeley (98). Three leather shoes dating to the 15th/16th century were found in Colchester (25). A midden was excavated at Great Wigborough (49). Excavations at Beeleigh Abbey (61) have revealed buildings from the 13th and 15th centuries. Large scale quarrying and rubbish pits were found at Maldon (63). Excavations at Thoby Priory (66) revealed evidence of the priory church. A medieval farmstead was excavated at St Osyth (88).

Post-medieval

Possible remains of a 16th-century building were found at Copped Hall (38). Evidence of the post-dissolution

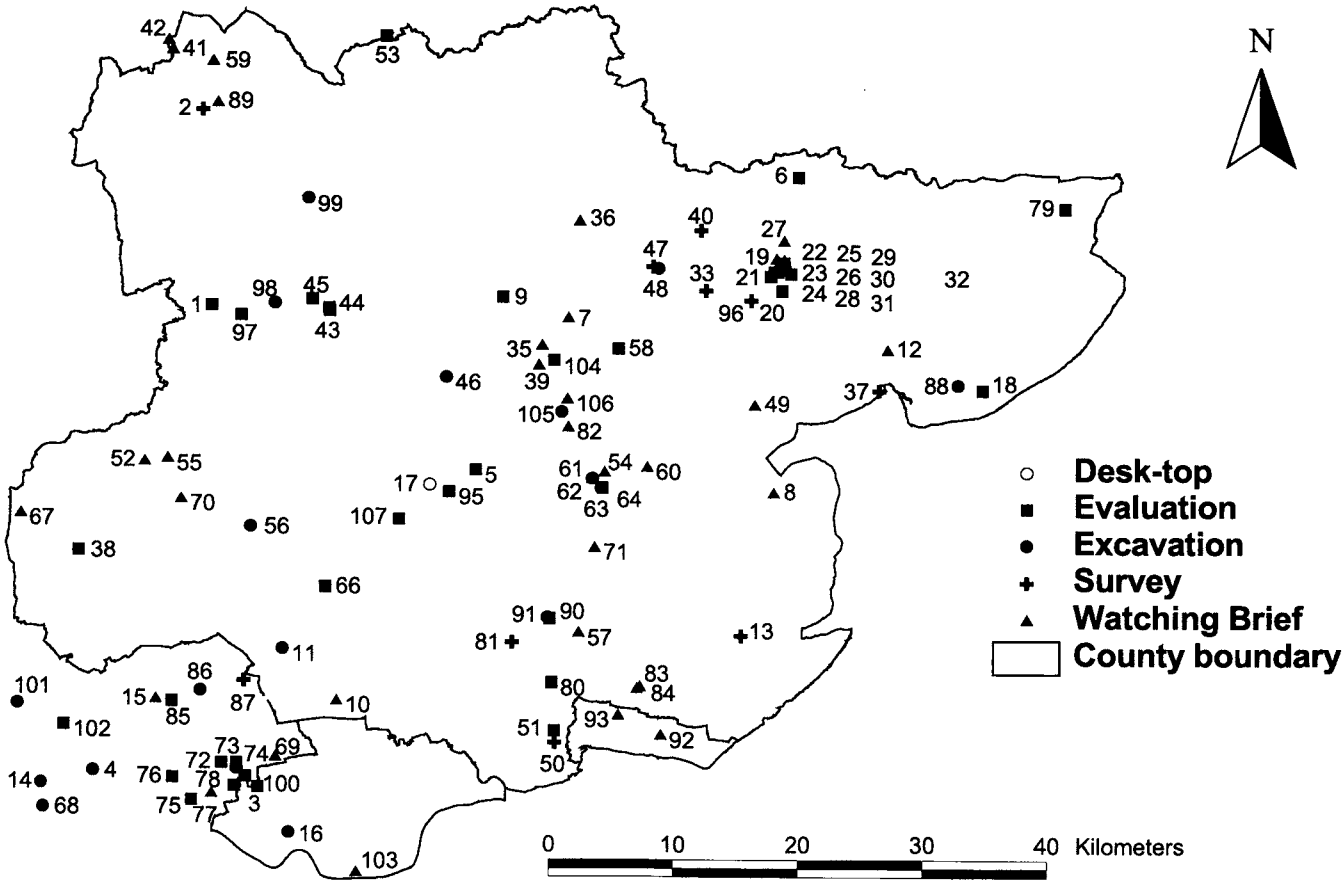

Fig. 1 Location of archaeological projects in Essex, 2002.

manor house came from Thoby Priory (66). Various industrial remains were surveyed at Rettendon (81). Thaxted (99) revealed evidence of the cutlery industry. 19th-century landscape features were recorded at Hylands Park (107).

1. A120 trunk road, Stansted Airport to Braintree (TL 5345 2200-TL 7460 2215)

O.W.A.

Subsequent to the evaluation and excavation work undertaken along the route of the A120 in 2001 by Oxford-Wessex Archaeology, a watching brief was carried out between April-June 2002 along the same route in advance of the roadworks. In addition an evaluation was undertaken at Stebbingford Farm borrow pit. In total 18 sites were investigated, some as extensions to previously excavated sites. Evidence of activity spanning the earlier prehistoric through to the medieval period was revealed. In summary the following sites were excavated:

Parsonage Lane (TL 5595 2209/5606 2212) - early Roman field system and enclosures with associated droveways and an undated cremation burial;

East of Parsonage Lane (TL 5633 2222) - single early-middle Iron Age roundhouse with associated pottery and other finds and Romano-British ditches, possibly a droveway;

North of Frogs Hall Stables (TL 5827 2240/5796 2236) - evidence of later Bronze Age activity including domestic refuse and a single urned cremation;

West of River Roding (TL 5846 2233) - two medieval pottery kilns (12-14th century) and associated features;

West of Stone Hall (centred TL 5885 2222) - later Bronze Age settlement activity;

Stone Hall (TL 5896 2216/5917 2204)- later Bronze Age settlement, farming and mortuary activity, the latter comprising a small cremation cemetery, mainly unurned; an isolated later Iron Age pit;

West of Strood Hall (TL 5977 2176) - later Bronze Age quarry pit;

Strood Hall (TL 5999 2170/5993 2162) - continuation of the Roman farmstead complex investigated in 2001;

Stane Street South (TL 6054 2145) - undated hearth feature and tree throw;

Highwood Farm (centred TL 610/1 212) - isolated late Bronze Age, late Iron Age and medieval features;

South of Great Dunmow (centred TL 613 212) - sparse evidence for later Bronze Age activity;

West of Ongar Road (TL 6231 2114/6256 2103) - Neolithic flint scatter and later Bronze Age settlement activity;

Grange Lane (TL 6523 2183 to 6549 2199) - sparse later prehistoric activity including three later Iron Age cremation burials;

East of Little Dunmow Road (TL 6611 2222 to 6629 2227) late Iron Age to early Roman settlement

comprising seven roundhouse structures and associated features;

Stebbingford Farm (TL 6749 2250) - medieval features probably connected with the previously excavated medieval farmstead at Stebbingford;

Stebbingford Farm Borrow Pit (TL 6735 2254 to 6776 2266) - a 21 trench evaluation carried out on the site confirmed the presence of low density later prehistoric activity spanning the early Iron Age to early Roman period with a continuation of the medieval features already noted at Stebbingford;

Valentine Cottage (centred TL 7070 2234 and 7080 2231) - several early Roman-period features suggesting a relatively high status farmstead in the immediate vicinity;

West of Panners Roundabout (TL 7306 2181 to 7314 2179) - late Roman-period settlement adjacent to Stane Street (A120).

Archive: O.W.A.

2. Audley End, Park (TL 5237 3843)

A. Westman, M.o.L.A.S.

A brick structure was investigated and recorded, situated in a stream on the eastern edge of the former 'Elysian Garden', about 250m north of Audley End House. The structure, 5m wide overall, comprised two successive rectangular compartments 2m wide, filling the stream, with an enclosed arched brick culvert along the eastern side to carry overflow water, for a total length of 12m. The walls of the structure, up to 0.5m high, included a honeycomb wall at the head of the first, smaller compartment, which had a solid brick base, and a stone sill across the second, much longer compartment, which had a gravel base. The structure is interpreted as a fish hatchery for game fish, probably built early in the 20th century and not used after about 1939. This function and dating are suggested, but not confirmed, by documentary evidence.

Archive: S.W.M.

3. Aveley, Little Brickkiln Wood, Belhus Woods Country Park (TQ 5720 8230)

E. Heppell, E.C.C. (F.A.U.)

An archaeological desktop and on-site assessment was undertaken on landscape features in Little Brickkiln Woods, Belhus Park. Upstanding archaeological remains, consisting of a mound with a circular brick structure on the top survive on the site. There are also a number of water-filled clay pits in the area; these remains are thought to be associated with the operation of a 19th-century brickworks in the area.

Brickmaking has taken place at Belhus since at least 1603, continuing through the 17th century. Documentary and cartographic evidence would suggest that these early works lay on the northern boundary of Aveley Parish, to the south of the study area. These works probably provided the bricks from which Belhus mansion was rebuilt in 1745-1777, and were abandoned by the 1840s. A new brickworks was established by 1876, possibly operated by Gibbons. These works were short lived and had been abandoned by 1897, presumably having run out of raw material. The works are shown on the first edition Ordnance Survey (1876).

Although not shown on any cartographic sources, the extant mound and structure in Little Brickkiln Woods are likely to be associated with this phase of works. The structure is likely to have been a mixing pan, or possibly a pug mill.

Archive: T.M.
Report: F.A.U. Report 1008

4. Barking, Hewlett's Quay, Abbey Road (TQ 4400 8360)

D Hounsell, J Grant, J Murray, H.A.T.

The field evaluation revealed evidence of the 19th- and 20th-century riverside/wharves. Trench 3, near the Abbey Road frontage, revealed evidence of post-mediaeval dumps and two east-west aligned channels of medieval date leading to the river. Trench 4, also close to the Abbey Road Street frontage, revealed a further east-west aligned channel with evidence of wooden revetting along its southern edge. Its lower fills contained quantities of 12th-century pottery, and its upper fill contained High Medieval sherds. A further small, irregular pit contained 12th-century sherds. Subsequent full excavation of the channel as it occurred within Trench 4 confirmed the dating of the feature and established the revetting to be largely uniform along the line of the channel. There was substantial later truncation of the site.

Archive: H.A.T.

5. Boreham, Generals Farm Area B (TL 7465 0840)

M. Peachey, E.C.C. (F.A.U.)

Monitoring of topsoil stripping ahead of quarrying uncovered several linear features previously noted on aerial photographs (EHCR 5767). Only one of the features produced dateable finds, but all are likely to be drainage features of fairly recent date.

Archive: Ch.E.M.

6. Boxted, Carters Hill, Boxted Cross (TM 005 325 (centred))

K.Orr, C.A.T.

An archaeological evaluation by trial-trenching at Carters Hill, Boxted Cross, near Colchester, Essex revealed pits and ditches, two of which may be dated to the Iron Age and form part of a field system which is visible from the air as cropmarks.

Archive: C.M. (ref. BOXC 02)
Report: C.A.T. Report 175

7. Bradwell, Rivenhall Airfield (TL 8200 2100)

M. Peachey, A. Letch, E.C.C. (F.A.U.)

Continuous archaeological observation on topsoil

stripping prior to quarrying at Rivenhall Airfield has recorded a ring ditch, cremation burial and several pits and gullies. The ring ditch is about 10m in diameter; excavation of a segment of the ditch found relatively large amounts of late Iron Age pottery and some fragments of cremated bone and charcoal, which may be pyre debris. A large ditch runs immediately north of the enclosure. The cremation burial was found to the northwest, in a scatter of pits and gullies. An area devoid of features separated the ring ditch from the pits and gullies, possibly resulting from disturbance during the construction of the airfield. The four pits were discovered during monitoring of the topsoil strip in the centre north of the site, they were all roughly circular with charcoal rich fills. Pottery of transitional middle - late Iron Age date has also been recovered together with residual flint-tempered pottery.

Previous summaries: Bennett 2002, 392
Archive: Bt.M.

8. Bradwell-on-Sea, Orplands Managed Retreat (TL 9850 0650)

E. Heppell, E.C.C. (F.A.U.)

As a part of creating a managed retreat, two breaches were cut in the sea wall in 1995, allowing an area of former arable land to be inundated. Ditches and banks were created in the hope of encouraging accretion of deposits. Monitoring of this site has provided valuable information on the processes of erosion and accretion, as well as identifying several archaeological sites in the intertidal zone. It is hoped that the work on this site will continue.

Archive: E.C.C.
Report: F.A.U. Report 1006

9. Braintree, Tear Drop site, Chapel Hill (TL 7680 2265)

M. Peachey, E.C.C. (F.A.U.)

An archaeological evaluation consisting of three trenches carried out on land at Lower Chapel Hill found only modern features and the foundations of recently demolished terraced housing. The development area is close to the site of the manor house of the Bishops of London (EHCR 6409-10) and the Chapel of St John the Baptist (EHCR 6407), no evidence of either of these was located during the fieldwork.

Archive: Bt.M.

10. Brentwood, All Saint's Church, East Horndon (TQ 6350 8950)

S. Hickling, E.C.C. (F.A.U.)

An archaeological watching brief was carried out during the construction of soakaway and excavation of drainage features outside the northeast corner of the chancel of this redundant church. The only features discovered were three inhumation burials and a Victorian brick-lined drain. There was no evidence of previous church buildings.

Archive: Ch.E.M.

11. Brentwood, Weald Road (TQ 5917 9370)

M. McKenzie, M.o.L.A.S.

The evaluation revealed the remains of cellars and drains associated with 19th-century housing on the site. Earlier features included possible 18th-century quarry pits/ ponds and ditches, which may represent land divisions or boundaries. Subsequent excavation revealed a possibly medieval ditch running northeast by southwest across the centre of the site. This may represent an original property or boundary ditch. Although its fills produced no medieval finds, the lack of post-medieval material, its stratigraphic location at the base of the sequence and its coincidence with what is thought to be the limit of the built-up area can, at least, raise this as a possibility.

Pitting, dumping and levelling took place from the late 16th/early 17th century onwards. The main phase of occupation, however, seems to have taken place in the 18th to 19th centuries with brick buildings occupying the site, possibly as a result of town expansion with the coming of the railway. These were demolished when a road-widening scheme took place in the early part of the 20th century.

Archive: Ch.E.M.

12. Brightlingsea, Brightlingsea Quarry, Moverons Lane (TM 0765 1838)

H.Brooks, C.A.T.

Monitoring and recording of topsoil-stripping over an area of 3.3 hectares in the North Field at Brightlingsea Quarry, Moverons Lane, Brightlingsea, Essex revealed field-ditches containing Neolithic pottery and several discrete features including a disturbed Beaker burial. Middle Bronze Age and Roman material was recovered from the ploughsoil. Some features were heavily truncated by machine-stripping of the site.

Archive: C.M. (ref. 2002.54)
Report: C.A.T. Report 214

13. Canewden, Grapnell's Farm, Wallasea Island (TL 9594 9473)

E. Heppell, E.C.C. (F.A.U.)

An archaeological desk-based assessment was carried out on the northern coast of Wallasea Island. It is proposed that a secondary sea wall, with associated soke dyke will be constructed to protect the island, which lies almost entirely below high water. Although documentary evidence shows the study area to have been settled from at least the Tudor period, extensive drainage works carried out the 1950s and 1970s are likely to have destroyed any below-ground archaeological remains.

Inland of the sea wall a rapid walkover survey identified few areas of archaeological potential. Scatters of peg tile marked the sites of the known post-medieval farmsteads, but no structural remains were visible. The modern trackway runs along a bank that may be of some antiquity; this is the only feature that the construction of the sea wall will impact.

A number of sites were identified on the salt marsh and in the intertidal zone. These were the sites of landings/quays, relicts of the oyster industry, and a number of abandoned hulks. Detailed examination could not be made of a number of these features as they were not safely accessible. The features in the intertidal zone will not be impacted by the construction of the sea wall.

Archive: S.M.
Report: F.A.U. Report 1024

14. Canning Town, Hermit Road (TQ 3980 8260)

G. Potter, C.A.

An apparent palaeochannel running broadly northwest-southeast was seen cutting through natural clay/silt deposits. A Victorian culvert, visible on a map of 1869 was identified, as was other evidence of 18th- to 19th-century activity. Prehistoric peat layers were encountered and sampled within the fill of the palaeochannel. Work is still ongoing.

Archive: C.A.

15. Chadwell Heath, Marks Warren Farm, off Whalebone Lane North (TQ 490 896)

R. Humphrey, A.O.C. with J.S.A.C.

Topsoil stripping from gravel quarry Area 5 and the remainder of Area 4 was monitored, revealing sparse prehistoric features. Two large pits were dated to the Early Iron Age. Other less well-dated features probably also date to the Late Bronze Age or Early Iron Age including several ditches that may represent fragments of a field system or define small areas of activity. These features include small pits or post holes, a possible burnt hollow or fire pit, and tree throw hollows that contained struck and burnt flint.

Two phases of an 18th- to 19th-century field system was also revealed on the site as well as various features indicative of 20th-century farming and activity peripheral to the World War II gun battery that was present on the site.

Archive: L.A.A.R.C.

16. Chafford Hundred, Millwood House (TQ 5965 7856)

S. Hickling, E.C.C. (F.A.U.)

Evaluation of this site, prior to residential development, recovered a quantity of residual worked flint from modern cut features. Subsequent excavation revealed evidence of several phases of modern garden planting with residual Bronze Age worked flint. Although no certain prehistoric features were encountered, the amount of residual material suggests occupation in the locality.

Archive: T.M.
Report: F.A.U. Report 989

17. Chelmsford, Marconi Driver's Yard, New Street (TL 7097 0721)

A. Letch, E.C.C. (F.A.U.)

A desk-based assessment was carried out prior to the submission of a planning application for a residential development. The development area is situated outside the Roman town of Caesaromagus and on the periphery of the medieval town. In the late 18th and up to the mid 19th century the area was used as pasture.

Medieval clay and rubbish pits dating to the 13th and 14th centuries have been found on the opposite side of Victoria Road (EHCR 16138). More have been found on the New Street frontage, although disturbed by later development. A recent borehole report indicates the presence of undisturbed soil horizons within the development area.

The Victoria Road School, designed and built in 1841 by Webb in the Tudor style occupies the south-west corner of the site. It incorporates later work by Frederick Chancellor, an acknowledged Essex architect of the late 19th century and early 20th centuries. The remainder of the plot was used for storage and possibly for industrial purposes, and was taken over by Marconi around 1940, for use as a vehicle depot. After the closure of the school, Marconi took over the buildings for use as an archive store.

Archive: Ch.E.M.

18. Clacton-on-Sea, Proposed new secondary school site, Jaywick Lane (TM 1535 1505)

A. Letch, E.C.C. (F.A.U.)

Fifteen evaluation trenches were excavated to the west of Clacton-on-Sea, on the site of a proposed new secondary school. The site lay within an area of prehistoric and later cropmark features (EHCR 2898-9). Datable archaeological remains were concentrated in the centre of the site, continuing in a broad band to the north-east and south-west, situated approximately 0.35-0.4m below present ground level. The evidence showed small-scale multi-phase activity indicated by a series of undated probable cropmark features, early Roman structures and elements of a field system, a Saxon ditch and a medieval pit. In addition the presence of a struck flint supports the predicted presence of earlier Neolithic or Bronze Age activity on the site.

Additional work involved the monitoring of machine stripping on the site of the temporary school site in the northwest corner. However, because of the limited depth required for these works, archaeological remains were only observed where machining was deepest, to the west of the site. These may form part of the Roman field system observed in the main area.

Archive: C.M.

19. Colchester, land adjacent to 2 Alexandra Road (TL 9826 2438)

H.Brooks, C.A.T.

This 0.05 hectare site is on the fringes of one of Roman

Colchester's main cemeteries. The site was evaluated by three trial-trenches showing that the southern two-thirds of the site had been truncated by recent pits. A Roman soil layer survived to the north of the site containing pits and other Roman features, but no burials. Spot-dating of the finds would suggest Roman activity of the 2nd to 3rd centuries. Loose human bones from one of the recent pits in T2 indicated probable Roman burials on the site. There was a large quantity of Roman building debris consisting of brick, roof tile and *tesserae*, indicating a Roman structure near to or perhaps on the site.

Archive: C.M. (ref. 2002.55)
Report: C.A.T. Report 187

20. Colchester, Colchester Garrison (TL 992 232)

H.Brooks and C.Crossan, C.A.T.

An evaluation in advance of proposed large-scale redevelopment to the south of Colchester town centre involved fieldwalking, geophysical survey and trenching within a broad area of Ministry of Defence land extending south from St John's abbey grounds to Berechurch Hall Road. The evaluation sites included farmland, public open space and military establishments amounting to 226 hectares, within which were located 249 exploratory trenches totalling 12km in length. The principal findings were:

Northern region (areas surrounding Abbey Field and bounded by Butt Road, Berechurch Road and Ypres Road, including Goojerat, Cavalry, Hyderabad and Meeanee Barracks). These areas lie within a 1.3km radius from Colchester town centre. The character of the archaeological remains identified can be summarised as principally modern in date, with a very small numbers of significant features. The significant archaeological features consisted of three Roman burials, a robbed-out Roman building, a prehistoric pit, and a few Roman pits and ditches. Some of the Roman ditches share a broad alignment with field-boundaries recorded in the region to the south, and may be regarded as parts of the same late Iron Age / Roman field system. There were a few prehistoric sherds and struck flints, but none of the prehistoric material was at a level to suggest anything other than scattered and intermittent activity in the prehistoric period. The features in the northernmost areas in particular contained larger groups of artefacts reflecting their proximity to the Roman town and Roman cemeteries and to the medieval centre of activity at St John's Abbey.

Central and southern region (south of Ypres Road, bounded by Layer Road to the west and the Monkwick Estate to the east. This includes Roman Way, Kirkee and McMunn barracks). These areas extend from 1.3km to 3.2km from the town centre. In the central areas evidence of early prehistoric activity was generally sparse and limited to isolated pits including possible Bronze Age pits with burnt flints. A middle Bronze Age bucket urn fragment, possibly from a disturbed burial, was found immediately east of Kirkee barracks. Cropmark linear features were examined and established to be part of a late Iron Age and Roman rectilinear field system.

In the more southerly region, east of Berechurch Road, significant archaeological features consisted of a late Bronze Age/early Iron Age occupation site with associated pits, elements of an early Iron Age/middle Iron Age landscape, and the *oppidum* fields and trackways (mainly known from cropmarks, but confirmed by the current work). Additionally, there was a higher level of small-scale and residual prehistoric material than in other garrison areas.

Previous summaries: Bennett 2001, 255; 2002, 393
Archive: C.M. (ref. 2002.8)
Reports: C.A.T. Reports 184, 197, 203, 205-207

21. Colchester, 7-13 Head Street (formerly Harpers store) (TL 9939 2514)

H. Brooks, C.A.T.

Following a fire which destroyed the Harpers sports shop, the southern half of the plot (11-13 Head Street) was rebuilt. For the most part, this involved the reuse of existing cellar space, but archaeological hand digging preceded the extension of the cellar into previously undisturbed ground. This revealed a very well preserved sequence of archaeological remains all of Roman period date. The earliest material was a small section of a timber structure, presumed to be of fortress date (Colchester period 1: *c.* AD 44-9). Over this lay a substantial clay block wall with chevron impressed decoration on both faces, with an open trench (presumably a drain) to its rear. This was of colony date (Colchester period 2: *c.* AD49-60/1), and had been burnt in the Boudican revolt of AD 60/1 (Colchester period 3). The next period of activity was represented by a building with septaria rubble walls and tessellated pavements. A well-preserved *sestertius* of Trajan lay in the bedding for the tessellated floor, probably as a deliberate foundation offering. This building was long-lived, as shown by the renewal of the plaster face on the septaria wall on at least 5 occasions (Colchester period 5: 2nd to 3rd century).

In advance of the rebuilding of the northern half of the Harpers plot (7-9 Head Street), three small exploratory trenches were cut to locate the highest significant archaeological deposits. A mitigation strategy was drawn up, which involved hand excavation of pile caps and beam slots where they cut into the archaeological horizon. This work is ongoing. So far, the results show the same Roman sequence as revealed in the earlier trenching (above) with the addition of medieval or post-medieval wall lines, soakaways, and an oven base, and heavy truncation by post-medieval and later pits.

Archive: C.M. (ref. 2002.123)

22. Colchester, 25 Head Street (TL 9937 2510)

H.Brooks, C.A.T.

A single evaluation trench was excavated to the rear of

25 Head Street. The principal archaeological remains consisted of Roman demolition debris lying over a Roman mortar floor, both of which were cut by a 13th-century cess-pit.

Archive: C.M. (ref. 2002.124)
Report: C.A.T. Report 198

23. Colchester, Royal Grammar School, Lexden Road (TL 987 247)

B.Holloway and K.Orr, C.A.T.

Evaluation in advance of a new art block revealed a linear feature, probably a Roman boundary ditch. A subsequent watching brief exposed Roman ground-levels and pottery, but no further features.

Previous summaries: Bennett 2000, 217, 223; 2001, 255
Archive: C.M. (ref. 2002.24)
Reports: C.A.T. Reports 179 and 208

24. Colchester, 14-15 North Hill (TL 9940 2546)

K.Orr, C.A.T.

Observations were made during groundworks associated with the repair of the medieval building (formerly 'Bonds'). Under the floorboards of the building, previous floor surfaces and the original medieval ground-level were exposed. Timber and brick foundations were revealed and there was evidence of the underpinning of wooden sole plates with peg-tile. A wall and a vaulted ceiling to a cellar dating to the late 17th or 18th century was exposed. The groundworks did not impact on any Roman remains.

Archive: C.M. (ref. 2002.235)
Report: C.A.T. Report 192

25. Colchester, rear 36 North Hill, (Byron's Yard) (TL 9936 2548)

K.Orr, C.A.T.

A small trial-trench was excavated but no archaeological features were exposed. However, three leather shoe soles, thought to date from the 15th or 16th century were found preserved near the bottom of the trench. These were not associated with any discernable features. Residual Roman tile was found.

Archive: C.M. (ref. 2002.30)
Report: C.A.T. Report 177

26. Colchester, North Station Road (the Victoria Inn) (TL 9932 2577)

K.Orr, C.A.T.

An archaeological watching brief produced more evidence of a high-status Roman residence that had been observed during the 2001 evaluation. The evidence consisted of a foundation, and parts of two mosaic floors and a herringbone floor. The structure was demolished to make way for at least one large building with tessellated pavements which probably had a public rather than a domestic function. The sparsity of stratified pottery made dating difficult; however, the site is thought to have been in use from the early 2nd to the late 3rd century AD.

