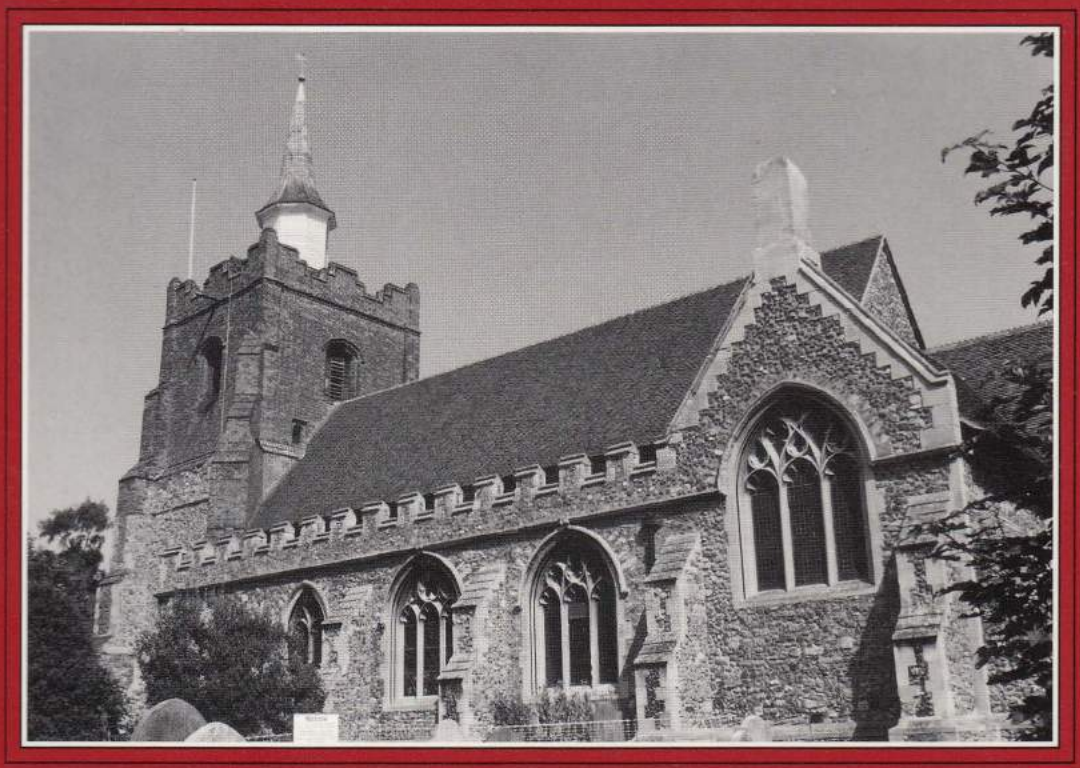
ESSEX

ARCHAEOLOGY AND HISTORY



TRANSACTIONS OF THE ESSEX SOCIETY

FOR ARCHAEOLOGY AND HISTORY

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ESSEX

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THE TRANSACTIONS OF
THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

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THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

The Society was founded in 1852 as the Essex Archaeological Society

Its objects are:

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

Publications

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

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Cover illustration: The church of Maldon St. Mary, from the south, before the addition of the octagonal extension. Archaeological observations made at the church recently are described in Church Miscellany 1998

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Bronze Age and Medieval Sites at Springfield, Chelmsford: excavations near the A12 Boreham Interchange, 1993

by N. J. Lavender

with contributions by N. Brown, P. McMichael, H. Martingell, R. Tyrrell, A. J. Wade and H. Walker

Archaeological investigations in advance of industrial development located two areas of activity, one dating to the Middle and Late Bronze Age, the other to the late 12th to late 13th centuries AD. The Bronze Age site comprised part of an enclosure established during the Middle Bronze Age, with Middle and Late Bronze Age internal features, including a possible shrine. Medieval activity took the form of a farmstead comprising at least two buildings with related enclosures.

1. INTRODUCTION

In June 1992 a programme of archaeological survey and excavation was initiated on land beside the A12 interchange south of Boreham. The work was conducted in response to the proposed construction of light industrial units in an archaeologically sensitive area. Archaeological mitigation took place in three stages: survey by fieldwalking in June 1992 (Lavender 1992), evaluation by trial trenching during August 1992 (Allen 1993) and excavation between May and July 1993. This work was carried out under the direction of the author and Patrick Allen of Essex County Council's Field Archaeology Unit on behalf of Countryside Commercial Plc.

The finds and site archive will be deposited in the Chelmsford and Essex Museum, and the results of the project have been entered into the Essex Sites and Monuments Record (ESMR).

The site and its environs

The site lies to the south of the A12/A138/B1137 interchange (TL 739 089), and straddles the boundary between the parishes of Springfield and Boreham (Fig. 1.1). The top of the valley slope is broken by a series of knolls or promontories. One of these, defined by the 25m contour is occupied by the Boreham Interchange site. It is probable that the location of these sites on the promontories during the Bronze Age is deliberate and related to the exploitation of the fertile Chelmer Valley. The ground forms a gentle southeast facing slope overlooking the second terrace of the River Chelmer, falling from 30m OD in the west to 23m in the south-east. It is situated on Head Brickearth overlying the Chelmsford Gravels, which outcrop locally. More generally, the site lies a short distance beyond the south-eastern edge of the Springfield Till, part of an extensive boulder clay plateau laid down over central and northern Essex during the Anglian glaciation (Bristow 1985; Buckley and Hedges 1987a). The surface geology is conducive to agriculture, as is the fertile valley of the Chelmer, which the site overlooks.

The importance of the Chelmer Valley as a prehistoric landscape has become increasingly clear during the last 20 years. The Neolithic is represented by the Springfield Lyons Causewayed Enclosure (Priddy (ed.) 1988, Gilman (ed.) 1989, Buckley and Hedges in prep) and the Springfield Cursus (Hedges and Buckley 1981 and in prep.). Early Bronze Age activity has been recorded in the form of a Beaker burial near the White Hart. Sites at Springfield Lyons (Buckley and Hedges 1987a and in prep.) and Great Baddow (Brown and Lavender 1994) represent the Late Bronze Age. Fieldwalking in advance of the construction of the A12 Bypass located worked and burnt flint near the Interchange site in 1985 (Brown and Lavender unpublished). It was also considered possible that a site such as the Boreham Interchange, beside the main Roman and medieval London to Colchester road, might produce evidence of Romano-British or later activity.

The fieldwalking survey

Fieldwalking was conducted over the 8 hectare site during June 1992 (Lavender 1992) using a system that has been employed in Essex since 1985 (Medlycott and Germany 1994).

The survey area was marked out following the National Grid and divided into numbered hectares. Each hectare was then divided into a grid of 20m square boxes, labelled A-Z (excluding O). By walking a transect 2m wide along the western side of each grid square, 10% of the entire area was sampled.

After being identified and weighed the finds were subjected to statistical analysis and plotted on distribution plans. Each find type was plotted out according to its standard deviation from the mean for that find type. Thus a "significant" scatter or density of finds is taken to be one which shows considerable variation from the norm for the survey area; nominally two or more adjacent 20m squares with a standard deviation of two or more from the mean are considered to be indicative of the possible presence of archaeological sites, the probability rising with the number of adjacent squares so defined.

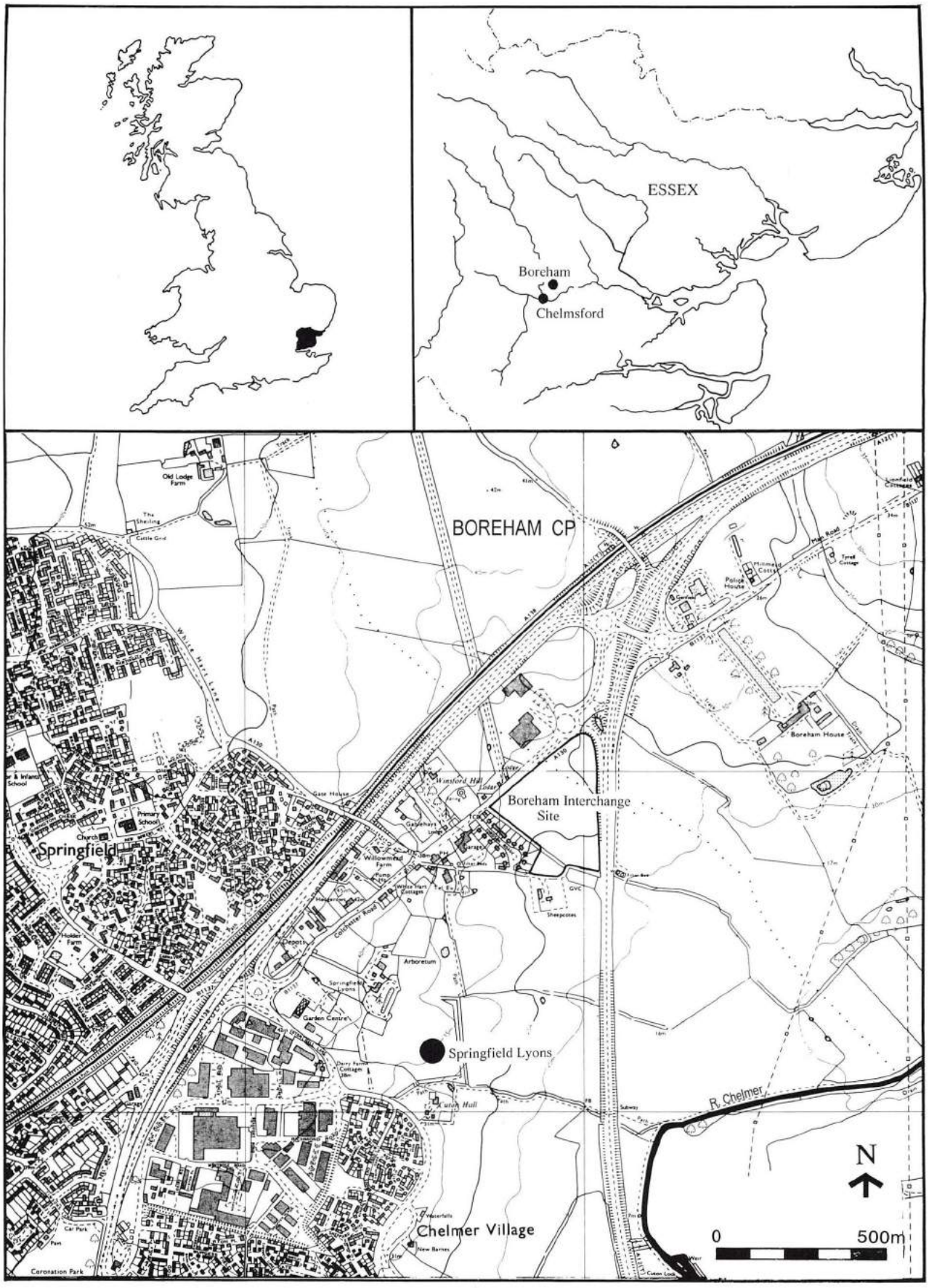

Fig. 1.1 Boreham Interchange. General site location (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

On Figs 1.2 and 1.4, the largest black circles represent a density in excess of two standard deviations above the mean for the survey area. In Fig. 1.3, each symbol indicates the recovery of a single artefact.

Relatively small quantities of material, well below the mean for the county as a whole, were recovered during the survey. It was clear that no major archaeological activity had taken place there during the Romano-British and Saxon periods. Post-medieval pottery and tile were plentiful, but its distribution suggested manuring practices rather than occupation.

The prehistoric and medieval finds, however, suggested that more intensive activity had taken place during both of these periods.

No prehistoric pottery was recovered. This is not unusual in acidic soils, due to the fragile nature of this material, and its consequent poor survival in the plough soil. Two other indicators of prehistoric activity, burnt flint and worked flint, were, however, quite widespread (Figs 1.2 and 1.3). 1.1kg of burnt flint were recovered from the site, with major concentrations lying in the eastern part of the field, in particular centred at TL 7398 0892. Burnt flint concentrations are regarded as indicative of prehistoric (usually later Bronze Age) settlement. Recent examples of such associations located in Essex are Fox Hall Farm, Southend (Ecclestone 1992) and the A131 Great Leighs Bypass (Lavender 1995a; 1995b).

The worked flint was spread fairly evenly across the survey area, but showed some signs of a concentration towards the eastern side.

Only seven sherds of medieval pottery were recovered (weighing a total of 72g), but the concentration of these around TL 7380 0888 (Fig. 1.4) was striking enough to be considered significant, particularly as it was only c. 50m from the B1137. A single sherd, weighing 2.9g, lay away from this cluster of pottery.

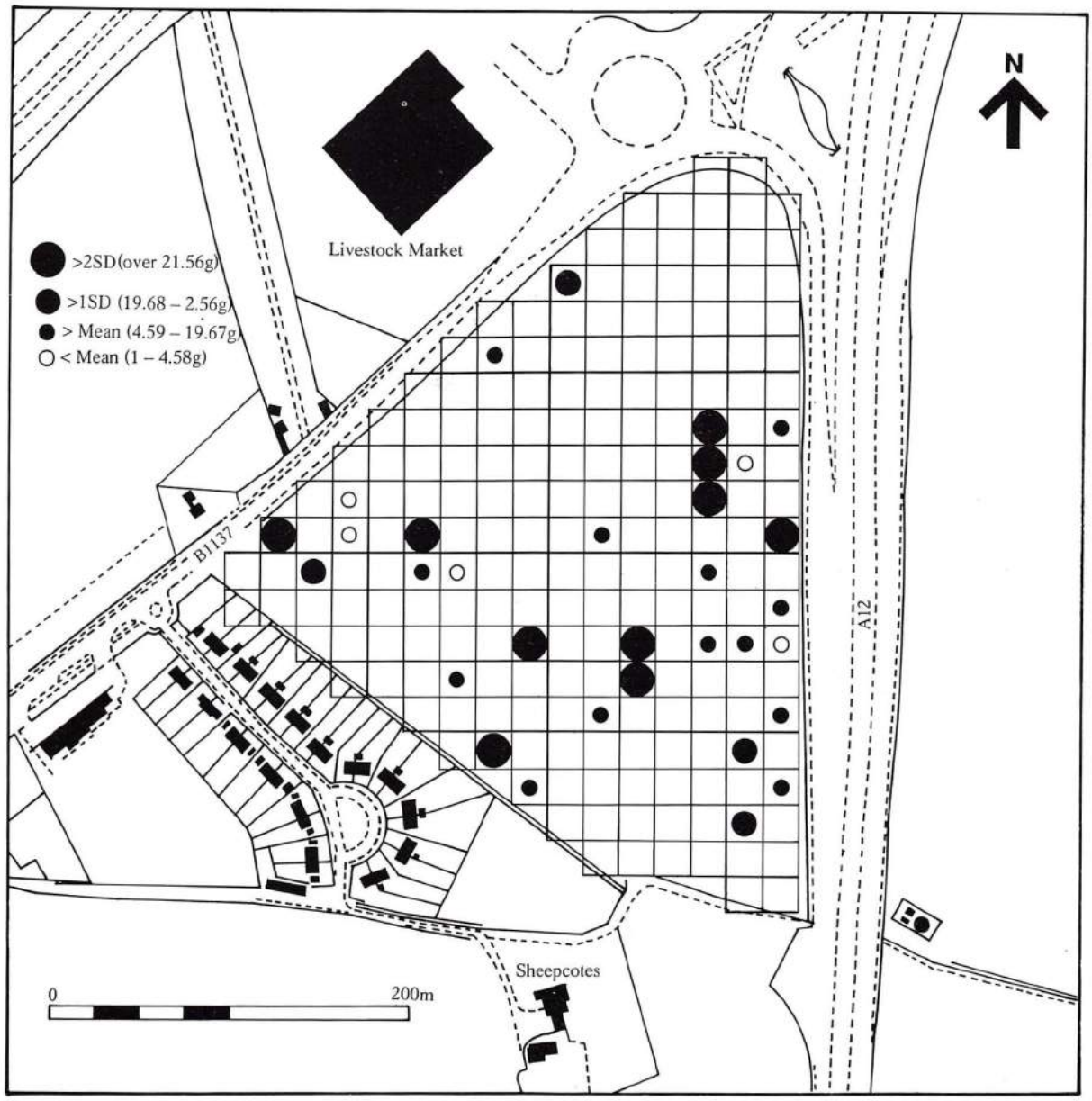

Fig. 1.2 Boreham Interchange. Distribution of burnt flint from fieldwalking (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

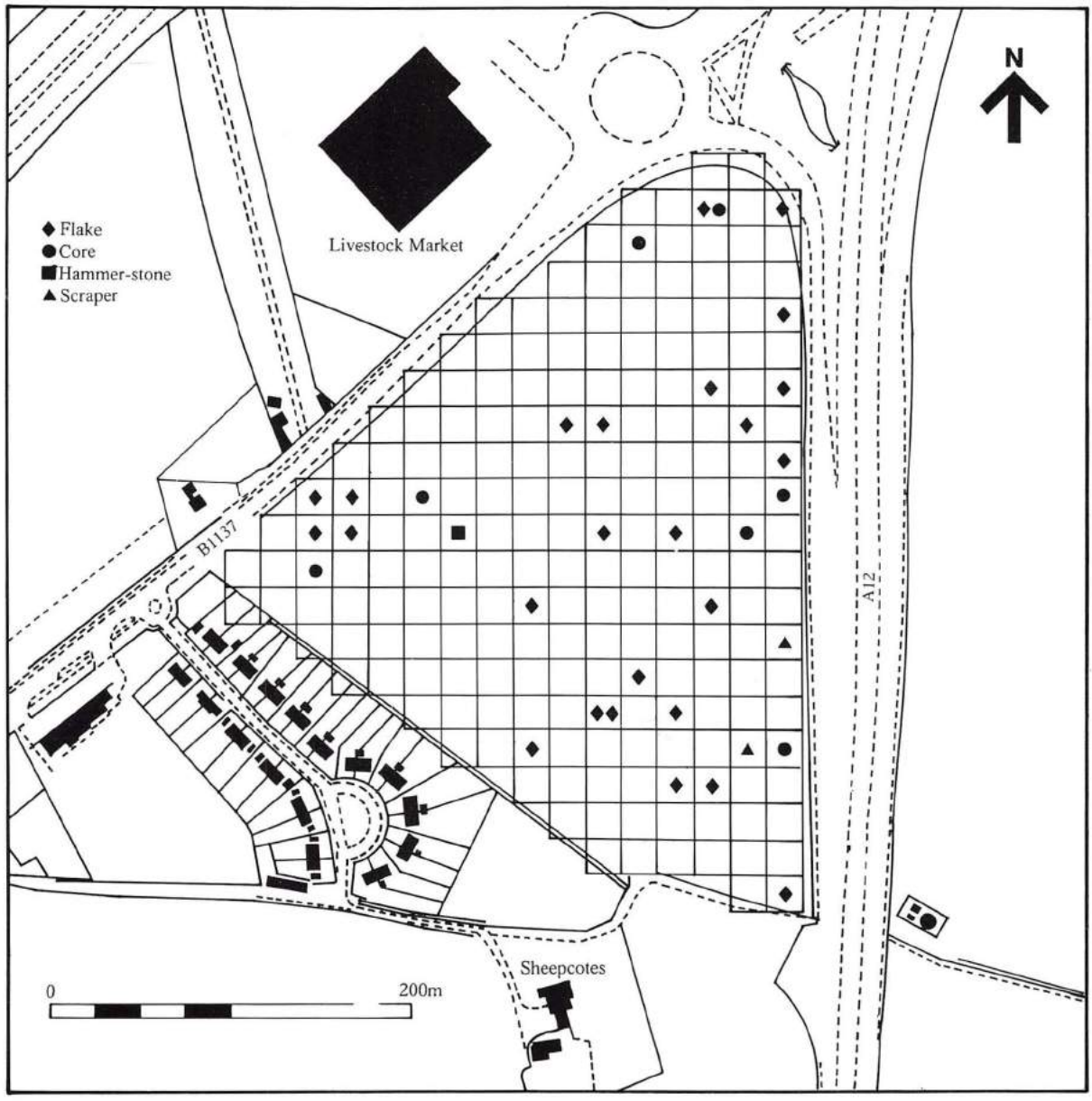

Fig.1.3 Boreham Interchange. Distribution of worked flint from fieldwalking (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

Evaluation by trial trenching

The results of the fieldwalking survey were tested by trial trenching (Allen 1993) in order to ascertain the nature and density of the activity.

Trial trenches were excavated within the areas of the finds concentrations, and also to the south of the survey area in some waste ground that could not be fieldwalked (Fig. 1.5, Area C).

Like the fieldwalking survey, the trenches were aligned with the Ordnance Survey National Grid (except in Area C where ground conditions dictated otherwise). The exact layout was biased in favour of those grid squares that had yielded the greatest proportion of finds during the fieldwalking. Fig. 1.5 shows the positions of these trial trenches and their relationship to the larger areas that were subsequently excavated during the final phase of fieldwork.

At the southeast corner of the field there is a gas compound from which a 24" high-pressure transmission main runs northwest towards the B1137 (Fig. 1.5). During the trial trenching and excavation stages of the project this pipe had to be avoided, and no excavation was permitted within 10m of it. It seems likely that important elements of the medieval site lay within the immediate environs of the gas pipeline (below, part 3).

All trenches were excavated using a Hymac 360° tracked excavator, to the top of the natural brickearth, except where the surface geology was very mixed. In these places it was over-machined by up to 100mm so that soil variations would be more easily recognisable. The depth of the topsoil was variable, but was on average 0.40m in Area A, and around 0.50m in area B.

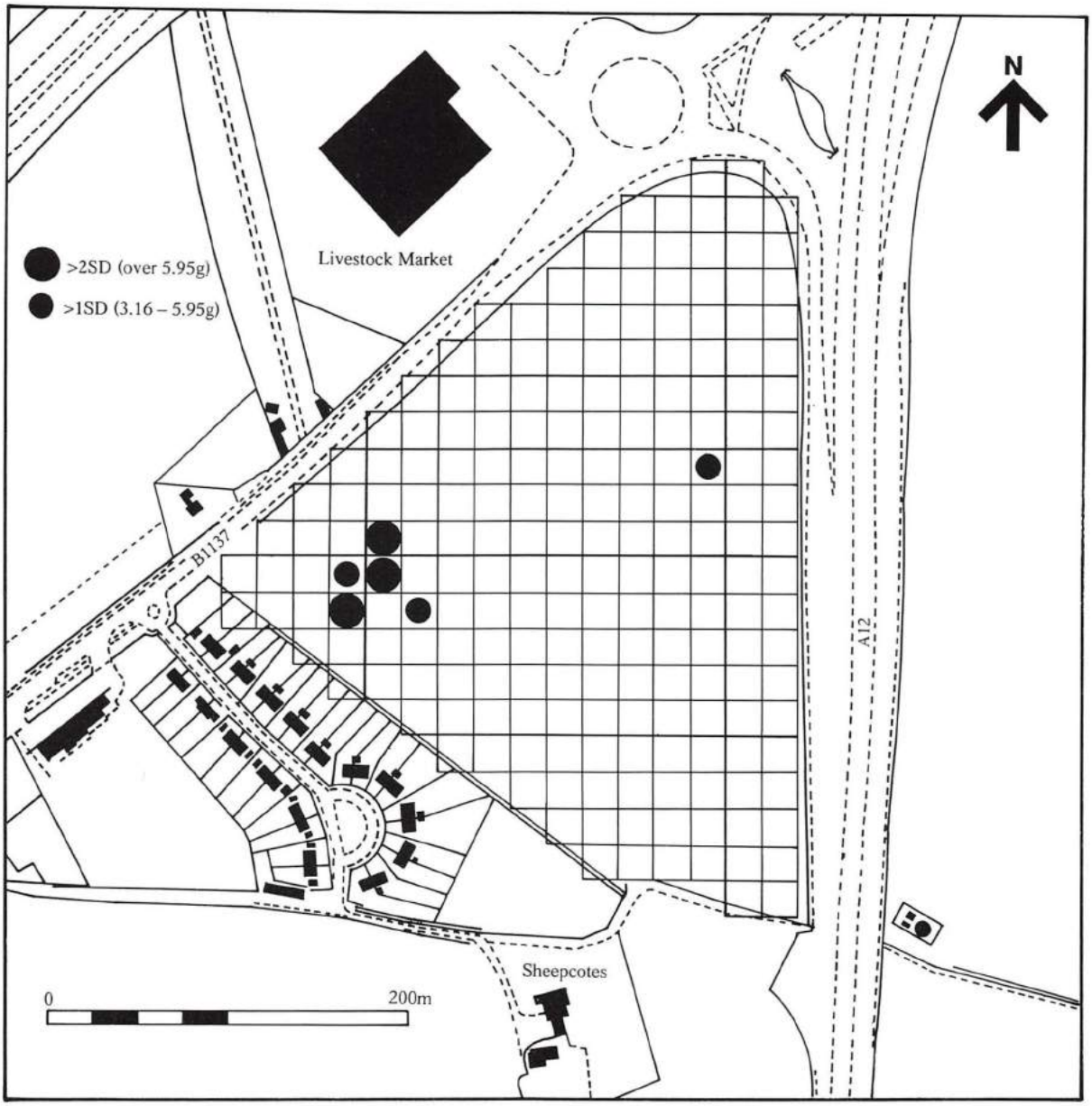

Fig.1.4 Boreham Interchange. Distribution of medieval pottery from fieldwalking (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

Three trenches, totalling 900m², were stripped of topsoil in area A. All contained archaeological features ranging in date from *c.*1200 to *c.*1300. These included a number of ditches, generally aligned from northwest to southeast, and three hearths. Because of the relatively small size of the trenches, the prevailing dryness of the soil and the lack of time to permit weathering, several other features, especially postholes, were not detected at this stage. The ditches were interpreted as parts of a field system, and the hearths assumed to be the remains of relatively insubstantial timber buildings.

Area B was evaluated by nine trenches, smaller than those in Area A, and totalling 420m². These were spread throughout the area of the burnt flint concentration and peripheral scatter along the eastern side of the survey area. Only three of the trenches (B5, B6 and B7) located archaeological features. One of these was a short length of ditch containing large quantities of charcoal and later Bronze Age pottery; others were Bronze Age pits or post holes. The final feature, undated during the evaluation, later proved to be a post-medieval ditch. All lay to the south of the greatest concentration of burnt flint.

The five trenches dug in Area C produced only two archaeological features (in Trenches C3 and C5). Both were small pits containing no dating evidence.

2. THE BRONZE AGE ENCLOSURE

Part of a ditched enclosure around an area of pits and post holes was located. The majority of the post holes probably indicate the lines of fences dividing the interior of the enclosure, although a small sub-rectangular structure is identified as a shrine. Material recovered from the enclosure

ditch is typical of later Deverel-Rimbury pottery and flint assemblages, whilst that recovered from the internal features generally belongs to the Late Bronze Age. It is suggested that the frequent occurrence of structured deposits, and the absence of obvious refuse, indicates that the site was not one of domestic occupation. The proximity of the site to the Late Bronze Age circular enclosures at Springfield Lyons and Great Baddow indicates intensive exploitation of the river terraces during this period.

Archaeological background

The Chelmer Valley (Figs 1.1 and 2.8) has produced evidence of intensive prehistoric settlement and activity from the earlier Neolithic onwards (Brown 1997). There are two major sites in the Springfield area: a causewayed enclosure at Springfield Lyons (Gilman (ed.) 1991; 1992), and the Springfield Cursus (Hedges and Buckley 1987), with a putative long mortuary enclosure at one end, known only from an aerial photograph. Grooved ware from several sites around the valley suggests that Late Neolithic settlement was also widespread.

Little Early or Middle Bronze Age activity has been located. A Beaker burial was found during gravel workings close to the White Hart public house to the south-west of the Boreham Interchange site, and Middle Bronze Age burials were located, also during quarrying, at Great Baddow 3km to the south (Brown and Lavender 1994). Cropmarks of several ring ditches, probably of Early or Middle Bronze Age date, lie on the valley floor.

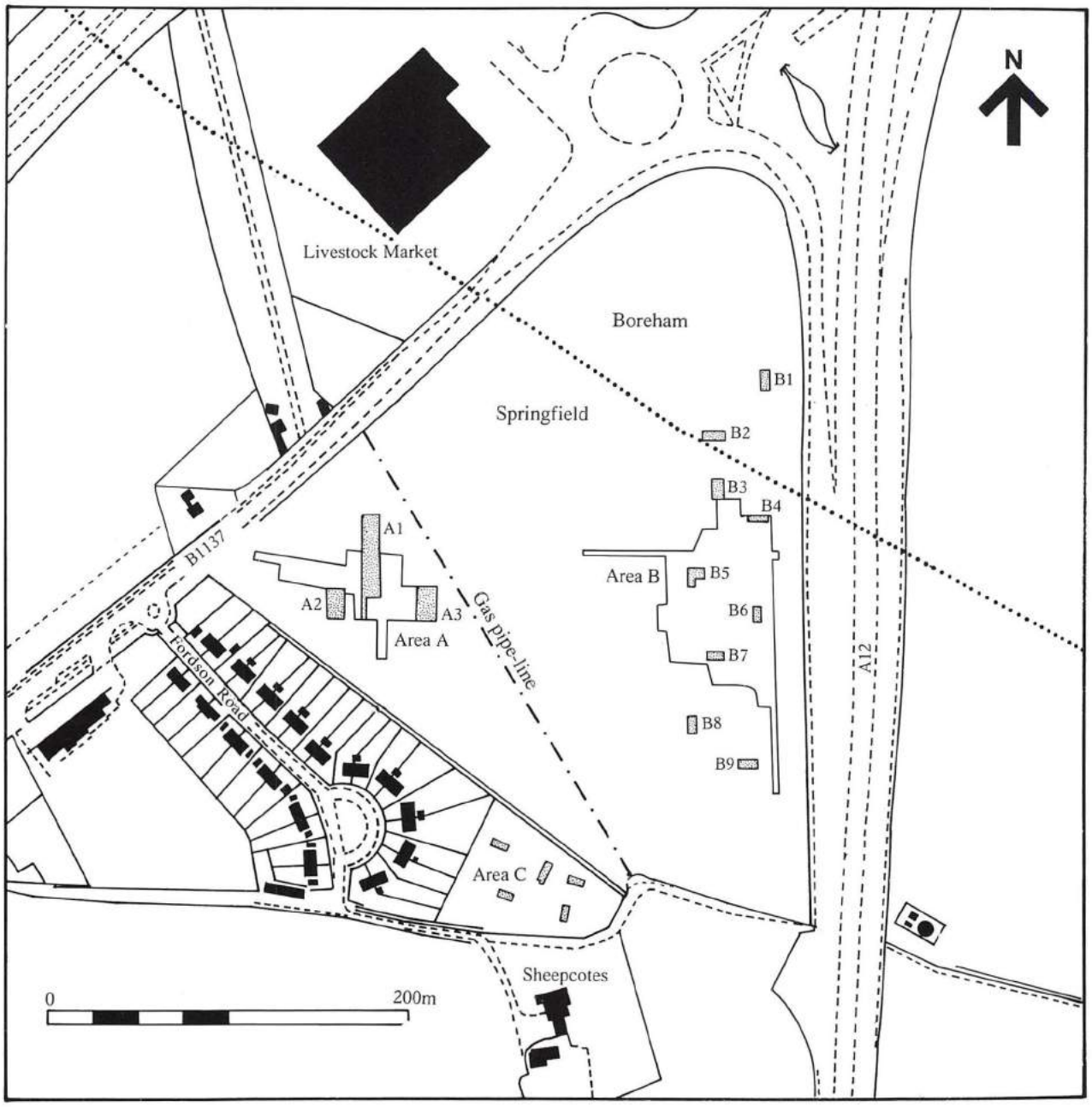

Fig. 1.5 Boreham Interchange. General trench layout (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

Late Bronze Age sites in the immediate vicinity comprise the two circular enclosures at Great Baddow (Brown and Lavender 1994) and Springfield Lyons (Buckley and Hedges 1987), respectively 2.75km and 0.75km south of the Boreham Interchange site. The Springfield Lyons site was totally excavated; it comprised a penannular ditch, *c.* 60m in diameter, with six causeways. Three circular structures lay within it, and metalworking debris was recovered from the ditch. About 200m north of Springfield Lyons, recent excavation has uncovered more evidence of Late Bronze Age occupation (Wessex Archaeology, pers. comm.). Excavation at the eastern causeway of the Great Baddow enclosure demonstrated that the date and profile of the ditch was comparable with that at Springfield Lyons.

A sub-rectangular settlement enclosure has been excavated at Windmill Field, Broomfield (Atkinson 1995). Open settlement is represented at Broads Green, near Great Waltham (Brown 1988b) and possibly Little Leighs (Lavender 1995b). Finds of Late Bronze Age metalwork have also been common in the Chelmer Valley. Further afield there are a number of sites around the head of the Blackwater estuary (Fig. 2.8), including a rectangular Late Bronze Age settlement enclosure at Lofts Farm, Heybridge (Brown 1988a)

The results of the fieldwalking and trial trenching described above indicated the presence of a Late Bronze Age site, possibly a settlement, in the vicinity of TL 7400 0890. This lay to the south of the main concentration of burnt flint. This was probably because the prevailing wind direction (southwesterly) determined the location of any smoke-generating activity.

Excavation

An area of *c.* 5500m², incorporating evaluation trenches B5, B6 and B7 was stripped of topsoil (Figs 1.5, 2.1) again using a Hymac with a toothless ditching bucket. It was apparent from the poor survival of many features that a great deal of truncation of the subsoil had taken place, probably the result of deep ploughing on the clay-rich brickearth.

Much of the western part of the stripped area comprised leached grey silty clay that was disturbed by tree roots, and in this area features were difficult to identify and excavate.

Two large recent disturbances lay within the site (Fig. 2.1), the most modern being associated with services and drainage along the eastern side of the field. This truncated ditch 502 just 2m from its terminal, and no excavation of it was conducted. The other was a large irregular feature containing post-medieval tile, but no obviously modern artefacts, which occupied much of the southwestern part of the trench. This was investigated by machine-digging a single bucket-width sondage to a depth of *c.* 1m deep, at which point it was seen that the depth was too great to permit survival of features beneath it. This is best interpreted as a post-medieval quarry pit. There were several further, smaller areas of modern disturbance, probably associated with the A12 construction (one contained a broken ranging rod).

Considering the proximity of the medieval settlement in the western part of the field, and of the late medieval farmhouse Sheepcotes, very few medieval features were located within this trench. Similarly, no signs of prehistoric activity, other than residual worked flint, were found during the excavation of the medieval site in Area A.

A number of linear features were recorded in which finds were sparse or absent. These were later than Middle Bronze Age in date, almost certainly medieval or later, and appear to have been part of a field system extending out from the settlement in Area A. They are discussed in their medieval context in Part 3.

The Enclosure (Figs 2.1 - 2.3)

The enclosure ditch

An enclosure ditch marked the northern and western limits of the main focus of later Bronze Age activity, although some features of possible Bronze Age date lay outside the enclosed area. The terminal of a ditch, 502, was recorded towards the north-west corner of site, but extended only 2m to the east before it was destroyed by modern disturbance associated with the building of the A12 Bypass. Ditch 502 (Figs 2.1, 2.3.10) was 1.2m broad and 0.37m deep, with a moderately sloping broad V-shaped profile and a flattish base. To the west was a causeway, 8m wide, beyond which lay the terminal of 504, similar in profile, but slightly larger (1.5m wide and 0.5m deep).

Ditch 504 (Fig. 2.3.11 – 14) curved round to the south for a distance of *c.* 40m. Two segments dug through it away from the terminal (segments 684 and 918) showed an increase in size (1.9m wide and 0.65m deep), but a consistent profile.

A fourth segment, 583, was excavated through the southern terminal within box-section 687. By this point its depth had decreased again to 0.50m, and its breadth to c. 1.0m; it retained its V-shaped profile. The irregularity of the fills in segment 583 suggests that an area of animal activity, which cut the feature along its western edge, had disturbed them quite seriously.

Features both earlier and later than 504 complicated box sections 687 and 688 (2.5m further south). The earliest of these, 552, was recorded in section 687 and also in 688 (Fig 2.3.4), where it terminated. This was *c.* 0.60m deep and of unknown width, being cut by 504 and 681. It is possible that this was the remains of the first phase of the ditch, of which 504 was the final recut. If this was so, then it was either only a short length, or was completely removed further north by the cutting of 504. A further short length of ditch, 681 was stratigraphically later than 552 and earlier than 504.

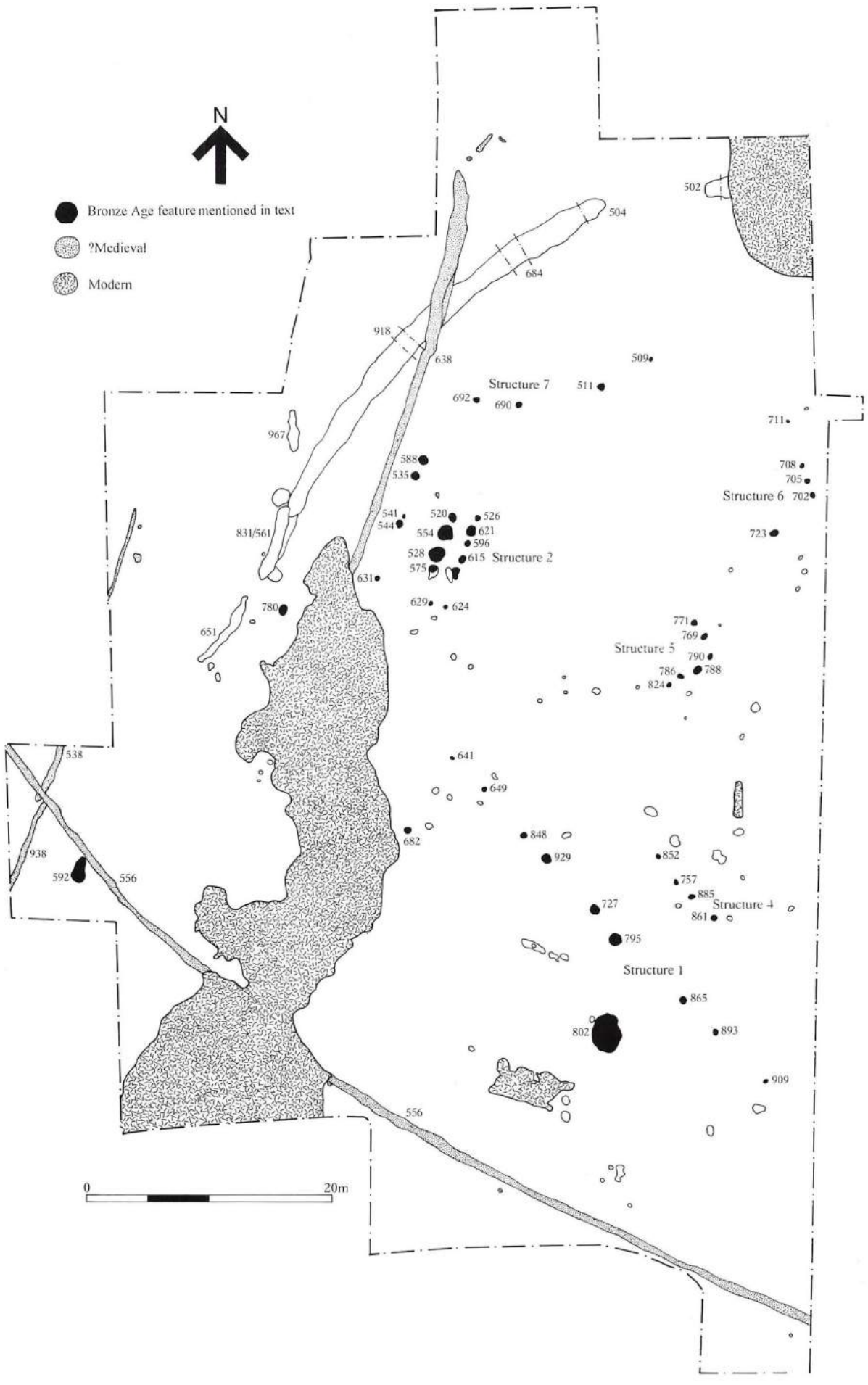

Fig. 2.1 Boreham Interchange. General plan of Bronze Age features (Area B).
Note that the features shown in outline only are also Bronze Age, but have been presented in this way to avoid confusion where they overlap.

This appeared to lie on the same alignment as 552, and again terminated in 688. It had a steep-sided, flat-based profile, and probably represents an intermediate phase of the enclosure ditch.

Structure 1

A line of post holes (Fig. 2.1; Structure 1) consisting of features 641, 649, 848, 929, 727, 795, 865, 893, 909 ran north-west/south-east across the site. It was apparently aligned on the south terminal of 504, although the large, irregular post-medieval quarry had obliterated any evidence for the northwest end of this line. Of the nine post holes that may be ascribed to this structure, some were very heavily truncated, surviving in one case (848) to a depth of only 10mm. Others (865, 909 and 929) were only a little deeper, at between 30 and 70mm. Post holes 641 and 795, however, were both 0.38m deep, and must originally have been substantial features. This truncation suggests the loss of a significant depth of subsoil and may explain the apparently incomprehensible scattering of most of the surviving post holes on the site.

In plan there seems to be an element of pairing of post holes within structure 1, the spacing being on a rough 3m/5m arrangement. If this line actually carried a fence, it seems likely that only the main supporting post holes have survived, and that any shallower intermediate

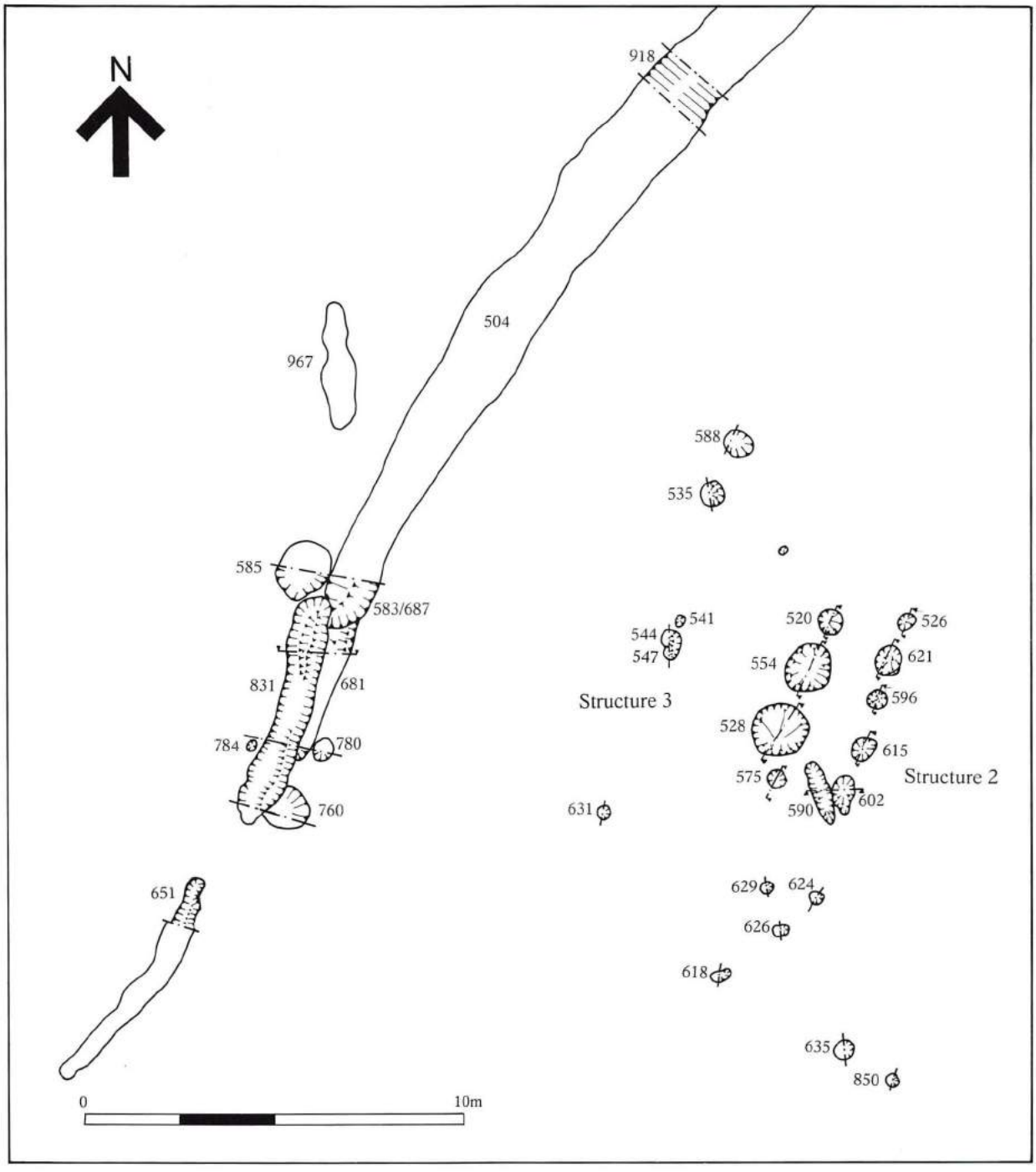

Fig. 2.2 Boreham Interchange. Detailed plan of structures 2 and 3

features have been entirely truncated. Several of the features of Structure 1 contained fragments of daub, and it seems likely that the fence was of sound construction and protected the enclosure from the prevailing southwest wind.

Since 504 did not continue to the south of Structure 1, it probably formed the southwestern side of the enclosure. It is likely that the ditches formed a semi-circular arc pointing northeast, most of which was destroyed by the construction of the A12. In this case, Structure 1 would have run along the chord and completed the D-shaped enclosure. A possible entrance through the fence might have been formed by the gap between 929 and 727. This would have afforded a clear line of movement across the enclosure, flanked by Structure 4 to the southeast and Structures 5 and 6 to the northwest.

Ditches 831 and 651

Ditch 831 (also recorded as 561), first identified during the evaluation (trench B5), was present in both box-sections 687 and 688 (Figs 2.1 and 2.2). It was 0.40m deep, 0.85m wide, steep-sided with a rounded base and 7m long. A gap of *c.* 2m lay between the southern terminal of this and the northern terminal of 651. This was more irregular in profile, and was 0.55m wide, 0.22m deep and 6.50m long. Both of these features contained very dark grey charcoal rich clay fills. Very few finds were recovered from 651, but large quantities of Middle Bronze Age pottery, flint and antler came from 831.

In plan these features form a distinct curve towards the southwest. It is possible that feature 967, which was not excavated since it was believed at the time to be natural, was a further length of ditch associated with 831 and 651, continuing the curve towards the north.

Ditch 831 cut ditch 504, and must therefore be considered to belong to a period when that ditch was no longer in use, but still within the Deverel-Rimbury ceramic tradition. It seems possible that 831, 651 and 967 form part of a later enclosure to the west of that bounded by 504, although its nature and function are far from certain, since very few features were recorded within the apparently enclosed area.

Internal Features

Features within the enclosure comprised post holes, pits and a single unurned cremation burial (682). Only one group of post holes was identifiable as a building, and lay near the south terminal of 504.

The majority of internal features appear at first sight to belong to the Late Bronze Age. Many of them contained pottery which was either definitely post-Deverel-Rimbury or undiagnostic. In several cases this pottery took the form of placed deposits which had been inserted after the removal of the post. It is therefore likely that these features were established within the enclosure during the later part of the Middle Bronze Age and that the pottery dates from a phase of disuse subsequent to a change in the pottery tradition.

Structure 2

Ten post holes, 520, 554, 528, 575, 526, 621, 596, 615 and 590, formed the plan of a roughly rectangular structure approximately 4.5m long and 2.2m wide (Figs 2.1 and 2.2; Structure 2). This structure was composed of earth-fast posts (Fig. 2.3.1 – 9), and was of only one building phase. The posts appeared to have been deliberately removed, and two of the post holes had placed deposits of pottery in the post pipes.

The two central post holes on the west side, 528 and 554, were much larger than the average of 60cm, having diameters of 1.4m and 1.3m respectively. These held posts approximately 80cm in diameter, but only penetrating *c.* 0.20m into the natural brickearth. The sequence of fills in both post holes was the same, a layer a redeposited natural brickearth covered with charcoal forming a thick pad for a centrally positioned post and packed around with more brickearth. From the post pipe of 520 were recovered the remains of a hooked-rim jar, perhaps complete when deposited.

It seems unlikely that the depth of the post pipes below the modern ground surface could have supported posts of any significant height in features 528 and 554. The truncation noted above with regard to Structure 1 might be responsible for this apparent structural problem.

Structure 3

Parallel to and 3m to the west of Structure 2 ran a line of post holes, 588, 535, 541, 544 and 631. These, together with 624 and 629, which ran at 90° to them on the south side of Structure 2, comprise post-hole group 3 (Fig. 2.2). The four post holes at the northern end of Structure 3 all contained post pipes. The size of these post holes varied between 541, which was a small stake hole 0.23m in diameter and 0.15m deep, and 588, 0.50m in diameter and 0.25m deep. A second small stake hole, 547, was evidently earlier and cut by 544. The arrangement of these post and stake holes suggests that they originally formed part of a fence delimiting a compound measuring at least 9m by 10.5m around Structure 2, although no evidence of north or east sides was recovered.

About 60 further post holes could not be assigned to any obvious structure, although their spatial arrangement suggests that they can be divided into groups of apparently related features. Of particular note is the area to the east of Structure 2. This comprises *c.* 625m^2 devoid of features. There was no reason to suppose that the truncation of deposits was any more severe here than elsewhere, and it seems that this blank patch is real and deliberate, forming an open area, possibly associated with structure 2. The post holes around this area do not appear to form a definite circuit, that would suggest it was fenced off, but possibly represent the remains of buildings or compounds facing on to it.

Comparable structures at Broads Green and Bargeroosterveld (Netherlands) were found in relative isolation. No other structures were observed at the latter, and at Broads Green the problems of feature recognition were such that even in this area it is probable that only the larger features could be seen (Brown 1998a, 7). There were, however, no features recognised to the north, and this may form a parallel for the open area at the Boreham Interchange. Possibly it formed an open space adjacent to the supposed shrine in which ceremonial (religious or secular) activities were performed.

Structures 4 - 7

From among the remaining post holes, certain patterns can be discerned which appear to represent further elements of structures or fenced compounds within the

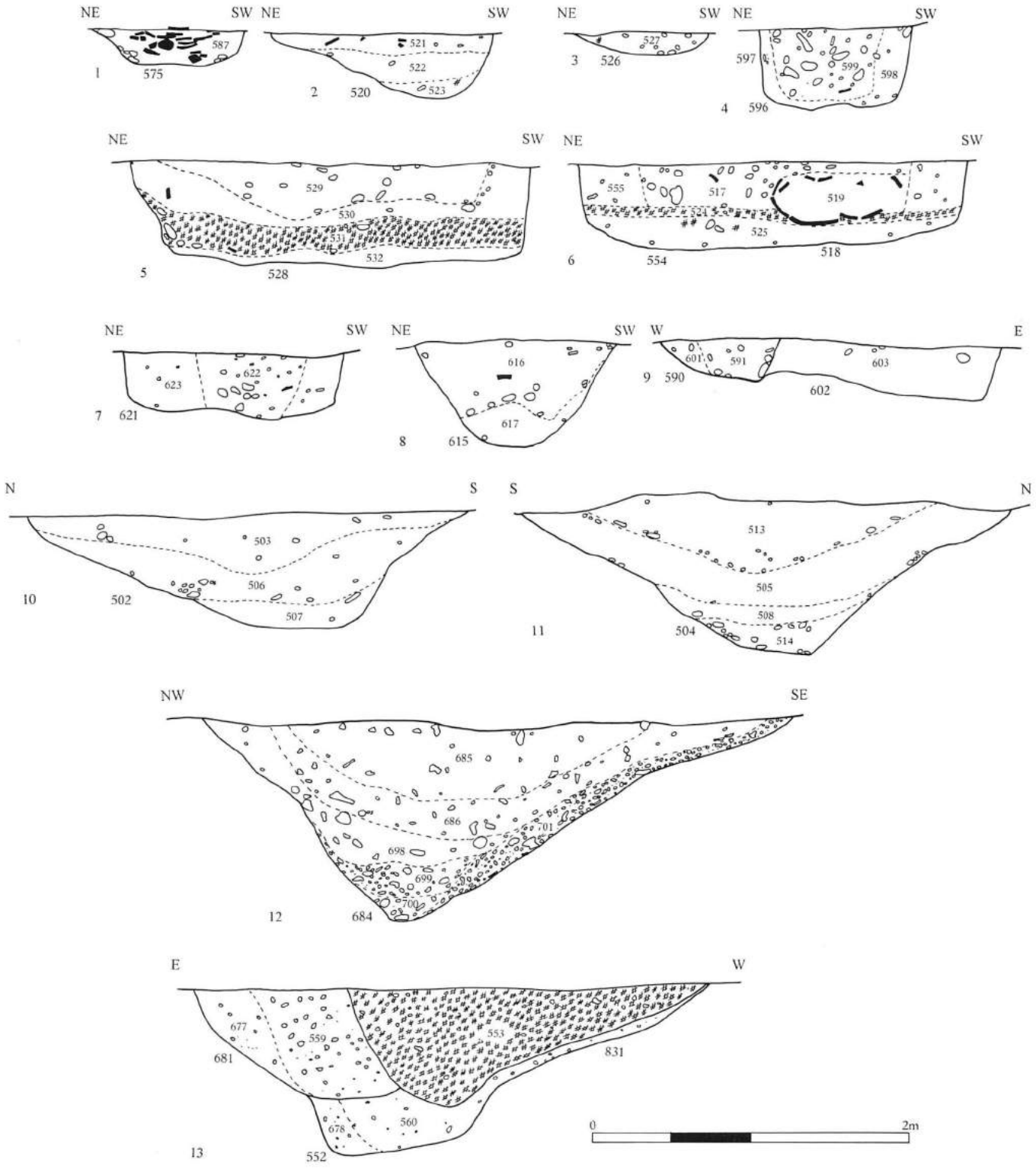

Fig. 2.3 Boreham Interchange. Sections through Bronze Age features. 1-9; structure 2: 10-13; enclosure ditch

settlement. Unfortunately the truncation of the site has led to the loss of many features, with the result that the full plan of these post holes has not been recovered. They can, however, be separated into groups that demonstrate elements of possible structural layouts, although the plans are far from complete.

There were no signs of roundhouses of the type found at Mucking or Springfield Lyons, but two arrangements of post holes may be tentatively suggested as structures. The first of these, Structure 4 (Fig. 2.1) appears to be another short length of fence, parallel to and 6m northeast of Structure 1. Structure 4 consisted of 757, 852, 861 and 885 forming a straight line 7m long. The two end features were small; 0.25m in diameter and only 0.03m deep, whilst the intervening post holes were both over 0.70m in diameter and around 0.10m deep. Posthole 885 contained a placed deposit of pottery.

Structure 5 (Fig 2.1) lay 17m southeast of Structure 2. It comprised six post holes: 824, 786, 788, 790, 769 and 771. The first four of these features ran in a straight line from the southwest to the northeast, and the remaining two turned northwest at 90° to these. It is conceivable that this arrangement represents the corner of a rectangular building. The average diameter of these features was 0.46m and the depth 0.16m.

Northeast of Structure 5, and close to the eastern edge of excavation, lay the post-hole arrangement of Structure 6 (Fig. 2.1). Five post holes, 702, 705, 708, 711 and 723 formed what may have been the northwest corner of a rectangular building.

Finally, a curving line comprising post holes 509, 511, 690 and 692 lay in the northern part of the enclosure. These have been grouped together as Structure 7 (Fig. 2.1), although their relationship is uncertain. It is possible that they represent part of a fence line dividing off an area in the north-west of the enclosure.