Previous summaries: Bennett 2002, 394
Archive: C.M. (ref. 2002.87)
Report: C.A.T. Report 193

27. Colchester, Northern Approaches Road Phase 2a and land to the west of Colchester General Hospital (TL 9890 2812-TL 9940 2645 and TL 9930 2731)

K.Orr, C.A.T.

A watching brief was carried out during topsoil-stripping for new access roads and new drains and also during topsoil-stripping for residential development. Along the road line, two spreads of medieval pottery were recorded but no associated features were observed. Four ephemeral pit- and ditch-like features and late Iron Age to early Roman pottery were recorded on the land to the west of the Hospital.

Archive: C.M. (ref. 2001.152)

Report: C.A.T. Report 186

28. Colchester, Handford House, 1 Queens Road (TL 9858 2475)

K.Orr, C.A.T.

An archaeological evaluation consisting of three trial-trenches revealed one in situ Roman cremation and other possible cremations. Modern or post-medieval gardening activity and the digging of pits for rubbish-disposal may have destroyed other cremations on the site.

Archive: C.M. (ref. 2002.161)
Report: C.A.T. Report 210

29. Colchester, St Mary's Hospital, Balkerne Hill (TL 991 253)

S.Benfield, C.A.T.

The site is west of the Balkerne Gate and excavation of the northern area was completed in 2001. Excavations at the site recommenced during 2002, following the demolition of buildings on the central and southern areas, and will continue into 2003.

A major discovery has been the presence of a Roman road heading towards the Sheepen area from the Balkerne Gate. From this two smaller streets or lanes, approximately 100 metres apart, head north down the slope of the hill. Either side of the eastern lane, and close to the projected line of the road, were the stone and mortar footings of two Roman buildings. Both of these buildings appear to have had timber predecessors. Remains of Roman buildings with mortar and tile footings have also been partly revealed along the side the Roman road in the area of the western lane.

Approximately thirty Roman inhumations have been excavated on the eastern part of the site which post date the lane and buildings. Only a few of these were accompanied by grave goods, consisting mostly of items of jewellery. Of note were two double burials in each of which two inhumations in separate coffins appear to have been made at the same time. In the first of these two adolescent girls were accompanied by jewellery and glass vessels, in the second were an adult and juvenile,

the juvenile accompanied by armlets. To date the only burial located on the western area of the site is a Roman cremation consisting of pyre debris along with items of jewellery and crushed pots.

Of particular note is a high quality Roman copper-alloy figurine, together with its hollow base, possibly of a priestess or water deity which came from a linear group of Roman quarry pits along the side the road.

A number of substantial rubbish pits dating from the Victorian Workhouse have been excavated, the large number of varied finds from which should provide an insight into the everyday life of the institution.

Previous summaries: Bennett 1998, 197-198; 2002, 395
Archive: C.M. (ref. 2001.64)

30. Colchester, St Helena's School, Sheepen Road

B. Holloway, C.A.T.

A watching brief was carried out on the digging of electrical cable trenches around the tennis courts. Two features were observed, one of which was archaeological. There was a large number of loose finds, principally Roman tile and late Iron Age/Roman pottery of a type found in adjacent Sheepen excavations.

Archive: C.M. (ref. 2002.90)
Report: C.A.T. Report 188

31. Colchester, rear of Mercantile House, Sir Isaac's Walk/St John's Street (TL 9975 2485)

K.Orr, C.A.T.

An archaeological watching brief was carried out during the digging of a trench for a lift-shaft, revealing part of a late medieval brick culvert and wall with buttress. These constitute evidence of settlement in the area at this time.

Archive: C.M. (ref. 2002.119)
Report: C.A.T. Report 202

32. Colchester, west side of St John's Abbey precinct wall, Mersea Road (TL 9990 2460)

B. Holloway, C.A.T.

Three test-trenches on the west side of the precinct wall were dug to assess the condition and stability of the wall. It was shown to be in varying states of condition and preservation, with evidence of previous patches and repair work.

Archive: C.M. (ref. 2002.23)
Report: C.A.T. Report 178

33. Copford, Copford Hall Farm (TL 931 232)

D. & A. Black

The surveyed field is known to contain much Roman tile in the plough soil and local legend believes it to be the site of a Roman villa. This magnetic survey, extending the work done by Cott in 2000, revealed a number of parallel ditches, some cutting others, suggesting extended usage of the site. A complex pattern of lines, extending into woodland and so incompletely surveyable, possibly show the site of a villa. There were some strong magnetic responses elsewhere in the field which had geometric outlines and so could be other buildings, perhaps associated with the villa. Additionally, other strong, but unstructured, magnetic signals were found, which could indicate either rubbish pits or cremation burials.

Previous summaries: Bennett 2001, 258

34. Cressing, Dovehouse Field, Cressing Temple (TL 8016 6820)

T. Ennis, E.C.C. (F.A.U.)

The 2002 excavation was situated in the eastern part of Dovehouse Field, to the immediate east of the 1999 excavation area. A second smaller trench filled in the missing gap between the west side of the 1999 area and the east side of the 2000 area and confirmed the position of previously identified ditches. The majority of the features excavated fell into three main phases, either very late Iron Age (1st Century AD), early Roman (mid 1st Century AD) or later Roman (later 3rd-4th Century AD).

Several Late Iron Age ditches were excavated. Two of these were roughly north-south orientated. The larger of these continued beyond the edges of the site and the other had rounded butt ends and was some 16m long. A third east-west orientated ditch was located in the northern part of the excavation, which was previously excavated in 1999. Two sections were excavated: the first revealed a feature much shallower and wider than the ditch segment excavated in 1999. It had a vertically sided slot running along the south side of its base, which may be part of an entrance-way through the ditch. The second segment revealed a much deeper feature, more in line with what was expected, but this could not be fully bottomed for safety reasons. It was not clear whether this ditch terminated in the 2002 area or continued beyond it. Underlying a collection of small pits in the possible terminus area were the hooves and leg bones of a horse skeleton which appeared to be a whole horse deliberately buried in the ditch.

One small ditch was dated as early Roman. This ran roughly east-west right across the southern part of the site and continued beyond both limits of excavation. One segment located towards the eastern end of this ditch revealed the grave of an adult skeleton, probably male. It was buried face down with its hands beneath the left shoulder. No lower legs or feet were present and there was no evidence of truncation. Also of probable early Roman date were the skeletons of two small babies, possibly stillborn, found in the top of another ditch, an oval hollow feature with a metalled surface made from compacted pebbles, and an oven and truncated corn dryer.

Later Roman activity included a large ditch, previously excavated in 1999, orientated east-west running through the centre of the area. A narrowing of this ditch in the western area of the site suggested a possible entrance-way through the ditch. At the eastern

end of the site the ditch formed a T-junction with a north-south ditch of similar date. In the south-east corner of the site was a large deep silt filled feature being possibly a pond or clay quarry.

Previous summaries: Bennett 1999, 218-219; 2001, 258; 2002, 396
Archive: E.C.C.

35. Cressing, Temple (TL 799 187)

D. Andrews, E.C.C. (H.A.M.P.)

A watching brief was carried out on the excavation of a narrow cable trench from the electrical sub-station housed in the end of the building known as the Woodshed around the north side of the Wheat Barn, across the entrance road and into the Cowsheds on Dovehouse Field. The trench, although very narrow at between 100-200mm wide and only 400mm deep passed through an area previously unexcavated. The section showed that what is visible on the surface is largely modern overburden resulting from use as a 20th-century mechanised farm. However, there were two Tudor brick layers and a granite block discovered which may be associated with an earlier use of the barns.

36. Earls Colne, brick oven in stables at the Castle Inn (TL 8290 2892)

B.J. Hillman-Crouch, E.C.C. (H.A.M.P.)

An oven of typical side flue pattern of the early 1800's. Originally it was a self contained building with its own roof. This was dismantled and the oven enclosed within a large stables building with its walls keyed in to create a small warm store. When abandoned, the metal work began to corrode leading to the collapse of the coal oven doors and grate followed by the failure of the wrought iron tie-rods. Once these had broken due to corrosion, the brick vault began to shift and start to collapse. The chimney was dismantled to the ceiling level of the stables and the void used for casual storage. The working side was blanked off with a brieze block partition most probably within the last 30 years.

See report on p.273-4.
Archive: E.C.C.

37. East Mersea, The foreshore, Cudmore Grove Country Park (TM 07 15)

E. Heppell, E.C.C. (F.A.U.)

Survey of three sites at Cudmore Grove Country Park has identified a range of structures on the foreshore, which are under threat from coastal erosion. Site A (TM 0726 1513), close to the Tudor East Mersea fort (EHCR 2217), is likely to be the remains of timber framed building. Site B (TM 0729 1516) may be the timber core of an earthwork running parallel to the shoreline. Site C (TM 0658 1431) occupies the position of a structure depicted on an 1801 map, and may represent an early attempt at coastal protection.

Given the absence of stratigraphy and finds associated with these structures, it is particularly important that these remains be dated in order to place them in context. This is of particular interest for those structures in the area of East Mersea fort to ascertain the sequence of events in this area.

Archive: C.M.
Report: F.A.U. Report 1053

38. Epping Upland, Copped Hall (TL 428 017)

C. Holloway, W.E.A.G.

Three one-metre-wide evaluation trenches were dug, with the aim of locating any remains of the north-west corner of Old Copped Hall. Built in the mid-16th century and demolished around 1748, this was the predecessor of the 18th-century hall which still stands.

Three channels constructed in brick and tile, possibly drains, were uncovered adjacent to a brick pillar and short section of wall which survive above ground. Approximately five metres to the north-west of the pillar, sections of two brick walls were found, interpreted as sleeper walls to support a timber floor. Approximately nine metres to the west of the pillar a more substantial section of brick wall, one metre thick, was found. Its location is consistent with the position of a fireplace on an internal wall shown on a floorplan of Old Copped Hall made shortly before its demolition. Patches of brick rubble and mortar were also found, possibly demolition rubble from the external walls of the Hall. The evaluation produced a few sherds of pottery, all post-medieval except one which has been dated to the 10th or 11th century.

Archive: W.E.A.G.

39. Faulkbourne, School Cottage (TL 7960 1720)

T. Ennis, E.C.C. (F.A.U.)

Archaeological monitoring of groundworks for an extension to the rear of School Cottage, Faulkbourne revealed one large feature orientated north-east/ south-west and more than 4m wide by over 1.1m deep. This feature probably represents the northern part of a large oval ring ditch previously recorded as a cropmark (EHCR 7347). The size of the ring ditch would suggest it forms part of a settlement or field enclosure of prehistoric or Roman date. Only one sherd of unstratified Roman pottery was recovered.

Archive: Bt.M.
Report: F.A.U. Report 1084

40. Fordham and West Bergholt, land at Fordham Hall Farm (TL 927 281)

H. Brooks, C.A.T.

A fieldwalking evaluation was conducted over 87 hectares. With the exception of large quantities of peg-

tile, only three classes of archaeological material were found in any quantity: struck flints, burnt flint (prehistoric), and Roman brick and tile. It is suggested that the combined distribution of struck flints and burnt flints on the southern side of the survey area highlights two potential prehistoric living areas on the northern flanks of the River Colne. Roman brick and tile was found at low weights close to a possible Roman villa site.

Archive: C.M. (ref. 2002.157)
Report: C.A.T. Report 218

41. Great Chesterford, scheduled area drainage works (TL 5022 4313 - TL 5034 4320)

M. Peachey, E.C.C. (F.A.U.)

Machine-clearance of a ditch running along the north side of the southern area of the Scheduled Monument exposed a 141m long section through archaeological deposits. This is the known site of a Roman town, overlying a 1st-century Roman fort and prehistoric remains. The features recorded in the section were all Roman, mostly pits and/or ditches dating to the 2nd-4th centuries, the period of the Roman town. The section confirmed the line of a north-south Roman road, recorded within the scheduled area by aerial photography and geophysical survey, and interpreted as the main street of the fort and the later town. Two significant finds were a late Mesolithic stone mace head and a Late Bronze Age socketed bronze axe head.

Archive: S.W.M.

42. Great Chesterford Sewage Treatment Works (TL 4990 4389)

A. Garwood, E.C.C. (F.A.U.)

Archaeological monitoring of ground reduction works preceding the construction of new reed beds revealed that part of the site had already been truncated when the existing grass bed filters were created. However, as this truncation was mainly limited to the eastern end of the site, archaeological features including two undated ditches, a late Mesolithic/early Neolithic pit and prehistoric alluvial deposits had survived.

Archive: S.W.M.
Report: F.A.U. Report 1148

43. Great Dunmow, former council depot, Haslers Lane (TL 6288 2155)

S. Hickling, E.C.C. (F.A.U.)

An archaeological evaluation by trenching was carried out on the site of a proposed new residential development on the site of a former council depot. The development area lies within the Roman 'small town'. Five trenches were opened, only the eastern-most contained archaeological features, consisting of one possibly prehistoric ditch, one Roman ditch and four postholes, possibly forming an alignment, possibly of Roman date. A small amount of burnt bone, slag and ironwork was also recovered. The ditches appeared to follow the edge of an escarpment and may indicate the southern edge of the Roman settlement. Subsequent excavation uncovered an extensive early Roman cremation cemetery.

Archive: S.W.M.
Report: F.A.U. Report 1064

44. Great Dunmow, rear of 37-61 High Street (TL 6285 2180)

R. Regan, C.A.U.

Evaluation was carried out prior to proposed development of the site. The investigation found a small amount of residual Roman pottery, with the earliest evidence of settlement activity dating to the 13th/14th centuries. Activity was more dense towards the High Street frontage, with structural activity and levelling accumulations from the 16th and 17th centuries.

Archive: C.A.U.

45. Great Dunmow, Woodland Park (TL615 225)

E. Davis, E.C.C. (F.A.U.)

A fieldwalking survey on phases 3 and 4 of this major residential development identified concentrations of worked and burnt flint, a small scatter of Roman material possibly associated with a Roman road, and concentrations of post-medieval pottery and tile which may be connected with quarrying and fishponds just outside the survey area.

Archive: S.W.M.
Report: F.A.U. Report 1162

46. Great and Little Leighs, A131 Little Leighs bypass (TL 7228 1607)

S. Hickling, E.C.C. (F.A.U.)

Archaeological work was carried out on two sites during the construction of the A131 Little Leighs bypass. Excavation to the north of the Strawbrook revealed only two features, a hearth and a possible quarry pit. The pit contained residual Late Bronze Age/Early Iron Age pottery and Roman glass. The hearth produced no dateable finds. A watching brief was maintained in the area of the Essex Showground; no archaeological features were encountered. Topsoil to a depth of 0.3m was stripped onto a clean, natural subsoil. Despite visibility problems due to the variable topsoil strip it was clear that no significant archaeological deposits existed in the area.

Archive: Ch.E.M.

47. Great Tey, Teybrook Farm and Warrens Farm (TL 8886 2515)

A. J. Fawn, C.A.G.

With the lifting of the foot and mouth restrictions of 2000, further investigation to determine the course of the Roman road on the two farms has confirmed the presence of the large possibly Roman excavation which blocks the route. A magnetometer survey of the area has

revealed some interesting anomalies, but not the presumed outline of the excavation. Further investigation of the ring ditch discovered previously near the road and thought to be Middle Bronze Age, is planned.

Previous summaries: Bennett 2000, 219

48. Great Tey, Teybrook Farm (TL 8931 2500)

A. J. Fawn, C.A.G.

During the preparation for extensions to a craft centre, the stripping of the topsoil revealed two Middle Bronze Age burial urns. Two more urned and one unurned burials in close proximity have been excavated since. A magnetometer survey of the stripped area indicated a penannular ditch, 26 m. in diameter, surrounding the interments and excavation has confirmed its presence. The site may be an enclosed Middle Bronze Age cemetery and investigation is continuing to confirm the possibility. The urns contain cremated bone fragments. No grave goods have been found so far.

Previous summaries: Bennett 2000, 219

49. Great Wigborough, Abbotts Hall Farm (TL 970 138)

K.Orr, C.A.T.

An archaeological watching brief was carried out during the digging of creeks and the breaching of the sea wall, and one previously unrecorded red hill of possible Middle Iron Age date was observed. A probable medieval midden of oyster shells was recorded near Salcott.

Previous summaries: Bennett 2001, 260; 2002, 400
Archive: C.M. (ref. 2002.160)
Report: C.A.T. Report 213

50. Hadleigh, Hadleigh Castle (TQ 810 860)

R. Clarke, R. Wardill, E.C.C. (F.A.U.)

An initial programme of survey was undertaken on behalf of English Heritage of the most recent areas of landslip on the south side of Hadleigh Castle (SM 26306). Two areas of slippage were located; the largest towards the central part of the castle bailey and the smallest to the immediate south of the medieval halls, located in the western part of the castle and excavated in the early 1970s. The survey comprised a measured plan with a Total Station Theodolite, followed by light cleaning, photographing and recording of the exposed faces. A more complex sequence of deposits was identified than had been observed during the initial site visit, including the remnants of two possible structures located in the western half of the main slippage and several layers of occupation and/or demolition debris in the smaller slippage. Finds, consisting of tile, stone, mortar, shell, pottery and glass, were collected during cleaning and, where possible, associated with a specific area of slippage or occasionally with actual deposits.

A geophysical survey by both resistivity and magnetometer meters was also undertaken within the castle bailey to help identify and assess the archaeology under threat by the encroaching landslides. The results of the survey show considerable disturbance, possibly from demolition debris, within the castle bailey. Several anomalies were identified, however, including possible ditches, pits and structural features.

Although both slippages occur largely within the edge of landslip recorded by Drewett, significant and possibly *in situ* deposits probably relating to the 13th-century halls and the bailey courtyard were identified. It is likely that much archaeological information has already been lost, and what remains is clearly vulnerable to further subsidence, weathering and human interference. Of significance also is a large crack, which was recorded to the north of the recent slips, running almost the entire length of the bailey. Several lesser cracks were also visible, to the west of the main slip, and in the hall foundations to the north of the smaller slip. These are clearly indicators of future ground movements and potentially imminent landslips. When these landslips occur, it is likely that the possible foundations exposed in the main slip will be destroyed and important deposits relating to the medieval hall will be lost.

Archive: S.M.
Report: F.A.U. Report 1049

51. Hadleigh, 124 High Street (TQ 0897 8696)

G. Seddon, P.C.A.

Three trial trenches revealed extensive truncation of archaeological deposits by building foundations and underground petrol tanks. One of the trenches did reveal a posthole group, possibly a post-medieval shed or temporary structure to the rear of the site. Residual Roman and medieval pottery was also recovered suggesting contemporary activity in the immediate vicinity.

Archive: P.C.A.

52. Harlow, Area N3, Church Langley (TL 4805 0910)

A. Letch, E.C.C. (F.A.U.)

This site is close to the medieval farmstead of Kitchen Hall and the medieval Harlow ware pottery production around Potter Street. Monitoring during groundworks for housing located early medieval pits and a gully, as well as ditches to a post-medieval field system. Some evidence was found to indicate post-medieval pottery production in the vicinity.

Archive: H.M.
Report: F.A.U. Report 664

53. Helions Bumpstead, Haverhill Business Park (TL 6740 4222)

D. Gill, S.C.C.

Evaluation revealed a Late Iron Age/early Roman settlement site and evidence of early Bronze Age activity within the development area. The Bronze Age features were of a low density and consisted of a well dispersed

group of pits, but the presence of pottery and hearth debris suggests some limited level of occupation of the site during this period.

The Iron Age features suggest that there was a well-structured settlement occupying a prominent position on the top of the slope over-looking the valley floor. The network of ditches would indicate that a series of boundary ditches divided properties within the settlement; postholes and pits were also recorded. The quantities of pottery and the presence of charcoal-rich occupation debris within the ditches indicate that they were within an area of habitation occupied from the first half of the 1st century AD to just after the conquest.

Archive: S.C.C.

54. Heybridge, Crescent Road (TL 8493 0826)

M. Roy, E.C.C. (F.A.U.)

An excavation was carried out at the rear of Crescent Road, prior to development of the land for new housing. Previous evaluation of the site had uncovered evidence of Late Iron Age, Roman and Saxon activity, and the excavation was positioned to record the densest concentration of features uncovered by the trial trenches.

Remains from the late Bronze Age, through the Iron Age and Roman periods and into Saxon times were encountered. These included a number of Late Iron Age/early Roman ring ditches and two possible Saxon sunken featured buildings. The great majority of the features on the site dated to the late Roman period, including a timber-lined well, which contained waterlogged deposits.

A watching brief was carried out at the site of the demolished 41 Crescent Road. Few remains of archaeological significance were encountered, largely as a result of extensive modern ground disturbance, though the remains of two pits and a post-hole, which contained artefacts of Saxon and possibly Roman dates were identified. This demonstrates that archaeological remains extend towards Crescent Road, north of both the excavation area opened in advance of the development work, and the important Roman and Saxon site of Elms Farm.

Previous summaries: Bennett 2002, 401
Archive: C.M.

55. High Laver, The Maltings, Bush Hall Farm (TL 4992 0935)

A. Cooper, E.C.C. (H.A.M.P.)

Prior to lowering of the floor, a 1.5m square test pit was excavated to a depth of 0.5m within the upstanding building to assess the presence of an original floor. The exposed section revealed a substantial layer of mixed gravel, chalk and brick fragments immediately beneath the current floor surface. This may represent a levelling deposit associated with the maltings upon which a slate or tile floor would have been laid. This deposit overlay a layer of mixed clay, brick and charcoal, which in turn overlay a thinner layer of grey clay. The grey clay layer contained charcoal lenses and a sherd of medieval pottery. This could represent a surface or deposit relating to an earlier building on the site.

56. High Ongar, Braces Yard, Mill Lane (TL 5660 0370)

T. Ennis, E.C.C. (F.A.U.)

An evaluation consisting of ten trenches was carried out on the site of a former timber yard, which lies close to a large cropmark enclosure to the southeast and is close to the historic core of High Ongar. Archaeological deposits were confined to the northern part of the site; the most important of these was a group of prehistoric features uncovered by a trench excavated in the northwestern corner of the area.

In a second phase of work, a 10m square was excavated around the prehistoric features. This revealed a cluster of small post-holes and two hearth pits dating to the Late Bronze Age. These were located close to the northern boundary of the development area and may form part of a building or small settlement. It is possible that this activity continues beyond the limits of the development area to the north.

Archive: E.F.D.M.
Report: F.A.U. Report 953

57. Hockley, Hullbridge Tidal Defences Survey (TQ 8270 9545 and TQ 8255 9568)

E. Heppell, M. Peachey, E.C.C. (F.A.U.)

A desktop study and watching brief were undertaken on the Hullbridge Tidal Defence Scheme. The project consisted of two components; the strengthening of the existing defences at Brandy Hole, and a managed retreat scheme to the east of Brandy Hole.

This area was included in the Hullbridge survey of the 1980s (Wilkinson and Murphy 1995), which recorded prehistoric deposits in the salt marsh edge immediately to the north. These remains comprise a well-stratified sequence of deposits, charting the changes in sea level in the area. Roman and medieval activity is also recorded in the vicinity. The area around Bartons Farm and Brandy Hole is not thought to have been reclaimed until the 17th or 18th centuries, but was certainly embanked by 1777. The wall in the area was breached early in the 20th century and never repaired. Although there are internal counterwalls shown in this reclaimed area from the 1940s onwards the existing embankment within the study area does not appear on any sources, including the modern Ordnance Survey. The documentary and cartographic sources would suggest that it is likely that this embankment is modern, possibly post dating the 1950s.

A watching brief on topsoil stripping for a borrow pit, haul road and site compound revealed no archaeological evidence. A representative section of the clay and Upper peat layers in the borrow pit was drawn once extraction was complete. The sequence matches that identified in the Hullbridge Survey and suggests the peat deposit is medieval in date.

Archive: S.M.
Report: F.A.U. Report 919

58. Kelvedon, land r/o the Institute Hall, High Street (TL 8605 1844)

N. Crank, H.A.T.

The evaluation revealed an urned cremation, contained within a vessel of middle Iron Age fabric, a curvilinear ditch of Late Iron Age date and two recent features. Residual sherds of Middle Iron Age date were also recovered from the subsoil in both trenches. The postulated line of the Roman fort, believed to pass through the site, was not present in either evaluation trench. The discovery of probable Middle Iron Age material in an area of known Late Iron Age settlement is significant, as little evidence of occupation of this date is so far known at Kelvedon.

Arhive: H.A.T.
Report: H.A.T. Report 1083

59. Little Chesterford, Chesterford Park (TL 535 422)

J. Tipper, C.A.U.

A watching brief of topsoil stripping for alterations to the access road revealed a small number of features indicative of a late prehistoric settlement. The evidence comprised three pits containing Middle to Later Iron Age pottery, and two ditches with no datable finds but phased to the same period. It seems likely that a ring ditch known from aerial photography to the south of the access road is associated with these features.

Archive: C.A.U.

60. Little Totham, Chappel Farm (TL 8839 0868)

A. Robertson, E.C.C. (F.A.U.)

The site lies immediately to the southeast of Rook's Hall Farm and slightly to the northeast of Chigborough Farm. Both of these large multi-period sites were excavated during the 1980's and early 1990's. There are also extensive cropmarks in the area, although relatively few on the actual site.

A watching brief on the topsoil strip was undertaken and showed a mixed geology with some obviously archaeological features and some more dubious. Several ditches, probably representing post medieval field systems; a small quantity of pits and postholes; several spreads of unknown origin and at least one small ring ditch, probably a hut circle or drip gully, have been identified. Excavation of these features will be undertaken in the near future.

Archive: C.M.

61. Maldon, Beeleigh Abbey (TL 8400 0771)

W.J.R. Clark, M.A.H.G.

Following the discovery of well preserved building foundations beneath the paddock area beside Beeleigh Abbey, M.A.H.G. was invited to undertake a research excavation on this site. An area of 450 sq. m. was machine stripped. Building 2 proved to be a timber hall built on a foundation of roofing tiles mortared together 7 layers deep, with a high status end wing, or parlour, at the southern end, and a domestic wing, incorporating a pantry and a buttery at the north end. The parlour had an upper storey on the evidence of internal stairs and, it is likely, the domestic wing did too. As built, however, the central hall had a central hearth without chimney, but it would have been a lofty building to enable the smoke to clear the living area with a pottery louver of Colchester type ware set high on the rafters to disperse the smoke. Pottery dating suggests that the building was in existence during the first half of the 15th century and was dismantled at some time after the Reformation. Archaeomagnetic dating indicates that the central hearth went out of use between 1450 and 1495 and a new hearth was built alongside the cross passage partition with a timber chimney and shroud. There is also evidence that a gantry was built to support an upper storey at this time, as well as a hearth and timber chimney inserted into the south wall of the parlour.

A second timber building, built on a foundation of overlapping roof tiles, was discovered to the east of, and in part below, building 2. Of nearly twice the floor area of building 2, building 3 also consisted of a hall with a central hearth and, although indications are that it may have had end wings, only further excavation will confirm this. Pottery evidence suggests that the building dates back to the 13th or 14th century whilst archaeomagnetic dating of the hearth gives a firm indication that its date of last use was 1240 - 1280.

On the evidence of vertical tiled hearths, at least two further buildings were discovered just north of building 2. The first of these buildings, building 4, is thought to be a kitchen of the same period as building 2, whilst beyond and below this, an earlier hearth and floor has been found, not yet fully excavated, but with indications of an early date. Above this partially excavated floor, evidence points to the existence of a farrier's workshop. Excavation revealed a deep layer of mortared tile which would have provided a foundation of adequate strength for a forge. A ditch cut to provide a source of water represents the northern boundary of the excavation. A pipe bowl and stem found at the bottom of an excavated section of the ditch, gave a date of *c.* mid 17th century.

Excavation will continue in 2003.

Archive: M.A.H.G.

D. Andrews, E.C.C. (H.A.M.P.)

A cable trench was cut from the toilet block eastwards around the Chapter House and then north to meet the garden wall and on to the new greenhouse. This was excavated to an average depth of 500mm. No plans or sections were drawn.

The section that passed parallel to the Chapter House uncovered a substantial brick footing and a masonry feature. The brick footing was visible in the bottom of the trench and consisted of small white bricks and green sandstone fragments c. 400mm wide. Its position corresponded with the eastern quoin of the Chapter

House. A series of small white medieval bricks coated in mortar and two moulded Caen stone quoins were also recovered from the general area. The masonry feature was visible in the south section at c. 200mm depth and consisted of lime mortar-bonded green Reigate stone. It was c. 400mm wide and 300mm deep and corresponded with a wall scar in the Chapter House.

Just north of the footing the base geology changed from clay to gravel and a human skull was uncovered. This was damaged by the machine bucket, but the dentition indicated a reasonably mature young male with worn teeth. The rest of the body lay in an east-west position under the path.

Previous summaries: Bennett 2002, 402-3

62. Maldon, Beeleigh Cottage, Beeleigh Abbey (TL 8397 0771)

D. Andrews, E.C.C. (H.A.M.P.)

During the edging of paths and drives with bricks set into concrete a substantial brick footing was encountered on the west side of the cottage. This was excavated to establish its extent, age, and relationship to the abbey buildings. It was concluded that the cottage sits on the foundations of a substantial Tudor building, which itself may have been built on the foundations of a medieval building, exemplified by gravel packing. Narrower shallow brick footings indicate an addition to the Tudor building, to which it was butt jointed. No cut was observed for a foundation trench.

Pre-1912 photographs in the Essex Record Office show a small single-storey building within a ruined structure, in the position of this footing. This building presumably reused the Tudor footings. The footings may have originally been for a porch, stair-tower or bay window. It is possible that this collapsed resulting in the footings being levelled and backfilled.

63. Maldon, Dovercourt Motors Site, Spital Road (TL 847 069)

N. Crank and L. O'Brien, H.A.T.

Located on the edge of the medieval town, this site did not reveal any of the putative 10th-century burh ditch fortifications. However, the remains of large-scale medieval gravel quarrying were found, in addition to several medieval rubbish pits, which contained quantities of broken early and high medieval pottery vessels, animal bone and oyster shells.

Archive: H.A.T.
Report: H.A.T. Report 1072

64. Maldon, Former Dovercourt Motors Site, Spital Road (E Side) (TQ 8480 0694)

M. Sutherland, H.A.T.

The evaluation revealed truncated evidence of small-scale medieval activity on the periphery of the medieval core of the town. A Roman pit, containing very sparse pottery sherds, had also survived amongst high levels of post-medieval truncation and smaller-scale ground contamination. No evidence was found to support the existence of the Saxon burh in this area. Possible domestic activity in association with medieval quarrying, recorded to the west (see above) was also recorded.

Archive: H.A.T.
Report: H.A.T. Report 1198

65. Mountnessing, St Giles Church (TQ 6476 9661)

T. Ennis, E.C.C. (F.A.U.)

A watching brief was carried out during building work at the medieval church, prior to the groundworks the monument to Pleasance Blencowe was removed for relocation to the west of the new structure. Monitoring of the construction of a toilet extension recorded an inhumation burial and the top of a brick-built vault. Traces of concrete on the roof of the vault suggest that at one time it possessed a superstructure. Evidence of post-medieval underpinning was recorded along the north wall of the aisle. No burials were encountered during monitoring of the excavation of the drainage runs. Further work is expected in 2003.

Archive: Ch.E.M.

66. Mountnessing, Thoby Priory (TQ 6260 9880)

B. Barker, E.C.C. (F.A.U.)

Thirteen trenches were excavated on land within and around the Scheduled Monument (Essex SAM 124). Only one trench revealed no archaeological features other than modern disturbance.

The evaluation located the remains of the post-Dissolution manor house and medieval foundations of the Priory church. All the structural remains appear to be well preserved, with minimal modern disturbance. Twenty-nine graves were identified, concentrated in an area to the southwest of the church. These are assumed to be contemporary with the priory, as suggested by medieval pottery recovered from two of the grave fills. All human remains were left *in situ*.

Post-medieval activity was seen to extend to the northeast corner of the development area. The trenching identified a number of ditches, drains and rubbish pits thought to be associated with Thoby Priory House.

Previous summaries: Bennett 2002, 403
Archive: Ch.E.M.
Report: F.A.U. Report 826

67. Nazeing, Langridge Farm, Paynes Lane (TL 3810 0480)

A. Cooper, E.C.C. (H.A.M.P.)

A watching brief was undertaken following the excavation of foundation trenches for a large extension to the north of Langridge Farm. The trench sections exposed a c.0.6m depth of topsoil overlying natural subsoil of pale orange-brown clay.

Several late medieval/post-medieval features were revealed. In the east-west section just north-west of the house a large cut feature, possibly a ditch c.2m wide, contained fragments of late medieval/early post-medieval pottery. If a ditch, this feature would have run parallel to the western arm of the moat and may represent an earlier moat or extension to the existing moat that was in-filled when the current house was built in 1548. Otherwise the feature could represent a back-filled medieval/post-medieval domestic rubbish pit. An un-mortared brick-built well of uncertain date was uncovered immediately to the north of the house. In addition a small brick plinth c.0.5m wide and a low wall constructed of late 15th-/early 16th-century bricks were revealed immediately to the west of the well. These may represent garden features associated with the early occupation of the current house and could have provided a surround to the well.

68. Newham, Landmark, Royal Victoria Docks (TQ 3997 8061)

A. Ainsworth, M.o.L.A.S.

A possibly Iron Age erosion/river scour event has removed all earlier prehistoric deposits that may have previously been located on the site. This event is believed to be associated with the confluence of the Thames/Lea moving to the west or south west of its original location possibly as a result of changes in RSL (relative sea level) or climatic deterioration causing increased surface run-off and river flux. As the river migrated, the site became cut off from its direct influence and may have been separated from it by a levee. The site became a boggy area frequently underwater due to flooding with clay accumulating as the floodwater drained away. This deposition is likely to have happened in the late prehistoric period although this cannot be conclusively proved as no reliably dateable material and insufficient plant material for radiocarbon dating was found. The environment of the site then became subject to daily tidal inundation, which led to the formation of mudflats. This might suggest increasing estuarine influence and possibly a rise in RSL.

As the river level fell post-depositional processes (soil formation) begin to outweigh depositional ones (minerogenic deposition) leading to the formation of a seasonally flooded marshy soil/grassy pasture. The area would have been suitable for grazing and is believed to have been utilised in the medieval/post-medieval period. In the 1850s with the excavation of the basin for the Royal Victoria Dock the up-cast was deposited on the site and sealed the pre-Victorian land surface. This re-deposited alluvium has been truncated in the 20th century by construction work relating to the construction of the boat yard in the east of the site and the construction of the Silvertown Way flyover in the centre and west of the site.

Archive: M.o.L.A.S.

69. North Ockendon, Hall Farm (TQ 5856 8483)

A. Vaughan-Williams, A.O.C.

The watching brief involved the monitoring of the excavation of two service trenches, and the foundation trenches for a new building. The two service trenches revealed a sequence of foundation walls, along with a cobbled surface and a tiled floor which were associated with the Manor House which previously stood on the site. The foundation trenches revealed a layer of building demolition down to the natural sand horizon.

Previous summaries: Bennett 2000, 226
Archive: L.A.A.R.C.

70. North Weald, Wyldingtree Farm, Weald Bridge Road (TL 5100 0600)

A. Cooper, E.C.C. (H.A.M.P.)

A watching brief was undertaken following the excavation of foundation trenches as part of the conversion of a range of farm buildings. The trenches ran along the western wall and within the interior of the cattle shed to the east of the farmyard. The trench sections were fairly uniform across the entire area. They exposed the patchy remains of a 19th-century yellow brick floor which overly three layers of mixed make-up material including fragmented brick, stone, clay lumps and lime mortar. These were deposited on a natural subsoil of pale orange-brown clay. The east-west trenches within the cattle shed revealed centrally positioned sections of laid brick. These probably relate to a central north-south 19th-century drainage channel. In addition, several features were cut into the natural subsoil beneath the rubble/make-up layers. These were in-filled with dark, charcoal-rich deposits with lumps of whitish marl, and could represent earlier rubbish pits or the foundations of an earlier building. No datable material was found.

71. Purleigh, All Saints Church (TL 8415 0205)

N. Crank and D. Hounsell. H.A.T.

Monitoring and recording during groundworks for the new extension and septic tank revealed a total of fifteen inhumations all aligned east-west (with the head to the west). All the graves had traces of coffins and/or coffin nails and fittings, in variable states of preservation. It is probable that the graves date from either the 18th or 19th centuries. No evidence for any earlier church structures was revealed.

Archive: H.A.T.
Report: H.A.T. Report 1189

72. Rainham, Berwick Field, Berwick Pond Road (TQ 5430 8430)

S. Hickling, E.C.C. (F.A.U.)

A fieldwalking survey identified above average concentrations of burnt flint and a large number of worked flints. These discoveries indicate possible prehistoric activity in the area. Only a small amount of

medieval and post-medieval material was recovered, probably representing manuring spreads.

Archive: M.L.
Report: F.A.U. Report 782

73. Rainham, Berwick Ponds Farm (TQ 5550 8385)

H. Firth, B. Sudds, H.A.T. and H. Sheldon, Birkbeck College

Co-axial field systems and stock enclosures of Iron Age and Roman date with elements of contemporary occupation have been identified. The Roman presence continued into the 4th century at least, and was succeeded by early Saxon occupation and re-use of the field systems/enclosures. The Saxon occupation appears to relate to a farmstead with a range of buildings, re-using the Roman field/landscape layout. The early Saxon occupation is contemporary with, and therefore may relate, to the nationally-important cemetery site at Gerpins Farm close by to the northeast. Later Saxon settlement was established in a different area of the site.

Previous summaries: Bennett 2002, 406
Archive: H.A.T., to go to M.L.

74. Rainham, Central Farm, Park Farm Road (TQ 5550 8450)

M. Roy, E.C.C. (F.A.U.)

A fieldwalking survey on this proposed site for part of the Thames Chase Community Forest identified above average concentrations of burnt flint and a large number of worked flints. These discoveries indicate possible prehistoric activity in the general area. No Roman or Saxon material was recovered. Only a small amount of medieval and post-medieval material was recovered, probably representing manuring spreads.

Archive: M.L.

75. Rainham, Channel Tunnel Rail Link, Ferry Lane (TQ 5190 8120)

B. Barker, E. Heppell, E.C.C. (F.A.U.)

Wooden revetments and structures associated with a modern wharf were recorded during the evaluation, carried out ahead of the construction. Documentary evidence suggests that this wharf was built in 1872, for the transport of produce to the markets of London. None of the pottery recovered during the work was earlier than Victorian. At least two different phases of revetment construction were identified. A further wooden structure was recorded running across the entrance to the channel to the east of Rainham creek. The wharf was last used in 1976. The modern refuse found within the backfill of the smaller channel supported this date.

Archive: M.L.

76. Rainham, 15-17 New Road (TQ 5036 8306)

R. Densem, C.A.

Two evaluation trenches were dug on the site prior to construction of new housing on the site. Sand and gravel natural was encountered at between 2.1-2.2m AOD in trench 1 and 0.6-0.8m in trench 2 as the site sloped downwards towards the Beam River. Investigation of trench 1 revealed a number of postholes, one of which contained fifteen sherds from a large late Bronze Age vessel and one from a late Bronze Age bowl. Another contained a thin flint blade or finishing flake of mesolithic or neolithic date. Six postholes were seen in an apparent arcing alignment although no dating material was recovered from them. Other cut features were also sterile of finds apart from a tree throw which contained a burnt prehistoric struck flint. The slope of the natural gravels down towards the Beam River was also visible in the section of the trench.

Investigation of trench 2 produced a large pit which contained a number of stakeholes in the base, believed to have been used to support hurdling for a pit lining. The pit contained nine fills, one of which produced a small fragment of Late Bronze Age or Iron Age pottery and another which contained a struck flint. What is believed to be a 20th-century drain cut containing a residual fine flint blade was also recorded.

77. Rainham, South Hall Farm (TQ 5350 8180)

D. Palmer, A.O.C. with J.S.A.C.

An archaeological watching brief was undertaken by AOC Archaeology Group on Phases 5 and 6 of the South Hall Farm gravel extraction site. The watching brief involved monitoring the machine stripping of the topsoil and subsoil across the site. A number of features dated to the Late Bronze Age were recorded. These included a ring ditch, pits and a small linear feature.

Of particular interest was the Late Bronze Age ring ditch which may have been the base of a tumulus. In addition to this a small ditch and a number of pit features were also dated to the Late Bronze Age. One of three small burnt pit features recorded produced three loomweights which were also probably Bronze Age in date. The low density of archaeology recorded suggested that this part of the site was on the periphery of any settlement. This is borne out by the topography of the site. The greater concentration of archaeology recorded to date has been down slope from the Phase 5 and 6 area along the line of the stream. A number of undated features were also recorded, along with tree throws and a post-medieval boundary ditch. Natural sandy gravel was recorded across the site.

Archive: L.A.A.R.C.

78. Rainham, Warwick Field, Warwick Farm (TQ 5569 8290)

S. Hickling, M. Roy, E.C.C. (F.A.U.)

A fieldwalking survey on the site of a proposed site for a part of the Thames Chase Community Forest

identified an above average amount of worked and burnt flint for the county, concentrated in the northern part of the area walked. An above average amount of Roman pottery was also discovered, but this was due to the discovery of large conjoining fragments in one square, the vicinity of which had recently been deep ploughed. This suggests Roman activity in the area, perhaps even the presence of features of Roman date underlying the findspot vicinity. A small quantity of medieval and post-medieval material was also discovered, but in amounts well below the county average, suggesting manuring spreads. A large amount of modern material was imported at some time, for reasons yet to be discovered.

Archive: M.L.
Report: F.A.U. Report 823

79. Ramsey and Parkeston, Proposed school site, Mayes Lane (TM 2193 3000)

S. Hickling, E.C.C. (F.A.U.)

Evaluation of the proposed school site took place in two phases, dictated by ecological considerations. An earlier desktop study had identified a range of archaeological activity in the vicinity of the development area. Phase 1, which consisted of eleven trenches, encountered a feature interpreted as a modern trackway. A group of worked flints, including a Neolithic serrated blade, was recovered from the topsoil. Phase 2, in the northern part of the study area, consisted of two evaluation trenches. These uncovered a series of ditches and pits, probably of medieval date, but also containing residual Roman pottery. The ditches appeared to follow the current field pattern, suggesting that it originated at least in the medieval period.

Archive: C.M.
Report: F.A.U. Report 1011

80. Rayleigh, Rear of 3 - 5 London Hill (TQ 8074 9090)

M. Peachey, E.C.C. (F.A.U.)

An archaeological evaluation prior to an office and residential development revealed evidence of occupation from the 12th to 14th centuries onwards. Layers of that date were excavated at the eastern end of the site while a pit or ditch of 14th- or 15th-century date was found in the central area. Probable late-medieval occupation layers were observed in the north part of the site while post-medieval pits and industrial features were revealed in the westernmost trench. The position of cottages demolished in the 20th century was also noted.

Archive: S.M.
Report: F.A.U. Report 982

81. Rettendon, Battlesbridge Tidal Defences (TQ 7755 9423 - TQ 7878 9499)

E. Heppell, E.C.C. (F.A.U.)

An archaeological survey was carried out as part of the Battlesbridge Tidal Defence improvements, which comprise a variety of works to the existing defences in the upper reaches of the River Crouch. These include the raising of embankments, the insertion of sheet piling and alterations to the existing drainage pattern in some areas. Haul roads will also be used in some areas. The study area was included in the Hullbridge survey of the 1980s (Wilkinson and Murphy 1995). Prehistoric deposits were noted in the salt marsh edge by Oldtree Point, at the eastern end of the study area. These remains comprise deposits such as an 'old land surface' and peat deposits. In the upper estuary such deposits are not buried at great depth below the estuarine alluvium. Medieval activity in the Battlesbridge area is represented by a number of moated sites. Battlesbridge is first mentioned in documents dating to 1351. By this date it was a crossing point of the Crouch and, as with the post-medieval period, was probably an important transport centre for the local hinterland.

In the post-medieval period, Battlesbridge also became an industrial centre, largely as a result of its proximity to the river which provided a power source. A tide mill was established in the 18th century and a tide mill, drying kiln and granary were constructed in the 19th century. There were also limekilns in the area adjacent to, what is now, the antiques centre. Further industrial activity took place to the west of Gosse's Farm where there was a maltings, limekilns and cottages. The tidal defences in the Battlesbridge area were established between 1777 and 1876. These are largely in the same position as those of the present day. By the Maypole caravan park, a meander of the river has been straightened (post-1960), the old line is marked by the parish boundary.

Field survey identified five areas of potential archaeological interest. One of these was an exposure of clay in the river bank (TQ 7759 9431). An embankment and posts were noted, probably associated with the post-medieval mill (TQ 7776 9461 and TQ 7801 9465). The wooden toes of embankment were noted at TQ 7839 9485, and a loading ramp at TQ 7853 9495, possibly associated with the demolished cottages.

Archive: Ch.E.M.
Report: F.A.U. Report 1083

82. Rivenhall, Airfield (TL 820 120)

M. Peachey, E.C.C. (F.A.U.)

Observation of topsoil stripping prior to quarrying revealed evidence of Middle Iron Age and medieval occupation. Pits, ditches and gullies of later Middle Iron Age date were found on Phase 1.2. A probable roundhouse and boundary ditch of Middle Iron Age date were found on Phase 1.3. Four pits of medieval date were found on Phase 3.1.

Archive: Bt.M.

83. Rochford, Former British Legion, East Street (TQ 8783 9062)

S. Hickling, E.C.C. (F.A.U.)

A watching brief was maintained over the digging of

foundation trenches for three new houses. The development area lies outside the known historic core of Rochford. Only one archaeological deposit was observed, a late medieval layer below the topsoil and above an area of disturbed natural subsoil at the eastern end of the site. This layer was broadly contemporary to the move of the Honour of Rayleigh court leet from Kings Hill, Rayleigh, to Kings Hill, Rochford (part of which is occupied by this site). Therefore this late medieval layer may have been an attempt to dry out and level the area in order to make the outdoor proceedings of this court more comfortable. Alternatively it might simply represent utilisation of the land for agricultural or horticultural purposes.

Archive: S.M.
Report: F.A.U. Report 981

84. Rochford, Kings Head Stables, Back Lane (TQ 8758 9047)

A. Garwood, E.C.C. (F.A.U.)

Archaeological monitoring of groundworks associated with the construction of a new dwelling on the former site of the Kings Head Stables recorded a series of four large early 18th-century rubbish pits. The pits were back filled and out of use by the 19th century when the site was redeveloped as stabling serving the adjacent Kings Head coaching inn. No archaeological features pre-dating the 18th-century pits were present on site.

Building survey revealed that the stable block, including a barn to the west and carriage entrance to the east, comprised three distinctly different structural elements, each showing significant evidence of re-building and re-use.

Archive: S.M.
Report: F.A.U. Report 1065

85. Romford, BAC Limited Site, Edinburgh Drive, Eastern Avenue (TQ 5032 8936)

D. Jamieson, M.o.L.A.S.

Natural gravel was observed at 15.60m O.D. No evidence for human occupation pre-dating the construction of 20th-century factory buildings was identified on the site. Alluvial and riverine deposits were identified to the east of the site, demonstrating the presence of an earlier course of the River Rom. A drainage channel was also revealed in this area.

Archive:M.L.

86. Romford, Romford Golf Course, Gidea Park (TQ 5262 9027)

D. Bluer, M.o.L.A.S.

Trenches were dug across the ridge which runs across Romford Golf Club and is a Scheduled Monument in the belief that it is part of the London-Colchester Roman road. Hand excavation of the gravel metalling in one trench recovered several fragments of post-medieval brick, while other pieces of circumstantial evidence also pointed away from a Roman attribution. It was therefore concluded that the ridge, although it certainly comprises a gravel thoroughfare, is not a Roman road, and probably represents a driveway constructed for access from the east to one of the incarnations of Gidea Hall, a mansion which has undergone several modifications and rebuilds since its original construction in the 13th century.

Archive: M.L.

87. Romford, Harold Court, Harold Wood (TQ 5609 9107)

R. Wardill, E. Heppell, E.C.C. (F.A.U.)

Survey work has continued on one of the proposed planting locations for the Thames Chase community forest. Geophysical survey was carried out in two phases, together with a cartographic study. In the first phase of geophysical survey a magnetic susceptibility survey was carried out on approximately 8.5 ha, previously the subject of a fieldwalking survey which identified two burnt flint scatters possibly indicating the presence of prehistoric activity. A zone of increased topsoil magnetic susceptibility was detected which corresponded to the site of a large, possibly 19th-century house, some removed field boundaries and most of the areas covered by the burnt flint scatters. The magnetic susceptibility data suggests that the burnt flint scatters could be associated with post-medieval and not prehistoric activities.

The second phase of geophysical survey covered a further 11.5 ha, comprising magnetic susceptibility survey followed by targeted magnetometry. One of the fields produced only evidence for recent human activity whilst in the other, archaeological features in the form of ditches and a probable pit were detected. Other archaeological activity was indicated but the survey data was inconclusive.

The cartographic study of land to the north of Harold Court suggests that the terracing of the field occurred between 1777, when a natural slope is shown on the Chapman and Andrè map, and 1876, when terracing is shown on the Ordnance Survey. It would seem reasonable to suggest that this terracing occurred during the construction of the railway in the mid-19th century, with the material extracted used to construct part of the large railway embankment on the northern edge of the site. The terracing, which results from cutting into a natural slope which can be seen in adjacent fields, removed material from approximately half of the field. It is therefore likely that any early archaeological deposits formerly present in this area will have been destroyed. Further damage will also have been caused by the quarrying shown on the 2nd edition (1898) Ordnance Survey map.

Previous summaries: Bennett 2002, 407
Archive: M.L.
Report: F.A.U. Report 1054

88. St Osyth, Lodge Farm (TM 1335 1545)

M. Germany, E.C.C. (F.A.U.)

Excavation in advance of gravel extraction at Lodge Farm, St. Osyth has uncovered a previously unknown causewayed enclosure, an Early Bronze Age pond barrow, a Middle Bronze Age barrow cemetery, a Middle Iron Age village, and a medieval farmstead.

The east side and the south-west quarter of the causewayed enclosure have been exposed. Current results suggest that it is comprised of a single circuit with a diameter of c.300m. Impressive quantities of Neolithic worked flint and decorated pottery have been yielded by many pits in the interior and by some of the associated ditches. The pond barrow inside the enclosure is thought to have been used as a site for cremation pyres, because it was scorched and was accompanied by cremation vessels and cremated bone. To the southeast of this feature is a large group of 25 Middle Bronze Age ring-ditches from plough-flattened barrows. In the gaps between the ring-ditches are many cremations, many in urns. The causewayed enclosure and pond barrow are the third and first examples of their type respectively to have been discovered in Essex. The Middle Bronze Age ring-ditches, as a type, are believed to be part of the 'Ardleigh Group', which is largely restricted to north-east Essex and south-east Suffolk.

Round-houses from a Middle Iron Age village are present in the east half of the site. The settlement is situated at the end of a long trackway or droveway, which comes in from the southwest. Hundreds of postholes relating to further structures like granaries and fence-lines have also been found. Finds from this period include large groups of pottery, many triangular loom-weights, and a spindle whorl.

The prehistoric evidence is post-dated by a Roman field system and a medieval farmstead. Evidence for the farmstead currently comprises enclosures and ditches, three or more buildings, a large group of pits, and a large pond. Finds from the pond include a bronze bowl and a large group of pottery.

Previous summaries: Bennett 1999, 215; 2001, 265
Archive: C.M.

89. Saffron Walden, 54 Castle Street (TL 5387 3875)

A. Letch, E.C.C. (F.A.U.)

An archaeological watching brief was carried out on a residential development on a site adjacent to Saffron Walden castle (SM 20671). Earlier phases of terracing into Bury Hill, which forms the castle mound beyond the southern boundary of the site, were investigated and on comparison found that as much as 3m of soil has been removed behind 54 and 56 Castle Street. This has destroyed any archaeological remains that may have been present in the areas examined, with the exception of the southeast corner of the site. This survived the effects of major terracing in the 19th century and indicates potential for archaeological remains to the east of the site, in an area of raised ground that forms the gardens to properties at the rear of Castle Street.

Archive: S.W.M.
Report: F.A.U. Report 991

90. South Woodham, Plot 9D, Ormesby Chine (TQ 8056 9618)

M. Peachey, E.C.C. (F.A.U.)

An archaeological trenching evaluation prior to a residential development uncovered features in all eight trenches. These were irregularly shaped linear features and pits containing a small amount of undiagnostic prehistoric pottery. The features uncovered share similar characteristics to those found during previous evaluation and excavation work on Plot 10D, 60m to the northwest. The deposits exposed in the trenches suggested a higher density of archaeology than on Plot 10D with a greater proportion of them being linear features. Several large unexcavated spreads may represent intercutting linear features. The development site is clearly within an area of prehistoric (?Late Bronze Age) activity, the nature of which is indeterminate from the features discovered.

Archive: Ch.E.M.
Report: F.A.U. Report 1002

91. South Woodham Ferrers, Plot 10D, Ormesby Chine (TQ 8040 9626)

M. Peachey, E.C.C. (F.A.U.)

An archaeological evaluation prior to a residential development recorded a Late Bronze Age linear feature and a pit of uncertain prehistoric date. A shallow depression contained post-medieval tile. Four other features were undated. Three of the trenches were devoid of features. An open area excavation (30m x 30m) was then conducted by extending the trench containing the Late Bronze Age linear feature. A large number of pits and linear features were discovered. Around a quarter of the features contained prehistoric pottery, a few sherds of which could be dated somewhat tentatively to the late Bronze Age period. Several features contained single sherds of Roman or medieval pottery; these were mostly located towards the eastern part of the excavation area. Most of the features were ill-defined, shallow and uneven in shape. Taken together they formed no discernible pattern, although it is possible that some may represent the truncated remains of gullies/ditches and post-built structures. The development site is clearly within an area of Late Bronze Age activity, the nature of which is indeterminate from the features discovered.