Features south of the enclosure

Pit 802

A substantial oval pit measuring 3m by 2.40m and containing large quantities of pottery, worked flint and burnt flint lay to the south of Structure 1 (Fig. 2.1). On the surface it appeared to be a large feature, but upon excavation, it was seen to be very shallow with an uneven base, ranging from 0.02m to 0.09m in depth. Despite the heavy truncation of the site, this can never have been a very deep feature.

Pit 802 was the only feature to produce any quantity of domestic refuse, and may be the base of a shallow rubbish pit or midden. It also contained a number of fragments of perforated clay slabs. These are a relatively common component of Late Bronze Age assemblages in Essex and Kent; their function, though widely speculated upon, remains unidentified, but does seem to be closely associated with domestic activity. This feature lay to the south of the line of Structure 1, and may represent a deliberate exclusion of domestic rubbish from the enclosure.

Cremation 682

A pit, *c.* 20m south of Structure 2 (Fig. 2.1), yielded a small amount of highly comminuted burnt bone, suggestive of a cremation burial. A few sherds of Late Bronze Age pottery were also recovered from this feature, but not sufficient to indicate that the burial was urned. The small quantity of material involved may indicate that it was disturbed from elsewhere and redeposited in pit 682. McKinley's recent research (1997; 1998) suggests that rather than forming an actual burial or grave, deposits such as this may be constituted of pyre debris

The Prehistoric Pottery

N. Brown

A total of 2086 sherds weighing 15.48kg was recovered from the excavations. The pottery has been recorded using a system devised for Essex prehistoric pottery (details in archive).

Fabrics present were:

		% Sherd Count	% Weight
	Flint, S2 well sorted	4	2
B	Flint, S-M 2	11	5
C	Flint, S-M with occasional L2	30	22
	Flint, S-L poorly sorted	35	57
E	Flint and sand, S-M 2	1	1
	Sand, S3	<1	<1
	Sand, S 2	<1	<1
L	Quartz, with some sand	<1	<1
	Vegetable temper, in this case with occasional flint	<1	<1
	Quartz and flint, S-L 2	<1	<1
P	Largely temperless	<1	<1
	Flint and grog, S-M 2	3	7
	Flint, S-M 1	1	1
Z	Unclassifiable	12	2

Where size of inclusions is represented by:

S = less than 1mm diameter

M = 1-2mm diameter

L = more than 2mm diameter

And density of inclusions by:

1 = less than 6 per cm^2

2 = 6-10 per cm^2

3 = more than 10 per cm^2

Where possible sherds have been attributed to the five vessel classes used by Barrett (1980) to characterise Late Bronze Age pottery. In some cases it has been possible to assign sherds to specific vessel forms. Forms present are:

A. Jar, round-shouldered with short upright or flared rim.

B. Jar, hooked rim with smoothly curved body.

H. Bowl, round-bodied, open.

L. Bowl, flared, open.

Q. Bucket.

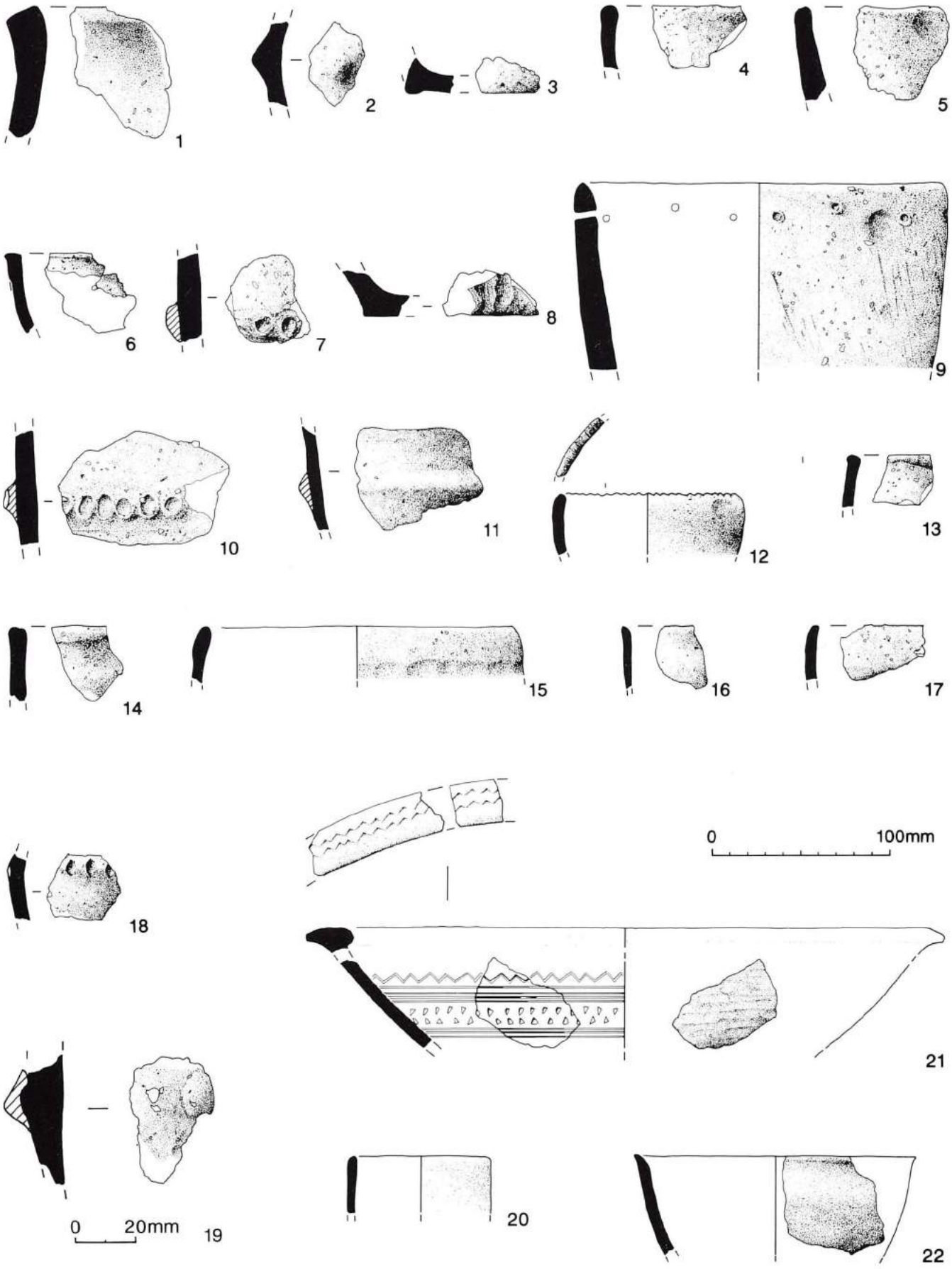

Fig. 2.4 Boreham Interchange. Prehistoric pottery

Catalogue of Illustrated Sherds (Figs 2.4 and 2.5)

Fig. No.	Context	Descriptions/Comments	Fabric	Form
2.4.1	504/505	Flat-topped rim of thick-walled vessel, abraded, possibly burnt	C	?Q
2.4.2	504/505	Smoothed surfaces, not burnished, pinched-up boss at shoulder	C	-
2.4.3	504/505	Smoothed surfaces, not burnished, footring base	C	-
2.4.4	687/553	Flat-topped rim of bucket urn	D	Q
2.4.5	687/553	Rounded rim of bucket urn	D	Q
2.4.6	687/553	Externally expanded rim	D	H
2.4.7	688/689	Applied finger-impressed cordon. Vertical finger wiping on interior. Slightly abraded exterior	D	Q
2.4.8	919/963	Flat base; lower half has vertical finger wiping	Q	-
2.4.9	919/963	Rounded rim of bucket urn	D	Q
2.4.10	919/965	Applied finger-impressed cordon, with traces of horizontal finger wiping below	D	Q
2.4.11	919/965	Applied plain cordon, with clear coil join above	C	?Q
2.4.12	919/965	Flat-topped rim with fingernail impressions on top	C	-
2.4.13	919/965	Flat-topped, externally thickened rim	C	-
2.4.14	918/917	Slightly expanded flat-topped rim of small bucket urn or plain jar	D	?Q
2.4.15	918/917	Plain rounded rim of small bucket urn or plain jar. Large cavity where rim joined to body revealed in break. Irregular shallow finger impressions below rim as a result of vessel formation	D	?Q
2.4.16	918/917	Flattened rim of small, thin-walled pot; traces of wiping on surfaces	C	-
2.4.17	520/521	Fattened rim of ?hooked rim jar; traces of wiping on surfaces	D	B
2.4.18	520/521	Finger-impressed shoulder of jar; abraded below shoulder. Horizontal wiping on interior	D	-
2.4.19	520/521	Body sherd with scars left by applied pinched lumps of clay, and single detached lump	D	-
2.4.20	520/521	Flattened rim of thin-walled cup	B	-
2.4.21	554/517, 524	T-shaped rim with clear scar where rim joined to body. Incised zigzag lines on top of rim. Top and interior of rim have traces of burnish surviving. Body sherd from same pot, but not joining; interior well smoothed with traces of burnish; exterior uneven, but with clear smoothing/burnish lines. Interior has single incised zigzag above 4 grooved lines, above double row of 'wedge'-shaped stabbed impressions above 3 grooved lines. At the break of the bottom of the sherd what may be the remains of another row of 'wedge' -shaped impressions can just be discerned	L	L
2.4.22	554/518	Everted rim with internal bevel, smoothed partly abraded interior; uneven exterior	C	H
2.5.23	554/518, 517	Large part of hooked-rim jar, plain rounded rim. Break clearly shows rim joined to body as separate strip. Horizontal wiping on exterior immediately below rim, vertical below. Firing spall on exterior. Vertical wiping on interior; lower part of interior abraded.	Q	B
2.5.24	528/531, joining sherd from 575/587	Internally bevelled rim with ? grain impressions howing on break	N	-
2.5.25	575/587	Internally bevelled rim of open bowl; exterior partly abraded	C	H
2.5.26	621/622	Internally bevelled rim of jar with finger impressions. Finger-wiped exterior	C	-
2.5.27	621/622	Externally expanded rim of jar, with clear coil joins in fracture	Q	-
2.5.28	596/598	Finger impressions on exterior of rim. Traces of horizontal wiping on interior	D	A
2.5.29	596/598	Internally bevelled rim	C	-
2.5.30	596/598	Plain rim of thin-walled jar. Pinch marks on exterior resulting from rim formation	C	B
2.5.31	596/598	Internally bevelled rim with fingernail impressions on exterior	C	-
2.5.32	615/617	Slashed decoration on exterior of rim; double row of 'wedge'-shaped decoration on neck	C	A
2.5.33	590/591	Lug/handle, fracture shows plug attaching lug to wall. Abraded and probably burnt	D	-
2.5.34	509/510	Rounded rim of thin-walled vessel, with abraded exterior	B	-
2.5.35	658/659	Flat-topped rim of bucket urn. Traces of wiping on surface	D	Q
2.5.36	658/659	Flat-topped rim of bucket urn or jar	D	?Q
2.5.37	658/659	Flat-topped rim of hooked-rim jar or bucket urn	D	?B
2.5.38	658/659	Flat base of ?bucket urn or large jar	D	?Q
2.5.39	696/697	Part of lug/handle; smoothed surfaces, partly abraded. Fracture shows plug attaching lug to wall	C	-

Date and Affinities

The earliest material present is of Deverel-Rimbury character. The enclosure ditch fills produced a typical range of Deverel-Rimbury pottery dominated by bucket-shaped forms (Q) including a large part of the plain rim of a bucket urn, with a row of pre-firing perforations below the rim (context 963, Fig. 2.4.9). This vessel is a striking parallel for a pot from Great Baddow 3km to the south (Brown and Lavender 1994, fig. 7), not only in terms of form, but also in the details of manufacture. Both pots have faint traces of finger impressions on the exterior as the result of rim formation, together with vertical wiping of the exterior. These vessels have clear parallels with material from Grimes Graves (Longworth 1981; Longworth *et al.* 1988). Context 965 (ditch segment 918) contained a range of material including an externally thickened rim (Fig. 2.4.13), a rim with fingernail decoration on top (Fig. 2.4.12) and a sherd with an applied finger-impressed cordon (Fig. 2.4.10). Such cordons occur widely in Deverel-Rimbury assemblages (Longworth *et al.* 1988) and are typical of decoration on bucket urns from south and central Essex (e.g. Rook Hall, Adkins *et al.* 1984-5; North Shoebury, Brown 1984-5 and 1995a); a similar cordon was recovered from context 689 (Fig. 2.4.7). Plain shoulder cordons are less common; however, the example from context 965 (Fig. 2.4.11) can be matched at Colchester (Brown 1992b, fig. 27). Pottery from the ditch also included plain

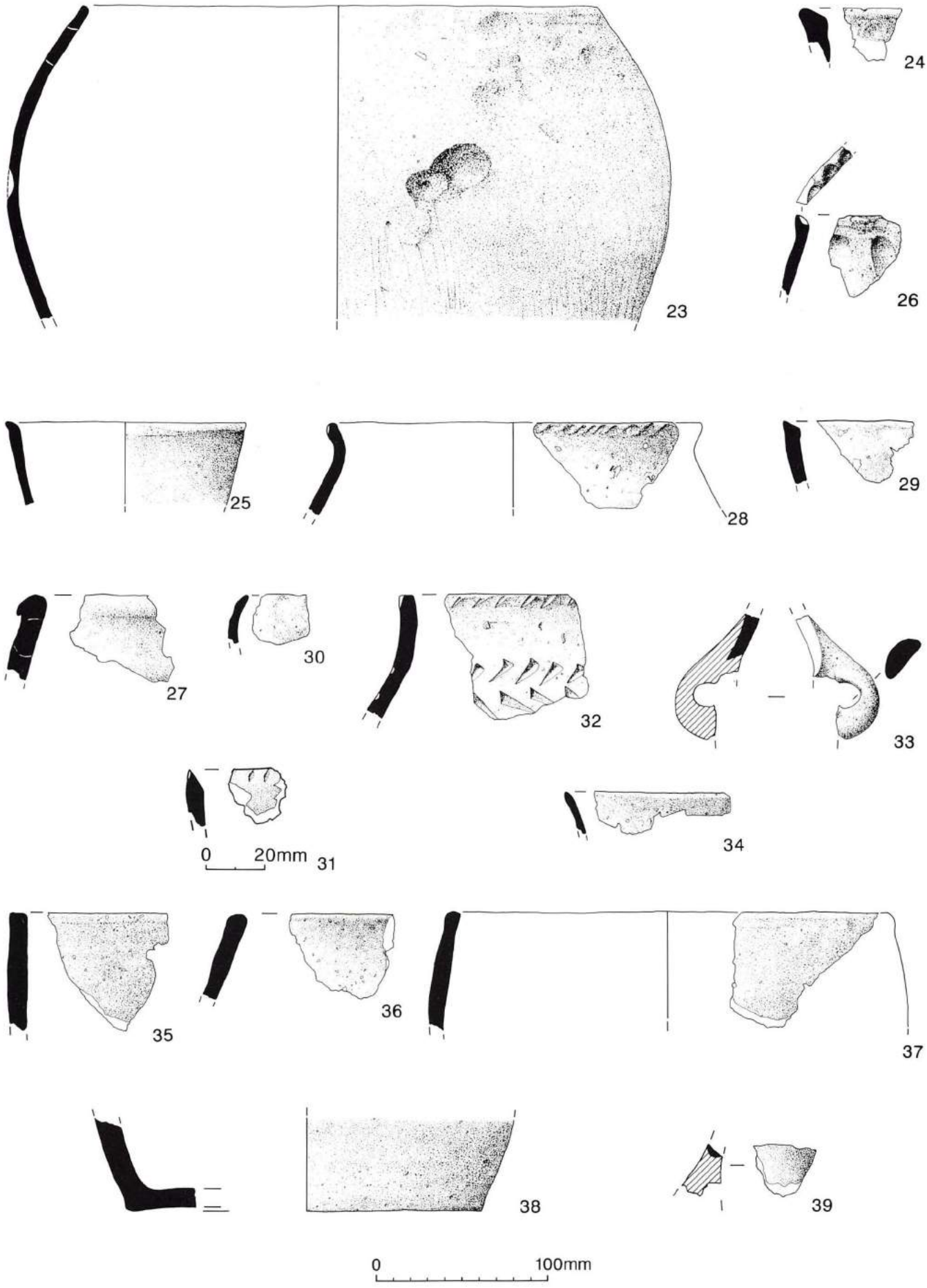

Fig. 2.5 Boreham Interchange. Prehistoric pottery

rims of small bucket urns in context 553 (Fig. 2.4.4-5) and 917 (Fig. 2.4.15-16). Such plain pots are again typical of Deverel-Rimbury pottery from south Essex (e.g. North Shoebury, Brown 1984-5 fig. 1 nos. 2, 6-7 and 1995a). Context 917 also yielded a sherd of a small straight-sided cup (Fig. 2.4.16), and part of a plain bowl. A rim of a very thick-walled ?bucket urn from context 505 (ditch segment 504; Fig. 2.4.1) is very poorly preserved, and appears to have been burnt. A small shoulder sherd with a pinched-up boss (Fig. 2.4.2) was recovered from the same context. This sherd derives from a small knobbed pot. Such vessels are widespread in Deverel-Rimbury assemblages from Essex (Brown and Bartlett 1984-5 and 1995b) and elsewhere (Longworth *et al.* 1988). Similar pots occur in Late Bronze Age contexts (Field and Needham 1986; Ellison 1988) including the circular enclosure at Springfield Lyons (Brown unpublished). Context 505 also produced a small base sherd (Fig. 2.4.3), with what appears to be a shallow footring, although the sherd is too small to be certain and the apparent footring might result from uneven joining of wall to base.

On typological grounds (Brown 1995b, 128-30), the pottery from the ditch may be regarded as late within the currency of Deverel-Rimbury ceramics, dating to the very end of the 2nd millennium, and an 11th/10th-century BC date may be suggested. In particular the bucket urn from segment 919 (Fig. 2.4.9) provides a close parallel for material from Grimes Graves where the pottery was associated with a calibrated radiocarbon range of 1375-845 cal. BC. The fragment of a small knobbed pot (Fig. 2.4.2) may also be indicative of a late date (Brown 1995b, 129), and the small cup (Fig. 2.4.16) and bowl (Fig. 2.4.6) are best accommodated in post-Deverel-Rimbury assemblages. No unequivocal Deverel-Rimbury pottery appears to be present amongst the material from the internal features. However, it is difficult to be certain, since many features contained only flint-tempered body sherds, some of which could easily belong either to bucket urns or large post-Deverel-Rimbury jars. Similarly, a large base from 919 (not illustrated) could be from either a bucket urn or a large jar.

The pottery from 658 may be contemporary with or slightly later than the ceramics from the enclosure ditch. The assemblage included a plain rim of a bucket urn (Fig. 2.5.35) and a large part of a straight-sided vessel, presumably of bucket-urn form (Fig. 2.5.36), together with a rim from a necked jar (Fig. 2.5.38) and part of a hooked-rim jar (Fig. 2.5.37). Such vessels occur widely in Late Bronze Age assemblages (e.g. Bradley *et al.* 1980, form 5; Barrett and Bond 1988, form 17) and are present locally among the large quantity of ceramics from Springfield Lyons (Brown unpublished), at Great Baddow (Brown 1994, fig. 6) and at Broads Green (Brown 1988b, fig 5.4) where it has been suggested that the small assemblage may date an early phase of the Late Bronze Age (Brown 1988b, 10). It would seem reasonable to date the material from 658 to the very beginning of the first millennium, perhaps the 10th century BC.

A rim sherd of a thin-walled post-Deverel-Rimbury bowl was recovered from 510 (post hole 509; Fig. 2.5.34). However, the great majority of diagnostic sherds from the internal features were from the fills of the post holes of structure 2. This material includes sherds of small hooked-rim jars (Figs 2.4.17 and 2.5.30) together with a far larger example (Fig. 2.5.23). Two rims of form A jars are present, both decorated; one with finger impressions on the exterior of the rim (Fig. 2.5.28), the other with slashed decoration on the rim exterior, and neatly executed wedge-shaped *kerbschnitt* arranged in a chevron pattern on the neck (Fig. 2.5.32). Form A jars are ubiquitous in Late Bronze Age assemblages (e.g. Bradley *et al.* 1980, form 8; Barrett and Bond 1988, form 14), occurring locally at Springfield Lyons (Brown unpublished), Broads Green (Brown 1988b, fig 5.7) and Lofts Farm (Brown 1988a, fig 15.54). Internally bevelled rims also occur in the fills of Structure 2 post holes (Fig. 2.5.24 and 29), one with fingertip decoration on the interior (Fig. 2.5.26). Expanded rims (e.g. Fig. 2.5.27) are also present. One jar shoulder sherd has a small applied pinched lump of clay and a scar where another such lump has been detached (Fig. 2.4.19). This appears to be a variation on the finger-pinched decoration which occurs widely as a minor component of Late Bronze Age and Early Iron Age assemblages in Essex (e.g. Springfield Lyons, Brown unpublished; Lofts Farm, Brown 1988a, fig 17.83; Beacon Green, Maldon, Brown 1992a, fig 6.22; North Shoebury, Brown 1995). A lug/handle from 590 (Fig. 2.5.33) shows clear signs of having been burnt. A similar, unburnt, lug/handle from 696 (Fig. 2.5.39) has well smoothed surfaces.

Two rims of plain open bowls (form H) were also recovered, both with internal rim bevels (Figs 2.4.22 and 2.5.25). Cups were represented by a plain rim (Fig. 2.4.20) and a small internally bevelled rim with fingernail impressions on the exterior (Fig.2.4.31). The rim and body sherds of a fine bowl (form L) with an elaborate T-shaped rim, carefully smoothed, elaborately decorated interior, and a rather more uneven exterior with clear tooling lines (Fig. 2.4.21), are most unusual. The decoration cannot be matched in any of the numerous Late Bronze Age assemblages from Essex (Brown 1988 a and b; Brown and Lavender 1994; Brown forthcoming; Barrett and Bond 1988), although somewhat similar, undecorated forms occasionally occur (e.g. Mucking North Ring, Barrett and Bond 1988, fig. 22.42 and Springfield Lyons, Brown unpublished). Both form and complex decoration are relatively common in continental assemblages (e.g. Brun 1986 pl. 44.2.I; Pl. 70.1.S; Pl. 74.A.233.K). It appears likely that the Boreham Interchange example represents an imported vessel.

Manufacture and Function

Many of the techniques of manufacture noted in Late Bronze Age assemblages elsewhere and discussed by Adkins and Needham (1985) can also be observed in the Boreham Interchange assemblage. These include vertical finger wiping of the exterior and bases joined to vessel walls by finger pinching (Fig. 2.4.8). Both lugs show one end plugged through the vessel wall (Fig. 2.5.33 and 39), and bases occasionally have dense flint temper on the bottom. Coil joins are occasionally visible in sherd breaks (e.g. Fig. 2.5.23 and 27), and rims can sometimes be seen as having been added as separate strips of clay (Fig. 2.5.23 and 24). One hooked-rim jar (Fig. 2.5.24) has a large firing spall on the exterior, and parts of the interior are heavily abraded. By contrast, the interior of one H bowl (Fig. 2.4.22) is well smoothed, probably originally burnished, possibly to reduce porosity in a vessel intended to hold liquids.

Distribution

Much of the pottery from the internal features appears to derive from deliberately placed deposits, including large parts of vessels placed within features and sherds apparently laid flat across the base of pits (Fig. 2.3.1). In some instances it is not possible to be sure whether sherds have been deliberately placed or not (Fig. 2.3.2). The concentration of pottery within the features of Structure 2 is reminiscent of the situation with a similar structure at Broads Green 6km to the northwest (Brown 1988b). Besides the probable imported vessel noted above, sherds in a flint and vegetable-tempered fabric (Fig. 2.4.24), hitherto unrecorded in Late Bronze Age assemblages in Essex, were recovered from the structure. The presence of these atypical vessels, in what is a relatively small assemblage, is an indication that the activities carried out at the Boreham Interchange involved some unusual artefacts. A few cross-joins were achieved within and between the features of Structure 2, possibly indicating that the fills of these features were deposited at the same time.

Worked Flint

H. Martingell

Method of Analysis and Glossary

The artefacts were analysed using a system, loosely based on Francois Bordes, of percentage of artefacts present and absent, to separate mixed period assemblages.

Blade: must be made from a blade core, i.e. all dorsal removals must come from one direction, or at the most, also from a directly opposed second platform. The sides should be parallel or nearly so and the section triangular or trapezoidal.

Blade flakes: must also show blade struck techniques on the dorsal surface, but the shape may be irregular and more flake-like. The length must be at least twice as long as the width.

Flake blades: will have random flaking on the dorsal surface, but the length will be more than twice the width.

Flake: any knapped piece with the criteria for a flake.

Flakelet: a small flake, *c.* 20x15mm, usually a core or tool preparation removal.

Chipping: a very small flake *c.* 6x3mm.

Primary: a flake or blade with a completely corticated dorsal surface.

Secondary: a flake or blade with some cortex and some flaking.

Tertiary: a flake or blade with no cortex.

Neolithic 'Levallois' core: a term used to describe a flake removed from a specially prepared disc core.

'Knife': a return to a description of a flake or blade with a sharp edge opposing a non-sharp edge, either blunted or with cortex.

Summary and Comment

A total of 160 flaked stone artefacts were recovered from Area B. Although this is not a great number of artefacts on which to make any claims, two areas can be highlighted.

Structure 2: A concentration of 47 pieces, 28% of the total, came from the post hole fills of this structure. Four were retouched pieces, a 'thumbnail' scraper from 529 (Fig. 2.6.3), a piercer/borer from 622, a retouched flake from 520 and a retouched bladelet from 598. The remaining 43 pieces consisted of waste (cores and core fragments), flakes, blade flakes and chippings. The piercer/borer, the retouched blade flake and a Neolithic 'Levallois' flake are in good quality black flint and these pieces are probably Neolithic. Thumbnail scrapers are traditionally considered to be of Bronze Age date.

From post hole 590 came two conjoining flakes with waste from the same nucleus; post hole 528 likewise contained two conjoining flakes with similar waste. This would suggest that we are looking at flaked material in a near primary context, but not on a large scale. This knapping work could be connected with the activity at Structure 2; the flaking method is random and the material grey flint with inclusions, this would conform with Middle and Late Bronze Age flaking techniques.

Western limit of the site: From the main fill of pit 592 came an exceptionally fine fabricator/rod (context 595; Fig. 2.6.5). It is complete, measuring 75 x 15mm, and is patinated in a light blue grey. This fabricator is of a type 'with D-shaped cross section and unretouched bulbar face'; it also has step and scalar retouch along the sides. They are found in Mesolithic through to Early Bronze Age contexts, but this one should be Mesolithic in date.

In the same area, from segment 557 of ditch 556 (a medieval or later feature), a complete piercer/borer (context 558; Fig. 2.6.6), made on a square flake of light brown flint, was recovered. The flaking of this artefact is very typical of Neolithic to Early Bronze Age piercer/borers.

The good condition of these pieces suggests the presence of a relatively undisturbed area of an early prehistoric working floor, despite their recovery from secondary contexts.

Isolated finds

Scrapers: A scraper from context 686 (Fig. 2.6.2) was recovered with a retouched blade flake of 'knife' type from a segment of the Middle Bronze Age ditch 504. The scraper is retouched around two thirds of the circumference from the dorsal surface, a thermal fracture, so that the ventral surface is retouched. It is of good quality and both artefacts could be Middle Bronze Age in date.

A scraper from context 758 (Fig. 2.6.1) is complete. It was recovered from a post-hole fill in Structure 7. This is a typical Bronze Age piece with invasive retouch around two thirds of the circumference.