Archive: Ch.E.M.
Report: F.A.U. Report 986

92. Southend, Former Littonia Works, Seaforth Grove (TQ 8951 8666)

S. Hickling, E.C.C. (F.A.U.)

A watching brief was maintained over the excavation of

the foundation trenches for a residential development. The development area is the site of a possible medieval moat recorded on the EHCR. Three features were recorded, two ditches and a large feature for which the extent could not be ascertained. Two of the features contained modern pottery, the third (a ditch) could not be dated. The results suggest that the farmstead shown on the 1st edition Ordnance Survey map did not possess a moat, at least in the position thought. Furthermore, it appears that the moat recorded in the EHCR has been misidentified, as a boundary ditch was located along one of its supposed edges. No positively dated features predating 1850 were discovered, although a single undated ditch did share the same alignment as a possible Iron Age field system.

Archive: S.M.

93. Southend, Royal Bank of Scotland, Thanet Grange (TQ 8610 8830)

A. Letch, E.C.C. (F.A.U.)

An ongoing watching brief on the site of the new regional headquarters for the Royal Bank of Scotland has recorded activity ranging from the prehistoric and Middle Iron Age to the 3rd century AD. The development area is in an area of few finds. A watching brief on a supermarket development immediately to the east found only one unstratified sherd of 3rd-century pottery and a few flint flakes. The area around Eastwood church to the north is known to have been used by the Romans as a cremation cemetery, and further to the north there is intensive occupation along Cherry Orchard Way, a modern industrial area.

The activity recorded takes the form of a late prehistoric field system that continued into use into the middle Roman period. A sequence of Middle and Late Iron Age pits lay to the north, close to a fourth major area, which remains to be investigated, which should provide more information on the relationship between the two periods. A pedestal urn from the later pit may imply the presence of cremations in the vicinity. The pits also contain large pieces of charcoal and burnt daub suggestive of an early settlement nearby. Roman pitting possibly signifies some extent of brickearth extraction in this period.

Archive: S.M.

94. Southminster, junction of Hall Road and Goldsands Road (TL 9635 9953)

K.Orr, C.A.T.

An archaeological evaluation by trial-trenching revealed diches of probable medieval date, one of which showed evidence of grain-processing in the vicinity. Roman tile and late Iron Age or Roman pottery indicates settlement of this date nearby.

Archive: C.M.(ref.SOUH 02)
Report: C.A.T. Report 176

95. Springfield, Beeleigh Link, Chelmer Village (TL 7253 0658)

C. Mayo, P.C.A.

Three evaluation trenches revealed four linear cuts which probably served as drainage ditches running approximately with the slope of the natural from north-west to south-east. A variety of pottery and struck/burnt flint was recovered from these features showing a variety of dates. This included abraded late Neolithic struck flint and one ditch containing a large quantity of flint-tempered Late Bronze Age pot. A small cut, possibly the base of a post hole, was recorded cutting the top of the Late Bronze Age ditch. This contained two small abraded pieces of mid- to late-medieval roof tile. Another feature, possibly the base of a small pit or post hole, was undated.

Archive: Ch.E.M.

96. Stanway, Gosbecks Archaeological Park, Shrub End (TL 967 224)

P.J. Cott

The geophysical survey located the position of more of the Roman/Iron Age field system found in 2001. The Roman theatre was included in this year's survey, and showed up better with resistivity than magnetometry.

(TL 968 255)

D. & A. Black

Cropmarks have shown a trapezoidal ditch structure, in area some 3 ha, lying c.100m south and west of the temple and theatre respectively. It is thought to date from the Iron Age. This structure was located by magnetic survey which, whilst confirming the general shape and size as shown by cropmarks, revealed a number of new features. The complex ditch structure both inside the trapezium area and outside was also surveyed, the magnetic plot again showing features unseen from crop marks. These ditches are thought to be Roman. This survey also served to locate these structures precisely with respect to the Ordnance Survey Grid.

Previous summaries: Bennett 1998, 99; 2002, 408

97. Takeley, land to the south of the A120, (Barkers Tanks Site) (TL 5580 2120)

N. Crank and J. Grant, H.A.T.

The evaluation revealed ditches and gullies of varying alignments. Despite a relatively low density of archaeological finds, and abrasion of pottery sherds, the features suggest significant Late Bronze Age, Early Iron Age and Roman agricultural activity across the site.

Archive: H.A.T., to go to S.W.M.
Report: H.A.T. report 1139

98. Takeley, Frogs Hall (TL 5850 2220)

M. Roy, E.C.C. (F.A.U.)

An excavation was undertaken in advance of gravel extraction as part of the A120 Stansted to Braintree Road Scheme. The site lay in an area of known archaeological potential on the floor of the Roding Valley. Prior to the excavation, monitoring by the Guildhouse

Consultancy located numerous features of Late Iron Age, Roman, medieval and post-medieval date.

Features of Late Iron Age and Roman date were concentrated in the east of the extraction site, immediately west of the course of the River Roding. These were probably related to a known villa site that lies immediately northeast of the development area, on higher ground on the east side of the Roding. The features recorded included several curvilinear ditches of Late Iron Age or Roman date identified as ring ditches associated with settlement activity. Three structures consisting of cuts lined with reused roofing tile were identified as Roman corn driers or malting ovens. The heavily truncated bases of several Roman cremations were also encountered.

Seven medieval pottery kilns were located, generally concentrated to the south and west of the site. Pottery associated with these structures dated to around 1200 AD, and it seems likely that these kilns were associated with the local production of coarse pottery vessels. Several further kilns have been located nearby during monitoring work on the new A120 route. Numerous other features of medieval date were found, which were probably associated with land management

Several of the features encountered are likely to relate to post-medieval and modern activity, including pits and ditches to the west of the site that may be associated with post-medieval house plots that lay immediately outside the gravel extraction site.

Previous summaries: Bennett 2000, 215
Archive: S.W.M.

99. Thaxted, Former St John's Ambulance Shop, Park Street (TL 6118 3080)

M. Roy E.C.C. (F.A.U.)

An excavation was carried out in advance of a residential development in an area of known archaeological potential within the medieval core of Thaxted.

To the south of the site two features cut into the natural subsoil, a posthole and a clay-lined pit, were visible under modern deposits. These may have represented a medieval structure in the backplot of a now-demolished property fronting onto Park Street. This interpretation is supported by the presence of medieval pottery in the pit fill. Such a structure may have been related to domestic production associated with the cutlery industry that thrived in Thaxted in late medieval and early post-medieval times. Bone-working debris was retrieved from both the fill of the pit, and an area of dumped material to the west of the site. This dump also contained late medieval pottery. The possible existence of cutlery production in this part of the town, to the south of the supposed centre of production, which lay along a stream through the town centre, is of significance, expanding the probable extent of the medieval industrial zone of the town.

The excavation also revealed a large ditch to the northwest of the site, interpreted as a probable boundary ditch, backfilled in post-medieval or modern times. Other features of post-medieval or modern date included a sandstone foundation base, various pits and a dog burial.

Archive: S.W.M.
Report: F.A.U. report 1027

100. Thurrock, White Post Field, Thames Chase (TQ 562 382)

T. Ennis, E.C.C. (F.A.U.)

Seven trenches were excavated based on a cropmark plot (Cox 2000). This confirmed the existence of two or possibly three linear features identified on the plot. A layer excavated in Trench 1 may date to the Late Iron Age or early Roman period. Pottery of this date was also recoved from Trench 3. The presence of a ring ditch and another linear feature could not be confirmed. A pit-like feature on the cropmark plot may correspond with a patch of natural gravel.

Archive: T.M.
Report: F.A.U. report 978

101. Walthamstow, Ancient House, Church Lane (TQ 3787 8916)

R. Densem C.A.

The excavations for various drain runs and a new garden wall were investigated in the area outside Ancient House, a possibly 15th-century timber-framed building that is being converted into flats. A 20th-century factory had been recently demolished here and a garden is to be formed. The archaeological and standing building features inside and on the exterior of Ancient House were recorded by others including English Heritage. Compass Archaeology's brief was to provide a watching brief on the groundworks in the new garden. The excavations were between 0.5 and 0.8m deep and were between 0.6 and 1.5m wide.

All the exposed deposits, with the exception of the well described below, were disturbed and/or redeposited and it is thought that this truncation of potential archaeological deposits took place when the factory was built, around 70 years ago. The top of a brick lined well, with an internal diameter of *c.*1.2m (four feet), was exposed and photographed in the base of one of the drain trenches. The well had been built at some date in the post-medieval period and was found to extend some 7m to a hard bottom. The lower brickwork below *c.*2m was of irregular unmortared bricks which may have been of 17th century or later date. The upper brickwork, between *c.*1 and 2m below the base of the drain trench appeared to be of more regular late 18th- or 19th-century red, handmade bricks. The upper metre comprised red frogged bricks forming the lower part of the truncated dome. The dome may have been added either in the 19th or early 20th century when the former factory was built over it. The well had been converted to a water pump in the mid-19th century as the location of the well is marked as such on a map of c.1865, and a lead pipe was found leading up the side of the well to the modern ground surface. The drain trench had truncated

the domed top of the well which was spanned over by concrete beams to enable the new service trench to pass over the feature which will therefore be preserved *in situ.*

102. Wanstead, The Temple, Wanstead Park (TQ 4165 8740)

S. Watson, M.o.L.A.S.

Two evaluation trenches were excavated on the site of a former pond, known to have existed until the late 19th/early 20th centuries. It is intended to reinstate the pond and the evaluation was undertaken to determine the original location, profile and depth of the pond. A third trench was excavated to determine the extent and nature of an underground brick structure discovered during recent ground works on the site.

Natural gravel was found at 13.75-13.15m O.D. The trenches excavated in the pond uncovered part of a brick slipway into the pond and part of the pond lining, probably dating to the 18th or 19th centuries. These features will need to be considered if further ground works are undertaken to reinstate the pond in its original form. The third trench revealed an 18th-century circular brick structure, probably an ice house, broadly contemporary with the Temple nearby.

Previous summaries: Bennett 2002, 412
Archive: M.L.

103. West Tilbury, Tilbury Fort west powder magazine (TQ 6510 7540)

M. Peachey, E.C.C. (F.A.U.)

An exploratory hole cut into the concrete roof screed of the west powder magazine was monitored. The roof screed dates from the late 1860s, when the fort was modified and updated. Several mason's marks were recorded and a small quantity of finds recovered.

Archive: T.M.

104. Witham, Faulkbourne Farm, Cressing Road (TL 8090 1750)

B. Barker, E.C.C. (F.A.U.)

An archaeological evaluation was carried out on the site of a proposed agricultural reservoir. Fifteen trial trenches were opened, two trenches were extended where potentially significant archaeological features were encountered. The majority of the features recorded were back-filled field boundary ditches. However, three separate areas of archaeological activity were identified. In the northwest of the evaluation area a pit and a tree hole containing prehistoric pottery and flint were excavated. To the north of the centre of the trenching area, a ploughed-out series of pits and post-hole were recorded. No finds were collected from this area, but the presence of highly degraded pottery suggests a prehistoric date. Excavation in the north-eastern corner revealed a hearth, a pit/well and two post-holes, bounded on the south and west by two ditches. Pottery recovered from the upper fill of the pit/well produced pottery dating to the 13th century. It is thought that this area of medieval activity was short-lived and probably abandoned due to flooding.

Archive: Bt.M.
Report : F.A.U. report 782

105. Witham, Maltings Lane

N. Lavender, E. Davis, A. Robertson, E.C.C. (F.A.U.)

Excavation of the area lying at the top of the ridge was completed. Prehistoric activity was more prolific than the 1995 evaluation had suggested, particularly in the vicinity of the western field boundary. Ditches running parallel to this ditch date from the Late Bronze Age and the Roman period, suggesting that the patterns of land division in the area may have been maintained over a period of three thousand years. Post holes belonging to at least one circular prehistoric building were found, although close dating has not yet been possible. Similarly three parallel rows of small pits, approximately 50m long, 5m apart and aligned north-south are almost certainly prehistoric, but yielded no closely diagnostic material. Middle Iron Age activity is attested by ditches and pits, one of which contained two almost complete jars of Little Waltham type.

During the Late Iron Age a large oval enclosure seems to have dominated the area, although there were few internal features. This enclosure survived through the Roman period and was extended southwards to incorporate a building with flint rubble foundations. This building was extensively robbed and heavily truncated by ploughing so that little evidence of its character or extent were recovered. It is, however, probable that it was from here that the painted wall plaster and tesserae recovered during the excavation of the haul road in 2000 originated. It was almost certainly a farmhouse. Several pits of Roman date, as well as features that may be associated with a kitchen garden were also excavated. Roman cremation burials continued to be found in the western part of the area, but only in quantities that would be in keeping with a small family burial plot associated with the house.

The parallel ditches towards the southern part of the area, originally thought to represent a trackway, have yet to be analysed, but now seem more likely to be the southern side of a large rectilinear enclosure. Parts of this enclosure clearly lie beyond the excavation limits, although the west and south sides are represented. The south side was recut and extended on several occasions, and the recut of the west ditch across the intervening space makes it quite clear that this cannot have operated as a trackway.

Two sunken-featured buildings of early Saxon date produced pottery and worked bone including pin beaters and fragments of comb.

Previous summaries: Bennett 2002, 412
Archive: Bt.M.

106. Witham, Rear of 126-8 Newland Street, Witham (TL 8193 1430)

S. Hickling, E.C.C. (F.A.U.)

A watching brief was carried out on groundworks for the construction of a small office block, at the rear of buildings on the main street of the planted medieval town established in 1212 by the Knights Templar. The only datable remains found dated to the 19th century and later, despite the fact that the buildings on the street frontage dated to the 15th and 18th centuries. These features were typical of backyard activity, comprising mainly surfaces and pits; it is likely that modern activity has truncated earlier remains.

Archive: Bt.M.
Report : F.A.U. report 1026

107. Writtle, Hylands Park (TL 6850 0430)

N. Holder, M.o.L.A.S.

An archaeological investigation was carried out in support of a Stage 2 Heritage Lottery Fund bid for the restoration of the grounds of Hylands House, Chelmsford. The report was commissioned by Chelmsford Borough Council. The investigation was primarily a desk-based impact assessment using published and unpublished sources. The investigation also included a 'walk over' survey, geophysical survey, trial trenching and auger sampling. The archaeological work was carried out in order to consider the likely impact of the restoration programme on both the 'pre-Hylands' archaeological remains and buried features of the early Hylands Park.

The 'desk top' elements of the work suggested that there is some potential for surviving prehistoric finds and features, with higher archaeological potential for the Roman period. The report also noted that the park overlies a number of small post-medieval farms and settlements, and suggested that some of these could have medieval antecedents.

The 'walk over' survey made use of a previous archaeological field survey and identified a small number of positive and negative earthwork features. There are some areas of 'ridge and furrow', the remains of medieval arable agricultural practices 'frozen' in the landscape. Others are undated features, perhaps former ponds.

The geophysical survey, the archaeological trial trenches and the augering were designed to define three elements of the 19th-century Hylands Park landscape. The investigations have located the former road that led from the old Widford Gate to Hylands House, part of the landscape architect Humphry Repton's original design for the park. It was concluded that the boundary of the 'Pleasure Gardens' to the north-east of the house was marked by a fence and not a ha-ha, and that the boundary line has changed over time. Some information on the layout of the gardens and outbuildings of the Flint Cottage to the west of the house was also obtained.

Abbreviations

A.O.C.	AOC Archaeology
Bt.M.	Braintree Museum
C.A.	Compass Archaeology
C.A.G.	Colchester Archaeological Group
C.A.T.	Colchester Archaeological Trust
C.A.U.	Cambridge Archaeology Unit
Ch.E.M.	Chelmsford and Essex Museum
C.M.	Colchester Museum (formerly Colchester and Essex Museum)
E.C.C.	Essex County Council
E.C.C. (H.A.M.P.)	Essex County Council (Heritage Advice, Management and Promotions)
E.C.C. (F.A.U.)	Essex County Council (Field Archaeology Unit)
E.F.D.M.	Epping Forest District Museum
H.A.T.	Hertfordshire Archaeological Trust
H.M.	Harlow Museum
J.S.A.C.	John Samuels Archaeological Consultants
L.A.A.R.C.	London Archaeological Archive Research Centre
M.A.H.G.	Maldon Archaeological and Historical Group
M.L.	Museum of London
M.o.L.A.S.	Museum of London Archaeology Service
O.W.A.	Oxford Wessex Archaeology
P.C.A.	Pre-Construct Archaeology Ltd
S.C.C.	Suffolk County Council
S.M.	Southend Museum
S.W.M.	Saffron Walden Museum
T.M.	Thurrock Museum
W.E.A.G.	West Essex Archaeological Group

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Work of the Essex County Council Archaeological Service 2002

Edited by S. Gale

This annual report reviews project-based work undertaken by members of the Essex County Council Heritage Conservation Branch (which subject to internal re-structuring includes the various sections of the former Archaeological Service). 2002 was important for new members of staff with the appointment of a Countryside Archaeological Adviser and the development of the Records Promotion and Education Officers role in making the Essex Heritage Conservation Record accessible via the worldwide web.

Full details of all sites can be found in the Essex Heritage Conservation Record (EHCR). The illustrations are by Roger Massey-Ryan and Lynn Dyson-Bruce.

Aerial Survey

Helen Saunders

The 2002 aerial survey programme was funded by a grant from English Heritage, with the two primary aims to survey crop and soil mark sites and to record historic towns and settlements. All prints are to be deposited both in the EHCR and with the National Monuments Record, Swindon. 2002 was an exceptionally wet year and consequently there was very poor cropmark development. This combined with changes to the law regarding the use of a private pilot and airfield for archaeological aerial reconnaissance (an airfield that holds an Air Operators Certificate (AOC) must now be used) meant that flights during the year were limited.

Approximately 8 hours of flying were completed during 6 flights over the region. The first flight in April was very successful with good cropmark development noted. Seven new sites were recorded, including a rectangular enclosure (EHCR 19635 TL490 389), a small ring ditch (EHCR 19631 TL536 257) and an unusual concentric ring ditch (EHCR 19633 TL505 357). During the flight a rare opportunity to fly directly over the main terminal and runway at Stansted was also taken.

Two flights in May resulted in 8 new cropmark sites including possible enclosures at West Bergholt (EHCR 19721 TL974 270) and Home Farm, Faulkbourne (EHCR 19737 TL794 164). The other new sites noted were field boundaries. The oil refinery at Coryton, Thurrock (EHCR 19918 TQ720 824) was also recorded and entered into the EHCR for the first time.

Due to wet weather and poor visibility only one flight, in July, was taken during the summer. There was very poor cropmark development over much of the county with the exception of the Stour Valley. Several known sites were photographed along with one new site of a possible concentric ring ditch overlooking the river Stour (EHCR 19859 TL988 344).

Two flights in October concentrated on historic settlement sites. To date 17 historic towns and villages have been recorded. It is intended to continue with the historic settlement recording into 2003.

Essex Mapping Project

Helen Saunders

Work continued throughout 2002 on the Essex Mapping project, as part of the National Mapping Project (NMP), co-ordinated and funded by English Heritage. The final 12 1:10,000 quarter sheets were completed during the year, bringing the final total to 190 for the entire project. 207 records were added to the Morph database, which totals over 10,500 records, with the records for 2 further sheets to be added. Over 90 new sites, including enclosures, ring ditches and field boundaries were added to the EHCR during the past year.

The mapping has concentrated in the north west of the county around Saffron Walden, Newport and Clavering. A substantial proportion of the mapping has occurred outside of the county with 7 out of the 12 map sheets having significant areas in the neighbouring counties of Cambridge and Hertfordshire. This would account for a reduction in the number of sites added to the Morph database and EHCR, for, although all sites were mapped, if they were not in Essex then they were not added to either the EHCR or Morph.

The area mapped is predominantly boulder clay, which is not particularly conducive to the formation of cropmarks, although there are several chalk outcrops that did allow the development of cropmarks producing small pockets of isolated archaeological features.

As in previous years many of the possible prehistoric sites are possible round barrows, with over 35 ring ditches of various sizes having been mapped. They are mainly found as isolated examples, but others are in small clusters such as a new site at TL440 348 (EHCR 19798). At this site there are 4 ring ditches running in a line for over 300m with a SW-NE orientation. Three of the ring ditches are complete with the largest one having a diameter of 33m and an entrance to the north, with the 4th apparently incomplete.

The cropmarks visible on TL43NW form an interesting cropmark landscape with a variety of square, rectangular and circular enclosures, possible trackways and ring ditches (possibly round barrows). Many of the sites were previously known, including a potential Romano-British settlement, with possible trackways, enclosures and a fragmented field system (EHCR 3972 TL439 371). One site of particular interest is that of a sub-circular enclosure with an internal pit (EHCR 17276 TL436 382). On RAF aerial photographs of the 1940's this site is under a wood that is marked on the 1st addition map in the 1880's, but the site becomes visible when deforestation occurs sometime after the 1950's and the field is cultivated. Due to the nature of the cropmark it would seem that it is not a recent mark or a consequence of the wood (e.g. track or path) and therefore the ditches must have been fairly substantial to have survived the surface activity.

Two potentially significant sites were also discovered and mapped on TL43NW. A large elongated enclosure was located on a 1948 RAF photograph (EHCR 19716 TL443 362). The site, with a NW-SE orientation, is 260m by 30m. Only the curved SE terminal is visible as the NW end runs into nearby woods. There are no apparent breaks in the ditch, and potentially there is a single central mound running in the centre between the two ditches. There is also a macula at the south-east end. This site has tentatively been interpreted as a possible bank barrow or cursus, as there are close morphological similarities with known examples (such as the Cleaven Dyke, Perthshire and Holywood North, Dumfriesshire) but without further field work and aerial photography a more positive interpretation can not be given. The second site of interest is to the north, a 1948 RAF photograph reveals 3 sides of an elongated enclosure over 200m long and 50m wide, the terminals are straight with rounded corners and is on a N-S orientation (EHCR 19719 TL447 378).

Other possible prehistoric sites mapped during 2002 included a conjoined rectilinear enclosure with internal pits and a possible trackway (EHCR 7269 TL453 383), which may be a prehistoric settlement. 1km to the north is a small hengiform 20m in diameter that has opposing entrances on a N-S orientation (EHCR 19712 TL453 394). Another large rectilinear enclosure approximately 120m by 155m with 2 possible entrances, a secondary ditch and internal pits was mapped (EHCR TL466 334), unfortunately the full extent of the enclosure has been masked by geology. 2km to the west of this an irregular "bean" shaped enclosure was mapped (EHCR 19826 TL477 341). The function of these enclosures is unclear, but as the latter has no internal or obvious settlement features it could be related to animal husbandry.

One of the clearest prehistoric cropmarks examined and mapped during the year was a multi-ditched rectangular enclosure (EHCR 154 TL524 366) (Plate 1). The internal enclosure has a broader ditch, a central internal pit and a south facing entrance. The 3 outer ditches are all incomplete, but there possible entrances. It has been suggested that this is similar to the Stanway burial enclosures at Colchester.

Sites dating from the medieval period comprise mainly of moats and ringworks. 10 moats were mapped during the year of which several are scheduled, including rectangular examples at Hare Wood (EHCR 3882 TL492 395) and Dagworth (EHCR 124 TL457 398). The circular site at Moat Farm (EHCR 126 TL493 320) is more unusual and has a rectangular example adjacent. It has been postulated from evaluation trenches that the circular site is actually later than the rectangular one (ECC Excavation report 1992). The number of moated sites mapped is not a true representation of moat numbers in the area, as a site could only be mapped if the details could be seen on the aerial photographs examined. Several examples of extant and waterfilled monuments were excluded due to tree cover.

Other upstanding earthworks that were mapped included the ringwork at Grove Castle (EHCR 3878 TL459 399). This is an upstanding mound with a diameter of over 45m with dry ditches and a perimeter bank. Plash Wood (EHCR 18361 TL486 348) is a medieval ringwork site that was bulldozed 20 years ago and now shows as a soil mark. Similarly, the Rookery (EHCR 3854 TL465 291) is a soilmark mapped where all trace of the earthwork has been destroyed.

More recent and extensive cropmarks have been those of field boundaries. In past years these have been very prolific with extensive tracts of field boundaries showing as cropmarks. However, although there are still areas where there are extensive field boundary cropmarks, for example around Langley, the overall numbers of field boundaries plotted has reduced from previous years.

There were very few World War II features mapped during the year, with the 2 airfields mapped being outside the county borders. Of interest though was a search light emplacement at Claverend Bridge (EHCR 19714 TL496 364). The site consisted of 5 circular upright structures visible on early RAF verticals from 1946. A central structure was approximately 10m in diameter with 4 smaller circular structures surrounding. The site had been destroyed by 1949 and on 1952 vertical photographs showed only as a faint cropmark. There was no evidence for the site on later photographs.

The mapping is now complete and an internal management report will be produced, followed by a publication after analysis of the data produced.

Greater Thames Estuary Essex Zone Monitoring

E. Heppell and N. Brown

Work on this project (Heppell and Brown 2002) has progressed throughout the year with regular monitoring at Rolls Farm, the project will continue until autumn 2003, when an Assessment Report will be prepared. In December 2002 a related project commenced at Cudmore Grove, Mersea, designed to investigate the date and function of archaeological deposits and timber structures being revealed by erosion on the foreshore of

Plate 1. Multi-ditched rectangular enclosure - EHCR 154

the Country Park. These appear to relate to a 16th/17th-century earthwork fort and may be the remains of wharves designed to allow the fort to be supplied by sea.

A full summary of both the monitoring project and the work at Cudmore Grove will be included in a forthcoming volume of Essex Archaeology and History.

Stour Valley Project

N. Brown

A full report on the first phase of this project (Strachan, Brown and Knopp 2001) has appeared in volume 24 of the journal Landscape History. During the winter 2002-3, a number of site visits were arranged to examine the current state of selected cropmarks on the ground, and it is hoped to extend this work to Suffolk. During 2003-4, ways of collating existing borehole data from the valley will be explored, with a view to undertaking further fieldwork in 2004-5.

Archaeological advice for the rural environment

Adrian Gascoyne

The establishment of a new Countryside Archaeological Adviser post within Essex County Council's Heritage Conservation Branch in July of this year has strengthened the provision of specialist archaeological advice and information to rural landowners in the county. The post is being jointly funded by Essex County Council and English Heritage in an effort to enhance the timeliness and quality of advice provided to landowners entering the Department for the Environment Food and Rural Affairs (DEFRA) agri-environment schemes and to encourage more pro-active promotion of the historic environment in the development of the England Rural Development Programme (ERDP). During the current review of the ERDP and prior to the implementation of the new entry level and higher tier agri-environment schemes in 2005, it will be important to ensure that the historic environment is considered on an equal footing with other issues such as wildlife and biodiversity.

The Heritage Conservation Branch commented on 58 applications to DEFRA's Countryside Stewardship Scheme in 2002. Sites protected by the scheme will include a Roman villa in Ingatestone, post-medieval water meadows at Halstead and medieval moated sites in Brentwood. A successful training day was held with the Farming and Wildlife Advisory Group (FWAG) in December for farmers interested in entering Countryside Stewardship and the Countryside Archaeological Adviser has been working with FWAG to provide pre-application advice for 2003.

Comments were also provided on 21 applications by farmers and other landowners wishing to enter into the Essex Coast Environmentally Sensitive Area. Sites to be afforded future protection under the scheme include numerous Red Hills and the site of the Battle of Maldon. Plans under the scheme to restore a post-medieval duck decoy pond on Horsey Island as a habitat for estuary birds, led to a jointly funded survey by Essex County Council and English Heritage. The survey revealed a set of remarkably well-preserved earthworks and the monument is to be considered as a candidate for designation as a Scheduled Ancient Monument: recognition of national importance. Proposed restoration work will be designed to minimise the impact to the site's archaeology whilst providing a valuable wildlife habitat.

Information to conservation bodies such as the Essex Wildlife Trust and RSPB continues to be provided to help ensure that the historic dimension of their large rural landholdings is properly considered during deliberations about future management. Advice is also given to the Forestry Commission to make sure that new woodland planting funded by their Woodland Grant Scheme does not damage archaeological sites or negatively affect the character of the county's historic landscapes. Applications to local authorities for the removal of hedgerows under the 1997 Hedgerows Act were also commented on.

Ongoing management funded by English Heritage on a number of Scheduled Ancient Monuments in Essex continues with beneficial works implemented on sites such as the Roman burial mound at Plumberow Mount, Hockley and an Iron Age, univallate hill fort at South Weald. Negotiations are proceeding to implement new monument management schemes on several other Scheduled Ancient Monuments in the county including Bronze Age round barrows at Lawford and Harlow. Management schemes have been drawn up and works to protect these sites will include the sensitive clearance of vegetation and repairs to stabilise damaged earthworks.

Historic Landscape Assessment (HLA) - East of England Regional Project

Lynn Dyson-Bruce

The Historic Landscape Assessment, the East of England Project, which is part of the wider initiative by English Heritage, has successfully continued and is approaching completion in certain areas (Fig. 1). The work comprises assessing historical and current mapped sources (paper and digital) with documentary research to enable an initial assessment as to the historic origin of the landscape; this is entered into a Geographic Information System to build an intelligent, seamless digital map of the region. This consists of assessing primarily the field systems, which make up the major part of the rural landscape. (Urban areas are subject to a more detailed companion survey - the Extended Urban Survey Project's, which assess the historic cores of urban areas.)

The past years work has been focused on completing Essex and Bedfordshire. In addition this project has played a significant part in the English Heritage Methodology Review of Historic Landscape Characterisation (HLC) and the drafting of the proposed Guidelines for future work in this area. Also the Project Co-ordinator was invited to be the peer reviewer for the historic (HLA) element in the Landscape Character Assessment for the Salisbury Plain Project. Further contributions to other projects; include the Stour Valley Landscape Assessment, North Hertfordshire Landscape Assessment, and Epping Forest.

Status

- ☐ Hertfordshire is fully digitised, with the work now focused on editing the digital maps, checking attribution & ensuring the database will comply with the single, but evolving methodology being used within the wider project. Completion is expected early in 2003.
- ☐ Essex has also been completed in 2002, (with much appreciated assistance from Debbie Knopp, David Green, David Lock, Adrian Turner & Mohammed Osman) fully digitised, with editing & checking scheduled later in 2003.
- ☐ Bedfordshire has been digitised & attributed, by Catherine Grindey, as part of the East of England Project using the same methodology, but also awaits editing & checking later in 2003
- ☐ Cambridgeshire is expected to start and be completed in 2003, using the East of England Methodology.

Results

Preliminary results, in brief, indicate not only major trends in the landscape but significant areas of difference. For example in comparison to other areas in England, where HLC has been completed, the landscape in the East of England is undergoing more change in the latter half of the 20th century including, urban development, mineral extraction and significant field boundary loss on a scale not witnessed elsewhere in the country.

The impact of these changes varies across the region, with the most significant areas of field boundary loss being within Essex, urban development in Hertfordshire, airfields (World War II & modern commercial e.g. Stansted Airport) in Essex, Historic Parklands being converted to educational establishments, hospitals, but mostly golf courses within Hertfordshire.

Fig. 1. Historic Landscape Assessment. East of England - darker shaded counties being completed

However despite these recent changes, the landscape still retains much of its historic character. This is where there is greater disparity in the historic development between the counties, and each county has recognisable characteristics. For example,19th-century enclosure takes different forms, in Bedfordshire, north Essex & north Hertfordshire there is the 'classic' regular Parliamentary Enclosure - rectilinear enclosure imposed upon the landscape, regardless of prior field systems and topography. However south of the Chiltern ridge the agrarian reforms are nested within the prior 'Common Arable' field systems, on a broad macro-scale and are less rigorous. Further south the parliamentary and later enclosures are piecemeal, and are couched, on a 'micro-scale' within earlier smaller 'common arable' and other arable field systems. This indicates variants, on the perceived traditional 'common-arable' and parliamentary / 'later enclosure' field systems. However there is 'traditional' Parliamentary enclosure on former grazing commons and wastes.

Prior to the later 18th and 19th-century enclosures, there was a wide variety of 'irregular field systems' with more easily defined pockets or areas of difference. For example the co-axial field systems within Hertfordshire, the small-localised area in Wormley Woods, and the much greater area to the West, focused on the Gaddesdons in the north, sweeping south and west towards the Buckinghamshire border. It is significant that there are no 'co-axial fields' in the north of the county and their distribution is predominantly on the poorly drained clays. It is thought these represent grazing areas and due to the poor nature of the land they have survived relatively well in comparison to their arable counterparts. North of Hertfordshire is a complex of 'irregular field system' a mixture of grazing and arable fields, the latter often a small variant of 'common-arable' fields. In addition Hertfordshire is one of the most 'emparked' counties in England and has a dense distribution across the county, many now being converted to alternate uses e.g. golf courses.

In Bedfordshire a very different history is apparent: there are still small surviving areas of pre 18th-century enclosure, but the county has largely been redefined by later agrarian reform either within the Parliamentary Enclosure Act, or by individuals, resulting in 'designed landscapes' e.g. the Duke of Bedford's Estates.

In Essex the major part of the county has a complex system of pre-18th century enclosures, between the parliamentary/former 'common arable' fields in the northwest and the 'Dengie-form' co-axial field systems (rectilinear enclosures based on two axes, whereas the other co-axial systems have a single axis) in the southeast. There are areas of former grazing commons in the northeast and southwest, which were enclosed in the 18th-19th centuries. There are significant World War II airfields in the county, some still serving as informal airstrips others have reverted back to agricultural use, often the buildings being re-used as industrial units.

Management

The complex pattern of historic enclosure has been significantly eroded in the past 50 years, due to various pressures, including development, modern farming (mechanisation), CAP reforms. In the past, the trend has been one of extensive field boundary removal & urban/industrial development. However urban development may not be stopped, due to increasing housing and government pressures, but their design could be more sympathetic and in keeping with the historic landscape.

The current trend is to restore those field boundaries that were removed in the latter half of the last century. It is important, that these boundaries are appropriately restored, in the appropriate form with the right species for hedges, ditching/banking/fencing/walling material, which has been historically traditional within the area, with traditional management regimes (e.g. under Countryside Stewardship management prescriptions). This should help restore not only regional and local traditional field patterns but also the associated wildlife recreating the rich and diverse environment we used to enjoy.

Conclusion

The rural landscape in the East of England is historically complex, being largely 'anciently enclosed' with various forms of 'common-arable', later or parliamentary enclosure of hitherto unrecognised forms, nestled within former anciently enclosed fields, forming hybrid field systems. In comparison with counties in the west of England there are similar forms of 'ancient enclosure' - i.e. the landscape is mainly medieval or earlier in origin but the significant difference is that of recent change with regard to field boundary loss. Urban and other development has had significantly greater impact on the landscape, reflecting the proximity to London, and the regions agricultural significance.

Survey of Modern Archaeological and Architectural Remains

Nigel Pratt

The project to record, protect and manage the industrial and more recent archaeological and architectural heritage of Essex through extensive survey was initiated by the County Council Archaeology Section in 1994. Since its inception, the project has added 1370 'new' sites to the EHCR and a total of sixteen thematic survey reports, including the three in 2002 outlined below, have been produced. The reports describe the history, technology and typological development of each thematic group allowing individual sites to be assessed and their importance graded enabling informed decisions to be made regarding their long-term conservation and management. An article describing the development and aims of the project has recently been published (Gould 2001), while copies of the reports are available for public consultation at EHCR, Essex Record Office and the National Monuments Record at Swindon.

Essex Breweries - Tony Crosby

As an ancient activity, brewing has traditionally been carried out on a private domestic scale: at home for the family; on the larger estates for the workers; and in the various institutions (religious communities, colleges and hospitals) for those who lived in and visited them. The other main producers of ale and beer prior to the 18th century were the retail publican brewers, brewing for sale in their ale houses and inns. During the 18th century, however, a third type of producer, the common, commercial brewer, began to trade in Essex until by the end of the 19th century they dominated the industry at the expense of the other two.

The survey (Crosby 2002) discovered only slight physical evidence of public house brewhouses, as such brewing ceased during the 19th century as independent breweries developed and hence the structures where the brewing took place have either been demolished or adapted to other uses in the intervening years. The best surviving example is the Marine Brewery at the Brewers Arms in Brightlingsea (EHCR 34251).

The ten unattached brewhouses surveyed, mostly dating from the 19th century, have all now been adapted to other uses and hence again it is difficult to identify the functions of different parts of the structure and the process flow through the brewhouse. Brewing in these cases, however, tended to be only a short-lived activity before it ceased in the face of strong competition from, or take-over by, the expanding industrial commercial brewers. The best surviving example is Sullins brewery in Hatfield Heath (EHCR 15105).

Although a number of the County's industrial scale integrated breweries have been lost in recent years (e.g. H. Luker & Co of Southend and Seabrooke & Sons of Grays) physical evidence of 26 such breweries were found during the survey. Many of these are outstanding examples of their type. Ridley's Hartford End Brewery (EHCR 15139) is the only remaining operational brewery in Essex, on the same site and within the same family as when it was established in 1842 (Plate 2). Little Coggeshall Brewery (EHCR 15095) is a rare example of a small family run brewery, which despite other uses since brewing ceased and recent conversion to private dwellings, retains technology, signage and artifacts, which provide an opportunity to follow the process, flow throughout the site. At Wethersfield, all the main structures associated with the brewery (EHCR 15973) are extant and are in use as the Village Hall, private dwellings, and the Brewery Tavern, which continues to trade. The Castle Brewery in Colchester (EHCR 15299) and Grays Brewery, Chelmsford (EHCR 15047) retain their principal classic industrial style structures, the latter now adapted to retail use. Great Baddow Brewery (EHCR 30408), The Eagle Brewery, East Hill Colchester (EHCR 31142) and Charrington Nicholl & Co.'s Brewery, East Hill Colchester are the only remaining Essex breweries which were built in an ornamental style, Great Baddow and The Eagle Brewery being associated with nationally recognised brewers' architects.

Plate 2. Ridley's Hartford End Brewery

Road Transport - Nigel Pratt

The need for a survey of the remaining structures associated with road transport in Essex from *c.*1750-1900 arose directly out of concerns raised by members of the public as to the fate of milemarkers and signposts in the County. The survey was carried out in 2001 and 2002 by Heritage Conservation branch staff with help from volunteers Susan Adams and John V Nicholls, and was extended to include road bridges and that other remnant of the turnpike era, the tollhouse (Pratt 2002a & b).

The survey identified two categories of tollhouse, those purpose built and those such as Tollgate Cottage, Black Notley (EHCR 27576) which contain the word "toll" in their name but pre-date the turnpike era and were not specifically built to collect tolls. The first Turnpike Act relating to Essex was passed in 1695 and the earliest purpose built example of a tollhouse in the County, Toll Bar Cottage (EHCR 27300) is on the route of this original Shenfield to Ingatestone turnpike, and dates to around this period. Other surviving tollhouses, although erected over a century later, follow a similar simple single-storey rectangular form; the half-hexagonal end with windows giving a view of both sides of the road, which is diagnostic of many toll houses in other parts of the country, is absent from the surviving Essex examples. Tollhouses built by the Epping and Ongar Trust *c.*1819 were identified at North Weald Bassett (EHCR 33833), Norton Heath (EHCR 40256) and, the now two-storey, Belle Vue Cottage, Epping (EHCR 15113). Other tollhouses, such as on the private road to Heybridge Basin (EHCR 40259) (Plate 3), survive relatively unchanged externally, while a single storey building which may be a former tollhouse was identified from the front elevation of the two-storey, and much altered, Mill Cottage, Great Chesterford (EHCR 25384).

In addition to the obvious threats posed by being sited close to the roadside, milemarkers face the additional risks of grass-cutting machinery and theft. The survey found that 22 or 19% of the 113 milemarkers recorded in the early 1970s by John Booker (ERO T/Z 193/2) have since been lost. Against this, however, 30 have been re-discovered giving a current county total of 121; a fraction of what would have originally been erected by the turnpike trusts. The earliest surviving examples in the county are stone, and were found to date to the mid 18th century, although precise dating is problematic as the inscriptions were re-cut, and the stones turned or replaced throughout the period. The cast iron cover plates attached to many of the stones to obviate the need for costly re-cutting make an appearance post-1820. These plates follow a standard pattern with the majority in the County being locally cast in 1832 and 1893 by Bendall's ironworks at Lawford.

Unlike the remnants from the turnpike era, cast iron signposts are still performing their original role and continue to a relatively common site on Essex roads.

Plate 3. Ye Olde Toll House, Basin Road, Heybridge

Most date to post-1900, and apart from some more unusual examples erected privately, the majority of the surviving posts were found to be cast locally by Maldon Ironworks, while examples by Stanton Ironworks of Ilkeston, Derbyshire predominate in the north west of the county. Despite their relatively common occurrence cast iron posts are an important element of landscape furniture and aside from their historic value the survey report makes a case for their retention on aesthetic grounds.

All 40 of the road bridges identified as surviving from the period are still in use, many having been widened to accommodate the demands of modern vehicular traffic or pedestrians. In most cases the original structure of the bridge survives behind these alterations, even where, such as at Ongar Bridge (EHCR 18436) and East Bridge, Colchester (EHCR 40280), both sides have been widened. Of particular interest are the 19th-century cast iron bridges, which make up one quarter of the survey total. In addition to those with existing statutory protection in their own right, the survey identified two fine intact and largely unaltered cast iron examples, Littlebury Bridge (EHCR 40268) erected 1858, and Parsonage Bridge, Howe Street 1871 (EHCR 40236) (Plate 4), which are highlighted as being worthy of consideration for listing.

Monuments Protection Programme

Sue Tyler

The main focus of the Additional Scheduling Project during the period 2002/3 has been on military monuments from World Wars I and II and the Cold War Period. In addition a small number of sites from other monument classes have been assessed; these include churches and post-medieval brick kilns.

During the course of the year a number of scheduling proposals have been drawn up for a variety of World War II structures including a minefield control tower at Burnham, a bombing decoy at Bulphan and a Bofors gun platform at Waltham Abbey.

The protection of a representative number of Cold War sites is ongoing and has commenced with two classes of monument: anti-aircraft gun sites and Royal Observer Corps Visual Reporting and Underground Monitoring posts. Visual Reporting or 'Orlit' Posts were manufactured in the early 1950s to plot the movement of hostile aircraft across the country. Constructed slightly later, during the late 1950s to mid-1960s, the purpose of the Underground Monitoring Posts was threefold: to confirm that a nuclear attack had taken place and its location; to estimate its power; and to monitor the passage of radioactive fallout. Two Essex examples of combined Visual Reporting and Underground Monitoring Posts have been selected to assess for possible scheduling: one at Elmdon in the north-west of the county (Plate 5) and another at Tendring in the north-east.

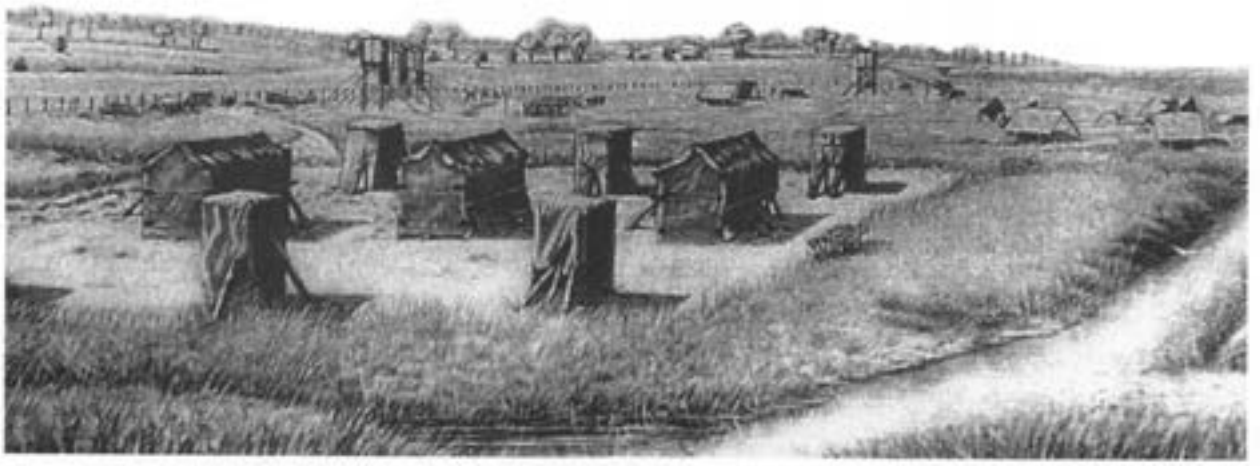
A number of sites still await assessment and it is hoped that further funding will be forthcoming from

Plate 4. Parsonage Bridge, Howe Street, Great Waltham

Plate 5. Underground monitoring post at Elmdon

WORLD WAR TWO DECOY BOMBING SITES IN ESSEX

PROJECT REPORT: MARCH 2002



Essex County Council
Planning

Plate 6. The cover of "World War Two Decoy Bombing Sites in Essex". Depicted is "East Mersea" decoy, a rare wartime drawing made by Hubert Inman, one of the camp guards.

English Heritage in order to continue this important work next year.

World War Two Defences in Essex Project

Fred Nash

In the past year the World War Two Defences in Essex project has concentrated in a number of directions following several distinct funding initiatives. *Essex Archaeology and History* 31 reported on the findings of the survey of the county's decoy bombing sites. These were constructed across Britain, with ever-increasing levels of sophistication, in an attempt to deceive German bombers into dropping their loads onto the open fields of the decoy rather than the airfields, docks and railway yards which they were meant to simulate. Following this survey, a report was compiled and issued in March 2002 (Plate 6). This details the background to defence by decoy, the wartime development and anatomy of the sites, and gives an inventory of the fifteen sites found (since increased to sixteen) together with their typology and current survival. Since completing the survey, four of these sites have now received Scheduled Monument status.

In the spring, the Witham area was the subject of detailed research into its wartime defences. From contemporary records and 1940's aerial photographs it was found that the entire town was ringed by defences with anti-tank barriers on all the approach roads. Unusually, three surviving 29mm spigot mortar emplacements were found, all along one stretch of the redundant Witham - Maldon railway line. These guns, issued to the Home Guard in 1942, were sited to fire across the fields towards Little Braxted. In all, 34 sites were documented.

The final link in the defence ring around wartime Colchester was surveyed during the summer months. This covered the section between Mersea Road and the River Colne south of the Hythe. In the town centre, at Colchester Garrison, there were many air raid shelters built to shield the camp personnel from bombing raids. Alongside Mersea Road, six of these still survive, their entrances slabbed over many years ago. Military air raid shelters in Essex have been found to very much follow a standard pattern. Parabolic concrete sections are bolted together to form a long vaulted chamber. This is erected half-sunken in the ground and earth is heaped over as extra protection. An entrance at each end completes the structure. Those at Colchester Garrison appear, from the outside, typical of this pattern (Plate 7).

One of the Districts which has been least covered by the WWII survey is Rochford. However, following a successful Heritage Lottery bid by Rochford Hundred Field Archaeology Group it will now be possible to undertake the survey of the District as one complete project. Guided by the Heritage Conservation Branch, members of the group are formed into teams to comb the District, parish by parish. Survey work began towards the end of 2002 and with strategically important areas such as Rochford Airfield and

Plate 7. At Colchester Garrison, six military pattern air raid shelters survive alongside Mersea Road.

Canewdon Radar Station in the District, is expected to take around a year to complete.

World War One Anti-Aircraft Gun Sites of Waltham Abbey

Fred Nash

In researching and recording the 20th century defences of Essex, a topic about which little is known is the county's World War One anti-aircraft gun sites. Throughout the war, there were hundreds of air raids on Britain made by Zeppelins and multi-engined bombers and by June 1918 as many as 469 anti-aircraft guns were emplaced across the country.

In the early part of 2002, the Heritage Conservation Branch of Essex County Council conducted a short survey of the WWI anti-aircraft gun sites of Waltham Abbey's Royal Gunpowder Factory (Fig. 2).

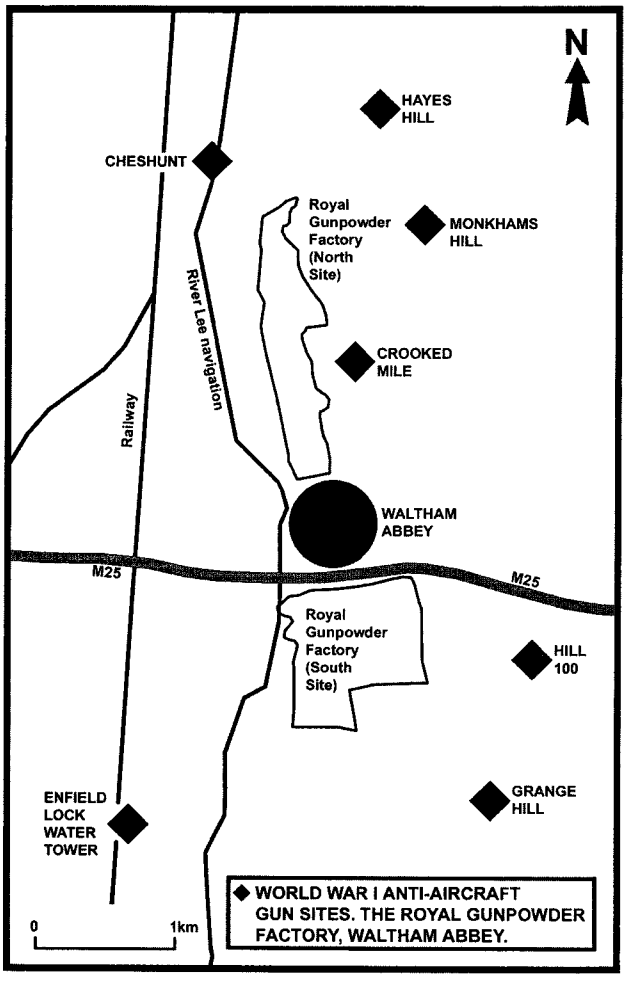


Fig. 2. The World War One anti-aircraft gun sites of Waltham Sub-Command.

The Royal Gunpowder Factory

Long before the outbreak of war, as early as 1910, the likely targets of bombing raids had been considered by the British government. The magazines and cordite factories, mainly grouped within easy flying range around London, were thought to be particularly vulnerable and, as war approached, they were given the highest level of priority, along with dockyards and weapons manufacturing plants, for the few available guns.

The Royal Gunpowder Factory at Waltham Abbey had been manufacturing explosives since the 17th century and it is known from surviving records at the Public Record Office that three of the original 26 guns deployed in April 1914 were sited there. These "Approved Armaments" records were compiled by the War Office throughout 1914-1918. They show the whereabouts and types of all the guns issued across the country. Unfortunately, no more than a handful of these records survive, but those that do provide us with reliable, and immensely valuable, information for specific dates. Thus it is known that four months before war began on 4 August 1914, the factory was defended by two Vickers one-pounder pom-poms (Plate 8) and one of the first 3inch 20cwt guns. Nine months later, at the beginning of the Zeppelin offensive, two 6pr Hotchkiss guns had been added. These were essentially the same guns which lined the sides of World War One cruisers, fired high explosive from the side turrets of MKIV "Male" tanks and, stretching their useful life forward to the Second World War, were emplaced in many pillboxes as anti-tank guns.

By February 1916, "Approved Armaments", had grown considerably, and the deployed guns at Waltham Abbey were now listed under six separate locations, none of them identified other than by their names. "Monkhams Hill" and "Cheshunt" are each shown with a 6pdr Hotchkiss, clearly those listed the previous year. "Enfield Lock Water Tower" has the 3inch 20cwt gun which had been shown earlier. "Grange Hill" and "Crooked Mile" each have one of the original one-pounder pom-poms. "Hill 100" is shown with a 3-inch QF (quick firing) 5cwt gun. This gun, produced by the Elswick Ordnance Company, was an attempt to alleviate the shortage problem. However, only fourteen were ever issued as a low muzzle velocity made them too inaccurate for the purpose. Finally, as a travelling back-up, a 13-pounder gun is listed, which, mounted on the back of a lorry, ferried between the sites.

As a measure of how much "Waltham Sub-Command" had grown after two years, an analysis dated November 1916, again unearthed from archives at the Public Record Office, lists 409 personnel manning the anti-aircraft defences. These include 16 Officers, 26 Staff-Sergeants and Sergeants, and 150 Gunners, besides supporting Rangetakers, Observers, Telephonists and Cooks.

The Commandant warranted the only motor car while the two Captains had to make do with motor cycles. The 20 bicycles were shared out between the Rangetakers and Observers.

The final issue of "Approved Armaments" which has been traced comes in July 1917, but this is slightly confusing. Only Cheshunt and Enfield Lock are mentioned, both under Northern Sub-Command. Whether Waltham Sub-Command as a separate unit had ceased to exist by that time is not known, nor whether the other sites under its control had by then been abandoned. Northern Sub-Command was part of a broad swathe of sites protecting London from an

Plate 8. Members of the Royal Naval Volunteer Reserve, Anti-Aircraft Corps, manning a one-pounder pom-pom on a pedestal mounting (IWM HU.71778).