Arrowhead: The barbed and tanged arrowhead from context 625 (Fig. 2.6.4) was recovered from a post-hole fill *c.* 4m south of Structure 2. This does not necessarily connect it with the activity of this structure; it is more likely to be a single lost item. The arrowhead is 3.5cm in length and partly pressure flaked over both surfaces, with some cortex remaining on the dorsal surface. The tang and one barb are missing. Barbed and tanged arrowheads date from 2,500-1000 BC (Green 1980).

Neolithic artefacts: Four artefacts, a truncated blade from context 901, a micro-denticulate (saw) from 947, a retouched blade from 598 and a piercer from 622 are made on blade blanks and are of good quality dark flint and are well made. They are probably Neolithic in date but are too dispersed across the site to have any significance; they could well be relics, either utilised in a later period or contained in soil brought into the area.

In summary, the lithic artefacts range in date from the Mesolithic to the Late Bronze Age and, as usual, primarily reflect the use of the valley gravels for raw material.

The lithic artefacts, in general, support the dating for the main features without being able to contribute any specific Middle or Late Bronze Age evidence.

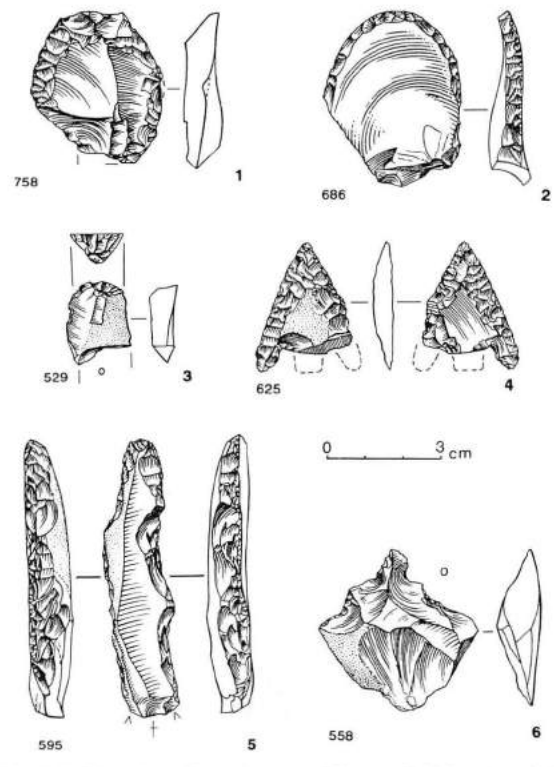

Fig. 2.6 Boreham Interchange. Flintwork. Nos 1 and 2; Neolithic scrapers. No. 3; endscraper. No. 4; Early Bronze Age barbed and tanged arrowhead. No. 5; fabricator/ strike-a-light. No. 6; piercer/borer

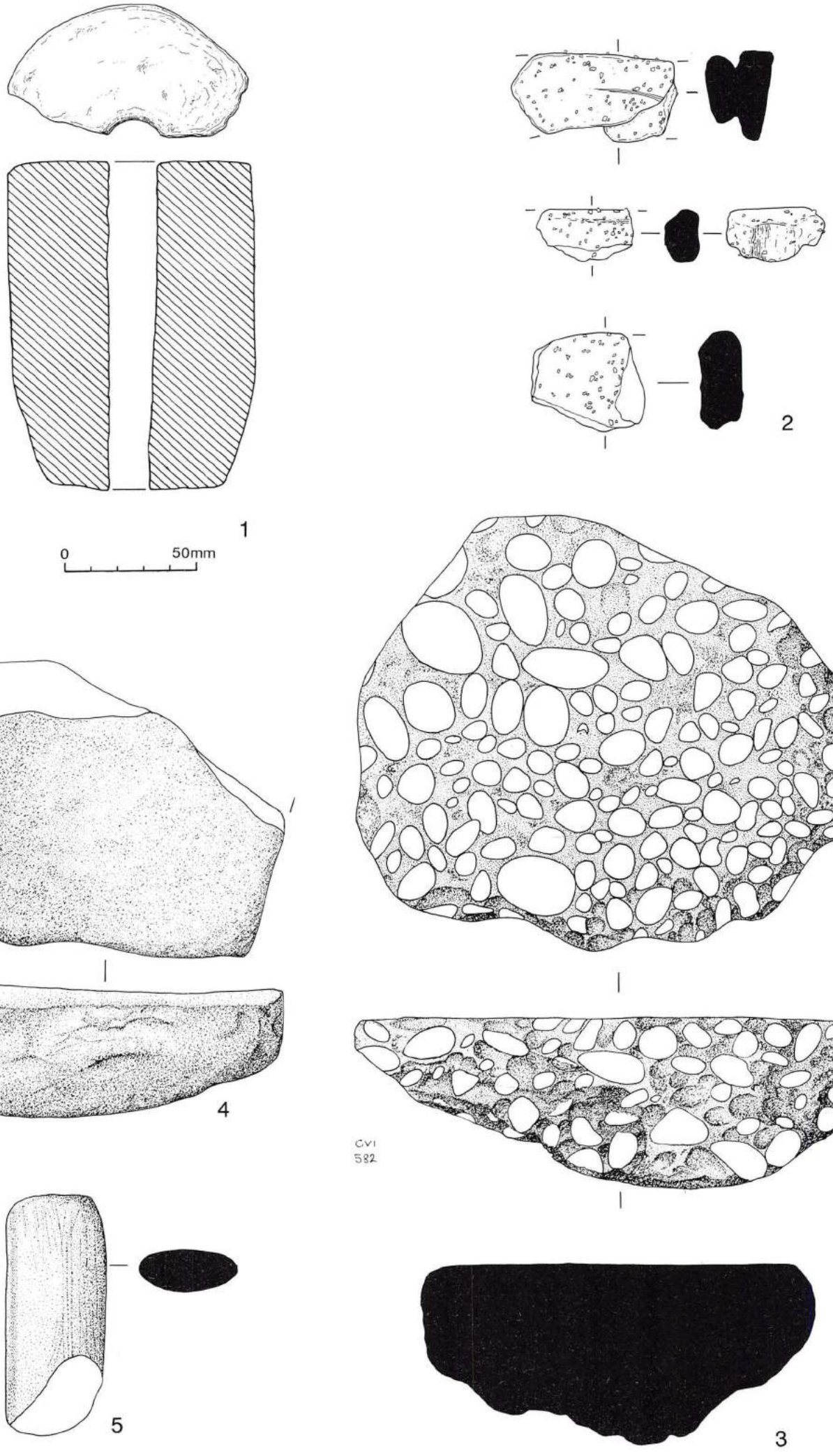

Fig. 2.7 Boreham Interchange. Miscellaneous finds

Miscellaneous Finds

R. Tyrrell

Only catalogued finds are reported on here. Details of a small quantity of material from recent and unstratified contexts may be found in the archive.

Copper-alloy object

Rod with square section, slightly tapering. Not very well finished, and with both ends probably broken. L 25mm, max. section 5mmx5mm. Context 901, top fill of ditch 556.

Daub

Area B produced a total of 829g (192 fragments with an average weight of 17g). The fabric was reddish through to buff in colour with occasional flecks of chalk and no vegetable inclusions.

Baked-clay objects

1. The flat top and part of one side of a possible cylindrical loomweight. Fabric buff in colour on one side, shading to reddish on the other, no visible inclusions. The excavator feels that this object was placed, rather than accidentally deposited. The only other loomweight in the area was found at Springfield Lyons, but was of the pyramidal variety (Barford and Major 1992). Middle Bronze Age. L 85mm (max. measurable), dia. 115mm, hole dia. 15mm. SF3, context 691, fill of post hole 690.

2. A group of five fragments of perforated clay slabs, in an orangey red fabric, with a quantity of crushed flint tempering were recovered from pit 802. The sherds have straight edges with grooves along them, typical of the type. Where a trace of the hole survives it is somewhat close to the edge. Such objects commonly occur on Late Bronze Age settlement sites around the lower Thames. A considerable number were found in excavations at Springfield Lyons (Major 1987) and at North Shoebury, and discussion of their form can be found in the report (Barford 1995, 127). Contexts 806, 807 and 808.

Stone

3456g of worked stone was recovered from area B.

3. Puddingstone quern fragment with a slightly worn, flat grinding surface and irregular underside, probably damaged. It is uncertain whether this is a saddle or rotary quern fragment. If rotary, it would be a lower stone with a diameter probably greater than 330mm, but there is no trace of either a central hole or a definite original edge. As a puddingstone rotary quern, it should date to the first century AD, but may have been brought to the site at a later date. The only other puddingstone saddle quern from Essex is also dubious, and is from Woodham Walter (Buckley and Hedges 1997b). 581 or lower ploughsoil.

4. Sandstone fragment with the right angled edge of a possible saddle quern re-used as a ?rubbing stone. The faces either side of the right angle are worn very smooth. Context 927, irregular feature 925.

5. Micaceous siltstone whetstone, oval in section, damaged at both ends and with considerable signs of wear and surface striations. Whether this is another placed deposit or just chance is difficult to be certain. Context 766, fill of post hole 765.

Animal Bone

A.J. Wade

The collection of material by both hand and selective wet sieving produced 1524 pieces of animal bone weighing 10.3 kg and 79 pieces of cremated human bone (49 g). Twenty-three percent of the animal bone was identified by number of pieces (355) and 73% by weight (7.5 kg). Eighty-four percent of the bone (by weight 8.6 kg) was recovered from ditches, with 504 being particularly prolific.

Of the eight species identified in the assemblage cattle dominated, accounting for over two thirds by both number of pieces (243) and weight (5.875 kg). The other species included dog (31 pieces), sheep or goat (19), pig (9), horse (7), and the wild species of red deer (16), roe deer (1), and vole (29).

Species	Pieces	Weight (g)	Minimum number of individuals
Cattle	243 (68%)	5875 (79%)	5
Horse	7 (2%)	480 (6%)	1
Red deer	16 (5%)	757 (10%)	(1)
Pig	9 (3%)	67 (1%)	1
Dog	31 (9%)	184 (2%)	1
Roe deer	1 (<1%)	40 (1%)	1
Sheep/Goat	19 (5%)	79 (1%)	1
Vole	29 (8%)	0.3	1
Identified	**355**	**7842**	
Unidentified	**1169**	**2812**	
Total	**1524**	**10299**	

Table 1: Summary of the identified species from the Bronze Age Site.

The disparity between cattle and the other species would have been enhanced due to the normal bias incurred by hand collection of the material and bone survival which both favour the larger bones of the larger species, causing the smaller species to be under-represented in the assemblage.

Evidence of butchery was found on three cattle bones (from ditches 504 and 831) and working was found on 5 pieces of red deer antler (also from ditch 504 and recut 578). No red deer bone was found and it seems most likely that the antler was shed and collected locally.

Discussion

Bronze Age, particularly Late Bronze Age, exploitation of the Chelmer Valley is well attested (Brown and Lavender 1994; fig. 8). Late Bronze Age settlements are relatively common, ranging from Windmill Field, Broomfield, downstream to Lofts Farm, north of the Blackwater Estuary (Fig. 2.8). Finds of metalwork, including tools and weapons, have regularly been recovered either as hoards or single items (Bradley *et al.* 1986; Brown 1987). The majority of this metalwork has been found to the east of the paired circular enclosures at Springfield Lyons and Great Baddow. Mould debris from the manufacture of Ewart Park type swords was found at Springfield Lyons (Needham 1987 and in prep.).

Finds of later Bronze Age metalwork from the Chelmer Valley include two socketed axe-heads from Phillows Farm, Little Baddow, another from Culverts Farm, nearby and a spearhead and a smith's hoard from Boreham (Buckley *et al.* 1986)

Middle Bronze Age activity is much more sparsely represented. No major settlements are known, and before the excavation at the Boreham Interchange, occupation was represented by finds of bucket urns and palstaves. The Boreham Interchange is therefore the first example of a distinct enclosed site with clear Middle Bronze Age origins to be found in the in the Chelmer Valley.

The excavation identified a Middle and Late Bronze Age site originating towards the end of the 2nd millennium BC. Whilst Mesolithic, Neolithic and Early Bronze Age flints were recovered from a number of features, these were all residual finds attributable to

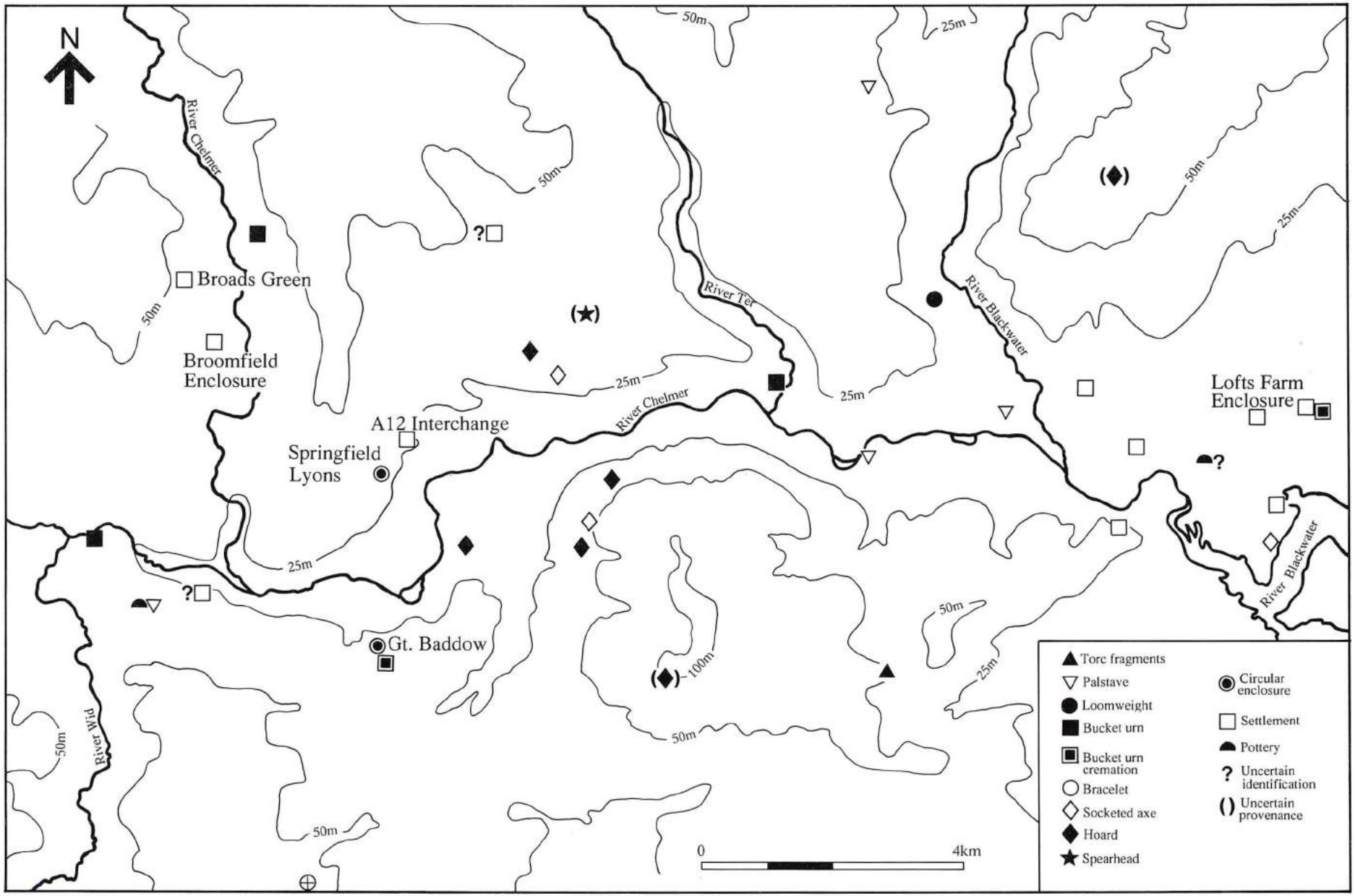

Fig. 2.8 Boreham Interchange. Distribution of Bronze Age sites in the Chelmer valley (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

accidental loss and no evidence for occupation prior to the Middle Bronze Age was identified. The site comprised a ditched enclosure, probably semi-circular, with the chord marked by a fence to the southwest. Within this enclosure, and to a lesser extent to the southwest of it, lay a large number of postholes and a comparatively small number of small pits. An element of 'ritual' activity is associated with many of these features, and an apparent absence of domestic features and refuse, with the notable exception of pit 802, may indicate that the site was almost entirely of a ritual nature.

The earliest substantial activity occurred during the Middle Bronze Age when the enclosure ditch was dug around the north part of the site. In its original form this feature may have consisted of lengths of interrupted ditch, as suggested by 552 and 681. An apparently continuous ditch, 504, replaced the earlier features, and eradicated all traces of them apart from at its southern terminal. Examination of the plan of 504, however, shows it to have a rather segmented appearance, suggesting that perhaps it continued to comprise short lengths of ditches that were repeatedly recut throughout the life of the enclosure. Ditches 651, 831, in this case, might be interpreted as the final phase of this process, rather than as part of a new enclosure. If this is so, 697 is probably a natural feature, in line with the on-site interpretation. It is likely that a similar process occurred with 502, but little of that feature survived and no evidence to support this proposition was recovered. The exact form of the enclosure is unknown, because of the destruction of the eastern part by the A12 Chelmsford Bypass. If, however, it is assumed that the plan was regular, it is probable that it was D-shaped with its central axis oriented to the northeast. In this case, the fence-line Structure 1 would have marked the chord. It may or may not be of relevance that a line taken at 90° to the estimated mid-point of Structure 1 would be aligned on the midsummer sunrise.

It is likely that many, if not all, of the post holes were dug at the same time as the enclosure ditch. However, most of the diagnostic pottery from the internal features is post-Deverel Rimbury. Most of this pottery was deposited (in several cases clearly deliberately) in the post pipes following the removal of their posts during the Late Bronze Age.

The few fragmentary structures (other than Structure 2) seem more likely to be the remains of fence-lines, rather than buildings. The division of a settlement into small compounds is common on Middle Bronze Age sites such as Black Patch (Drewett 1980) or Itford Hill (Burstow and Holleyman 1957). The post holes at the Boreham Interchange may reflect a similar practice, and although there was no clear evidence for buildings, they may represent the division of the enclosure into areas associated with different types of activities.

Placed deposits of pottery and other material are common on prehistoric sites, and have been assumed to have a religious or ceremonial significance. At the Boreham Interchange several such deposits were noted. In segment 684 of ditch 504, there appeared to be a degree of structure to the deposits in that different layers yielded predominantly either pottery or animal bone. This may, however, merely indicate patterns of waste disposal, although there appears to be a general absence of refuse deposits over the site. More convincing is the large quantity of pottery and antler in the very charcoal-rich fill of 831, which seems to have a 'ritual' connotation. In several post holes, including two within Structure 2, there were clear signs of deliberate deposition of pottery in the post pipes subsequent to the removal of the timbers. Whilst all of this is indicative of activity relating to the disuse of features, post holes 528 and 554 (both on the west side of Structure 2) showed clear signs of deliberate preparation. Both of these features had a layer of charcoal spread evenly over the base below the post pipe and packing.

The function of Structure 2 is not altogether clear. Whilst post-built round houses of Middle and Late Bronze Age date are not uncommon (Burstow and Holleyman 1957; Drewett 1980; Buckley and Hedges 1987; Bond 1988; Brown 1988a), other structures usually take the form of the ubiquitous 'four-posters.' An example of a Late Bronze Age long house was excavated at Lofts Farm (Brown 1988a). The only Essex structure similar to the Boreham Interchange example is at Broads Green, Little Waltham (Brown 1988b). This comprised a combination of earth-fast posts, post-in-slot and beam-slot construction, and was probably rebuilt, or at least repaired, during the course of its life. Once again, there was evidence for placed deposits of pottery in the features (over 60% of the site pottery assemblage came from this structure), and a ritual interpretation is preferred by the excavator. Both the Broads Green and Boreham Interchange structures have affinities with the wooden structure at Bargeroosterveld, Drenthe, Netherlands (Waterbolk and Van Zeist 1961), which has been identified as a shrine. On these grounds, and because of the apparent ritual activity pertaining to its construction and demolition, Structure 2 is also interpreted as a possible shrine.

Whilst the Bargeroosterveld shrine was found in isolation, that at Broads Green was associated with other features. Because of the salvage nature of the excavation, it is unlikely that all features at Broads Green were observed and recorded (Brown 1988b, 1). It does, however, lie in among a number of pits and postholes forming no clearly defined pattern, with a large clear area adjacent to the shrine itself, possibly analogous with the 'courtyard' at the Boreham Interchange. At Broads Green this clear area was to the north, whereas at the Boreham Interchange it was to the east. This may be a matter of convenience, and the exact relation of the shrine to the 'courtyard' need not be dependent upon liturgical requirements. Another interesting parallel between Broads Green and the Boreham Interchange is the presence of cremation burials.

Late Bronze Age burials are rare in southern Britain, and it is conceivable that at both the above sites they predate the later activity (particularly at Boreham Interchange, where activity most definitely starts in the Middle Bronze Age, and the burial appears to have been disturbed and redeposited). The burials at both sites were all unurned, and are impossible to date accurately in the absence of radiocarbon dates. The association of the shrine structure with burials on both sites is, therefore, suggestive, but inconclusive.

The Boreham Interchange site is, perhaps, atypical in the absence of obvious signs of domestic occupation. The lack of recognisable building plans among the postholes is probably the result of truncation rather than a genuine absence, but there are almost no pits present among the features; certainly, none that could be interpreted as the storage pits usually encountered on Late Bronze Age settlements. In addition, there is almost no domestic rubbish. The majority of finds appear to be from placed deposits, and probably represent the abandonment of the site rather than its use. Only pit 802 among the internal features contained what appeared to be a refuse assemblage. More finds of both pottery and bone were recovered from the enclosure ditch. Indeed, 80% of the bone (8.6kg) came from the ditch, whereas barely 10g were recovered from the pits and post holes. Even the finds in the ditch seem more likely to represent structured deposits rather than the disposal of domestic refuse, since there is an element of selection visible in the finds pattern, alternate layers being dominated by either pottery or bone.

Furthermore, very small quantities of worked flint were found: only 160 pieces, compared to 433 from the small settlement enclosure at Windmill Field, where the excavated area was less than a quarter of that at the Boreham Interchange. Taking the paucity of the flint, bone and obvious domestic items such as spindle-whorls, loom-weights and saddle querns into account, a picture of the site begins to emerge that is not one of domestic settlement.

Comparatively small amounts of daub were recovered. Whilst not conclusive, this is also an indication of the absence of domestic buildings. The largest concentrations came from the enclosure ditches and from features in the western part of the site. Structure 2 yielded over 100g, as did the postholes at the north of the enclosure and the segments across 502 and 504. The postholes and pits towards the eastern limit of excavation produced very small quantities, which might suggest that that these were not the remains of buildings. There was also daub in the postholes of Structure 1, indicating that this fence may have been coated in daub. It is possible that the large quantity of daub that would have been required for Structure 1 accounts for at least some of that found in nearby features.

If, then, the Boreham Interchange enclosure was not a domestic settlement, but a religious centre or meeting place, it must have served settlements in the vicinity. The question arises as to where these settlements were. As already noted, whilst Late Bronze Age settlement is well known in the Chelmer valley, there is a pronounced absence of Middle Bronze Age sites. It is obvious that the area was inhabited at the time; finds of bucket urns (including the cremation burial from Great Baddow) and palstaves around Chelmsford and Springfield attest this, but the settlements remain elusive. The reason for this may lie in the tendency for archaeological investigations to be directed towards the major cropmark sites.

The formal abandonment of the site, with the deliberate removal of posts and deposition of pottery, occurred in the early part of the Late Bronze Age. It is reasonable to suppose that there is a connection between the abandonment of this site and the establishment of the settlement enclosure at Springfield Lyons 0.75km to the south. The Springfield Lyons site, amongst other things, clearly fulfilled a variety of symbolic and ceremonial functions (Brown 1996), and it may be that the occupants of this enclosure took over and adapted the religious/ceremonial activity formerly focused at Boreham Interchange. Needham (1993) has suggested that the Late Bronze Age saw the placing of specifically religious foci within otherwise domestic sites; the abandonment of the Boreham Interchange and the establishment of the Springfield Lyons sites may exemplify this process.

3. THE MEDIEVAL SETTLEMENT

The excavation identified a complex of at least two, probably three, buildings comprising a thirteenth-century farmstead with associated ditches and gullies. A series of earlier ditches, believed to be associated with an earlier phase of buildings lying to the northeast of the excavated area, was also investigated.

Archaeological and historical background

The site lies *c.* 140m southwest of the boundary between the parishes of Springfield and Boreham, which crosses the northern part of the development area (Fig 1.5). It abuts the southeastern side of the B1137, formerly the main London to Colchester road. Since this road does not appear to have changed its course along this section since its original Roman foundation, it is reasonable to assume that the site stood beside the main thoroughfare joining Chelmsford and Boreham during the medieval period.

Medieval settlement in Boreham, and to an extent Springfield, appears to have been dispersed, and outlying farmsteads away from the manorial centres may have been the rule rather than the exception. The Domesday Book records 12 manors which can be reliably placed within 3km of the site, of which Cuton Hall (Keuentuna) had probably the closest centre, 0.90km to the south (Fig. 1.1).

Recent excavations at Boreham Airfield, in advance of quarrying, have located the site of a windmill dating to the late 12th or early 13th century. Related enclosures and structures suggest that the centre of one of the manors of Boreham may lie at or near this site (Germany 1995; Clarke in prep.).

In Boreham itself, excavations at site of the former Buxted Chicken Factory have indicated the presence of medieval roadside development as early as the Late Saxon period (Foreman 1997).

A Late Saxon settlement (overlying an Early Saxon cemetery) has been excavated at Springfield Lyons, 0.75km south of the Boreham Interchange site. Springfield Lyons itself is first mentioned in documents dating to 1337, and the nearest medieval building to the site, Sheepcotes (Fig. 1.1), is first mentioned in 1375. Both of these establishments, however, were very probably in existence well before their earliest recorded dates

The excavation

Whilst the dating evidence (below) suggests that the entire life span of the settlement was quite brief, three phases of activity can be identified. These are:

Phase I The cutting and recutting of a probable boundary ditch on a northwest to southeast alignment across the site. (Late 12th-early 13th century?).

Phase II The replacement of this boundary with at least two, probably three, building plots separated by shallow ditches. (13th century).

Phase III A period subsequent to the abandonment of at least one of the buildings, associated with ditches running from southwest to northeast. (Later 13th-early 14th century).

Throughout the site description that follows, measurements given are maximums recorded except where otherwise stated. Measurements of depth are taken from the machined surface (i.e. top of subsoil) without taking into account the depth of topsoil, which was generally between 0.40 and 0.45m.

Area A

Phase I (Fig. 3.2)

During phase I, activity was characterised by a repeatedly recut ditch, which may have formed the southern limit to the inhabited area at this time. A number of smaller linear features were probably parts of farm enclosures and fields.