Plate 9. 'Hayes Hill' poses its share of questions.

attack from the north and it appears that the two Waltham sites listed had been incorporated into this more general anti-aircraft barrier. By that time the 3inch 20cwt had been widely adopted as the standard weapon of AA defence and all the eighteen sites within Northern Sub-Command were equipped with it.

Emplacements and Gun Rings

Current survival at the sites is both mixed and somewhat confusing. Gun development during the 1914-1918 period meant that as new guns were delivered, emplacements and mounting plates for one gun would need to be changed for another. It is not known to what extent the few surviving records reflect these changes. In addition, most, if not all, these sites were updated and re-used during the Second World War. However, some of them may have re-mounted World War One guns on the old bases, which themselves may have been later superseded by more modern weapons.

On the ground, nothing remains at four of the seven sites documented. However, "Monkhams Hill", "Hayes Hill" and "Grange Hill" all retain gun mounting plates or emplacements of varying patterns. At "Monkhams Hill" a raised platform of brick and concrete measuring 37 feet by 29 feet still holds its 6 foot diameter steel mounting ring. At "Hayes Hill" two mounting plates survive embedded in the grass (Plate 9) while at "Grange Hill" three emplacements still overlook the Lea Valley and the Royal Gunpowder Factory South Site. Of these six mountings, two are known to be for 40mm Bofors guns (WWII), two are thought to be for 3inch 20cwt guns (WWI & WWII) and two remain a mystery.

This short survey has provided some of the answers but it is clear that there are many puzzles to be solved before the record of the World War One anti-aircraft gun sites of the Royal Gunpowder Factory can be underlined.

A background to World War One anti-aircraft gun defence, and fuller results of the Waltham Abbey survey, can be found in "Zeppelins, Gothas and Giants", *Essex Past and Present* Issue 4, November 2002, from which this report is compiled.

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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.

Copford St. Mary. The spire

D.D. Andrews

In 2003 this broach spire was reshingled with oak shingles because of woodpecker damage, affording an opportunity to inspect its structure. The spire is relatively short, about 6.3m high (Fig. 1). It is built off the top plates of the belfry and three east-west beams laid across them. At the corners, the top plates seem to be connected with mortice and tenon joints, not mitres as sometimes occur in belfries. The mast is supported by four tall braces or raking shores which rise to almost half its height. At the half way point, there is an octagonal ring beam formed of eight rails mortised together and connected to the mast by short horizontal ties. There are short braces between these ties and the shores below. The rafters are pegged to the ring beam. In the top half of the spire, the mast has no bracing and is held in position simply by the rafters. The timbers have scribed carpenters' marks.

The spire is in good condition and has only undergone minor repairs. The top of the mast has been renewed: it is secured to the lower half with a rather crude tenon which is nailed. Some of the timbers forming the ring beam have been replaced, and a new ring beam has been inserted beneath it, probably in the 18th or 19th century. The top of the belfry has been strengthened with the addition of two new tie-beams; one bears the inscription 'W H COBB 1844'. The corners of the top of the belfry have been strapped.

The timber and carpentry of the spire are good quality. It is clearly a late medieval structure, datable to *c.*1350-1600. It is, however, difficult to know where to put it in that date range. The most extensive records of church spires are those made by Cecil Hewett (e.g. 1982). In most of those drawn by him, the mast is supported by tiers of saltire bracing. The use of shores as at Copford seems unusual. Somewhat similar arrangements exist at Doddinghurst, probably 15th century, and Marks Tey, believed to be 17th century.

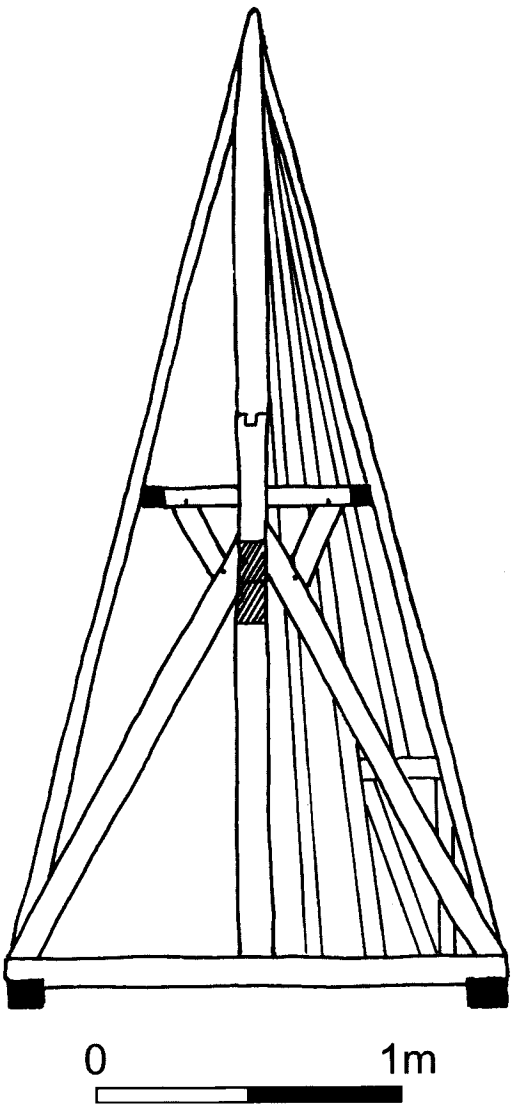

Fig. 1 Copford St. Mary, east-west section through the spire, looking south.

The straight timbers, and the scissor-braced pattern of the shores when seen from the east or west *(not as shown in the sketch)*, could indicate an early date. This raises the question of the date of the belfry and the relationship of the belfry and spire to the nave roof, which is scissor-braced and probably 14th or 15th century (Andrews 1990). The belfry could not be examined in detail, but its construction looks very simple and possibly late. Inside the church, the belfry seems to interrupt the nave

roof and be a later insertion. None of this leads to any very clear conclusion. It is possible that the belfry has been rebuilt and the old spire re-erected above it.

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Finchingfield, St. John. The north aisle wall and the south chapel roof

D.D. Andrews

The north aisle wall

A dry area was formed along the base of the north wall of the north aisle in 2003 to counteract damp, the wide concrete gutter being removed. Curiously, at the west end, no mortared masonry or foundation was found behind or below the gutter. Instead, there was very compact yellow-brown clay and stones, which contrasted with the dark brown loamy graveyard soil on the north side of the trench. Excavation in the side of the trench to an estimated 150mm beneath the wall proper (i.e. beyond the plinth) failed to encounter solid foundations. Nor did there seem to be any foundation beneath the north-west buttress (the end of which is badly cracked). The architectural features of the wall, the windows, the string course, and the plinth (which is rebuilt in cement but preserves a few chamfered blocks of oolite and seems in origin to be old), all point to a 14th-century date. Foundations of that period are generally mortared. 12th- and 13th-century foundations, however, often consist of packed earth and gravel laid in a trench. This raises a question mark over the date of the wall. It is noticeable that the west end of it is built of smaller and more neatly coursed stones than the east end (beyond the north door). It may be, therefore, that the western part of the wall is earlier than the eastern. This may correspond with the situation inside the church, where the two western arches of the north arcade are of a different build to the eastern ones (late 14th or early 15th century, as opposed to 14th century).

On this admittedly very slight evidence, the following building sequence is suggested:

1. A Norman church, represented by the tower, with an original or later aisle, represented by the western end of the north wall.
2. An extension of the aisle (or partial rebuild) in the 14th century, i.e., the eastern three arches. At this stage, the exterior was embellished with the string course, plinth and windows.
3. The rebuild of the two western arches at the end of the 14th century or early in the 15th.

The south chapel roof

The south chapel dates from the 14th century, the date of the arches on its north and west sides (though these arches are not identical and therefore presumably not contemporary) and of its windows. The chapel roof is ceiled. Nothing can be seen of it from the inside apart from the modern plate which runs beneath the valley gutter on the north side. The ceiling is made of hair lime plaster and is painted pale pink. Retiling in 2003 provided an opportunity to inspect the roof. It is of clasped purlin construction (Fig. 2). At the east and west ends, there are deep (*c.*300mm) section tie-beams with deep collars. Between them, there are a further two deep collars supporting the purlins. These collars are mortised into the rafters. The other collars are simply trenched across the rafter couples. There are four windbraces, not located in a systematic fashion, nailed to the common rafters but let into the deeper rafter trusses.

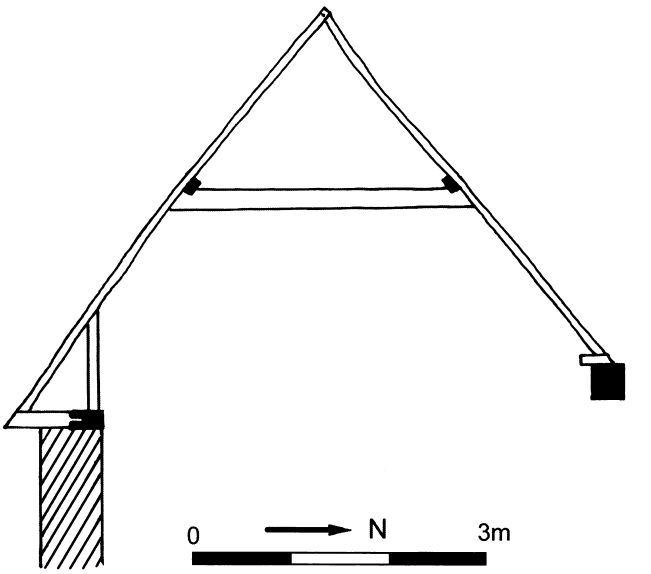

Fig. 2 Finchingfield St. John, the south chapel roof.

On the south side, the short sole pieces are tenoned into a massive wall plate, itself tenoned into the tie-beams. The ashlar pieces seem not to be tenoned into the rafters: there are no pegs and tenons could not be detected, so presumably they are nailed into them from underneath. The rafters are tenoned into the sole pieces, but only those with the deep section collars are pegged at this joint. The mortises in the wall plate are often slightly too big for the ashlar pieces, and are all too big for the sole pieces, the gaps being filled with wedges. The rafters are mortised at their apices. The sole pieces have scribed carpenters' marks. The markings elsewhere are chiselled. The timbers are numbered from west to east, the 'principal' trusses (i.e. those with the collars clasping the purlins) being excluded from the numbering system.

The timbers are of relatively substantial scantling, with the exception of the rather skinny collars. The rafters are wide section, typically measuring about 150 x 80mm. Some of the timbers, including the purlins which are single timbers, have bark still adhering to them, and taper noticeably along their length. This shows that they must be half or probably more often quarter trees. Saw marks were not, however, evident in most cases, and it seems therefore that the timbers were riven. This would explain the strange way the tops of

several rafter trusses kink to the east: this is simply the way the timber split, following the grain.

The clasped purlin construction, the occasional use of pegs in the carpentry joints, the chiselled carpenters' marks, and the nailing of the windbraces all suggest a 17th-century date for the roof. Although the sole pieces with their scribed marks look as if reused from an earlier roof, everything else points to the roof being of a single construction. It may well be roughly contemporary with the chancel roof, which is dated by an inscription to 1635. Whereas the chancel roof is showy, with pendentives, the chapel roof is relatively crude and it is unlikely that it was ever intended to be seen. It was probably ceiled from the first, though the presence of four replacement collars indicates that the ceiling cannot be original. The roof is in good condition, although there is a notable degree of deflection. The rafters on the south pitch are bent over the ashlars because the north side has dropped, probably because of rot in the area of the valley gutters. The rafters of the north pitch have bent inwards. Repairs are however relatively few and insignificant, except for major work to the valley on the north side which took place some time in the 20th century.

Tudor brick in the west gable suggests it may have been contemporary with the roof. It had to be rebuilt above collar level in 2003. The brickwork of the east gable showed it to have been rebuilt in the 18th or 19th century. Originally, the gables might have had a parapet rather than a verge.

Horndon-on-the-Hill, St. Peter. The roofs

D.D. Andrews

The nave arcades, and the north chancel chapel, date from the 13th century. Retiling the church in 2003 provided an opportunity to assess the history of the roof. The nave has a crown post roof. The rafters, collars and soulaces are of substantial scantling, and are mortised and tenoned. The braces of the crown post are fairly thick, suggesting a date in the 14th century. The structure of the crown post assembly is rather crude, and it is possible it is a later insertion beneath a plain rafter collar truss roof. The nave eaves assembly is made with large sole pieces halved over a central wall plate. The sole pieces often project slightly into the nave, where there is another wall plate over which they are presumably also halved.

As usual, the relationship between the nave roof and the belfry is problematic. This belfry should be more strictly defined a belltower, as it is not supported by, or integrated with, the fabric of the church. This suggests that it has been moved to this position from outside the church, or even from elsewhere. An empty mortice in the collar purlin for a brace which descended to a post which must once have stood on the tie-beam set behind the tower, tends to confirm the theory that the tower has been introduced into the west end of the nave, and suggests it is earlier than the roof. Most of the rafters which adjoin the sides of the tower are modern.

A description of the church in 1855 by H.W. King indicates that the dormer windows in the nave were in existence by that date (ERO T/P 196/2, I/MP 190/1/1-2). Nail holes in the rafters show that a ceiling has been removed. Possibly about 20-30% of the rafters have been replaced. The new rafters are machine sawn and have been stained, and so it is difficult to differentiate them from the original. Flitch plates have also been attached to both sides of the collar purlin. This rebuilding of the roof must have occurred in the restoration of 1899 recorded in a brass plaque now in the vestry, the architect for the nave being C.R. Ashbee, and for the chancel, W.D. Caroe. This dating is confirmed by the discovery in the nave roof of numerous bottles of the Baddow Brewery Company's Pale Family Dinner Ale which can be dated by the brewery's address to about this time. The interior of the church bears relatively little obvious evidence of Victorian restoration, and it seems clear that the overhaul of the roof was a significant part of the work. On the south pitch of the nave, the existence of oak battens showed that the 1899 work was still largely intact. The north pitch, however, was felted and must therefore have been re-roofed in relatively recent times. The roof is ceiled with plaster fixed between the rafters. This plaster is very brittle, the hair in it being very fine, and was a cause of concern at the time of the retiling.

The very narrow south aisle has a plain roof with closely set rafters which run up and against the nave rafters, with an overlap of 3-4 feet. The eaves was originally made with an inner and outer wall plate. Only the decayed inner one survives; there are empty mortices in its side for the sole pieces, none of which survive. This is an old roof but has no datable features, apart from a sequence of chiselled carpenters' marks. Assuming these relate to its original construction, they indicate the roof to be 17th-century or later.

The north aisle has been reduced in height, the windows being truncated and provided with 16th- or 17th-century heads. Originally the roof must have been parapeted. This explains the diminutive clearstorey windows above the north arcade which are now inside the church. The roof is made of modern timber and seems to have been totally renewed in the restoration. It is of butt purlin construction. Assuming this is how the roof was built before 1899, it suggests a 17th-century date which would be consistent with the style of the heads of the truncated windows. The rafters are set directly into the top of the masonry of the truncated aisle wall.

The chancel has a late medieval seven-cant trussed rafter roof of substantial scantling and made with mortice and tenon joints. Caroe's work at the restoration involved renewing about six trusses, and putting boarding behind the rafters. He used an early felt over the rafters, and strengthened the roof with diagonally set battens.

Langford St. Giles. The western apse

D.D. Andrews

This small church is an oddity, having once had apses at the east and west ends. The eastern one was squared off in the Middle Ages. The church was substantially rebuilt

in the restoration of 1881 when most of it was faced in squared blocks of Kentish Rag. The western apse was untouched, its special character having been apparently respected in this work. In 2003, 20th-century cement render on the apse was removed and replaced in lime, presenting an opportunity to examine its fabric.

The wall is built of ferricrete, roughly coursed blocks large in size (up to 500 x 280mm), with one or two pieces of flint. They are bonded with pale brown mortar containing abundant small pebbles and shell which comes up to the faces of the blocks, leaving little doubt that the wall was always rendered. A very small patch of straw-filled daub high up in this masonry is probably spillage from daub infill at eaves level. At the bottom of the wall, below a very clear lift at a height of 1.52m, a darker brown rather silty mix was used. Lifts can be detected higher up in the walls. There is a conspicuous one at the top of the windows. A measurable one in the lower part of the walls is 660mm high. There are several putlog holes just above the level of the window cills which have been blocked in 19th-century brick. The plinth at the base of the wall is probably original to the apse, as the chamfered stones at the top of it seem to be of Caen. The plinth was rebuilt in concrete probably when the apse was cement rendered.

There are three small round-headed Norman windows in the apse, 200mm wide by 610mm high. The masonry around them is undisturbed, and they seem original to the wall. The stone of their surrounds is dirt and lichen covered, but it seems to be Caen; if original as it seems, it is in remarkably good condition.

A later build was clearly evidenced at the top of the wall where it had been raised in height by 530mm, mainly with reused ashlar (Reigate and Caen, some with fine diagonal tooling), but also septaria and some modern red and white bricks. The latter identify this event as probably belonging to the 1881 restoration.

Laver (1909) speculated that the western apse might be of very great antiquity. A Saxon origin might explain this anomalous structure. Thinking along similar lines, Pevsner (1964, 258) drew parallels with Carolingian and Ottonian Germany. However, removal of the render has shown the wall to be 12th century. In these circumstances, the apse might be explained by the initial presence of two altars in the church, or perhaps a dual patronage of the sort that saw two or more churches built close to each other. There remains, however, the possibility that the apse is built over the foundations of a much older structure. Until this is investigated, the apse cannot simply be dismissed as an anomaly of the 12th century.

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Moreton, St. Mary. The roofs

D.D. Andrews

Removal of the failing ceilings in 2002 revealed the nave and chancel roofs. These are identical in pattern, being

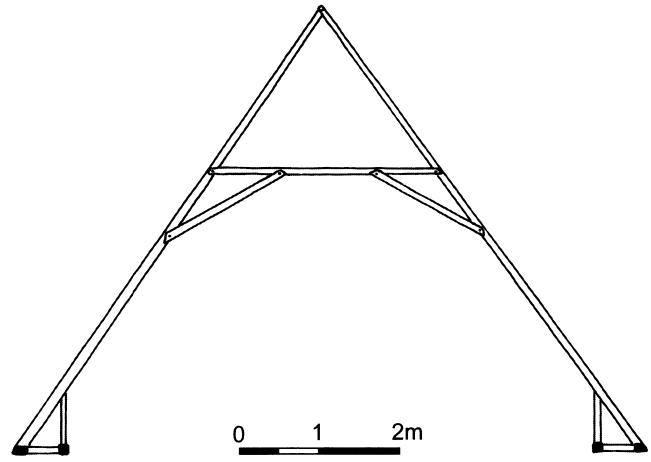

Fig. 3 Moreton church, the nave roof of the first half of the 13th century. (The eaves detail could not be examined and as shown is largely conjectural).

trussed rafter couples with soulaces. The rafters are halved at the apex. The collars are attached to the rafters with barefaced dovetails, and the soulaces are lap jointed to collars and rafters. In the nave, some of the soulaces are secured with notched-lap joints. However, the character of the roofs is quite different. The nave roof (Fig. 3) is made of timber of slight scantling (e.g. rafters 125-150mm wide, collars as little as 65mm wide). The members all seem to be small trees, with a minimum of labour expended on squaring them up. The chancel roof is in much better condition, but the timbers are of larger scantling (e.g. rafters 150 x 100mm) and more energy was expended on their conversion, so that there is little sapwood left on them. The joints in the chancel are also secured with trenails rather than pegs, and on the southern pitch have carpenters' marks distinguished with semi-circles. Initially, these differences were thought to reflect the privileged position of the patron who would have been responsible for the maintenance of the chancel and must have had access to the best sources of local timber, in relation to that of the parishioners, who had the upkeep of the nave and who clearly had difficulty obtaining good timber. Tree-ring dating showed this reasoning to be fallacious. Because of the quality of the timber and shortage of rings, the nave could not be dated. The larger timbers of the chancel roof gave a likely felling date of 1510-38 (Bridge 2002).

This surprisingly late date does not apply to the nave roof. It is not simply that the timber and carpentry did not look 16th-century: evidence was found that confirmed its much earlier appearance. The eaves construction could not be examined in detail, but seems to consist of an inner and outer wall plate with sole pieces at relatively wide intervals, connected to the plates with dovetail joints. The gaps between the ashlar pieces were, as was usual in older roofs, filled with daub, of which there are extensive remains. Where the top coat of plaster had come away from this daub, wall paintings were revealed. Mainly in red, they comprise a foliate or leaf scroll pattern, apparently forming a frieze

over the tops of the windows in the area of the ashlar pieces. The style of this painting was unquestionably 13th-century, probably early 13th-century, leaving no doubt that the daub and the roof structure are contemporary or earlier.

It is probable that the roof and paintings are original to the main build of the nave and chancel which is datable, on the evidence of the lancet windows, to *c.*1200-1250. An apparently similar simple seven-cant roof of the same date has been found recently at Beeleigh Abbey, Maldon. It is interesting that these roofs are not scissor-braced which is what might have been expected of carpentry of this period. Where the daub was preserved at the eaves, there was in the back of it an indentation for a round or half-round timber, presumably a light intermediate rafter. If so, this strengthening of the load carrying capacity of the roof may indicate that it was always tiled. These timbers may also have been related to the finish on the inside of the roof. Presumably a skim coat of daub was carried up from the infill at the eaves on to the underside of the tile battens or else to lathing attached between the rafters, perhaps to these intermediate timbers which were set slightly behind the main rafters.

There are crown posts on the two westernmost tie-beams of the nave roof. This crown-post construction was more extensive: there is a mortice for a simple scarf joint at the east end of the collar purlin, indicating that it has been truncated and once ran the full length of the nave. Their carpentry looked distinct from that of the roof trusses, as if they had been inserted to strengthen the roof. This interpretation was confirmed by dendrochronology: the braces to the crown-post, though generally lacking in rings, were datable, with a most likely felling date after 1518. Once again, this was contrary to what an examination of the timbers suggested, as the broach stops and thick down braces would be more consistent with a 14th- or 15th-century date.

The nave roof has been strengthened with nailed-on purlins, three on the south pitch and one on the north pitch. Many of these are of elm, a probable indication of a 17th century or later date. It is quite possible that these were added at the time that the ceilings were put in the church. The ceilings had failed because the laths were wormy and rotten. They must have dated from the 18th century or perhaps from the 17th. They were replaced with traditional laths and lime plaster.

The uneven wall surfaces present on the north and south walls of the nave indicate that there is extensive survival of medieval plaster below the level of the wall tops. Much of this preserves wall paintings, of which small portions, comprising the leaf scroll pattern at the top of the walls with ashlar masonry outlined in red below it, were uncovered and conserved in 2002 by Paine and Stewart. Small areas of painting on the window reveals in the east wall are medieval in style but their good condition indicates that they have been repainted. These were possibly the wall paintings discovered when Chancellor restored the church in 1865-68 (*The Builder*, **26**, 1868, p. 847). The church was also restored in 1869 (ERO D/CF 8/5), though this work was confined to replacing the 'old, high, unsightly and inconvenient' pews with benches, and renewing the floor.

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Rawreth, St. Nicholas

St. Nicholas comprises nave, chancel, north aisle and west tower. The south aisle was removed after damage in World War Two and the south arcade infilled. The oldest parts - little more than the tower, the west wall, and the south arcade - date from the 15th century. The rest of the church was rebuilt in the 19th century, mainly in a restoration by Geldart from 1881. A toilet block was added on the south side in 2003. In the foundation trenches, a fragment of wall was uncovered just to the south of, and cut by, the south arcade. Built of large chalk blocks bonded with sandy yellow mortar, and extending to a depth of 1.7m below existing ground level, the wall was probably orientated east-west, and presumably belonged to an earlier phase of the nave of the church. The south wall of the demolished south aisle was found to be of several phases, originally of Kentish Rag but with 19th-century rebuilds in brick. In the drain trenches dug to the south, east and north of the church, 49 burials were encountered, comprising seven brick tombs, eleven coffins, and 31 inhumations. The earliest for which there was dating evidence was a burial cut by the wall of the south aisle.

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South Benfleet, St. Mary

Prior to the construction of a toilet, test pits were excavated inside and outside the west wall of the tower. An offset projecting 600mm was found externally at the base of the west wall. This is much in excess of a normal foundation offset, and could be a foundation of a tower earlier than the existing, which is dated to the 14th century. Inside the tower, three former surfaces were found, the earliest at a depth of 750mm below floor level.

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Springfield, All Saints. The nave roof

D.D. Andrews and E. Watkin

The nave roof was retiled in 2003, making it possible to see above the boarded ceiling which probably dates

from the time of the restoration by Clarke in 1869 (ERO D/P 211/6/6). In the east side of the tower, in the 14th-century stone masonry below the Tudor brickwork of 1568, there is the chase for an earlier roof with a lower pitch. The existing roof is seven cant, consisting of trussed rafter couples, each with two collars. It is constructed with mortice and tenon joints. The rafters are bridled at the apex. The nave is 24ft wide (increasing to 25ft at the west end). It is a very big roof, which may explain why the rafters, which are made of half trees, become relatively thin and waney towards the apex. Several couples are notably bent towards the top, clearly obtained from trees only just large enough for the purpose. Similar timbers were used for the rafters of the south chapel at Finchingfield St. John (see above). At the eaves there are inner and outer wall plates. The sole pieces, made from single trees, have 'puzzle' holes in their outer ends which must have been used for lining up the timbers in the construction process. The ashlars are tenoned into the sole pieces and halved over their internal ends. There are several long mortices on the inside edge of the inner wall plates. Some of these are empty, but in some cases the sole pieces are tenoned into them. There is a tie-beam against the side of the tower, and two across the nave, both now boxed in. The easternmost of these two ties was made from a timber of inadequate length, a short piece of wood being scarfed on to its southern end (Fig. 4). This scarf, made with a tenon below a bridle, had failed and the joint had pulled apart.

The roof is in good condition and showed little sign of previous repair, though it has been reinforced with intermediate rafters, possibly in 1869. Towards the east end of the south pitch, two rafters have been cut through and a trimmer inserted, probably for a former dormer window. The rafters flanking this had also replaced in softwood. No dormer, however, is shown on an 1844 print of the church which is based on a sketch of 1834 (ERO I/MP 323/1). If correctly interpreted, the window was a short-lived 18th-century feature.

The simple construction of the roof leaves its date difficult to assess. A 14th-or 15th-century date could be proposed for it. It is, however, possible that the waney timbers were always intended to be ceiled, in which case it might be 16th century. It is possible that it is contemporary with the Tudor brickwork of the tower. Two pieces of timber cut out from the roof in the course of repairs were rejected for tree-ring dating.