The earliest activity took the form of a ditch (1102) running northwest to southeast running across much of Area A (Fig. 3.2). This broad (2.29m), shallow (0.15m) ditch, perpendicular to the 1137 and parallel with the existing southern field-boundary ditch, was recut four times (features 1099, 1097, 1094 and 1092); on each occasion slightly further to the north east. The entire sequence was investigated at a point towards the east end of the excavation area (Fig. 3.6.16), and no recut was more than 0.55m deep. More limited excavation in box-sections 1077 and 1250, showed ditch 1097 to be a little deeper further west (around 0.70m). A nearly

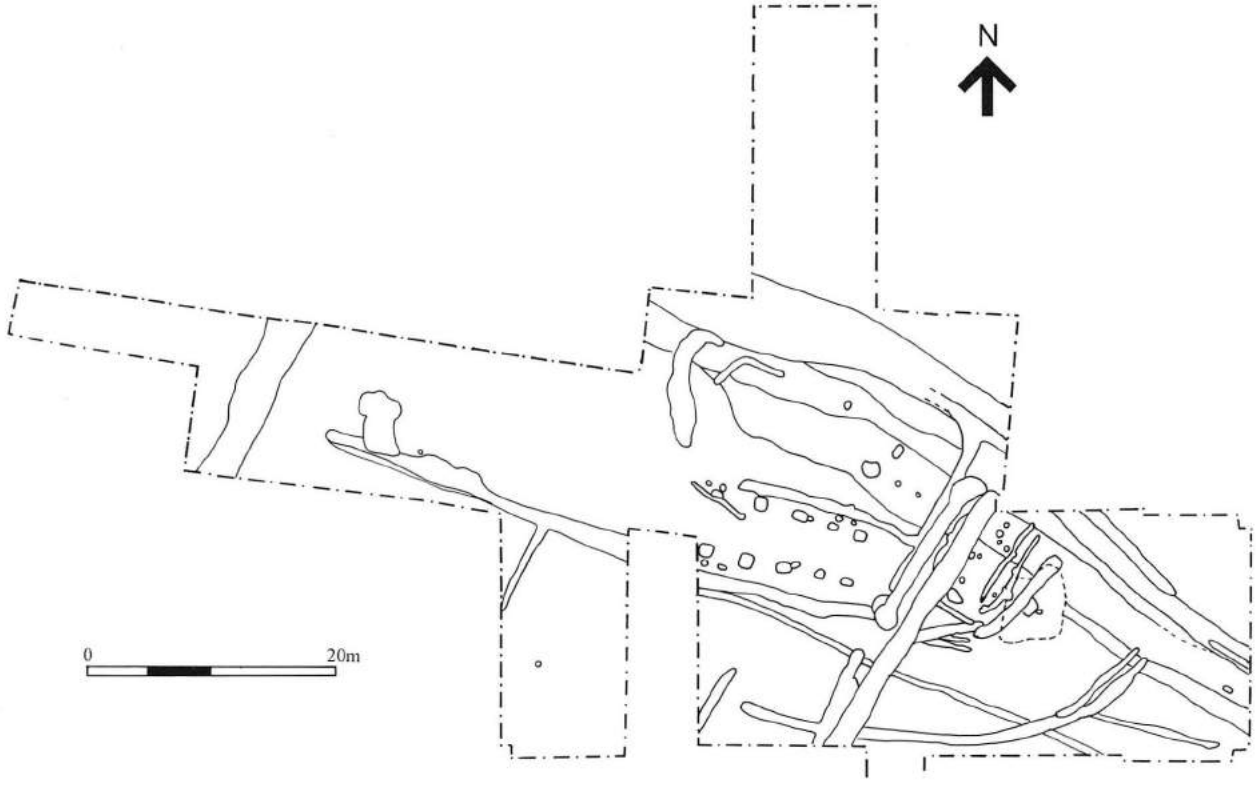

Fig. 3.1 Boreham Interchange. General plan of medieval features: all phases

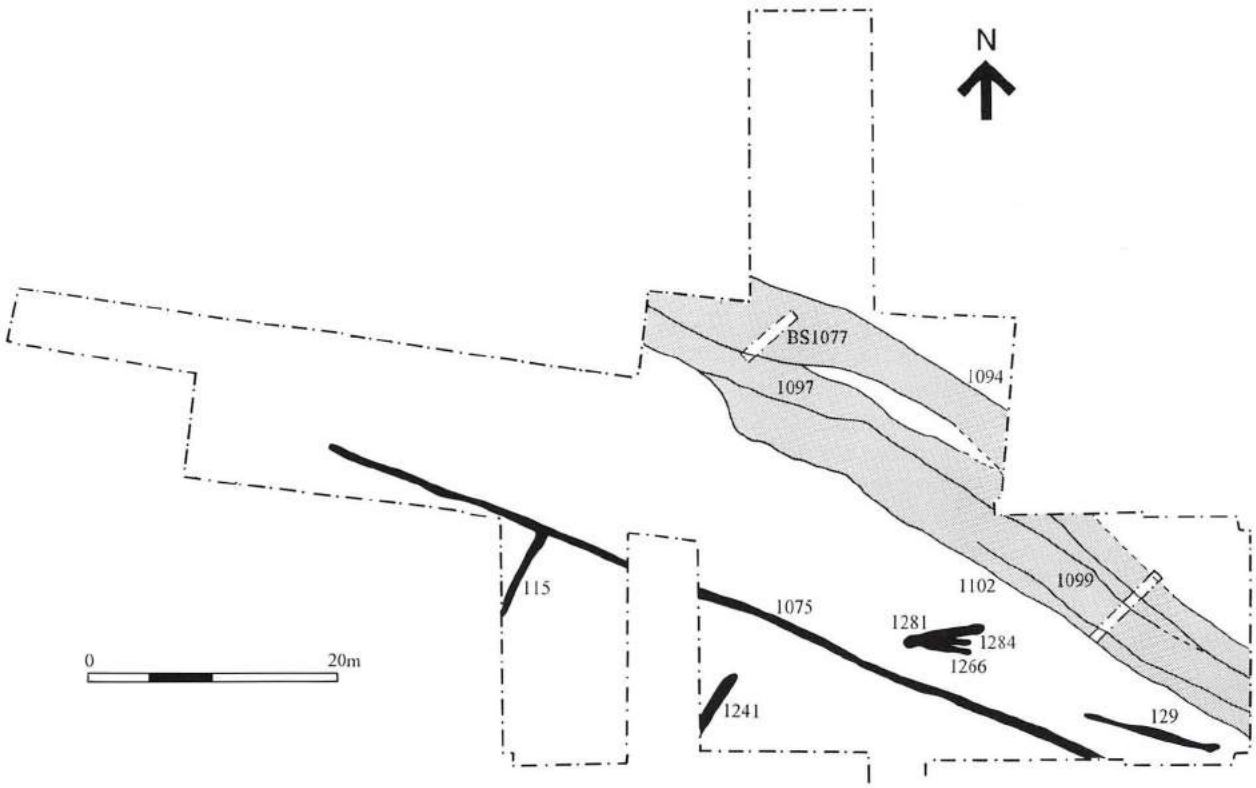

Fig. 3.2 Boreham Interchange. General plan of medival features: phase I. Features shown in tone are of the same date as those shown in black, but are represented in this way to avoid confusion where they overlap.

complete chimney pot from the fill of 1097 suggests that there was at least one building associated with this early phase, although none was identified within the excavated area. It seems likely that any buildings would have lain to the northeast of the ditches, in the region of the gas pipeline.

Evidence of a rectangular ditched enclosure, covering much of the southern part of the site and beyond, was afforded by two shallow ditches. Ditch 115 ran southwest from the point where it was truncated by phase II ditch 1008 for a distance of 8m, was 0.6m wide and a maximum of 0.20m deep. 1075 was probably contiguous with 115, but the relationship was destroyed by 1008. It lay on roughly the same axis as ditch 1102, further north. The depth of 1075 was roughly the same as that of 115 (up to 0.25m deep), and its width, at 0.55m in segment 1090 was also similar. Ditch 1241, lying parallel with 115, and though wider (0.96m), was only 0.10m deep and probably formed an internal division within this enclosure. Stratigraphically, two short lengths of slot or gully (1266 and 1284) may also belong to this phase. These shallow (0.70m and 0.50m respectively), narrow (slightly more than 0.3m and 0.25m) features were parallel with 1075, and cut by features associated with the buildings of phase II. Despite appearing similar to structural slots, there was no suggestion of other features that could combine with them to form the plan of a building.

Phase II (Figs 3.3, 3.4)

This phase saw the erection of two definite buildings within the excavated area, set within plots defined by ditches. A third structure left less distinct traces, and two apparently isolated hearths may represent the only surviving remains of more ephemeral structures.

For much of its length, phase I ditch 1075 was cut away by ditch 1008, a broader, deeper feature on a slightly different axis, which contained one recut (Fig. 3.6.13). This was aligned slightly closer to a true east-west axis than 1075. The eastern terminal of this feature was destroyed by the phase III ditch 1223 close to the southeast corner of Building 1. It then continued along the south side of this building, and extended 31m beyond it to the west. It would appear to mark the southern side of the phase II building complex, the northern side of which was provided by ditch 1092. Ditch 1008 ran alongside Building 1, and with 1062 delimited its plot, possibly also serving as an eaves-drip gully.

Ditch 1092 was observed at its eastern end, and excavated as the final recut of phase I ditch 1102. It became apparent later, however, that it had more in common with the ditches of phase II, being much narrower than the earlier ditches (0.85m). It was also excavated as part of box-section 1077 as 1120.

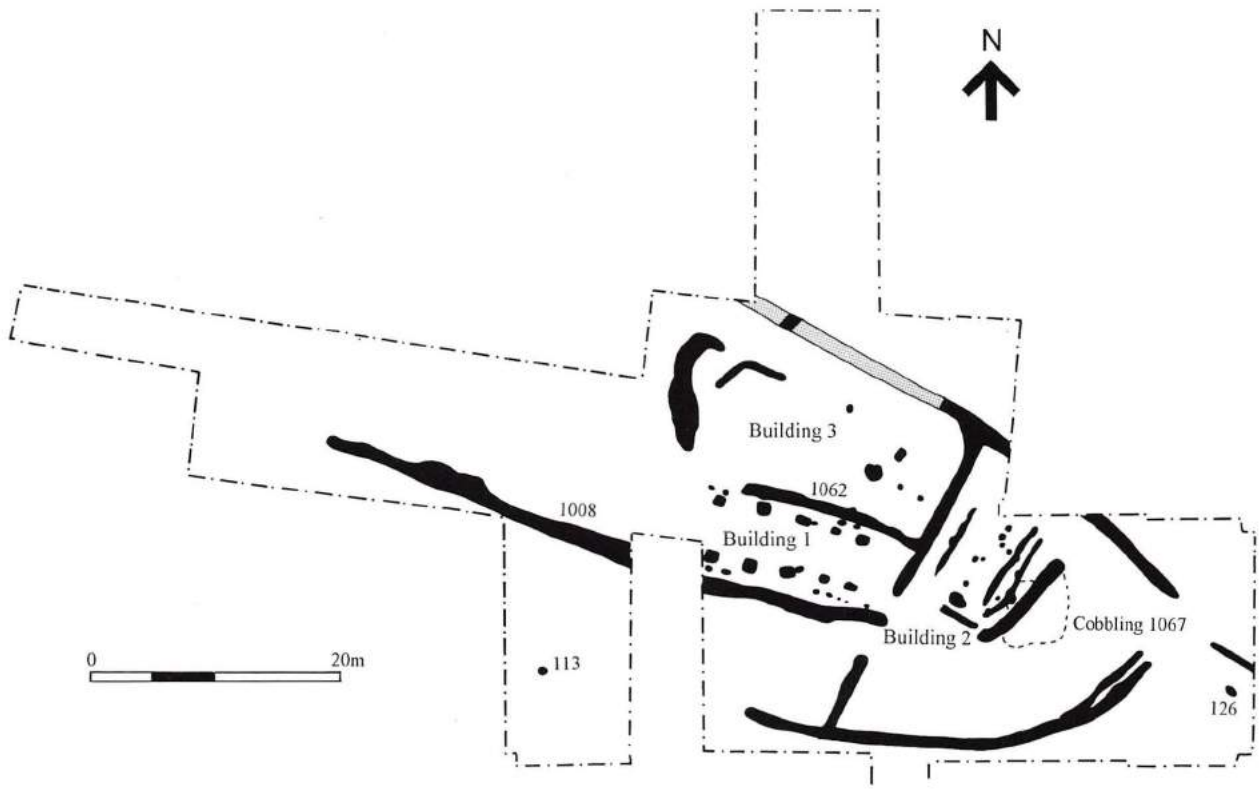

Fig. 3.3 General plan of medieval features: phase II

Building 1

The first building to be identified comprised two parallel rows of six large sub-rectangular post holes aligned east-west. These post holes were on average 1.02m x 0.86m, originally containing posts *c.*0.50m in diameter (Fig. 3.6.1-12). Outside these main post holes were rows of smaller post holes, ranging from 0.25 to 0.50m in diameter, interpreted as supports for walls outside the main structural timbers.

North of the post holes was a very shallow gully (1062), a feature only 0.16m deep, with irregular edges varying from 0.90m to 1.20m apart (Fig 3.6.14), running the length of the building. The localised gravel natural into which 1062 was cut may suggest that it was in fact part of a natural watercourse that was regularised to form a drip gully. At its east end it probably joined with 1304, a further shallow feature, 0.30m deep and *c.* 1m wide, which lay parallel with the east end of Building 1, but this relationship was destroyed by the phase III ditch 1223. A narrow gap (*c.* 2m) between the terminal of 1304 and 1008 was probably to permit access to the building, although very little ground between Building 1 and the ditches remained. Ditch 1304 continued north of 1062, being observed cutting 1097 in segment 1250, but how far it extended is unknown due to the impossibility of seeing it in plan against the earlier ditch fills.

Building 1 was constructed of large earth-fast posts supporting the framework of the roof. The outer walls, probably wattle and daub panels, would be supported by posts in the small outer post holes and attached at the top to a pitched roof. The smaller post holes (1027 and 1145) that cut 1023 and 1014 may represent the position of opposing central doorways. It is possibly more likely that these post holes, and those to the east, are part of an extension to an original two-bay structure. It is notable that the two eastern bays are slightly smaller than the western ones.

Building 2

A second building was composed of three parallel shallow slots (1131, 1138, 1221) running north-south. A fourth slot is conjectured as having been cut away by a later deep ditch (1206), which had also truncated the east side of 1221. The easternmost slot, 1131, curved inwards towards its southern terminal. It was 7.5m long, 0.40m wide and 0.16m deep. Four post holes were excavated along the line of the slot, and probably cut it. All of these features were, however, filled by the same material, and the exact nature of the relationship was impossible to determine. Feature 1138, the inner slot on the east, was much shallower, only 0.04m and narrower, at 0.25m. Its northern terminal extended slightly further north than that of 1131. Slot 1221 was, as noted above, severely truncated by 1206, but enough of its western side was preserved for signs of an inward turn reflecting that of 1131 to be discerned. It was cut by post hole 1216, and irregularities along its western edge indicated that other post holes also cut it.

Feature 1295, a short length of slot at the south end of the structure, apparently marked the end wall. This was shallow (0.10m), but its width of 0.32m was comparable

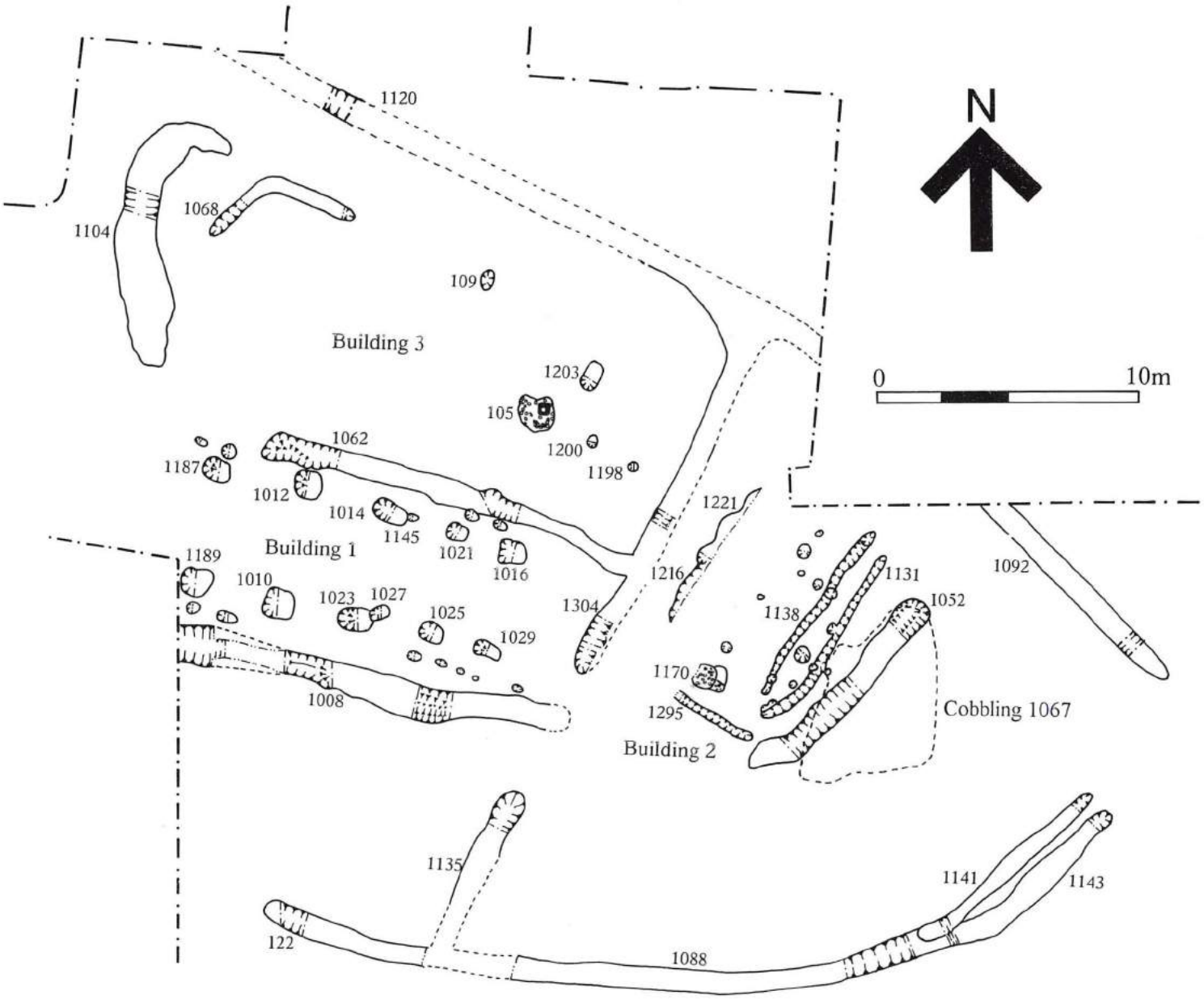

Fig. 3.4 Boreham Interchange. Detailed plan of medieval timber buildings 1, 2 and 3

with the other components of Building 2. Although 1206 (Fig. 3.5) cut away the western terminal of this slot, an overall length of 4.5 to 5m can reasonably be assumed. Other features associated with these slots include four post holes in a line running along the centre of the building, the posts in which would have formed the main roof supports. Between the southernmost of these post holes and slot 1295 lay 1170, a hearth made of flint nodules and pebbles.

Running alongside the east side of Building 2 was ditch 1052, which was a fairly large feature, being 1.18m wide and 0.49m deep, curving inwards towards the building at its southern terminal, parallel to slot 1131. The northern terminal was some 1.50m short of the north end of the slots. This feature produced the only coins from the excavation, a silver penny and another quarter cut penny, dated to the reign of Henry I (1100-1135).

Ditch 1052 would seem to be a drip-gully, but was back-filled and covered over by an area of cobbling, 1067, which survived ploughing largely because it had slumped into the top of the ditch. The gravel extended as far as, but not over, slot 1131, suggesting that Building 2 was still standing and in use at the time of its deposition.

Building 3

A third building almost certainly lay between gully 1062 and ditch 1092, although few of its component features were recognised during excavation. It seems likely that the foundations of this building were so slight that most did not penetrate below topsoil, but a possibly more likely explanation is that they were not visible cutting the earlier ditches over which this building lay. The presence of hearth 104 in this is area suggests the existence of a structure, possibly domestic, but further

supporting evidence is scant. It consists of four post holes, and a right-angle corner of slot or gully (1068), 0.52m wide, which may mark the northwest corner. Beyond 1068 was a further feature probably associated with Building 3. This was a short length of ditch 10m long, running north-south with a slight 'hook' at the northern end. It had a steep-sided, bowl-shaped profile, 1.3m wide and 0.6m deep (Fig. 3.6.15), and contained large quantities of daub.

A significant point regarding hearth 104 is that the base, 105, was strengthened with sherds of pottery, including fragments of a chimney pot. This reinforces the suggestion that there were structures in the area dating from the earlier phase of activity on site, which were demolished or refurbished during or prior to the construction of the phase II buildings.

Other Possible Structures

The presence of two further hearths (113 and 126) suggests the existence of further buildings, as does the unusually high number of chimney pots represented on site. These hearths were simple sunken bowl hearths and very small. No further features indicating buildings, however, were located, and once again it is suggested that foundations too shallow to penetrate the subsoil may have been employed in their construction.

Ditches

Apart from the ditches mentioned above in association with the structures, there are a number of other linear features belonging to phase II. Among these was 1088, a shallow ditch 0.95m wide and 0.19m deep with a flattish base running along the south part of the trench, and possibly defining the southern limit of the building area. At its eastern end, it curved quite sharply towards the northeast, cutting the fill of 1102 just before terminating in a rounded butt-end. The last 8.5m of this ditch were recut slightly to the north west of its original course.

One further ditch that possibly belongs to this phase was 1135. Very little of this survived, but it appears to have been a continuation of 1304, 0.90m wide and 0.35m deep spanning the gap between 1008 and 1088.

Phase III (Fig. 3.5)

Subsequent to the abandonment of the buildings activity on the site appears to have continued in a limited form. A large area north of and cutting the western terminal of 1008 appears to be a series of intercutting and recut pits. A box-section excavated through this area identified three definite pits though the section suggests the presence of more.

Three ditches cut across the site on a north-south axis. These were 1117, 1223 and 1206. Feature 1117, at the extreme western limit of the excavation was related to no other features, and so is difficult to date. It was a large ditch, probably forming a substantial boundary, 2.8m wide and 0.18m deep. The alignment of all three of these ditches is roughly parallel with the main London to Colchester road west of the site.

1223 cut across the eastern terminal of 1008, and destroyed much of phase II ditch 1304, since it ran on

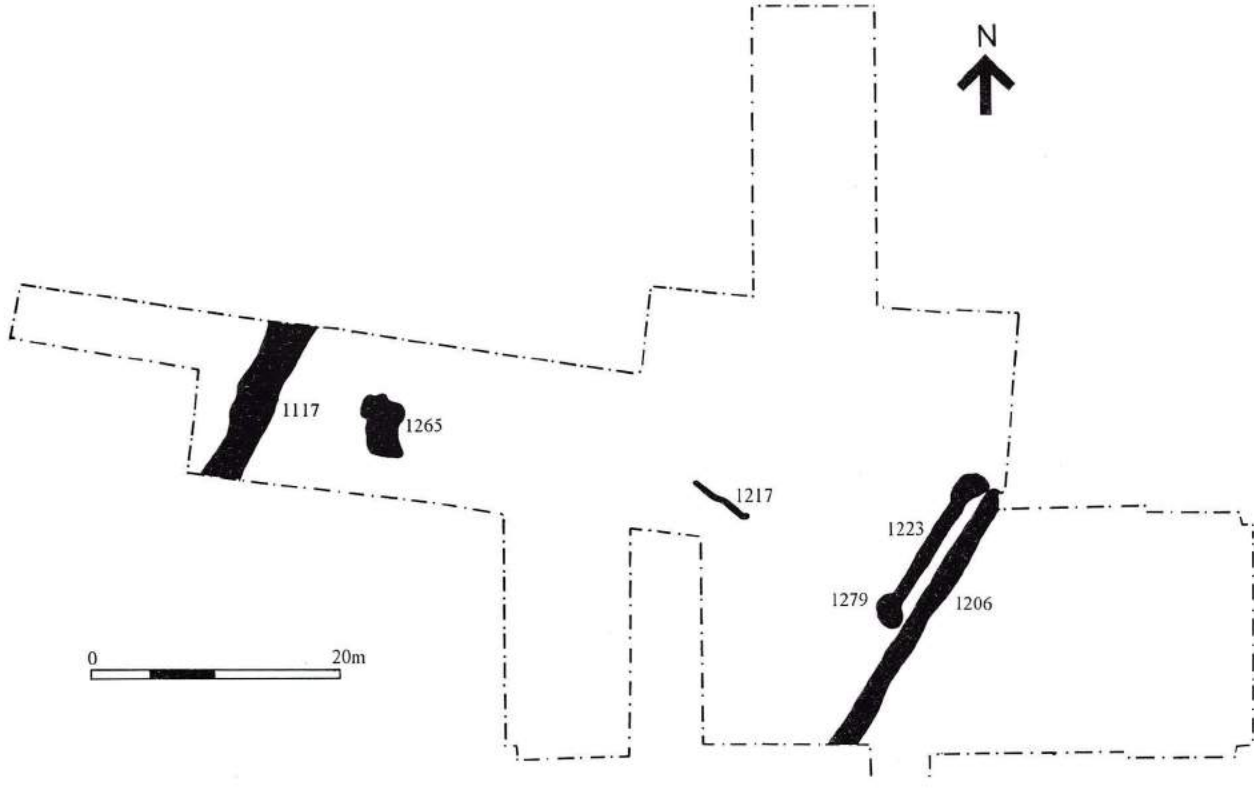

Fig. 3.5 Boreham Interchange. General plan of medival features: phase III

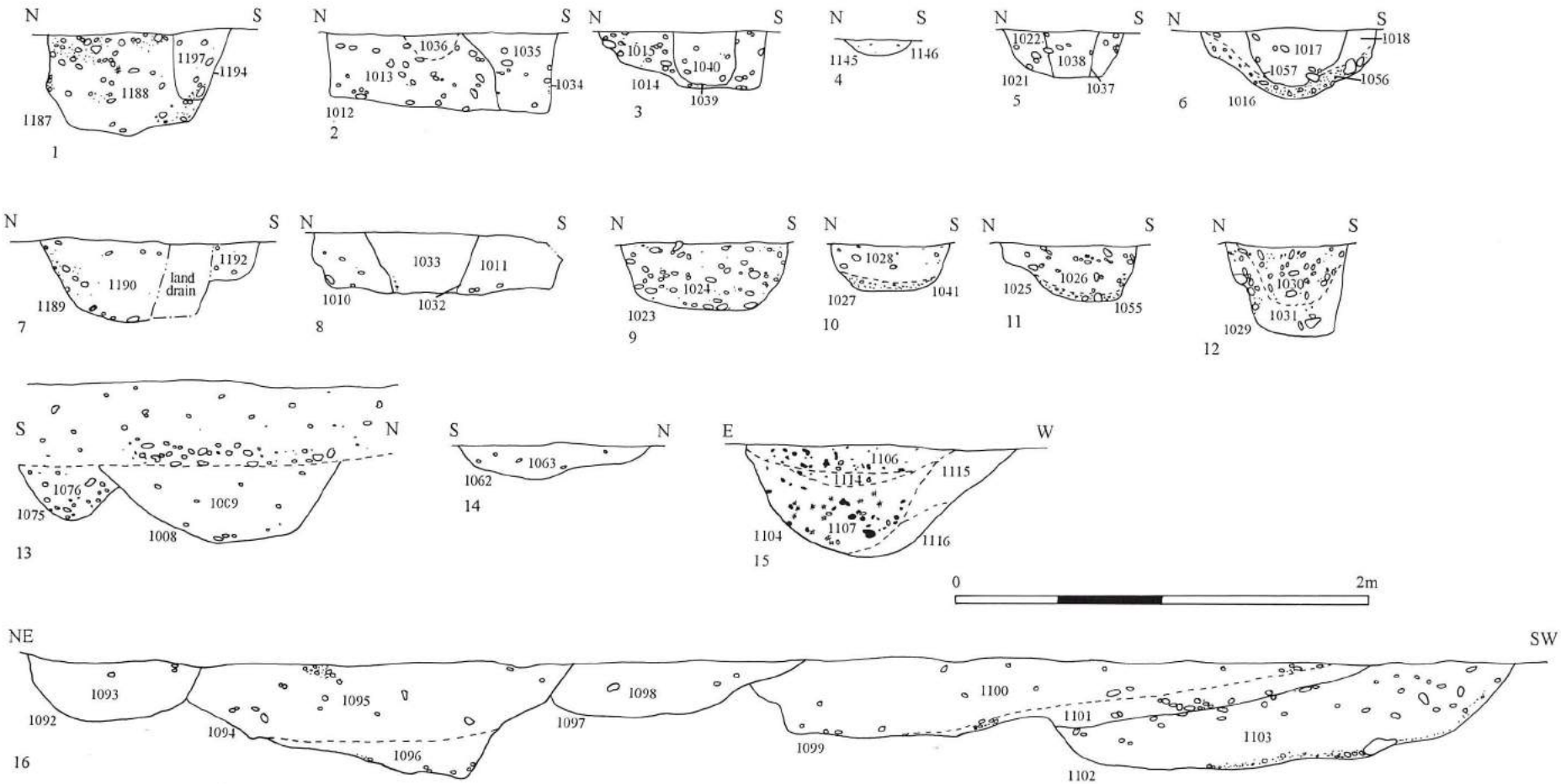

Fig. 3.6 Boreham Interchange. Sections through medival features. 1-12; building 1: 13-16; ditches.

an almost identical southwest to northeast alignment. Whilst being reasonably wide (1.0m), 1223 was only around 0.20m deep, thus it was possible to identify 1304 quite readily once its existence was realised.