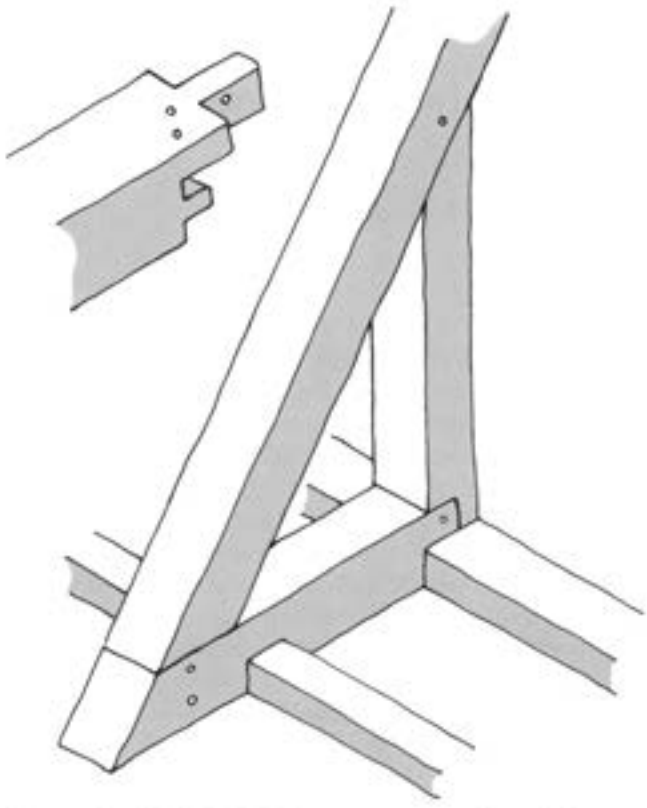

Fig. 4 Springfield All Saints, eaves construction of the nave roof, with detail of the scarf joint at the end of the tie beam.

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Essex Archaeology and History 34 (2004), 272-282

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 highlight of 2003 from the historic buildings viewpoint was the return of the Vernacular Architecture Group to Essex for its spring conference, with its venue at New Hall, Boreham. Like the previous Essex conference in 1984, one of the valuable results was the catalogue of buildings visited, with a supplement devoted entirely to Maldon.

The Essex Tree-Ring Dating Project

D.D. Andrews

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 (Stenning *et al.* 2003). 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.

Table 1. Recent tree-ring results for Essex.

Parish	Building	Date	Timbers	Analyst	Report
Hatfield Broad Oak	Forest Cottage	1360		I. Tyers	Stenning 2003
High Easter	Ramseys	1280-1325	Arcade plate	I. Tyers	Stenning 2003
Maldon	Beeleigh Abbey	1214+10-50	Reused as floor joists	I. Tyers	
Little Hallingbury	Romans	1443	Hall	M. Bridge	Typescript
Moreton	St Mary's	1510-38 After 1518	Chancel roof Nave crown post	M. Bridge	Typescript
Wakes Colne	Crepping Hall	1301-1337		I. Tyers	Stenning 2003
Wakes Colne	Normandy Hall	1368		I. Tyers	Stenning 2003
Walthamstow	Low Hall	1344	Excavated bridge		EAH 33, 202
West Ham	All Saints	1384 or soon after	N aisle tie-beam	M. Bridge 24/2003	CA Report
White Colne	Harvest Cottage, 26 Colneford Hill	After 1516, est. 1526-62	Sole plate from partition wall	I. Tyers	
Wimbish	Broadoaks	1572-94	Floor joists	I. Tyers & M. Bridge	ODL Report 2003/2

Notes
1) English Heritage Ancient Monument Laboratory Reports are now Centre for Archaeology[CA] 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, and the Oxford Dendrochronology Laboratory (ODL), Mill Farm, Mapledurham, Oxon RG4 7TX.

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Clavering North Tower Windmill

Adam Garwood

The survey at North Mill was carried out to establish the level at which the building's machinery and historic fabric survived, and to record the extent and quality of structural repairs carried out during previous renovation works. Built in 1811 and working in tandem with the adjacent South Mill (1757), North Mill worked under wind power up until 1919, after which its sails were removed. However, it continued in use for a few more decades, driven by a 16hp oil engine.

Apart from the removal of the sails, the most significant alteration to its appearance has been the replacement of the original beehive cap with an aluminium reproduction, the wholesale replacement of windows, and the removal of loading platforms. Built over five floors, with a canted timber-framed office around the northern third, the windmill has retained much of its internal machinery. This includes, on the first (spout) floor, a central three-chambered meal bin, three sets of bridgetrees and brays (one still complete retaining its entire governing mechanism) and the hursting, pulleys, and the drive shaft associated with the later engine drive. A complete set of millstones (the other two sets no longer survive), the clasp arm, the great spur wheel with its undershot crown wheel for auxiliary drives, and the main upright shaft are visible on the second (stone) floor. The sack hoist drum (repositioned) and wall scars of former grain bins are present on the third (bin) floor, with the framework for the sack hoist mounted on the floor above.

Later renovation works, particularly the removal or replacement of all the original floor boards, straight-flight stairs, and common floor joists, has compromised the building's vertical relationships, while poorly executed and crude laminated repairs to the main structural floor beams are both inappropriate for a

building of this status and unconvincing in their long term structural performance.

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A Victorian oven at the Castle Inn, Earls Colne

Barry J. Hillman-Crouch

The Castle Inn public house lies on the main road through Earls Colne. Planning permission was sought for extensive alterations to the outbuildings to the rear which originally comprised a wagon house and stables. A small room in the stables with a hatch-way high up in the wall was identified as a Victorian bread oven. When the partition walls were removed, its completeness and condition were verified and provision made to record it. It was evident that the oven had been out of use for many years and that the vault was beginning to collapse. It was decided for safety reasons to dismantle the oven, salvaging its materials and making a thorough archaeological record of its construction details. The wall containing the oven doors was left in position. Also uncovered during the works was a substantial well in the courtyard made of 19th-century bricks.

The oven itself (Fig. 1) was a substantial brick structure 3m square and 1.9m deep, containing a large oven space 2.2m square by 450mm at the highest point. The oven space was created by a very flat brick vault whose integrity was maintained by flattened wrought iron tie rods which passed into the brick work and were fastened with nuts into timber stanchions placed vertically against the outside of the brickwork. Also embedded into the exterior brickwork were three courses of horizontal timber lacings which contained the oven on three sides.

Beneath the oven were two voids. One, a brick arch placed off-centre beneath the main oven door, was the spent coal hole. Once the oven had been heated to its working temperature and the doors closed, the hot coals were either raked out or brought out in a wheeled cinder trolley and placed in this arch to make use of the residual heat. The second void was square sided and formed the coal oven to the side of the main door. This was designed to incorporate a grate and cinder box in which to burn the coals to heat the oven. This coal oven was created using some specially made bricks of very large dimensions.

Above the oven was a chimney incorporating iron reinforcements and exhibiting signs of substantial remodelling. The main part of the chimney was positioned above the main door and to its left was a much smaller flue with a cast metal damper plate which could be used to shut it off once the required temperature was reached. The top part of the chimney

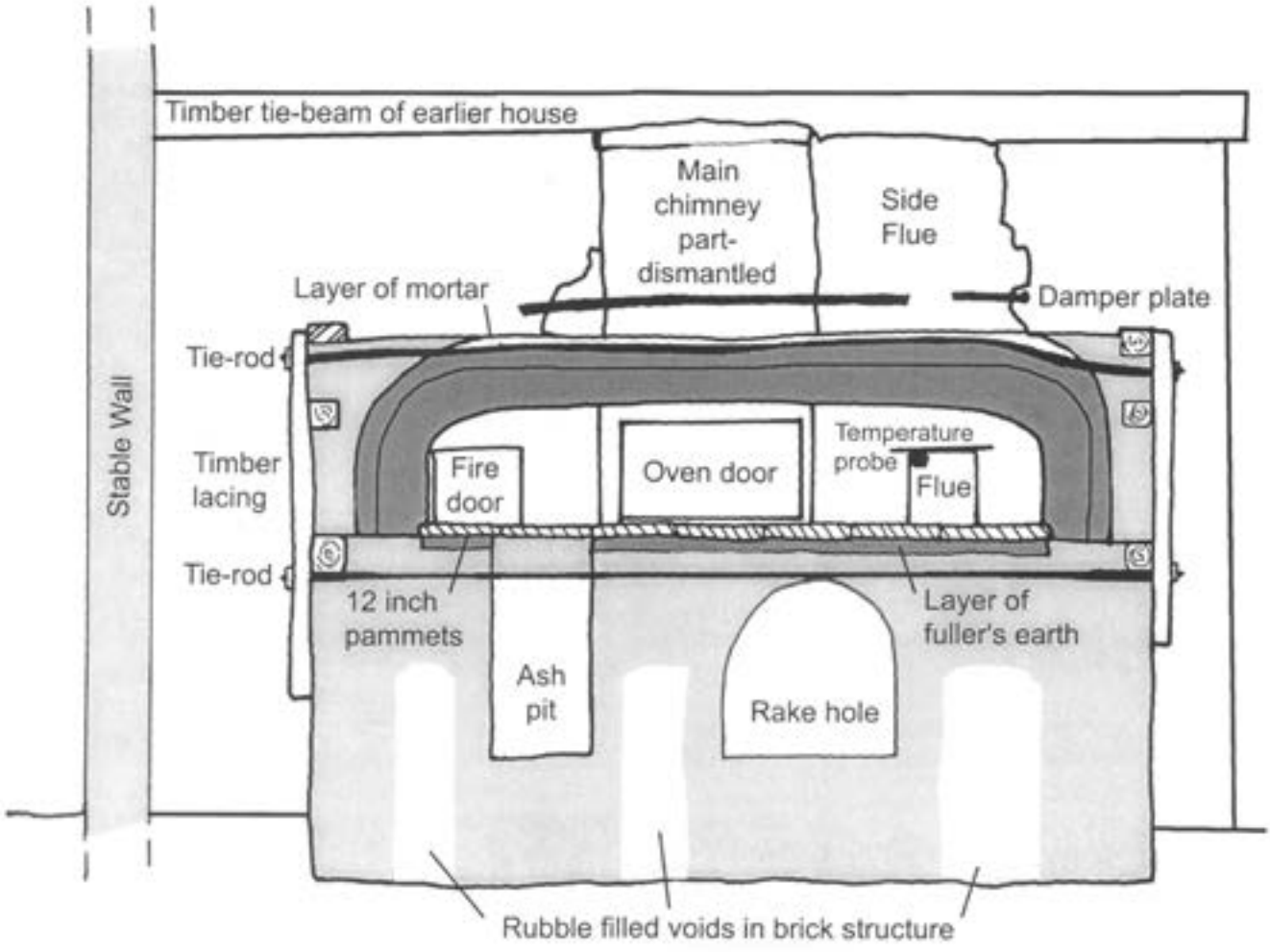

Fig. 1 Earls Colne, Castle Inn, section through the bread oven illustrating the main components.

had been dismantled long ago. Through the brickwork into the side flue, a temperature probe with a circular dial had been set into the oven. The oven doors were made of plain cast iron with wrought iron fittings and no makers' names. The main door had 'No 3' cast into it. There was no sign of an integral water tank which is sometimes a feature of this type of oven.

The wrought iron straps had flattened shanks to pass between the brickwork joints and the ends were threaded to receive square nuts with slightly domed outer faces. The ends of the rods were turned to a point to receive the hand-cutting die. This form of thread died out after the 1850s when the Whitworth thread was universally adopted. The square washers had been hot-cut with a set chisel. The brickwork itself was interesting in that a combination of types of bricks was used, some of them bearing makers' names. In the main the oven was constructed of soft red mostly frogged bricks measuring 60 x 105 x 230mm set in a hard white mortar that had dessicated with the heat. The size of the frogs was variable and there were some plain bricks. Many bricks carried the maker's imprint of 'Blomfield Halstead'. Most had horizontal pressure marks from being stacked to dry before firing. Many bricks were broken and these were used to infill the base structure. A number of white used paviors had also been slipped in to make up the gaps. Two large specials were incorporated into the coal oven. One marked 'Kemp & Sons, Stepney Green' was a trapezoidal brick measuring 430 x 480mm maximum and of normal thickness. The second was unmarked and incomplete but was at least 300mm square and of exceptional thickness (175mm), made of two bricks burned together. The floor of the oven was composed of 65-75mm thick red pammets 300mm square bedded on a 50mm thick layer of fuller's earth.

The oven was a typical side flue pattern of the early 1800s. Originally it was a self contained building with its own roof. It was built on to the back of the late 16th- or early 17th-century rear of the east range of the inn. To judge from the large chimney stack with its three octagonal flues, this range contained a kitchen. The oven roof was later dismantled and the oven enclosed within a large east-west stables building, its walls being keyed in to create a small warm store. It probably went out of use because of the changing pattern of economics that greatly reduced the amount of local bakers in favour of large scale production, modern techniques and steam ovens. Although a specialist structure with bespoke hardware and tailor-made bricks from London, it was in the main constructed of local materials, probably by local craftsmen.

The oven resembles one at Purleigh (Essex Heritage Conservation Record 38560) which had its own roof and a water tank above it.

Chambers Manor Farm, Epping Upland

Andy Letch

In advance of residential development, the surviving structural elements of a planned Victorian dairy farm, including a cowhouse and pigshed, were recorded. An archaeological watching brief undertaken during associated groundworks revealed the presence of a possible silted-up moat, related to the medieval Chambers Manor House and extant moat remains to the south-west.

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A timber-framed building at The Greenwood School, 90 Head Street, Halstead

Richard Shackle

In 2001, Landlink plc redeveloped the former Greenwood School in Head Street on the northern edge of the medieval town of Halstead for housing. Most of the buildings are 19th-century but the former staff quarters date back to the medieval period. It is a medieval hall house, parallel to the street, perhaps built in the 15th century, consisting of a fragmentary open hall and a rebuilt service end of the 16th century. The parlour end is completely missing.

The hall consists of the end truss with two service doorways, the top plates of the low end of the hall with some evidence for the central truss, one rafter foot and two studs (Fig. 2). The underside of the service doorways are heavily sooted, confirming that this was an open hall. The hall has had a floor inserted and its roof raised. This much altered fragment has been encased in brick on the side facing Head Street.

The rebuilt service end is in-line with the hall and probably replaces an in-line service end. It is timber-framed in oak with close studding and tension braces. It consists of a two-bay structure jettied to the front with one bay wider than the other. There was one room on each floor. The front elevation (Fig. 2) is much cut about but enough survives to show that it was symmetrical with a central window and two braces on the upper floor and two windows on the ground floor. This would have looked very impressive from Head Street. The rear elevation (Fig. 2) is only partly visible but it can be seen that there was one window on the upper floor. On the ground floor we can only reconstruct the southern bay. This shows that there was studding only above the mid rail but none below, which suggests that there may have been a brick fireplace below the mid rail. The end trusses are open framed below the tie-beam and closed framed above, that at the northern end presumably being built against an earlier building next door, and that at the southern end being built against the open hall. The central truss (Fig. 2) is very similar except that there is open framing above the tie-beam. The integral floor consists of large bridging joists and wide section common joists. The position of the stair trap giving access from the ground to first floor is not visible and must be hidden behind plaster in the narrower bay. There is a very plain crown-post roof with thin

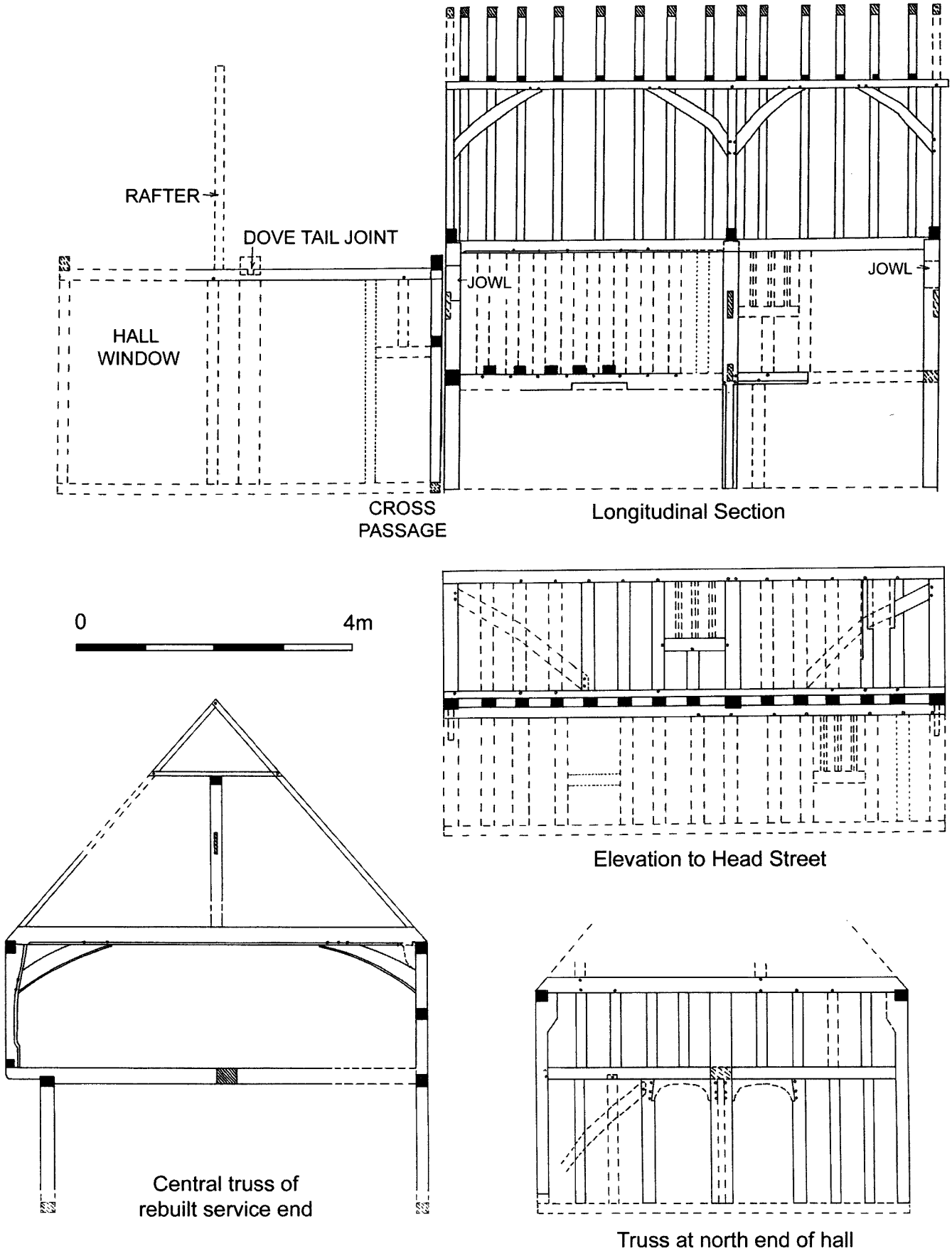

Fig. 2 Halstead, 90 Head Street.

cranked braces. There is some evidence that the exterior of the front elevation was lime washed. There is an interesting mark painted on the underside of one of the joists where it would have been hidden by the lower jetty beam. This mark could be a construction mark or perhaps graffiti. It bears some resemblance to a merchant mark.

The plan form of this structure suggests that it is not just a replacement service end but something grander. The one large room on each floor with a probable brick chimney on the rear wall suggests either an attached kitchen or a new parlour. If it were an attached kitchen it would replace an outside detached kitchen. If it were a new parlour it would replace the old parlour at the other end of the open hall, the old parlour becoming the new service end.

The service end underwent many alterations including underbuilding the jetty, a small staircase against the central partition and the construction of an internal chimney stack.

Thorley Maltings, Blasford Hill, Little Waltham

Adam Garwood

The building survey and watching brief carried out at Thorleys Farm Malting, revealed through the study of its carpentry and wall foundations, that the building was raised as a timber-framed two-storey farm malting with a single aisle in the mid to late 17th-century. Notable features of the 17th century frame include the alternate use of oak and pine for the main binding joists, their embellishment with lambs' tongue chamfer stops, and use of chiselled carpenters' marks. The survey also uncovered successive phases of renovation and enlargement during its 230-50 year term of use. The main phase of alterations was undertaken during a period of investment in the late 18th century, which saw the enlargement of the building with the addition of a two-storey double-pile storage unit onto the southern end of the malthouse. This increased the growing floor area and provided a segregated barley store at first floor. The kiln was also replaced by the existing brick-built malt kiln and the malthouse was underpinned. The malting was renovated once more in the mid to late 19th century, the steep being moved into an adjacent brick lean-to to increase the floor area, and the malt kiln being provided with a new perforated ceramic tile kiln floor.

The procedural flow within the malting remained relatively unchanged throughout its lifetime. Barley steeping, couching and germination were carried out at ground floor level, with germination spread across the main floor and eastern aisle, leaving the first-floor reserved for both malt and barley storage. The malthouse remained in production until the early decades of the last century.

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Maldon, 69-71 High Street

D.F. Stenning

This building on the north side of the High Street comprises three gabled cross-wings, the right hand of which has a spectacular 17th-century carriage arch which has been recorded by Hewett (1969, 162). The central wing (Fig. 3), which is described here, is the oldest part, being a three-bay cross-wing, formerly associated with a hall located to the left, and datable to the mid to late 16th century. It is largely built of reused timbers, and is of a distinctly utility character. All the floor timbers have plain simple chamfers. To the left is a former undershot cross-passage with a very long spere beam; if spere screens existed, they must have been movable. There were three doors in the passage flank; that nearest the street probably had an arched head. On both floors there was a two-bay chamber to the front, and single-bay rooms to the rear. Stairs rose in the central bay. This plan probably represents a pair of service rooms in the rear part of the ground floor, and parlour or shop in front. The larger chamber above was probably a solar. It seems likely that there was some form of movable or light-weight partition on the ground floor, separating the front two bays, thus explaining the door openings.

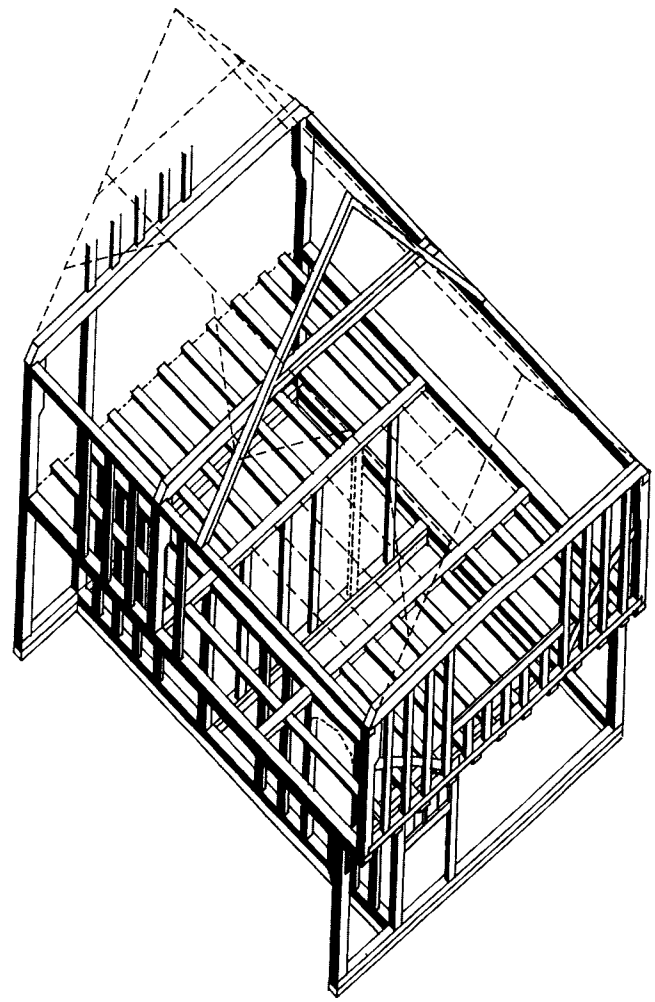

Fig. 3 Maldon, 69-71 High Street, the central cross-wing.

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Moreton, Bundish Hall barns

These two large barns both date to about the late 16th century. The western barn reuses several 15th-century timbers from a domestic building, possibly from the house on the site which has a 15th-century wing according to the DoE 1984 listing. This barn was repaired in the 18th century. There appears to have been rebuilding and repairs on the site throughout the 19th century, perhaps to keep up with the model farm movement. Two additional units were added to the eastern barn during this phase and lean-tos added to the western barn. The barns are likely to have been used for arable crop storage and processing throughout their life, although the later additions served for a mixture of purposes. The eastern barn, which is listed, has undergone relatively few alterations and is a fine example of a barn of this period.

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Town Mill, Mill Lane, Stebbing

Adam Garwood

Town Mill was surveyed prior to its conversion for residential use. This revealed that the watermill was originally built in the late 17th century to early 18th century as a six bay two-storey timber-framed mill, probably equipped from the outset with an undershot wheel. The mill was renovated during the mid or later 19th century, at which point a more efficient pitch-back waterwheel and stone drive gearing, fabricated by Fell Christy of Chelmsford, was inserted. To enable this later wheel to function, the mill stream was embanked to raise the water level and obtain a greater head of water. Contemporary with this re-working was the heightening of the mill building with the addition of a second (attic) storage floor and lucam, subdivided into distinct grain bins. The mill continued in use until 1995, although latterly it mainly milled animal feed.

The mill retains much of its original 19th-century cast-iron gearing, including the pitch back-water wheel and double shut pen trough, pit wheel, great spur wheel and three sets of stone nuts, originally under-driving three millstones on the first floor and one spur pinion providing drive for the sack hoist and auxiliary machinery. A layshaft, formerly driven via an external steam engine, provided alternative power to the two eastern stone nuts, when water levels were low. A single set of French Burr millstones and its complete furniture remained on the first floor, as did the sack hoist drive mechanism. The latter drove auxiliary machinery such as a grindstone for sharpening dressing tools, a circular saw and bolter machines used for screening the meal. It also drove the sack hoist drum on the second floor, through a slack belt clutch mechanism, which also powered two internal chain sack hoists (only one survived) and an external hoist via the lucam.

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Sawkins Farm, Mount End, Theydon Mount

Adam Garwood

Sawkins Farm barn was surveyed prior to its conversion to residential use. The barn was originally built *c.*1650 serving the Hill Hall Estate. Built as a four-bay barn, the frame comprised stout primary bracing in oak and elm, unjowled storey posts, joggled mid rails with curved tension braces in the upper register, and a joggled butt-purlin roof structure. The barn was renovated and enlarged during the 18th century, with the addition of lean-tos either side of the wagon porch and another more substantial lean-to on the northern end wall. During these works the barn was raised up onto brick dwarf walls and the roof was reworked, the common rafters and purlins being replaced. During the 19th century, the shelter shed, pig sty and enclosed stock yard were added following a distinct move towards cattle farming and latterly dairying with the conversion of the shelter shed into a milking parlour.