Area B

A number of features within Area B (the Late Bronze Age enclosure) have been identified as medieval (Fig 2.1). These were mainly ditches and gullies, probably forming part of a field system related to the main focus of activity in Area A.

Two gullies ran on an approximate northeast/ southwest alignment at the western edge of the site. 538 was *c.* 25m long and very shallow (0.22m deep). Its southern terminal lay 0.40m west of the northern terminal of 937, which it overlapped slightly. 937 continued the line, leaving the excavation after *c.* 8m, and had a profile almost identical to that of 538.

Although no dating evidence was recovered from either of these features, extrapolation of their line suggests that they would have met a similar ditch (1075), which ran southeast from Area A, at an angle of *c.* 90°. For this reason, it is suggested that these gullies represent part of a system of fields or paddocks dating from the 12th or 13th century AD. Three post holes (567, 571 and 925) lay close to the east side of 538 and may be associated with it.

The northern terminal of prehistoric ditch 937 was cut by 556, a shallow, narrow ditch running on an approximately southeast/ northwest alignment. Its length is unknown, as it extended from the east baulk to the west and beyond, curving slightly towards the northwest.

For much of its recorded length ditch 556 was quite consistent in its size and shape. In segment 213 (excavated during the evaluation), segment 557 and segment 900 the ditch was between 0.25 and 0.35m deep and 0.70m wide, with a bowl-shaped profile tending towards a splayed-out V-shape. In segment 565, however, which was excavated against the leached-out clay natural on the west side of the site, it appeared much slighter (*c.* 0.10m deep and *c.* 0.40m wide).

Finds from 556 were sparse, but comprised abraded prehistoric pottery and burnt flint. A single sherd of blue and white glazed china was found lying loose on the feature's surface. Because it cut gullies 538 and 937, it is assumed that 556 was of medieval or later date. The sherd of china recovered from the surface of the ditch suggests that it was comparatively recent.

Immediately south of ditch 556 were three widely spaced post holes, 922, 923 and 943, which may originally have formed part of a line running parallel to it.

Cutting through prehistoric ditch 504 was steep-sided gully 951, *c.* 0.80m wide and 0.75m deep. It ran roughly parallel to and 18m east of the line of 538/937. This ditch was *c.* 15m long and terminated just beyond the southern edge of 504. A shallower ditch or gully, 638, formed a recut along the whole of this length and continued along the same alignment for another 19m before being obliterated by the post-medieval quarry. Ditch 638 was *c.* 50cm wide and 10cm deep, with a bowl-shaped profile. The northern terminal was 10m north of its junction with 504, and its southern extent is unknown. No finds were recovered from 951, and only abraded prehistoric pottery from 638, which was clearly residual. The alignment of these features suggests a medieval or later date.

The excavated material

Medieval pottery

by Helen Walker

A small amount of pottery totalling 1159 sherds weighing 10.6kg was excavated from 84 contexts in trench A. The only identifiable fine wares comprise a few sherds from Hedingham and sandy orange ware jugs. The most frequent coarse wares comprise early medieval ware followed by medieval coarse wares including Hedingham products, and shell-and-sand-tempered ware. Several coarse ware fabrics also contain flint. Although three phases of occupation were identified, all the pottery appears to belong to the early to mid-13th century, and a number of vertical cross-fits show that some contexts were contaminated by intercutting features. The assemblage appears quite typical of rural sites. Coarse-ware forms comprise mainly cooking-pot rims, some with very large diameters, a few bowl rims and very occasional sherds from more specialised forms. By far the most unusual finds are fragments from several chimney pots.

Method

The pottery has been recorded using Cunningham's typology (Cunningham 1985, 1-16) and her fabric numbers, and rim codes are quoted in this report. The rim codes for the cooking pots are especially important as they follow a chronology described by Drury (1993, 81-4) who suggests an approximate date range for each type. This dating framework has been used to date the cooking pots from Boreham Interchange. Because the descriptions of some of the more developed cooking pot rim forms can be rather long-winded, the rim code is used in the text instead. Drury's cooking-pot rim typology is as follows:-

Rim code	Description	Date
-	Thickened, everted rims	From 11th/12th C
-	Beaded rims	from 12th C
B2	Simple, slightly developed everted rims	*c.* 1200
B4	Developed rims with pointed rims and internal thickening or beading	*c.* 1200
D2	Cavetto, or curved over flanged rims	First half of 13th C
H2	Squared rim with sloping top above a short neck	Early to mid-13th C
H1	Flat-topped rim above a short upright neck	Throughout the 13th C

The pottery has been written up in phase order and the fabrics present in each phase have been summarised by means of tables (Tables 2 to 4). Pottery selected for illustration comprises sherds already illustrated in the evaluation report, vessels that are partially complete, and forms that are unusual. The drawings are shown in fabric number order rather than phase order. For examples of cooking-pot rims not illustrated, refer to Drury's Rivenhall report (Drury 1993, figs 38-40). Percentages quoted in the text are calculated from sherd count.

The pottery fabrics (from phased contexts)

Fabric 12A *Shell-tempered ware:* (7% of total) An early medieval fabric described by Drury (1993, 78) and tempered with crushed shell, usually oyster. Its date range is 10th to 13th century, but see under 'Fabric 12B' for a discussion of the dating of shelly wares. Forms comprise cooking pots, with thickened everted rims and beaded rims, along with a developed H2 rim and a down-turned flanged rim. Rim size varies from 220 to 280mm. In addition to this there is one beaded rim with internal thickening, which may be from a bowl or a cooking pot. Decoration: none.

Fabric 12B *Shell-and-sand-tempered ware:* (19% of total) an early medieval fabric described by Drury (1993, 78). At Rivenhall, Drury dates this ware form the ?early 11th century to the second half of the 12th century (Drury 1993, 80). However in other areas, shelly wares continue well into the 13th century, for example at Hadleigh Castle and North Shoebury, both near Southend (Drewett 1975, 119-23 and Walker 1995, fig.76.30-8). Inland, 13th-century shelly wares also occur at King John's Hunting Lodge, Writtle, near Chelmsford, where they were current in the earlier 13th century (Rahtz 1969, 106). Therefore, the extreme date range for this ware is likely to be 11th to 13th century. This is by far the most frequent of the shelly wares. Forms comprise two everted flanged rims from bowls, one with a diameter in excess of 400mm. All other identifiable rims are from cooking pots, and there are examples of thickened everted, beaded, B2, and B4 cooking-pot rims. Most rims are too fragmented to measure diameter but two rims measure 260mm and one beaded cooking-pot rim has a large diameter of 320mm. Decoration: one body sherd exhibits a thumbed, applied strip.

Fabric 12Bf *Shell-and-sand-tempered ware with flint* (<1% of total) As Fabric 12B but with sparse inclusions of calcined flint as well and sand and shell. Forms and decoration: none

Fabric 12C *Sand-and-superficial-shell-tempered ware:* (2% of total) Another early medieval fabric described by Drury (1993, 78). Here, sand is the dominant tempering agent with only sparse, usually superficial shell. Forms comprise small fragments from a bowl with a rounded everted rim and a cooking pot with an H2 rim. Both rims are too fragmented to measure diameter. Decoration: none.

Fabric 13 *Early medieval ware:* (30% of total) This is described by Drury (1993, 80); the main tempering agent for this ware is abundant coarse sands, it is low-fired coil-built and typically has red-brown surfaces with a grey core. At Rivenhall, Drury dates it to the ?early 11th century to *c.*1200, but excavations at Stansted show early medieval ware in association with fine wares dating to the early to mid-13th century (Walker forthcoming a), so perhaps date of ?early 11th to earlier 13th century is more likely. Early medieval ware belonging to the earlier end of this date range was fired in bonfires or clamps, but early medieval ware belonging to the second half of the 12th to earlier 13th century was more likely to have been fired in proper kilns, as at Middleborough in Colchester (Cunningham 1984, 186-9).

This is the commonest fabric type found. All identifiable forms comprise cooking pots consisting of examples with beaded rims (No. 1), a B2 rim, a D2 rim and four H2 rims (Nos. 2-3). Size of cooking-pot rim ranges from 210 to 300mm in diameter. Also present are a pierced base found in building 3 and a sherd from a possible storage jar in phase III. Decoration: thumbed, applied strips are relatively common and there are a couple of instances of wavy line combing. Cooking pot No.3 shows thumbing around the edge of the rim, and a base sherd was found with continuous thumbing around the basal angle. In addition, a glazed sherd was excavated from building 3.

Fabric 13T *Transitional sandy ware:* (3% of total) Previously known as early medieval-transitional ware but changed to be consistent with Cotter (forthcoming). This has a buff-brown to red fabric, sometimes with a grey core and darker surfaces. Vessels are often thick-walled. The matrix is fine and there is a tempering of predominantly grey, white and colourless sands. It may have been produced at Hedingham (Walker forthcoming a). Only one form is present the rim of a large B4 ?cooking pot measuring 340 mm (No.4). Decoration: none.

Fabric 13f *Early medieval flinty ware:* (3.5% of total) The same as Fabric 13 but with the addition of sparse, crushed calcined flint. Forms: part of a spouted or socketed bowl (No.5); Cooking pots; a large beaded rim measuring 320mm, a B4 rim (measuring 300 mm) and an H1 rim (measuring 260mm). Decoration: none.

Fabric 20 *Medieval coarse ware:* (17% 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 the county. Some of the sherds found here are low-fired and difficult to distinguish from early medieval ware. Apart from a possible jug rim, all the identifiable forms are cooking pots; rim types comprise sub-forms B2, B4, D2, H2, H1 and there is one example of a down-turned flanged rim (No.6). Diameter varies from 200 to 300 mm and there are two examples of very large cooking-pot rims, a D2 rim and an H2 rim measuring 330 and 340mm respectively. Decoration: There is an example of an H2 rim with thumbing around the edge, a B4 rim shows combing on the rim and body and two body sherds show thumbed, applied strips.

Fabric 20D *Hedingham coarse ware* (10% of total). This is a type of medieval coarse ware, made at kilns in the area of Sible Hedingham in north Essex. It is tempered with moderate grey, white and colourless sub-angular quartz and sparse rust coloured oxides, within a fine micaceous matrix. Colour is usually grey although buff and sometimes reddish examples also occur. It has the extreme date range of mid-12th to mid-14th century (see under 'Fabric 22' for a discussion of dating). Forms comprise three H2 cooking-pot rims (No. 7). One has a large diameter of 340mm.

Fabric 20f *Flinty medieval coarse ware* (1% of total). A type of medieval coarse ware with sparse but clearly visible inclusions of calcined flint as well as sand. Forms comprise H2 cooking-pot rims ranging in size from 210 to 300mm. Decoration: none

Fabric 20ox *Oxidised medieval coarse ware* (3% of total) Colour varies from a very bright to a dull orange, usually with a darker core. There is nothing distinctive about the fabric, but it has been sub-divided as it was deliberately oxidised. These vessels do not appear to be products of the Mill Green or medieval Harlow industries, which also produced oxidised coarse wares. Forms comprise a small bowl or cooking pot with a carination below the rim (No. 8) and a second similar vessel. There is also an example of one B4 and two H1 cooking-pot rims (No. 9). Decoration: the B4 cooking-pot rim shows wavy line combing.

Fabric 21 *Sandy orange ware* (1.5% of total) Described by Cunningham (1982, 359), sandy orange ware includes any locally made sand-tempered, oxidised ware with a date range of 13th to 16th centuries. This ware occurs only in phase I, where a slip-painted jug was found (No.10).

Fabric 22 *Hedingham fine ware* (2% of total) This is described by Drury (1993, 86-9), it has a fine micaceous fabric, usually creamy orange or buff and typically without a reduced core. The main vessel produced is the jug, usually highly decorated and with a mottled green glaze, although examples with a plain lead glaze are not uncommon. It was made at several production sites centred around Sible Hedingham in north Essex and has a wide distribution throughout north Essex, East Anglia and down the Essex coast. In Essex, it seems to be commonest from the late 12th to earlier 13th centuries, but excavations at Denny Abbey in Cambridgeshire show Hedingham fine ware present in securely stratified groups dating from the second half of the 12th to the first half of the 14th (Coppack 1980, 223-47). This is the commonest of the fine wares. No rims are present but all appear to be from jugs. Styles of decoration comprise applied strips (No. 11) and zones of red-slip-coating (No. 12).

Fabric 35B *Mill Green-type ware* (<1% of total) This is a fine red-firing, micaceous fabric, fully described by Pearce *et al.* (1982) and by Meddens and Redknap (1992, 11-43). It was made at kilns near Ingatestone in central Essex and has been dated by its occurrence in Thames waterfront deposits to the late-13th to mid-14th century.

However, at some excavations in Essex, for example at King Johns Hunting Lodge, Writtle (Rahtz 1969), it seems to be present by the mid-13th century. Sherds are classified as Mill Green-type ware if they are too small or abraded to be positively identified as Mill Green ware. Two abraded sherds were found in phase II with a sherd of definite Mill Green ware found unstratified, showing two parallel lines of white slip-painting under a plain lead glaze.

Fabric 40 *Post-medieval red earthenware* (<1% of total) This is described by Cunningham (1985, 1-2) and spans the whole post-medieval period starting from the late 15th/16th century and persisting into the 19th. One body sherd was found stratified.

The chimney-pot fabrics

Type 1 Brick-red fabric tempered with sparse shell or shell vesicles, sand and sometimes sparse flint. The fabric is very friable and has a laminated fracture (No. 13)

Type 2 As type 1 but with more shell or shell vesicles (No.14)

Type 3 Brick-red or buff-red fabric tempered with sand and sparse flint but virtually no shell, harder and less friable than types 1-2. No one particular shape occurs in this fabric (Nos. 15, 16, 17)

Type 4 Moderate flint tempering, also sand inclusions and shell vesicles. One example only, a small fragment in building 3.

Table 2: Quantification of pottery from Phase 1 by feature, fabric and sherd count

Feature	Seg.	Fill	Relationship	Fabrics												Wt		Chimney pots		Wt
				12A	12B	12C	13	13t	13f	20	20D	20f	20ox	21	22	(g)		type 1	type 2	(g)
ditch 1099		1100	cut by 1052				2	1			1					24	R			
ditch 1250		1240	cut by 1223		3		3			4	2	1				132				
ditch 1250		1239	upper fill	11	1	6	14	1	5	14	10		3	1	5	827		58	1	2544
ditch 1120		1123	upper fill				12									108				
ditch 1281	1286	1274	primary fill	1												2				
ditch 1281	1287	1258	upper fill		4											31				
ditch 129		130			1		3				1					12		1		34
ditch 1075		1076	cut by 1008, 1088		2											4				
gully 115		116	below 119		13	1	6							2		327				
115/117		119			1		9			2				15		286				
ditch131		132	same as 1241	6	2											36				
ditch 1241	1242	1243			2		2		2							35				
				18	29	7	51	2	7	20	14	1	3	18	5	1824		59	1	2578
	R = Roman pottery present																			

Pottery from phase I (Table 2)

A small amount of pottery was excavated from phase I, which comprised a series of ditches and gullies. A total of 175 sherds weighing nearly 2kg, with an average sherd size of 10g is present. Finds also include examples of chimney pots in fabric types 1 and 2.

At the bottom of the sequence, the upper fill of ditch 1099 (context 1100) produced a few sherds of early medieval fabrics along with a sherd of Hedingham coarse ware, giving a date of not before the mid-12th century for the start of occupation. However, as this feature was cut by phase II ditch 1052, the pottery may be intrusive.

Succeeding ditch 1250 produced the largest group in phase I, weighing just under 1kg. However this feature was cut by phase III ditch 1223, and cross-fits between the two features show the fills have been contaminated. There is also a cross-fit with context 1224, a fill of phase II ditch 1304, which was also cut by 1223. Datable pottery in the primary fill (1240) comprises an abraded medieval coarse ware cooking-pot rim of sub-form H2, a type datable to the early to mid-13th century. Its fabric shows sparse calcined flint tempering as well as sand and has been classified as Fabric 20f. The bulk of the finds came from upper fill 1239. Fine wares found here comprise Hedingham ware and a single sherd of abraded sandy orange ware showing the remains of a pale green glaze. There are five sherds of Hedingham ware; two sherds have a reddish fabric with a decayed, yellowish splash glaze and two have an orange fabric with a grey core, buff surfaces and a pale green glaze. Another sherd from the same vessel was found in fill 1225 in phase III ditch 1223. The fifth sherd is abraded, has a buff-coloured fabric and shows traces of a yellowish glaze. None of these sherds are of closely datable types, but the author has noted that buff or reddish fabrics seem to occur more often on earlier jugs. This has also been noted by John Cotter (forthcoming). They may date from the second half of the 12th century to the earlier 13th.

Coarse-ware forms from the upper fill of ditch 1250 comprise mainly cooking pots. Rim forms include examples of a beaded rim, a B4 rim an H2 and an H1 rim. The H1 rim is typologically the latest and was current throughout the 13th century. One of the H2 cooking pots has a very large rim diameter of 340mm. Also present is a medieval coarse ware possible jug rim and part of a ?cooking-pot rim in oxidised medieval coarse ware with a carination below the rim and straight sides (No.8). This is an unusual shape for a cooking pot that usually has a pronounced shoulder below the neck, and it may in fact be from a small bowl. The most important finds in ditch 1250 are the remains of two chimney pots, an almost complete example of a fabric type 1 pot (No. 13) and part of a fabric type 2 pot (No. 14). As both chimney pots show vertical cross-fits with later features (see catalogue entry) it is possible that they are intrusive, although the bulk of chimney pot No. 13 was found in ditch 1250.

Little pottery and no featured sherds were found in phase I ditches 129, 1075, 1120, and 1281, although a fragment of type 1 chimney pot was found in ditch 129. Ditch 1241 and its equivalent 131 also produced very little pottery, the latest datable sherd comprising an early medieval ware H2 cooking-pot rim. A small group of pottery was found in gully 115, from fill 116, and fill 119, at the junction of 115/117. Cross-fits between the two fills indicate they were deposited at the same time. Part of a sandy orange ware jug (No.10) was recovered from the gully; it has orange-brown surfaces, a thick blue-grey core and is tempered with coarse sub-rounded sands and shows off-white slip-painted decoration without an accompanying glaze. Unglazed slip-painted jugs are not usually current until the late 14th to 15th century, although slip-painting under a plain lead glaze is common on many wares from the 13th century. The coarseness of the fabric and it general appearance suggest that it is much earlier than 15th century. Its shape, with the triangular rim and rilled vertical neck is comparable to coarse ware jugs excavated from a production centre at Mile End near Colchester (Drury and Petchey 1975, fig. 4.1-2). The kiln products were originally dated from the late 12th to mid-13th century, but the dating has now been revised to not before *c.*1200 (Drury 1993, 82). Therefore on balance this is probably a 13th-century vessel, perhaps belonging to the earlier 13th century. The only other datable sherd in this group is a sand-and-superficial-shell-tempered ware H2 cooking-pot rim. There is also a flanged, everted bowl rim in sand-and-shell-tempered ware.

Discussion of phase I

The best dating comes from gully 115/117, which produced the largest group not cut by later features. Here, jug No. 10 and an H2 cooking pot give a most likely date to early to mid-13th century. Pottery from the other, less securely stratified features, would also seem to be of this date. The fact that both coarse and fine wares are present indicates the pottery is from both living and service areas.

Pottery from phase II (Table 3)

This is the largest phase and a total of 756 sherds weighing nearly 7kg was excavated with an average sherd size of 9g, slightly less than that of phase 1. All wares found in phase I are still present in phase II with the exception of sandy orange ware. Appearing for the first time are small amounts of Fabric 12Bf and Mill Green-type ware. Chimney pots are again present, and examples of fabric types 1, 2, 3 and 4 were found.

The ditches

Nearly all the ditches produced pottery but in varying quantities; hardly any came from NW-SE ditch 1092. Rather more was found in ditch 1052, which lay parallel to slot 1131 of building 2. Primary fill 1238 of this ditch produced only a single sherd of shell-and-sand-tempered ware. Datable pottery in secondary fill 1237 comprises a medieval coarse ware type H1 cooking-pot rim. Rather more pottery was found in ditch segment 1053 (fill 1054); however, as this fill cut phase I ditch fill 1100 and was in turn cut by cobbled layer 1071, there is again the possibility of contamination. Fine wares found here comprise one tiny abraded sherd of possible Mill Green ware; although the fabric is right for Mill Green, there are no traces of surface treatment and therefore identification is only tentative. The remaining pottery is coarse ware, of particular interest is the remains of a spouted or socketed bowl rim in early medieval flinty ware (No. 5). Early medieval socketed bowls and a possible spouted bowl were found at excavations at Stansted Airport on sites dated by fine wares

Table 3: Quantification of pottery from Phase 2 by feature, fabric and sherd count

Bid	Feature	Seg.	Fill	Relationship	Fabrics													Wt		Chimney pot types				Wt
					12A	12B	12Bf	12C	13	13t	13f	20	20D	20f	20ox	22	35B	40	(g)		1	2	3	4	(g)
	ditch 1092			1123 in ph 1	2				3										42						
	ditch 1052	1236	1238	primary fill		1													16						
		1236	1237	secondary fill		2			5			2		1					140						
		1053	1054	cut 1100, cut by 1071		47		1	2		1	3	4		3		1		565						
	ditch 122		123	same as 1088	2	2			8				12		4				180						
	ditch 1088		1089	same as 122, 1143		6													35						
	ditch 1143		1144	cut 1100 and 129									4						20						
		1261	1262			4					1								21						
			1264	surface cleaning		1													6						
	ditch 1141	1259	1260	cut 1100 and 1144	1	1			1										10						
			1263	surface cleaning		3								3					47						
	ditch 117		118	same as ditch 1008		1			4										73			1			66
	ditch 121		120	same as ditch 1008	5			3	5			12							161						
	ditch 1008	1290	1291	cut ditch 1075	2														5						
		1275	1276	same as 1291		5			2			3	1						56						
		1270	1273	below 1271		4			3		1	3							94						
		1270	1271			1	2			2		1	10			1			79				1		668
	ditch 1304		1227	cut by 1223	6	5			12	2	5	7	1						439		1				14
	ditch 111		112	same as ditch 1062	11	3			41		1	15		5		5			694	R					
			110	surface finds	3	1			8			9							130						
	ditch 1062		1063	same as 111	2	3			5	5		9	4			3			143						
1	P-H 1012		1013	part of 1059		2			5						1				69						
	P-H 1014		1015	part of 1059							1								1						
	P-P 1057		1017	in P-H 1016, in 1059					6			1				4			72						
	P-H 1080		1081	part of 1058								1							12						
	P-H 1023		1024	part of 1060								1							1						
	P-H 1010		1011	part of 1060	1				1			2							28						
	P-H 1189		1190	part of 1060							1	1							3						
	P-H 1025		1026	part of 1060							1								1						
	P-H 1212		1213	part of 1061					1										17						
	P-H 1195		1196	part of 1061								1							5						
	P-H 1042		1043	part of 1061								3							13						
2	slot 1131	1132	1133																0	R					
	P-H 1163		1164	cut 1138								1							5						
	P-H 1165		1166	cut 1100, 1138		3			1		1								31						
	P-H 1157		1158			2													10						
	slot 1221		1219	secondary fill		1									1				9						
	slot 1221		1248	same as 1219		10			2				1						93						
	P-H 1216		1214	cut 1219		3						1							57						
	slot 1295		1296	cut by 1206	1														8						
	area 1071		1067	cut ditch 1052	5	19			40		6	20	5	1	9				1002						
	layer 1002			cleaning above 1067	2	10			8		1	11	1						170						
	layer 1003			cleaning above 1067		3			20		6	15	2	1	10				599						
	layer 1004			cleaning above 1067		1		1	2			1	3	3					106			1	1		335
	layer 1006			cleaning above 1067					2			5	1						93		5				622
	layer 1007			cleaning above 1067		6			4			4	1					1	165						
3	hearth 105								8			4					1		103						
	hearth 105		103	surface finds															0				1		268
	P-H 1203		1202	cut 1100	2	1													20						
	P-H 1200		1201	cut 1100	2					1									46						
	hearth 126		127									4							5						
	slot 1068		1069													1			3						
	slot 1068		1070	surface cleaning					3			5	2						108						
	P-H 109		108						1										11						
	ditch 1104		1106	below 1105				5	11		2	9	15						880						
	ditch 1104		1105	top fill				3	1			1	6						130				1		76
	ditch 1104		1247	surface cleaning					1		1	1							33						
					47	151	2	13	216	10	29	156	73	14	28	14	2	1	6865		6	2	3	1	2049
	R = Roman pottery present																								

to the mid-13th century (Walker forthcoming a, nos. 8, 49, 89). The remaining coarse wares comprise cooking-pot rims, typologically the latest of which is a medieval coarse ware curved-over, or D2, rim, dating to the first half of the 13th century, with a very large diameter of 330mm. A shell-and-sand-tempered ware beaded cooking-pot rim also has a large diameter measuring 320mm.

Ditch 122/1088/1141/1143, which lay to the southeast of the buildings, produced very little pottery; most came from the western end, with least from eastern arms 1141 and 1143. No fine wares are present. Datable pottery in ditch 122 comprises an oxidised medieval coarse-ware H1 cooking-pot rim (No. 9) belonging to the 13th century. Ditch 1088 and ditch arm 1143 produced no diagnostic sherds, while ditch arm 1141, which cut 1143, did not produce demonstrably later pottery. However, an early medieval flinty ware H2 cooking-pot rim was recovered from the surface cleaning of ditch 1141 and appears to be from the same vessel as found in cobbling layers 1003 and 1004, one of the few instances of a horizontal cross-fit to be found on site.

Ditch 117/121/1008 which ran to the south of building 1, produced only slightly more than ditch 1088 etc. Of interest in the western end, ditch 117, was part of a shelly (fabric type 2) chimney pot, perhaps from the same vessel as found in layer 1004 to the east of building 2. Also worth noting from this part of the ditch is an early medieval ware H2 cooking-pot rim with thumbing around the edge of the rim (No. 3), a type of surface treatment more characteristic of 12th-century thickened or beaded cooking-pot rims. Of interest in ditch continuation 121 is an early medieval ware base sherd, which is continuously thumbed around the basal angle, as found on bowls on a mid 13th- century site at Stansted Airport (cf. Walker forthcoming a, no. 43). Few featured sherds were found in the main ditch section 1008 and comprise two cooking-pot rims, typologically the latest being a D2 rim datable to the first half of the 13th century from primary fill 1273. Above 1273, fill 1271 produced the only fine ware to be found in the ditch, a single sherd of Hedingham ware with a pale green glaze decorated with a band of red slip-coating. It is from the same vessel as a sherd excavated from cleaning context 1278 of phase III ?pit 1279 (No. 12). Red slip-coating was commonly used to decorate Hedingham ware jugs and is not closely datable (unless used in Rouen style motifs). Also found here is a section of another chimney pot of sandy type 3 (No. 15). This differs from the previous chimney pots in that it has a narrower bore (see illustration) and much deeper and more frequent thumb indentations, six columns as opposed to four on the shelly examples. There is no evidence that the pottery from fill 1271 is significantly later than that from the primary fill, although the dissimilarity in fabric types and the lack of cross-fits suggests that the pottery from the two fills was not deposited in the same episode.