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West Powder Magazine Roof, Tilbury Fort

M.J. Peachey

Built in 1716 to store gunpowder from incoming ships while in dock, the West Powder Magazine was significantly altered in 1749, when blast walls were added and once more during the 1860s when a screed low domed roof replaced the original roof structure. The monitoring of an inspection hole cut into the concrete screed roof revealed that its composition comprised a hard outer skin sealing a looser, brick-tempered concrete below. This construction method, used in conjunction with the blast walls, was deliberately designed to encourage any blast to rise vertically, away from adjacent magazines or installations.

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Meads Farm Cottages, Yeldham Road, Toppesfield

Brenda Watkin

Meads Farm Cottages are situated to the south-east of the village of Toppesfield and are identified on the 1777

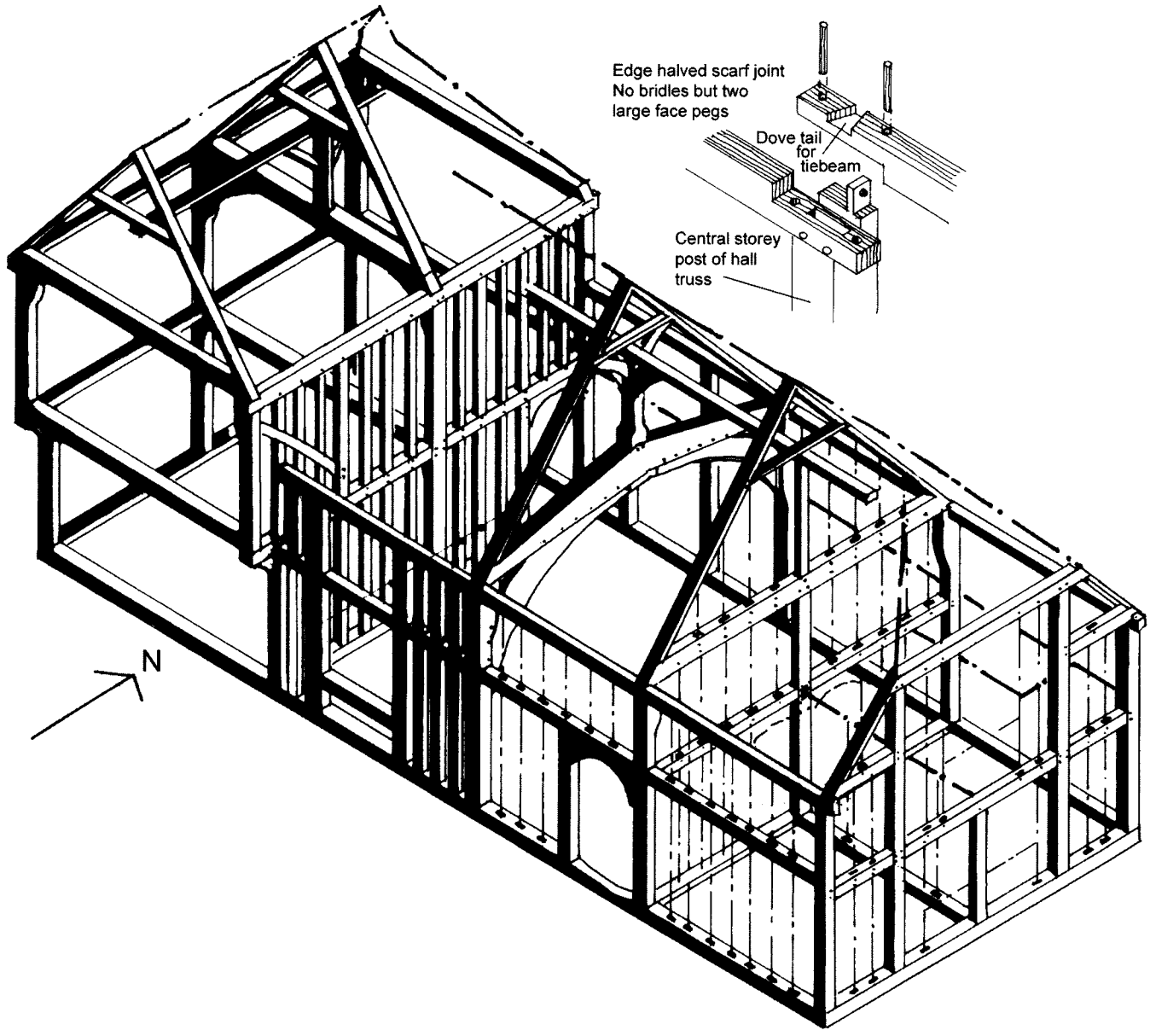

Fig. 4 Reconstructed frame drawing of Meads Farm Cottages, Toppesfield.

Chapman and Andrè map of Essex as The Farm (TL 7480 3725). Although the cottages are now two semi-detached properties they were previously one dwelling of medieval origin comprising cross-wing, hall and in-line service end (Fig. 4). The main frame is all of one build from the early 15th century with an inserted floor and stack added to the open hall in the 17th-century.

The frame of the medieval house is of large section timbers with the studs being sawn into two halves after axe conversion to the square. This is typical of timber framing after the Black Death when the regular management of the woodlands becomes sporadic and the trees and coppice are left to grow to a larger size. The studs are 7½-8in. wide and closely spaced at 1ft. 3in. centres. The main storey posts at the bay divisions are jowled except at the corners where the roof is hipped. A mid rail is used in the construction of both the two storied cross-wing and the 1½ storey height hall and service end.

The two-bay parlour cross-wing, at the western end, is plastered internally and therefore it is impossible to determine the stair position or joist size and jointing method. It was formerly jettied to the front (south) but this has been cut back flush with the wall on the ground floor hall range. This operation has resulted in the roof being hipped both to the front and rear instead of the former gable to the front and hip and gablet to the rear. The construction of the cross-wing is contiguous with the hall in that the jetty plate is taken through to the front wall of the hall creating a mid rail that is then morticed into the stud forming the jamb of the hall window. This is a feature that also occurs at Highgates, Gosfield, instead of the more normal form of an independently constructed cross-wing with the hall wall plate simply morticed into a stud of the cross-wing. From the evidence of brace mortices in the central storey posts it can be determined that both the ground floor and the first floor had open braced central trusses so that each

floor was undivided. The roof has been modified to the front but the crown post to the central truss survives, as does the original hipped and gableted rear roof under a new hip. The crown post is of rectangular section and braced axially to the collar purlin. The rafters are set flat and of coupled pairs with halved collars.

The cross-wing was divided from the open hall by a close studded wall with an opening for the parlour door against the north wall. This wall would have formed the high end of the hall and peg holes can be seen in the studs where the high-end bench was positioned. Peg holes, visible above the floor later inserted into the hall, could have been the fixing for a canopy. The hall was of two bays with the cross-passage at the end of the eastern bay and the hall window positioned at the high end. The central truss consists of a heavy section cambered tie-beam with braces taken down to moulded corbel blocks that formed part of the storey post but have now been mutilated. The braces are chamfered and would have formerly met against a central chamfered down-stand below and forming part of the tie-beam; unfortunately this section has been lost when a door head was cut into the underside of the tie beam. The crown post is square with heavy chamfers to give the appearance of an octagonal section and finished with a step and run-out stop creating the impression of a moulded base. It has curved four-way braces 2in. (50mm) wide. The wall plate is joined with a scarf immediately above the central storey post. The joint is a simple edge-halved scarf with no bridles but secured by two large face pegs. In the 17th-century a floor was inserted into the open hall by means of an axial bridging joist housed into the central post of the bay division, with the deep section common joists housed into the beam with housed soffit shoulders, centre tenons and diminished haunches. The external ends are lodged on the mid rail. The common joists appear to have a slight chamfer but the main bridging joist has the typical 17th-century bar with extended lamb's tongue profile stops to the chamfers. The open hearth was also replaced at this time with a brick stack on the rear wall, inserted in the position of the hall window, but both the cooking hearth and the upper stack have been modified. The roof above collar height is still soot blackened and the residual black stain can still be seen on some timbers below this level resulting from the smoke of the open medieval hearth.

The position of the two service doors, against the central post of the wall dividing the hall from the service rooms, can be determined by an empty mortice to the underside of the beam to the north and the pegged door jamb to the south. A further door opening, against the north wall, gave access from the cross-passage to the stairs to the chamber over the service rooms. Although the stairs have been removed the trimmed stair trap can still be seen against the external wall of the northern service room with a rebate to the inner joist denoting the presence of a screen to enclose the stairs. The ground floor of the service end was originally divided into two rooms. On the first floor the service chamber extended across the width of the building and was divided from the hall with a fully studded partition with the central stud above the tie-beam acting as a crown post and braced to the collar purlin on the hall side only. As the east end of the roof was half hipped, another brace was not necessary. The external eastern wall of the service rooms is framed in interrupted tie-beam construction where two large posts are used to house the ends of the tie-beam and then continue up to collar height. With a low eaves height this construction allows for a window to be fitted into the space formed by the collar and midrail that is normally crossed by the tie-beam. The original shutter groove can still be seen to the underside of the collar.

Meads Farm Cottages represent an unusually well preserved typical single cross-wing house with hall and in-line service end built in the early 15th century. An analysis of the maps of the Walkers of Hanningfield (1584-1631) by Edwards and Newton (1984) shows the single cross-wing house to be the second most numerous house type (15.5%) after the in-line hall house (61.6%). A date of *c.*1420 is proposed for the house: this would accord with the start of a period of rebuilding after the Black Death when the population of Essex was halved.

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Wimbish, Broadoaks

D. Andrews and P. Ryan

This is a large, imposing, but complex, fragment of a former brick mansion, which originally had buttressed walls, stone-mullioned windows (Plate 1), and other high quality features, including an outstanding stone fireplace (RCHM Essex I, 353). Another notable feature is a priest's hole (Vaughan 1918). As one of the larger brick houses in the county, it deserves to be better known. It comprises a west range and a north range with an L-shaped plan. These constitute the oldest parts of the house. The angle between them is built up (or filled in) so that the house has a rectangular plan (Fig. 5), but that part of the structure in this angle (which contains a panelled drawing room) is later, 17th or else early 18th century, although built of reused Tudor brick. Projecting footings show that the west range formerly extended further south, and the north range further east. This suggests that the house originally had a courtyard, or part courtyard, plan within its moated enclosure, though the RCHM argued for it having a half H- or E-shaped plan, facing east. Most of the south front is faced in 19th-century brick. If the south-east part of the house is indeed 17th or 18th century, then it was probably at that time that it was reduced in size and given effectively a lobby-entrance plan.

A hopper head dated 1960 suggests there was major refurbishment about then. The house has been extensively refurbished and extended in 2002. These works have shed some light on the history of the building. The chimney in the entrance hall is clearly of two phases, the right hand part built of Tudor brick,

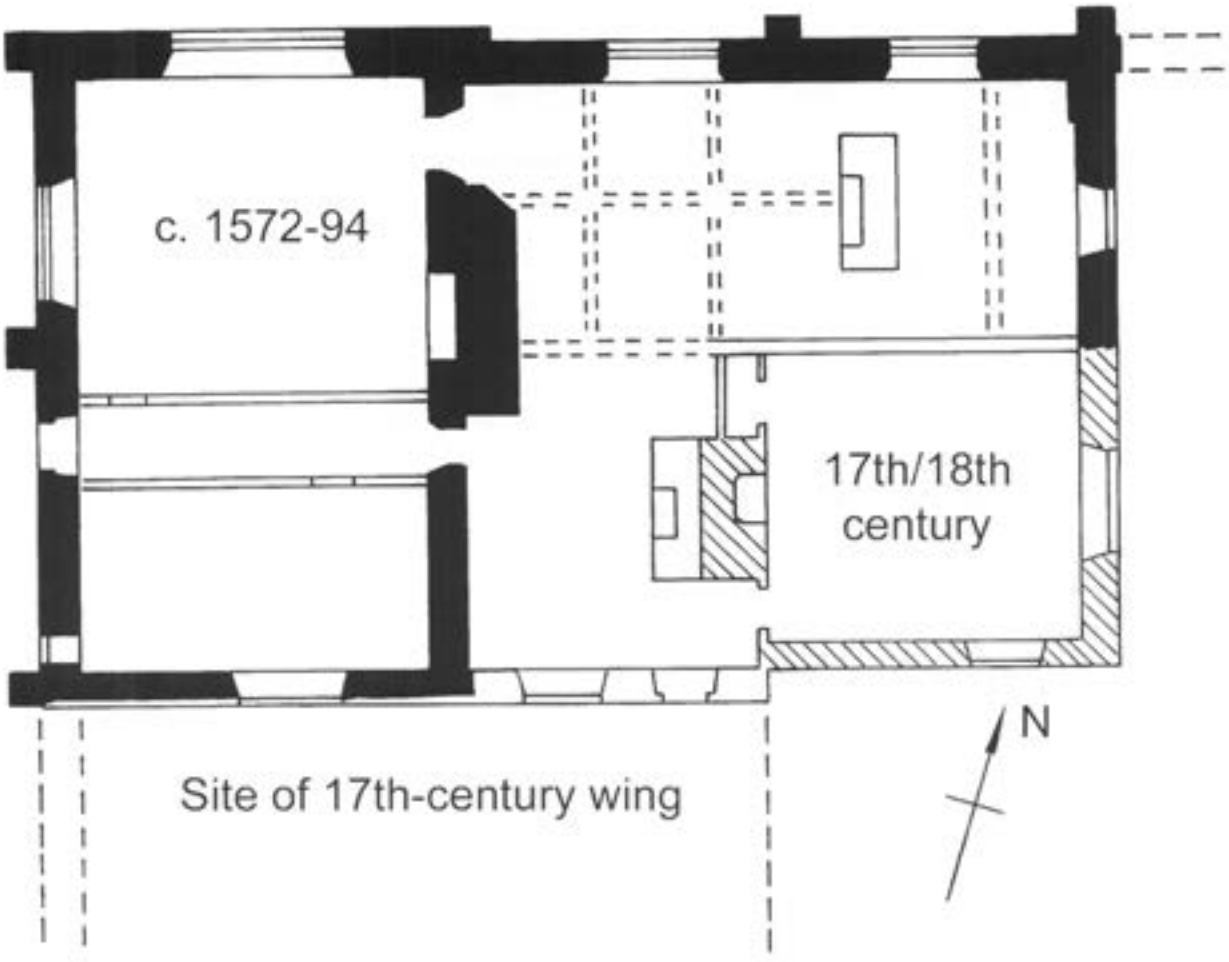

Fig. 5 Ground plan of Broadoaks, Wimbish, as it is today.

Plate 1 Wimbish, Broadoaks, the north and east elevations.

probably reused, and the left of 18th or 19th-century brick. On the north side of this stack, the beginning of a curving flight of steps formed in reused pammets and flooring bricks was found. This seems to have led to a cellar now infilled but recorded by the RCHM.

The south wall of the room where the cellar is located rests on the concrete of the modern sub-floor. This implies that this south wall has been rebuilt, at least in part. The line of this wall has been breached to the west in the hall area, but above, in the ceiling, it is represented by a joist with mortices in its soffit. This implies that there was a stud wall, which is puzzling, because if this was an outside wall, it should have been of brick. If this line of reasoning is correct, it is possible that parts of the house were timber-framed. The south wall of the west wing was seen to have a wide foundation of Tudor brick, showing that although rebuilt or refaced, this is in origin an old wall line.

The west wing has a clasped purlin roof with windbracing. There are rebated oak floorboards. The floor is made with two sets of joists, the lower for the ceiling of the first-floor room. The north range seems to have a butt purlin roof with cranked windbraces above the purlins. The floor has narrow section joists.

The south-eastern part of the house has a butt purlin roof, which is made from reused timbers, including rafters, major floor joists, and probable wall plates. Its construction supports the 17th- or early 18th-century date proposed for this part of the building.

Tree-ring dating was carried out by Martin Bridge and Ian Tyers who analysed slices of joists cut out where a new stair well was formed in the north wing, and took cores from the attic roof of the west wing. This demonstrated that these two parts of the house were of much the same date, despite slight architectural differences, and indicated a construction date of 1572-94, probably in the earlier part of that range (Bridge 2003). Floorboards from the west wing did not cross-match with the other timbers, indicating a different source of supply. The reused timbers in the south-east part of the building did not date, and showed different growth characteristics to the other timbers.

The narrow section floor joists 2.6m long in the north wing were of interest, inasmuch as at least eight of them showed evidence for at least three growth cycles. When about sixteen years old, and 2-3in. (25-75mm) in diameter, the tree's growth had slowed down and then effectively halted for several (perhaps up to ten) years. This pattern was repeated at least twice, though in neither case was the slowdown as dramatic, or catastrophic, as on the initial occasion. Although this ring pattern must reflect woodland management practice, or environmental conditions, it is unclear exactly what these were.

In the light of this new information, the development of the house can be provisionally summarised. It was built by the Wiseman family. The tree-ring date makes it possible to attribute it to Thomas Wiseman, who died in 1585 (cf. Morant 1768, II, 559). To the initial phase belong the north and west wings, which may have formed part of a courtyard house, in view of the length of the north wing. The north wing seems only to have had a brick wall on its north side, implying that subordinate parts of the house were timber-framed. If correctly reconstructed, this house was rather old-fashioned for the date of its construction, though provided with handsome stonework, notably the clunch fireplaces and windows with their hoodmoulds

Fig. 6 Lithograph made for the Moravian Church in 1853 depicting Broadoaks, Wimbish, before it was reduced in size. Today the house consists of the part on the right hand side with the two gables, the 17th-century display front to the left of it having been demolished.

supported by consoles. In the 17th century, a taller and wider building, with two rectangular gabled bays, was added to the south end of the surviving north wing, presumably replacing a part of the house which had been pulled down. This represented a modern house of the period, gabled and directly in contact with the surrounding countryside, not enclosed by courtyards. It may be compared to the houses illustrated in the drawings of John Thorp, or with Moyns Park, Birdbrook. This house is depicted in a lithograph of 1853 made for the Moravian Church and based on an 18th-century illustration (Fig. 6). It had fifteen hearths at the time of the 1671 Hearth Tax. With the extinction of this branch of the Wiseman family, the Moravian Church took a lease in 1742 on Broadoaks from the widow of Wiseman Clagett, moving their school thither from London. The school departed in 1745, eventually becoming established at Fulneck in Yorkshire where it still exists. In 1749, Broadoaks was bought by lord Charles Maynard. It was under the ownership of the Maynards that the 17th-century enlargement and part of the north wing were pulled down, and the building reduced to a large lobby-entrance farmhouse.

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Bridge Hospital, Witham

Built in 1837-39 following the poor law amendment act of 1834, the Witham Union workhouse was erected to the designs of George Gilbert Scott and William Moffatt. One of two, the other its twin at Tendring, the workhouse conformed a standard design based on Kempthorne's cruciform in a square plan. The Witham Union, like Tendring, but unlike later Billericay and Dunmow Unions, was built, due to budgetary constraints, with minimal architectural adornment. In 1882 the workhouse was purchased by the South Metropolitan District School Board changing its focus to specialise in accommodating children with ringworm, and then between 1901 and 1908 was used by the Metropolitan Asylums Board as a school for children with ring worm. It was later converted into a working colony for handicapped and adolescent boys until it was handed over to the National Health Service in 1948 (Morrison 1999).

The original workhouse comprised a detached single-storey entrance range, a central three-storey cruciform block set about a four storey hub, a detached two-storey infirmary and school buildings. The assessment has revealed that all the primary workhouse buildings, apart from features in the workrooms, walls to the exercise yards, and the casual ward, have survived. Of the main buildings, the entrance range and the masters' block are particularly well preserved. Additionally the survival of the kitchen block and infirmary is very unusual, to a degree that merits national importance. The boys' school room of 1892-3 also remains in good condition.

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Book Reviews

Excavations at Little Oakley, Essex, 1951-78: Roman Villa and Saxon Settlement, P. M Barford, with a report on his excavations by M. J. Corbishley, East Anglian Archaeology 98, Chelmsford: Essex County Council, 2002. Pp. 214 + Figs 124 + Pls 18 + microfiche.

Little Oakley is situated in the north-east of Essex close to Harwich and the coast, and the salt production sites known as 'The Red Hills'. Although there is evidence of prehistoric occupation, the bulk of the report is given over to describing Romano-British and early Anglo-Saxon settlement from the mid-late first century to the fifth century AD. While very little in the way of buildings was recovered, it is likely that the site was the centre of a villa estate whose boundaries and working appear to have had a significant influence on the development of post-Roman landscapes. More importantly the excavations recovered significant quantities of material for reconstructing the economy and life of the villa.

In many ways this report represents the strengths and weaknesses of archaeology in Britain before the introduction of PPG 16. On the one hand, it is a tribute to the energies and dogged persistence of the amateur archaeologist, in this case Commander R. H. Farrands; on the other it is a sad commentary on the historic under-resourcing of archaeology in Britain. In 1939 during the construction of a new sewer at Little Oakley, foundations and Romano-British material were observed by Hazzeldine Warren, the well known Essex antiquarian. After the war in 1946-7 during the construction of pre-fabs for 'displaced persons' further evidence of Romano-British occupation was recorded. This was the setting for the inspiration of Commander Farrands, a Trinity House pilot recently moved to the area, to rent an allotment from Tendring Rural District Council and, with its permission, to begin excavating it in 1952. Building on his own experience and with almost no training he continued his work until 1963. Subsequently, prompted by the Council's plan to demolish the pre-fabs in 1975, Mike Corbishley negotiated permission to carry out further excavations which, with grant aid from the then Department of the Environment, continued until 1978. Commander Farrands died in 1985 without having produced a report and the present author, who had been involved with the 1975-8 excavations, with support from Tendring District Council, the Archaeology Section of Essex County Council and Colchester Museum, took up the challenge of bringing Farrands' work to publication alongside that reported by Corbishley.

This was no mean task. Farrands' excavation consisted of a series of trenches in four principal locations, the overall complexity of which can be judged by examining Figure 5 which collates their plans for Site I where most of the evidence, albeit very limited, of one, possibly the principal villa building was obtained. Without the benefit of the excavator's account or memory to call upon, the stratigraphy from this multiplicity of records had to be distilled into a coherent synthesis and narrative which could also serve a the basis for the reporting of the finds. It is a triumph that a coherent and convincing story has indeed been extracted from this largely unstructured mass of records and the complementarity with the findings of the Corbishley excavations is reassuring. Nevertheless there remain uncertainties and many of the interpretations are qualified.

Two concluding chapters build on the results to enable both a measured and reflective essay which reconstructs the villa estate and a carefully crafted synthesis of the history of the villa and its economy. This was no seaside 'holiday home', but a working farm which combined animal husbandry (particularly cattle, but also sheep and pig) with crop-raising. Although samples were floated to extract carbonised remains, there was little indication of which cereals were grown. The animals were raised mostly for their meat and the evidence for the survival on site of older beasts suggests that younger animals were taken off site to market. Proximity to the sea adds a further dimension to the story. As the evidence of finds of briquetage suggests, salt production is implied and to be linked to the Red Hills salt-evaporation sites on the adjacent salt marshes. The presence of young, 2-3 year old oysters also suggests the possibility of their cultivation in the vicinity, as well as their consumption by the inhabitants of the villa. All these strands of evidence raise interesting questions about the nature and extent of the exploitation and husbandry of marine resources around the shores of Roman Britain. Despite the oyster being one of the classic symbols of Romanised life in Britain and elsewhere, the lack of systematic research means we still know little about where it was cultivated and who were the consumers.

The discovery of a large assemblage of early Anglo-Saxon pottery represents another important contribution to settlement history in the fifth century. Elsewhere in Essex, some two dozen sites have produced both late Roman and early Anglo-Saxon material. In this case, even if the villa house had been demolished in the late fourth or early fifth century to provide rubble foundations upon which timber-framed buildings were constructed, the presence of the pottery indicates an essential continuity, perhaps to be extended to that of the management of the villa estate as a whole. At the same time the very different material evidence with its close continental affinities introduces the possibility of a different ownership. How long the estate centre might have remained at Little Oakley is not clear, but the writer suggests a shift eastwards to the location of Foulton Hall in the mid-to-late Saxon period.

We probably know a great many other examples where the difficulties of translating the enthusiastic work of amateur archaeologists, sometimes, as here, carried out over many years and recorded in a variety of ways,

have discouraged their transformation into published accounts. It is very much to the author's credit that this has been achieved - and so thoughtfully - for Little Oakley. For this reviewer the greatest challenge that this report poses for future work is the need to get a much better understanding of the history and character of the exploitation of marine resources in Roman Britain. Where better than the Essex coastline and hinterland to pursue this research objective?

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The Verderers and Courts of Waltham Forest in the county of Essex 1250-2000 by Richard Morris, pp 207, 47 illustrations (24 in colour), £14.95, Loughton & District Historical Society 2004

Many notable books have been written on Waltham, now Epping Forest, and this one, very precisely titled, draws significantly on its distinguished predecessors, bringing together, in meticulous detail, the long evolution of the administration of the Forest as it has progressed from being the hunting preserve of Norman kings, covering - technically - most of our county, to providing a green recreation ground for London, snatched from the jaws of late Victorian development. The author, himself one of the four current Verderers of the Forest, concentrates on this ancient office, in existence (probably) since the twelfth century. Indeed, the book is considerably enlarged by discursive, if potted, biographies of many notable Verderers.

Though responsible to the crown when presiding at the specialist Forest Court of Attachments and Swainmote and required to attend the Forest Eyre, Verderers were from an early date elected by the freeholders of the forest. When, from the late seventeenth century, royal interest in hunting waned, Verderers played their part in allowing that increasing encroachment of the forest which led, so late as 1851, to the destruction of Hainault Forest and to increasing development of the remaining forest as London spilled over the border of Essex. The 'rescue' of the Forest by the Corporation of London, informed by the efforts of the Commons Preservation Society, led to the Epping Forest Act of 1871 which placed the forest in 'public' ownership. The new regime retained the post of Verderer, thus sustaining its remarkable continuity.

All in all this is a valuable book of record, carefully researched and generously illustrated.

Andrew Phillips

Essex Archaeology and History 34 (2004), 00-00

Essex bibliography

A Bibliography of Essex Archaeology & History at Spring 2003

Both monographs and periodic literature are included; articles published in journals which are devoted exclusively to Essex (e.g. Essex Journal) are not included. Items which have been overlooked in earlier bibliographies are added for comprehensiveness of coverage.

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Andrew Phillips and Paul Sealey

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John Robert Rilling, *The administration of poor relief in the counties of Essex and Somerset during the personal rule of Charles I, 1629-1640*, Harvard University Ph. D. 1959

Christopher Thompson

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