One fill of ditch 1304, which bounded the eastern side of building 3, produced modest amounts of pottery (context 1224). The only featured sherds are coarse-ware sagging bases, probably from cooking pots. There is also a fragment of chimney pot No. 13 that originated in phase I ditch 1250.

The largest quantities of pottery came from ditch 1062 and its equivalent 111, which bounded buildings 1 and 3. This is one of the few features to produce a fairly large group of pottery that was not intercut with other features. Hedingham ware was found in fills 1063 and 112 and this constituted the largest amount of Hedingham ware from any one feature. Three sherds from the same vessel were found in fill 112, they have a pale green glaze and are decorated with vertical applied strips in a clay paler than that used for the body of the pot. This method of decoration is typical of Hedingham ware jugs. Hedingham sherds exhibiting such strip decoration have been found at Pleshey Castle from a period I context datable to around 1200 (Williams 1977, fig 31.15), and from King John's Hunting Lodge, Writtle, from period 1a, the earliest phase of a period dating from 1211 to *c.*1306 (Rahtz 1969, fig. 52.15). Consequently strip jugs may have been current from the late 12th century to the earlier to mid-13th century. Another larger sherd with applied strips (No.11) is pale grey rather than the typical orange of Hedingham ware, but its fabric and general appearance are consistent with that of Hedingham ware. This time the strips are grouped together which is unusual, and there appear to be traces of red slip in between the strips. Three sherds from a Hedingham ware sagging jug base found in fill 1063 may belong to the same vessel as No. 11. Also worth noting from fill 112, is the presence of an unglazed Hedingham ware body sherd from a small rounded vessel showing external sooting on the upper portion of the sherd. It appears to be an example of a coarse-ware vessel in a fine-ware fabric. A very similar sherd, also sooted, was found during excavations at Harwich (Walker 1990, fig.15. 41). Identifiable coarse-ware forms, all from contexts 110 and 112, comprise cooking pots; an early medieval ware beaded cooking-pot rim and H2 rim have been illustrated (Nos. 1 and 2). Also found was another early medieval ware H2 cooking-pot rim and examples of medieval coarse-ware H1 and H2 rims.

Building 1

This was a post-hole building and as would be expected of such features very little pottery was found, with some post holes containing only single sherds. The only fine ware present is part of a Hedingham ware sagging base from post pipe 1057 (not from the same vessel as found in context 1063). Shell-tempered wares are almost entirely absent, although this is probably not significant. Early medieval ware and medieval coarse ware are the commonest fabrics. Featured sherds comprise an oxidised medieval coarse-ware cooking-pot rim or bowl, similar to No.8 in post hole 1012, a medieval coarse-ware H2 rim in post pipe 1057, and another medieval coarse-ware H2 rim in post hole 1080. All these features are on the northern side of the building. No horizontal or vertical cross-fits were noted in building 1. This pottery probably represents residual sherds that were in the soil when the posts were inserted or when the holes were filled in after use.

Building 2

As with building 1, little pottery was found in the structure. Finds from the few post holes that did produce pottery are shown on Table 3. None produced more than four sherds, and the only featured sherd is an early medieval ware B2 cooking pot rim in post hole 1165. Slot 1138 did not produce pottery at all, while parallel slot 1131 produced only a residual Roman sherd. Slightly more pottery was excavated from N-S building slot 1221, from two secondary fills 1219 and 1248, although nothing diagnostic is present. In common with parallel ditch 1304, featured sherds from fill 1248 comprise fragments from bases, although these are not from the same vessels as those found in ditch 1304. Slot 1295 produced a shell-tempered ware 12th-century type beaded cooking-pot rim.

Far more fruitful in terms of pottery was cobbled layer 1071, which had slumped into phase II ditch 1052. Its fill, 1067, produced 1kg of pottery, the largest single group from the site. As might be expected, sherds from the same vessel occurred in 1054, a fill of ditch 1052 which was cut overlain by the cobbled area. There were also cross-fits between layer 1003, the cleaning of 1067. No fine wares are present but all the more common coarse ware fabrics occur. Forms as ever, comprise cooking pots including a large Fabric 13f beaded rim measuring 320 in diameter. Typologically the latest are examples of H2 and H1 rims in medieval coarse wares. One of the H2 rims shows thumbing around the edge in the same manner as that of No.3, and a sherd from the same vessel occurs in cleaning layer 1003. Similar pottery to that of cobbled layer 1067 was found in cleaning layers 1002 to 1006 at its surface. Fragments from chimney pots occur in layers 1004 and 1006. In layer 1004 there is one small fragment of a shelly fabric type 2 chimney pot which may be from the same vessel as that found in phase II ditch 117 (fill 118), and a large chunk of a sandy fabric type 3 chimney pot (No. 16). Form-wise it has little similarity with type 3 chimney pot No.15. The chimney pot from layer 1006 is another example of a type 1 chimney pot and could well be from the same vessel as No.13, although no joins could be found. Only part of the body was found which has an out flaring shape similar to that of No.14. Appearing in the upper layer 1007 is a sherd of intrusive internally glazed post-medieval red earthenware.

Building 3

Hearth base 105 produced a single sherd of ?Mill Green ware; like that from ditch 1052, the sherd is very abraded and identification is only tentative, however, it does show traces of a greenish glaze which at least precludes the possibility that it is Roman. If this is Mill Green ware then it is the latest pottery to be found on site with a date of mid-13th to mid-14th century. Surface finds from hearth 105 (context 103) include part of a sandy, type 3 chimney pot (No.17); again the shape of the vessel is not particularly similar to the other fabric type 3 chimney pots. The shape of the base is most similar to fabric type 1 pot No.13. This is the only instance of a chimney pot that could be more or less *in situ*.

Adjacent post holes 1200 and 1203 produced very little pottery; the only featured sherd is a Fabric 13t rim from a large ?cooking pot (No.4). Nothing diagnostic was recovered from hearth 126 or post hole 109. Slot 1068 produced the second example of fine ware from building 3, a sherd of Hedingham ware with a buff fabric and pale green glaze from fill 1069. More pottery was collected from the surface cleaning of this feature (context 1070) including a early medieval-ware beaded cooking-pot rim and a medieval coarse ware B4 type rim with wavy line combing on the rim and body, comparable to an example from Rivenhall (Drury 1993, fig.39.51).

Another large, uncontaminated group of pottery was excavated from ditch 1104, where pottery occurred in the 5th and 6th fills, 1106 and 1105. This constituted the largest quantity of pottery from building 3 and fill 1106 had the highest sherd size of any context with an average of 21g, indicating low residuality. Some of this pottery is abraded but this may happen if the pottery is near enough to the surface to undergo weathering. Pottery of interest comprises a sherd of glazed early medieval ware showing splashes of pitted yellow glaze and traces of incised wavy lines. Glazed early medieval ware is unusual, but not unknown and was a relatively common find at the Stansted Airport excavations (Walker forthcoming a). There is also a large section of fire-blackened Hedingham coarse-ware cooking pot with an H2 rim (No.7), showing evidence that it was made in sections (see catalogue entry). A second example of a medieval coarse-ware rim shows a down-turned flanged rim (No. 6); this is not in Drury's typology but may be a variant of an H1 rim. Also worth noting is part of an early medieval-ware sagging base probably from a cooking pot showing a patch of carbonised residue in the centre of the base, most likely the result of burning food during the cooking process. The top fill of ditch 1104 (context 1105) produced a fragment of chimney pot fabric type 4, the only example of a chimney pot in this very flinty fabric. Of interest from the cleaning of ditch 1104 is a small sherd of early medieval ware from the base of a vessel showing two perforations and is probably from a watering pot or strainer of some kind. The possibility that it is from a cheese-press can be precluded as there are no runnels. The holes are about 7mm in diameter and 20mm apart and were made during manufacture by pushing a tool through the base of the pot from the outside.

Discussion of phase II

By far the best group is that from ditch 1104; unfortunately there are no fine wares to date it but it would seem to represent a group from a service area. The fact that pottery is present only in the upper fills may indicate that this is a disuse deposit. The latest pottery in phase II is the possible Mill Green ware from ditch 1052 and hearth 105, which would preclude a date before the mid-13th century. Otherwise there is no evidence that the pottery from phase II is later than that from phase I.

The pottery from phase III (Table 4)

Only a small amount of pottery belonged to this phase, a total of 228 sherds weighing nearly 2kg, or about the same amount, in terms of weight, as that from phase 1, although here, the average sherd size is lower, at about 8g. No buildings belong to this phase and the pottery comes from pits and linear features. Again the range of fabrics is similar to that from the two previous phases; no new fabrics appear, a few fabrics are absent, but only those that occur in very small amounts in previous phases.

Only early medieval shelly wares and early medieval wares were found in ?pit 1279. Slightly more was found during the cleaning of this feature (context 1278) including a sherd of red-slipped Hedingham ware (No.12) first found in phase II ditch fill 1271. Also from the surface cleaning is an early medieval flinty ware base sherd which is interesting because most of the flint is on the external surface just above the basal angle, rather than distributed evenly throughout the pot.

A second sherd of Hedingham ware was found in gully 1194 (fill 1197). It shows an applied strip and is part of vessel No.11, also found in phase II ditch 111. Little pottery was found at the bottom of pit sequence 1280. Slightly more was found in pit 1234 at the top of the sequence, although there are no fine wares or diagnostic forms.

The largest quantity of pottery in phase III came from ditch 1223. Primary fill 1225, which cut ?pit 1279, produced the largest group, although no cross-fits between the two were noted. However, there are at least two cross-fits with phase I ditch 1250. Therefore it is possible that all this pottery is derived from phase I; there is certainly no pottery demonstrably later than that from phase I. The only forms present are cooking pot-rims and chimney pots, but there is also a large sherd of early medieval ware showing thumbed applied strips intersecting at right angles, perhaps from a storage jar. In addition a cooking-pot base shows spalling on the underside where it has been heated. Less pottery was found in subsequent fills of the ditch, although finds include part of chimney pot No. 14 in fill 1294.

Ditch 1206 which ran parallel to ditch 1223 contained smaller amounts of similar pottery, although no cross-fits were noted. Pottery was excavated from only one fill of ditch 1117 (fill 1119) which lay at some distance, but was also parallel to ditch 1223. Featured sherds comprise a B4 cooking-pot rim in oxidised medieval coarse ware,

Table 4: Quantification of pottery from Phase 3 by feature, fabric and sherd count

Feature	Seg/	Fill	Relationship	Fabrics											Wt		Chimney pots		Wt
	part			12A	12B	12Bf	12C	13	13t	13f	20	20D	20ox	22	(g)		type 1	type 2	(g)
?pit		1277	cut 1008		1			6	1						37				
		1278	above 1277	3	8			11		1		1	1	1	179				
gully 1197					1			1				5		1	24				
	1217	1218	same as 1197	1							1				12				
pit 1230	1280	1231	cut by 1232					3							25				
pit 1232	1280	1233							1						6				
pit 1234	1280	1235			2	1	1	12	6		6				217				
ditch 1223		1225	cut 1279	7	3	1		32	11	2	6	13		1	870		2	1	246
		1268	surface cleaning									5			52				
	1293	1294						3							11			6	78
	1300	1301		2	5			8	2		10				207				
ditch 1206		1205	parallel to 1223	1	1			1		2					48				
		1204	cut 1157, 1219	2	9			4			1	5		1	39				
		1193	surface, =1204		3										11				
ditch 1117	1118	1119			4			4			1	1	1		163				
				16	37	2	1	85	21	5	25	30	2	4	1901		2	7	324

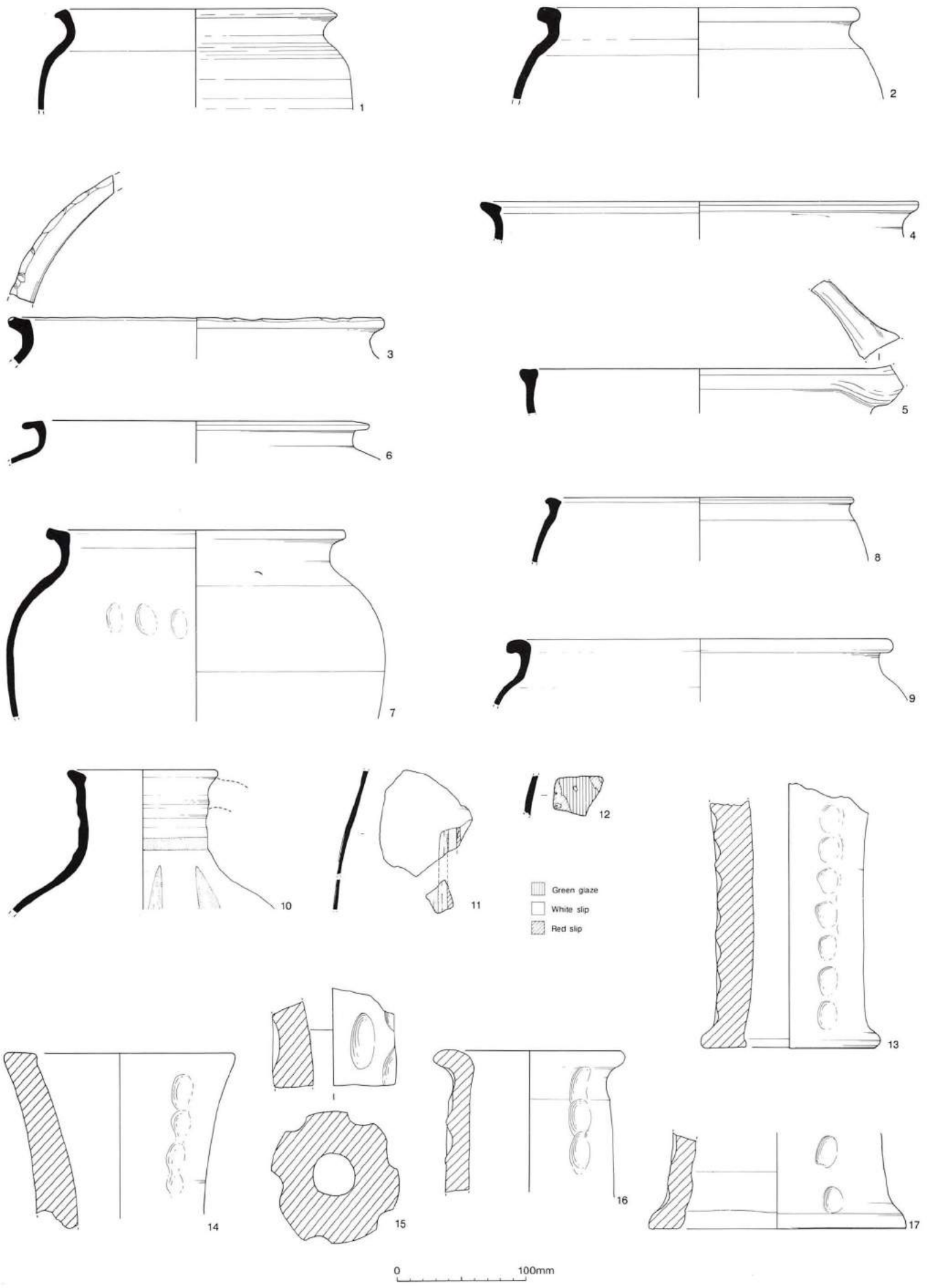

Fig. 3.7 Boreham Interchange. Medieval pottery

showing wavy line combing on the body comparable to an example from Rivenhall but without the combing on the rim (Drury 1993, fig. 39.51). An early medieval-ware rim sherd found in this ditch is from the same vessel as found in phase II ditch 1052 (Fill 1054) and is an example of both a horizontal and a vertical cross fit as these features are c. 7 m apart.

Discussion of phase III

As there are no large securely stratified groups in phase III, little can be said. All the pottery could derive from earlier features.

The catalogue (Fig. 3.7, shown in fabric number order)

1 Cooking-pot rim: early medieval ware (Fabric 13); colour mainly dark grey with patches of buff, orange-red and brick-red; thin-walled for early medieval ware; horizontal striations on external surface; borderline medieval coarse ware. *Fill 112 (ditch 111) phase II*

2 Cooking-pot rim: early medieval ware (Fabric 13); patchy dark grey to brown core, buff-brown internal surface and margins. *Fill 112 (ditch 111) phase II*

3 Cooking-pot rim: early medieval ware (Fabric 13); red-brown fabric with darker surfaces; uneven thumbing around rim edge. *Fill 118 (ditch 117) phase II*

4 Rim of ?large cooking pot: Transitional sandy ware (Fabric 13T); red-brown core, buff-brown internal surface and dark grey external surface showing patches of sooting. *Fill 1201 (post hole 1200) phase II building 3*

5 Rim of socketed or spouted bowl: Early medieval flinty ware (Fabric 13f) brick-red fabric with brown-grey core; no traces of use; measurement of diameter only tentative due to distortion of caused by spout/socket. *Fill 1054 (ditch 1052) phase II*

6 Cooking-pot rim; medieval coarse ware (Fabric 20); grey core and buff-grey surfaces; abraded. *Fill 1106 (ditch 1104) phase II, building 3*

7 Cooking pot; Hedingham coarse ware (Fabric 20D); grey but with orange-buff margins and grey-buff internal surface; neck and upper part of shoulder show slight banding of colour with grey interspersed with narrow ill-defined bands of buff; lower section of vessel more abraded than the upper; a row of thumb marks on the internal surface just below the shoulder may be evidence of joining, suggesting the top part of the vessel was made separately; fire-blackening on the shoulder and under the rim. *Fill 1106 (ditch 1104) phase II building 3*

8 Bowl or cooking-pot rim: oxidised medieval coarse ware (Fabric 20ox); bright orange surfaces but slightly darker on the external surface; grey-brown core; abraded. *Fill 1239 (ditch 1250) phase I*

9 Cooking-pot rim; oxidised medieval coarse ware (Fabric 20ox); uniform orange fabric but with slightly paler surfaces; abraded. *Fill 123 (ditch 122) phase II*

10 Jug: sandy orange ware (Fabric 21); unglazed, slip-painted, described further in text. *Fill 116 (gully 115), fill 119 (gully 115/117)*

11a,b Fragment of jug: Hedingham ware (Fabric 22); showing applied strips and red slip-coating, described further in text. *Fill 112 (ditch 111) phase II and fill 1 197 (gully 1194) phase III*

12 Fragment of jug: Hedingham fine ware (Fabric 22); uniform creamy orange fabric; decorated with zones of red slip-coating with plain area in-between; covered by a pale green glaze; red-slipped areas are unglazed apart from stray splashes. *Fill 1271(ditch 1008) phase II, surface cleaning 1278 (?pit 1279) phase III, and unstratified context 1400*

13 Chimney pot: Fabric type 1; mainly reddish fabric but with areas of buff to grey; very friable, large portion of vessel has disintegrated; internal surface fire-blackened; bulk of vessel found in phase I. *Fill 1239 (ditch 1250) phase I, fill 1224 (ditch 1304) phase II*

14 Chimney pot: Fabric type 2; similar to No. 13 in appearance; internal fire-blackening. *Fill 1239 (ditch 1250) phase I, fills 1225, 1294 (ditch 1223) phase III*

15 Chimney pot: Fabric type 3; brick-red fabric; deeply indented thumb marks; no evidence of fire-blackening. *Fill 1271 (ditch 1008) phase II*

16 Chimney pot: Fabric type 3; uniform brick-red fabric; sandy but with inclusions of flint and sparse shell; fire-blackening on inside of flange shows it may have stood flanged-end uppermost, no definite traces of fire-blackening on internal surface. *Cobbled area 1004, phase II, building 2*

17 Chimney pot; Fabric type 3; red-buff to grey surfaces; red-brown margins and brown-grey core; tempered with coarse sub-rounded sands with larger sub-angular sands; sparse carbonised material; vertical line of thumb marks. *Context 103 (hearth 105) phase II, building 3*

Discussion

The absence of significant quantities of fine wares makes dating difficult; the identification of the stratified Mill Green ware is very tentative and therefore cannot be used to date the site. The presence of Hedingham ware and the H2 and H1 cooking-pot rims give a most likely date of the early to mid-13th century. The absence of the blocked, neckless cooking pot, sub-form H3, as found at Danbury tile factory and datable to the late 13th to 14th century (Drury and Pratt, 1975, 128) also indicates that settlement did not go beyond the mid-13th century.

It was not possible to detect any difference in date of pottery from (stratigraphic) phase I to that from later phases. This must be due in part to contamination from intercutting features which is fairly unusual on rural sites, as features tend to be dispersed over a wider area, and there is much less vertical stratigraphy. However even the uncontaminated features in phases II and III did not produce pottery demonstrably later than that from phase I. The scarcity of horizontal cross-fits or large quantities of pottery in post holes show that there is no evidence, from the pottery, that the buildings were dismantled, and the site levelled after it went out of use, as has been encountered at other medieval sites, for example at Stansted and Gutteridge Hall (Walker forthcoming a and b).

The preponderance of cooking pots over all other forms is typical of medieval sites, as these were general purpose vessels used for a variety of household purposes as well as for cooking. Fire-blackening, carbonised residues, and spalling on the undersides of bases, as found on several of the cooking pots at the Boreham Interchange, show cooking (or heating of other substances) was their main purpose. Some of the cooking pots must have been very large as several have diameters in excess of 300mm. Diameters in the region of 260mm are more typical. Perhaps large numbers of people were being catered for. The only specialised vessels are the spouted/socketed bowl (No. 5) and perforated sherd. Socketed bowls were also used for cooking, the socket being for the insertion of a wooden handle. However if vessel No. 5 is from a spouted bowl, then it must have been used for liquids. Very few bowl rims were found at this site, and they occur only in shelly fabrics. The fine-ware jugs would have been used at the table.

By far the most interesting finds are the chimney pots, in use in southern and south eastern England from the end of the 12th century and throughout the 13th (Dunning 1961, 78 and 1970, 89-90). The remains of at least six chimney pots are present. Although they vary in shape and fabric, all are basically thick-walled, hollow cylinders decorated with columns of thumbing and correspond to the Essex sub-type as defined by Dunning (1977, 127). No. 15, with its narrow bore and elongated thumbing, is similar to chimney pots produced at the Mile End near Colchester (Dunning 1975, fig. 11.64). The others show similarities with a Hedingham ware chimney pot made at the Hole Farm production centre, and with a Dunning type 2 chimney pot from Pleshey Castle (Dunning 1977, fig 27.4, 6). The Hole Farm and Mile End chimney pots have both been assigned an early to mid-13th century date, the same date as the pottery assemblage. The Dunning type 2 chimney pot belongs to period II of Pleshey Castle which has the rather wide date range of late 12th to mid-13th/early 14th century and could also be contemporary with the pottery. However, these comparisons are by no means exact, especially as the Hole Farm example has a grey sandy fabric.

Chimney pots are not particularly common on medieval sites. Apart from Pleshey Castle and the Sible Hedingham and Mile End production sites, to the author's knowledge, chimney pots have only been found at two other sites, both in Chelmsford, at the Marks and Spencer site (Dunning 1977, 127) and at Kings Head Meadow (Walker forthcoming c). Pottery chimney pots were used in towns because of their resistance to fire, but have also been found at rural farmsteads (Dunning 1961, 86, 89). It does seem odd however, to find them is such large amounts on such a modest settlement (two more than at Pleshey Castle). Further, Dunning considered that because of the airflow properties of the Pleshey Castle type 2 chimney pot, it would have been seated on a chimney stack over a flue suggesting a wall fireplace and therefore a substantial building (Dunning 1977, 128). There is no evidence for such a building at the Boreham Interchange, either from the structural features or the positions of the hearths. Perhaps these chimney pots are, in fact, of a type that would sit over a central hearth (Dunning 1961, 84) which would explain the presence of a chimney pot fragment from the surface of hearth 105 in building 3.

Another possible explanation is that these chimney pots represent reused building material, brought in from somewhere else and employed for some kind of secondary purpose. This would explain why they are of varying shapes and fabrics, if they represent a 'job lot'. Also militating against their use as chimney pots is that there is only a little sooting and no evidence of mortar or other material to adhere the chimney pot to the roof. Further, Pat Ryan (pers. comm.) has suggested that these are not chimney pots at all, but could be oven flues, tuyères from bellows or ventilators.

Apart from the chimney pots, this assemblage is similar to other rural sites in central/north Essex such as at Stebbingford and Stansted (Walker 1996 and Walker forthcoming a), all of which have pottery dating from the early to mid-13th century and show Hedingham ware as the main fine ware, with early medieval ware and medieval coarse ware occurring together.

Flint

A total of sixteen flaked stone artefacts were recovered from Area A, from phases II and III. None of these are distinctly diagnostic of any one period; it is probable that they were already in the immediate landscape when medieval occupation took place.

With so few pieces recovered, it seems possible that they were either discarded after use or lost. There is no indication of a working floor in this area.

A scraper from context 1247 is fine and could be Neolithic, whereas an end-retouched piece (from 118) is very much a convenience tool and should be later prehistoric, possibly Middle to Late Bronze Age.

Miscellaneous Finds

R. Tyrrell

None of the finds from area A contradict the 13th-century date indicated by the pottery, with the exception of the Henry I coin, which is very worn.

Iron Objects

Thirteen objects or parts of objects were found in area A, nine of which came from phase II. These include two possible knife blades and a horseshoe fragment, which were found in the same ditch as the Henry I penny. There are no diagnostic features on these objects that conflict with the pottery dating.

1. Possible knife blade fragment. L 97mm B 29mm. Context 112, fill of ditch 1052. Phase II.
2. Whittle-tang knife blade. L 170mm B 29mm. SF11. Context 1054, fill of ditch 1052. Phase II.
3. Horseshoe fragment, with upturned calkin. Context 112, fill of ditch 1052. Phase II.
4. Strip terminal with rivet. This is possibly a small box fitting, or from leatherwork. Context 112, fill of 1052. Phase II.

There were nine nail shafts, which ranged in size from 19mm to 40mm, and a single flattish nail head, 22mm in diameter. One is probably a horseshoe nail. None of the nails were found in contexts that were relevant to the phasing of the area.

Daub

A total of 5.26kg (911 fragments) of daub was recovered from area A. The fabric was reddish through to buff in colour with occasional flecks of chalk and no vegetable inclusions. The fragments were angular (average fragment weight was 87g) and showed little sign of abrasion.

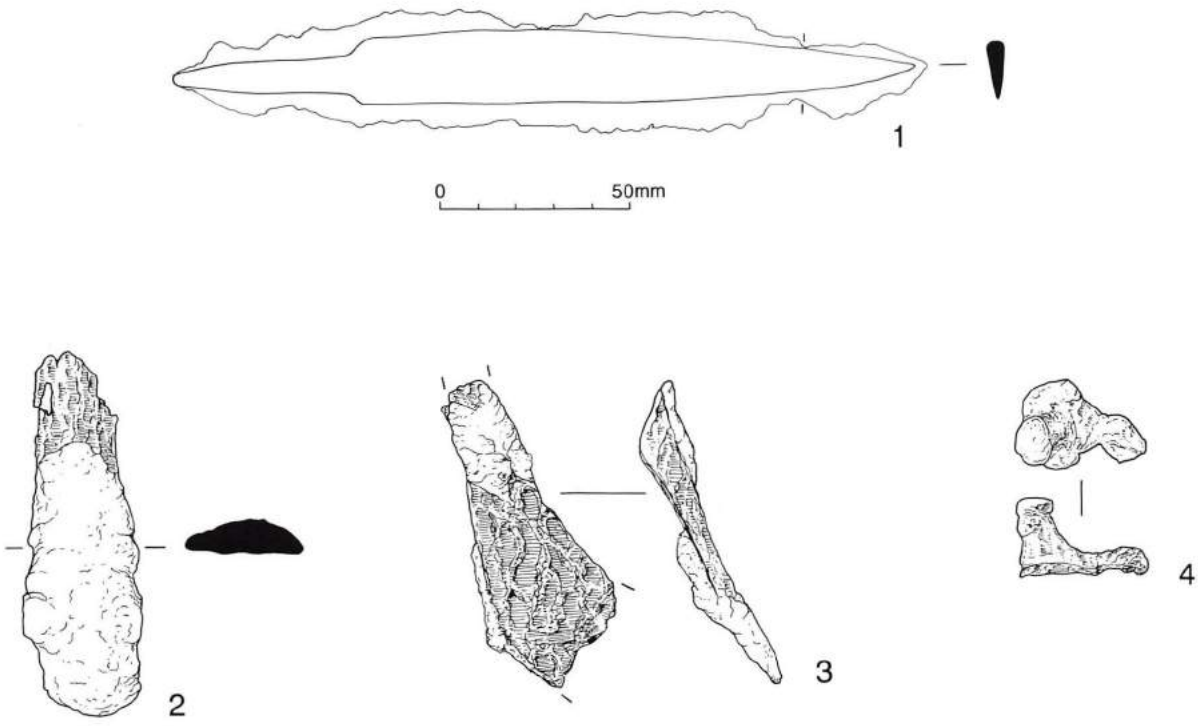

Fig. 3.8 Boreham Interchange. Miscellaneous finds

There was no evidence of wattling or any other structural detail apart from two groups of fragments from 1224 and 1225, which were parts of a rounded right angle (not illustrated).

Stone

Area A produced a single irregular fragment (122g) of lava quern from context 120, the fill of ditch 122 (not illustrated).

Coins

P. McMichael

A silver short cross penny of Henry I (1100-1135), worn but legible. SF13. Context 1054, fill of ditch 1052. Phase II.

A quarter cut silver penny, illegible, very worn. SF12. Context 1054, fill of ditch 1052. Phase II (not illustrated).

Animal Bone

A. J. Wade

The medieval site produced 342 pieces of animal bone weighing 1.544 kg. Twenty percent (70 pieces) of the bone was identified by number of pieces and 76% by weight (1.170 kg).

Of the three site phases, phase II, which included three buildings, produced the most animal bone. This was derived mainly from ditches, which accounted for 78% of the total material by weight (0.799 kg).

Eight species were identified, namely cattle (29 pieces), sheep or goat (19), pig (13), horse (5), cat (1) and the wild species hedgehog and vole (1 piece each).

This information is summarised on the following table.

Species	Pieces	Weight (g)	Minimum no. of individuals
Cattle	29 (41%)	533 (46%)	1
Horse	5 (7%)	446 (38%)	1
Pig	13 (19%)	98 (8%)	1
Dog	1 (1%)	6 (<1%)	1
Sheep/Goat	19 (27%)	86 (7%)	1
Cat	1 (1%)	0.1 (<1%)	1
Hedgehog	1 (1%)	0.8 (<1%)	1
Vole	1 (1%)	0.1 (<1%)	1
Identified	**70**	**1171**	
Unidentified	**272**	**371**	
Grand total	**342**	**1542**	

Table 5: Summary of Species

Three bones displayed butchery marks and another had been worked. From phase I was an unidentified cut bone (gully 115). The other material was all from phase II and included two pieces of cut horse bone (ditch 122/1008).

The piece of worked bone was from the cobbled area 1067 and was fashioned like a crude stylus or pin.

Fifteen pieces of animal bone had been gnawed by dogs. The presence of dog-gnawed bone indicates a degree of residuality within the finds and the presence of nearby settlement (the dog being domesticated). Both of these factors are reflected in the recovery of over half the gnawed bone from phase II, mostly from the cobbled area 1071.

Discussion

Site chronology

Occupation of the site was very short-lived. The pottery evidence suggests that it did not continue beyond the middle of the 13th century. There appears, however, to have been a considerable amount of activity within this short period of time. This includes the digging of the phase I ditches, one of which was recut four times, a circumstance that should imply a more protracted time frame. Earlier (possibly late 12th to early 13th century) pottery was recovered from this sequence of ditches, and it has been noted by Walker (above) that the later sherds may have been intrusive and belong to phase II features. If this is the case, however, the implication remains that the site was not occupied for much longer than 50 years.

Ditches represent the earliest phase of activity, and no associated structural remains were located within the excavation area. The presence of chimney pots within the fills of these features, however, implies the existence of buildings at this time. Whether these pots were used as chimneys, or for some other purpose (Walker, above), they were certainly deposited in the ditches before the construction of the buildings that were excavated. It is apparent that any buildings belonging to the earliest phase lay outside the area investigated, probably to the north-east of the early ditch 1102 and its recuts, where the presence of the gas pipe-line precluded excavation. Activity to the south of 1102 was limited to an enclosure (comprising 115, 1075 and 1240) and a number of short slots or gullies of unknown significance. The enclosure is probably part of a field system that included the medieval ditches observed in Area B.

Feature 1094, the last recut of ditch 1102 probably went out of use during the first half of the 13th century. At this time the site was substantially reorganised, with buildings now occupying the area of the former ditches. This could represent either abandonment of the conjectured earlier buildings, or the expansion of the settlement into the excavated area. The presence of large cooking pots may suggest the latter, if they represent the feeding of a substantial population.

The general alignment of the phase II features retained that of phase I, and the northwest-southeast ditches are at roughly 60 (to the present line of the B1137. It seems probable that a track, not located during excavation, led from the road at a similar angle, and that the settlement was laid out on it. The likelihood is that it lay to the south of the excavated area, broadly parallel with the present Fordson Road Fig. 1.1).

The buildings and their functions

Three buildings can be confidently identified as existing during phase II. One of these was probably agricultural, the others domestic.

The principal post holes of Building 1 suggest a very solid construction. Where post-pipes were visible (chiefly on the north side) they had an average diameter of 0.50m. The apparent solidity of this structure, taken with the absence of any hearths on a site where they were common, suggests it was used for storage, probably as a granary, with a raised floor to protect the contents from rats. If this were the case, a large quantity of grain could be stored within this building, and the implication is that the site represents a sizeable farm.

Again, this accords with the evidence of the cooking pots, suggesting a fairly large community.

Buildings 2 and 3 appear to have had domestic functions, indicated by the presence of a substantial hearth in each. The remains of Building 2 survived well, and suggest that it had possibly been rebuilt at some stage, as suggested by the number of structural elements that were located. The ditch on its east side had been backfilled and cobbled over during the life of the building. The cobbles may simply have been used to cover the ditch, which was possibly damp and boggy, rather than being part of a yard surface. This structure could have been either a dwelling or a kitchen, the latter being a more likely explanation given its size and shape. A further indication of this function is that much of the dog-gnawed bone was recovered from the cobbled area, which may reflect disposal, and the tendency for dogs to gather in the kitchen area.

Building 3 was fragmentary, and it is probable that most of the features that it comprised were not visible against the fills of the phase I ditches that they cut. The building occupied a plot, defined by ditches, roughly 20m by 8m. Its actual size is unknown but it was at least 17m long. A hearth towards its eastern end again implies a domestic function. Two further hearths, located during trial trenching (113 and 126 in Fig. 3.3), may indicate the sites of further buildings, but no structural features were found in association with them. The crudeness of these hearths may suggest that they were located within outbuildings of relatively simple construction that have left no archaeological traces.

Ditches at this period were used to define the building plots, and may also have acted as eaves-drip gullies. The ditch arrangement shown in Fig. 3.3 is partly conjectural. The stippled parts of ditches 1092 and 1304 were not seen on site, but their presence seems likely. The area bounded by ditches 1088 and 1092, in which Building 2 stood, appears to contain a great deal of empty space. It is conceivable that insubstantial buildings that did not penetrate the natural clay stood in this area. Assuming that Building 2 was a kitchen, this area may have contained domestic fowl for consumption and the provision of eggs. No bird bones, however, were recovered during the excavation.

Settlement layout

The layout and construction at several medieval farms in Essex has been discussed by Medlycott (1996, 176-7 and fig. 27), with a set of comparative plans. The sites demonstrate considerable diversity, which probably reflects local conditions as well as economic and social status.

The Boreham Interchange site compares closely with Round Wood, Stansted, even to the relative layout of the buildings (Fig. 3.4; Brooks and Havis 1991, fig. 9), although they are rather more cramped at Boreham. Building 5 at Round Wood, identified as a dwelling, corresponds with the ephemeral Building 3 at the Boreham Interchange. The probable kitchen (440), involving both earth-fast post and slot construction, is sufficiently similar to Building 2 (even its disproportionate length to width ratio) to suggest a comparable function.

Dyer (1986) has discussed the nature of structures within peasant settlements during the medieval period. A fairly average rural establishment appears to have consisted of a hall or dwelling, a barn or granary, a kitchen and possibly, but not necessarily, other structures. Whilst later in the period it became common for byres to be separate structures, in the 13th century it was still more usual for them to be attached to the dwelling.

The layouts of the Boreham Interchange and Round Wood sites, and possibly Stebbingford, appear to fit well into this category (Fig. 3.9). The three major structures appear to have been present, and it is conceivable that other ancillary buildings lay beyond the limit of excavation.

Dyer, using data from Worcestershire (Field 1965) supplemented by figures from Gloucestershire, Staffordshire and Warwickshire, states that measurements taken from standing buildings give an average bay size of 15' by 15' (c. 4.6m by 4.6m), with most buildings from later medieval records and surviving examples being of two (4.6m x 9.2m) or three (4.6m x 13.8m) bays; generally of three. Structures of one, four, five or six bays were scarce, totalling 17% of 113 known buildings surveyed in Worcestershire.

At the Boreham Interchange the most complete structure, the suggested granary, consisted of four bays, none of which was square. The two westernmost bays were 4.4m wide and roughly 3.5m long. The eastern bays were substantially smaller, being 4m wide and 2.5m long. Whilst this inconsistency with an average measurement given for a distant part of the country is probably not significant in itself, the implication is that the building was quite possibly not built in one operation. It seems likely that the structure originally comprised only the two larger western bays, and was extended eastwards.

At Round Wood the post holes of the granary were very large, possibly as a result of being dug out at the end of the life of the building (Havis forthcoming.), but the bays appear to conform more closely to Dyer's average.

The possible house at the Boreham Interchange has left insufficient remains to give valid measurements for, but at Round Wood, the size and shape of the bays was more akin to the granary at the Boreham Interchange site, as was the one distinguishable bay in the kitchen. The possible kitchen at Boreham Interchange appears to have been an equivalent of two bays long, each measuring 2.40m.

The farmstead's status and development

The size of the suggested granary, and the recovery of at least six chimney pots suggests a site of reasonable

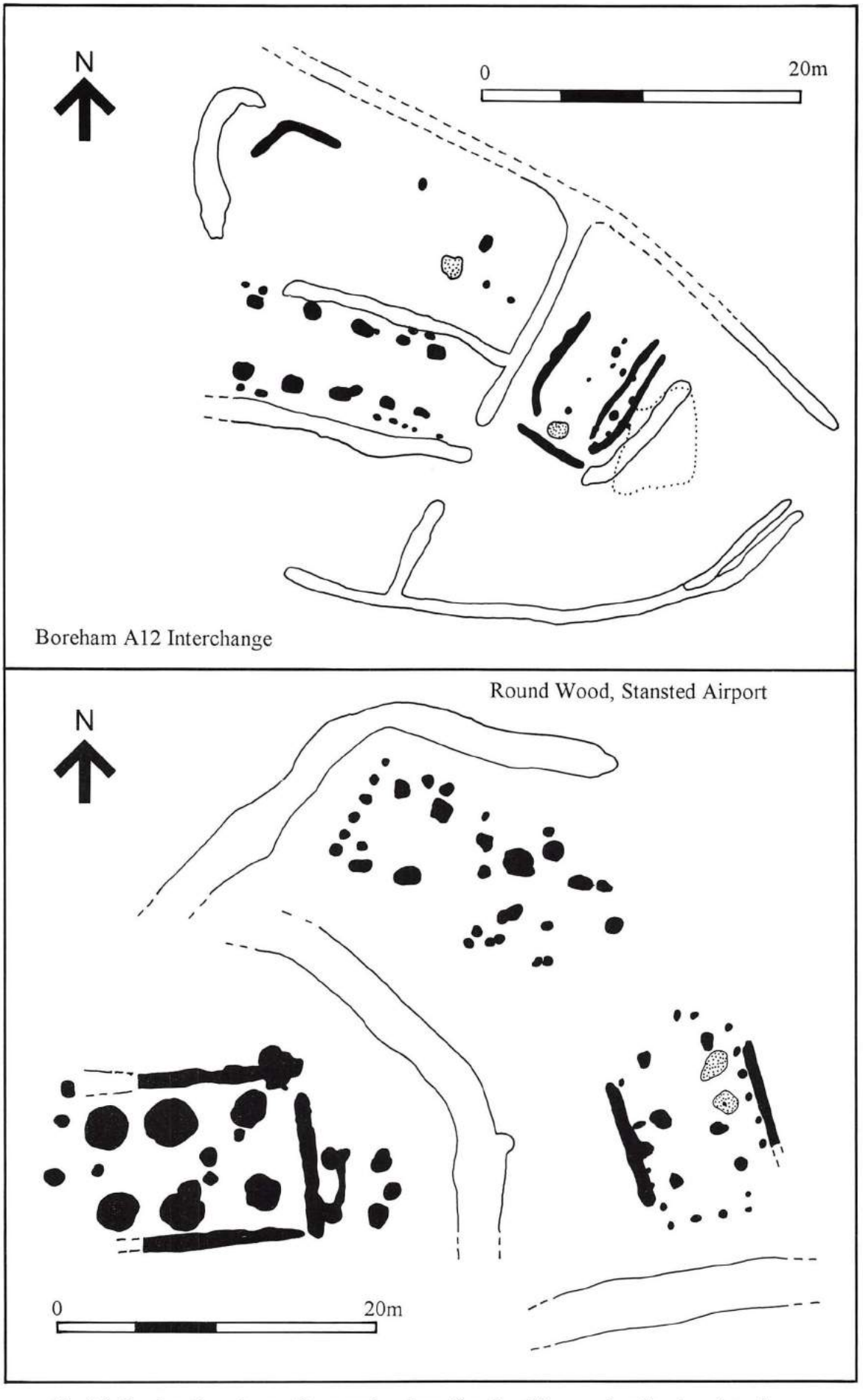

Fig. 3.9 Boreham Interchange. Comparative plans of medieval farmsteads at Boreham Interchange and Round Woods, Stansted.

size and prosperity. Several similar Essex farms, such as Round Wood, Wood Side, Duckend Farm and Molehill Green, all at Stansted Airport (Brooks and Wall 1988; Brooks and Havis 1991; Havis forthcoming), also flourished in the later 12th and 13th centuries. The pattern of medieval settlement at Stansted, comprising a 'boom period' in the late 12th and 13th centuries, followed by recession in the 14th resulting from poor harvests and plagues culminating in the Black Death of 1348 reflects that found over much of the country. At Stebbingford, Felsted (Medlycott 1996), one can possibly discern the same general history.

At Boreham Interchange the site seems to have been first occupied in the late 12th century. During the early 13th, it was remodelled or expanded, and the evidence suggests that it enjoyed a period of prosperity at this time. The pottery shows that the features were becoming filled up around the middle of the 13th century, long before the demise of the farms at Stansted and elsewhere.

Phase III comprised two ditches, a short length of gully and some pits, which are dated as later than phase II entirely on stratigraphic grounds. Very little pottery was recovered, and all of it could be residual and derived from phases I and II. Similarly, there is no reason to suppose that all of the phase III features existed at the same time; ditch 1223 cut the fill of pit 1279, which must post-date phase II because it in turn cuts ditch 1008. Ditch 1223 could be a recut of 1304, and may imply that Building 1, at least, was still standing when it was dug. The relationship with 1279, at its southern end, suggests, however, that 1008 was no longer in use. Gully 1194 cut posthole 1187, indicating that at least the western bay of Building 1 had been demolished. However, like all of the phase III features, 1194 cannot be securely dated. Building 2 must have been abandoned before ditch 1206 was dug, since this feature destroyed the slots on its west side.

The reason for the abandonment of the site is not, therefore, discernible from the archaeological evidence. It appears to be abrupt, and to occur at a time of prosperity. It is, therefore, conceivable that the answer lies not in the failure, but in the success of the farm. The closest extant medieval farmhouse is Sheepcotes, approximately 250m southeast of the site. This establishment is first known from a deed of 1375. Recent work by Wessex Archaeology in the vicinity of the house, however, has produced evidence for 13th-century occupation, demonstrating that the site was in use at around the same time as the Boreham Interchange site. Because the two sites are very close together it seems unlikely that they represent two separate farms, and the most probable interpretation is that the farmstead located during excavation did migrate to the site of Sheepcotes. Further excavation at Sheepcotes is anticipated, and this will hopefully elucidate the nature of the 13th-century activity there.

The excavation at the Boreham Interchange has not afforded an overview of the development of a medieval site. Instead, it has shown a part of that site at one stage in that development. The farm located almost certainly existed in some form before the construction of the excavated buildings, and it seems likely that it continued after their apparent abandonment. A possible pattern for the development is that the farm was established to the northeast of the excavated area, in the region of the part of the field adjacent to the gas pipeline and therefore unavailable for investigation. This was almost certainly in the late 12th century, since there is no evidence for activity prior to this time. The farm then either expanded or moved its focus to the excavated area. After a short period, the site recorded in the excavation area appears to have been abandoned. There is no indication of a decline; the buildings simply went out of use, and there is no pottery later than the middle of the 13th century. A few features cut through the site at a later date, but these do not seem to have accumulated any fresh finds, and there is nothing in their fills that could not have been derived from the phase II features.

The apparent halt in the use of these buildings could be interpreted in one of three ways. The entire site could have been abandoned; it could have contracted to the supposed original nucleus beyond the phase I ditches, or it could have moved to a new centre. It seems unlikely that the site was completely abandoned. The event seems to be too abrupt, and there is no evidence to suggest that there was any deterioration of the buildings that would indicate a decrease in its prosperity. Indeed, there is evidence to suggest that during the comparatively short period that the buildings were in use, the kitchen was rebuilt and the granary was extended by two bays.

This argument also would appear to discount a contraction of the farm. It appears to have been prosperous and expanding. Furthermore, if the centre of activity remained nearby, one might expect to find pottery of later 13th and 14th-century date within the later features and in the topsoil. This is not the case, and it seems likely that the focus of the farm was removed to a new location within the land held by it. The most probable candidate for this is Sheepcotes, although there is no documentary evidence for the existence of this farm until the late 14th century. This is, however, not an argument against the hypothesis, since many medieval farms located by archaeology do not feature in documentary evidence at all.

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The Carmelite Friary at Maldon: excavations 1990-1

by Raphael M.J. Isserlin

edited by Patrick T. Allen, with contributions by: D.D. Andrews, L.A.S. Butler, Sarah E. King, Hilary Major, Katherine Reidy, Charlotte Roberts, Pat Ryan, C.C. Thornton, Alec Wade, Helen Walker and O. Williams-Thorpe

Work in advance of construction of a public library and car park revealed the first excavated evidence for the friary, known from documents to have been founded in 1292-3 and demolished in the decades following the dissolution of the house in 1536-8. The later part of the excavated sequence represents the garden of the mansion apparently built by Vincent Harris over the former friary buildings between 1565 and 1570-74, and replaced by the present houses, Friary West and East, in 1805-7.

A cloister with buildings ranged around its north and east sides, with eight burials in the east cloister walk, was recorded in one excavation area (site MD10), while an outbuilding interpreted as a stable was recorded in the other (site MD9). The buildings were extensively robbed and only limited architectural reconstruction is possible, although a notable feature was the early use of Flemish-type bricks. Very few religious artefacts were recovered, but there is some artefactual evidence for books and writing, and for the use of the outbuilding as a stable. An early example of Venetian glassware was recovered from one of the friary drains.

The archaeological results and documentary sources are discussed together to analyse the evidence for precinct boundaries, the layout and functions of the buildings, water supply and drainage, and processes at work during the Dissolution. Documents have also made it possible to reconstruct part of the friary's library, showing that it was a centre of scholarship.

Three alternative views of the friary are discussed: that it followed the usual monastic plan, with a straightforward layout of cloister and related buildings; or that the church may have been to the south of the cloister; or that there was a break from the standard layout, perhaps suggesting an ideologically-inspired architectural similarity with the mother house in the Holy Land.

INTRODUCTION

Historical background

When permission to build a Carmelite friary at Maldon was sought in 1292, news of the destruction of their mother house at the foot of Mount Carmel the previous year would have been fresh to many members of that order. Indeed Edward I would also have seen Mount Carmel when on Crusade in Acre in 1271 and this may be significant. Although daughter houses had been founded outside the Holy Land for some 60 years, founding a new house at Maldon so soon after the loss of the mother house demonstrated the continuing vitality of the Order after this setback. As we shall see, this response may have manifested itself in architectural similarities to the mother house.

A plot of land on which to build was licensed a year after the foundation, in 1293.[1] Building work was apparently not completed until some time after 1300, however, since a document of that date implies that work on it was still in progress.[2] In 1314 a plot of land adjacent to the friary was licensed as room for expansion.[3] Documentary evidence for the friary in its original form is extremely sparse. We know that in 1300 the church was permitted to have an oratory with a belfry,[4] that in 1391 funds were required for its repair, and that by this date a chapel of St. Mary existed,[5] but that is all (Petchey *et al.* 1985). Wills recorded from between 1371 and 1533 detail bequests inadequate to fund major building campaigns, although repairs were being carried out as late as 1518 (Simpson 1986, 34-5). No other records relating to the friary buildings are known to have survived the dissolution. The friary buildings and adjacent lands at the time of the Dissolution are listed in a deed of sale of 1544, but although this includes useful evidence of ancillary and agricultural buildings, it provides only a very cryptic view of the layout of the friary precinct.[6]

Maldon made a substantial contribution to learning. It produced a Professor of Theology, Richard Acton (*ob.* 1446). Twelve works by its most eminent scholar, Thomas of Maldon (*ob.* 1404) are known, eleven by title only; Thomas is recorded as an acute thinker and disputant. Both Thomas and Richard moved for a while to Cambridge University, but returned to Maldon, where they died. Remarkably, in view of later events, the texts of their tombstones are known (Page and Round 1907, 182-3; Lee 1909, 861-2; Weever 1631, 611). Neither Richard nor Thomas left the greatest mark on the friary, but a third Cambridge man, John 'Bilious' Bale (1495-1563). Together with a member of the Maldon gentry, William Harris of Mundon (father of Vincent Harris), and through links with Thomas Cromwell, Earl of Essex, he seems to have assisted in the dissolution of Maldon's Carmelite community.

The very composition of one of Bale's volumes is a metaphor for the friary as revealed by excavation. In 1525, when still a friar, he started his account of his order, and would have had to stay at Maldon. The creation of his work involved the destruction of material from earlier

ages.[7] The fly-leaves of Bale's volume are pages reused from earlier tomes: a 13th-century work on physics, and a 14th-century treatise on logic. Thomas the logician's world of learning was already vanishing. With the advent of the Dissolution, Bale abandoned Roman Catholicism and Carmelite history, became Bishop of Ossory in Ireland, and turned his energies to autobiography and Anglican plays (Stephen and Lee 1908, 961-2). One drama, written in 1538, had strong links with the site, for it condemned the urban preaching of his former brethren as 'craftye Assaults of the Hypocrytes';[8] a theatre was built in the ruins of the friary, in which the play was probably performed. Bale's part seems clear.

The site changed hands several times in the years following the Dissolution (Simpson 1986, 36-8, 48). References to the friary buildings in the deed of sale of 1544 suggest that robbing and demolition were still at an early stage, although some or all of them may already have become derelict. Certainly, the use of gunpowder for special effects during a dramatic performance in July 1540 (Simpson 1986, 37-8; Petchey 1991, 189-90) must have been to the detriment of the former friary buildings! It is probable that the friary buildings had fallen into ruin or been demolished before the early 1570s, when Camden saw 'the desolate place of the White Friars' (quoted in Petchey 1991, 246), and part of the former precinct was apparently occupied by the Harris' mansion built by 1570 (Page and Round 1907, 183) or 1574 (Petchey 1991, 85). The extreme west of the precinct remained waste ground, and by 1600 had become the town dunghill (Petchey 1991, 86-7).

Apart from this glimpse into the world of monastic learning and its somewhat startling aftermath, it is only recent excavation which enables us to see, like those fly-leaves, 13th and 14th-century structures hidden below later accretions, and, in a rapid change of land-use, the mid 16th-century theatre in the friary ruins (Fig. 1; Table 1).

History of research

Even the location of the site (Fig. 1) was uncertain until recently, as not one stone stands in its original above ground position, a testament to thorough robbing. Nevertheless, in 1920, moulded stones were observed by J.W.S. Bloe of the Royal Commission on Historical Monuments for England (RCHME). Some were reset in the garden wall of Friary East, others were used for garden 'rockeries' (RCHME 1921, 173; and NMR archives). More recently, other masonry was unearthed south and west of the putative friary location (Petchey *et al.* 1985, 9-10; figs 3, 4). None of the fragments Bloe sketched so conscientiously survived demolition or clearance in 1990.

Secondary sources are of limited help. Because of the rapid eclipse of the friary buildings in the 16th century, there are no prints or drawings of the site, and no tradition of antiquarian diggings. Boundaries have been realigned and few relict examples can be directly related to excavated buildings. On the 1st edition Ordnance Survey 1873, the labelling of the area east of a Georgian mansion, Friary East, as its 'supposed site' was an educated guess, rather than an informed statement. Documents suggest that the precinct took in land somewhat north and west of this as well (Simpson 1986, 17-22).

Construction of a public car park by Maldon District Council and a public library by Essex County Council Libraries Department provided the opportunity for excavation of areas to the west and north of the two Georgian houses, Friary East and Friary West. This article presents the results of these investigations, carried out in 1990-1 by Essex County Council Archaeology Section. The work was funded by the County Council's Libraries and Social Services Department. The archive and finds are stored at Colchester and Essex Museum under the site codes MD9 and MD10. The skeletons have been returned for reburial to the Carmelite Order at Aylesford Friary, Kent. A public library and offices for Social Services feature prominently in this new landscape, so some 450 years after the Dissolution, the site has resumed some of its former roles.

Location and geology (Fig. 1)

Maldon is situated at 90 feet (28 metres) above sea level on a hill overlooking the river Chelmer at the point at which it flows into the Blackwater estuary. The site of the friary excavations lies south of the High Street, adjacent to White Horse Lane (TL 550 069). It occupies a level patch of ground, which from 1946 until 1991 was a car park. From 1805 until 1946, the site lay within the grounds of a pair of Georgian houses, Friary East and Friary West, constructed in 1805-7, which lay to the south of the site. To the south of Friary East and West, the ground slopes downhill very sharply to the south, and somewhat less so to the east. Despite the site's hill-top location, the boulder clay subsoil is saturated. The uppermost part of the boulder clay was partially exposed in plan and in section over both excavation areas, consisting of salmon-pink, yellow- or orange-brown clay with flint and gravel inclusions, and studded with tree-holes. When, therefore, the friary was founded in 1292-3, this wasteland would have been an attractive piece of land of which to dispose, occasioning the Crown no great loss of revenue (Maldon being a royal manor) during the late 13th-century recession.

The excavations: MD9 and MD10

The area was investigated in several stages, comprising two main excavation areas, to the south-west of Friary West (MD9), and to the north of Friary East (MD10; Fig. 1). The car-park surface and makeup was removed by machine, together with post-medieval garden soil, and excavated by hand thereafter. In 1990, the digging of trial pits by the contractors was observed by Dr. D.D. Andrews. A series of trial trenches (1-6) dug across part of Friary West garden under the supervision of D.D.Andrews and M. Beamish in 1990-1 (MD9) located a ditch and parts of an outbuilding. A zone around trenches 2, 4 and 6 was selected for area excavation, supervised by S. Bryant; a second zone to

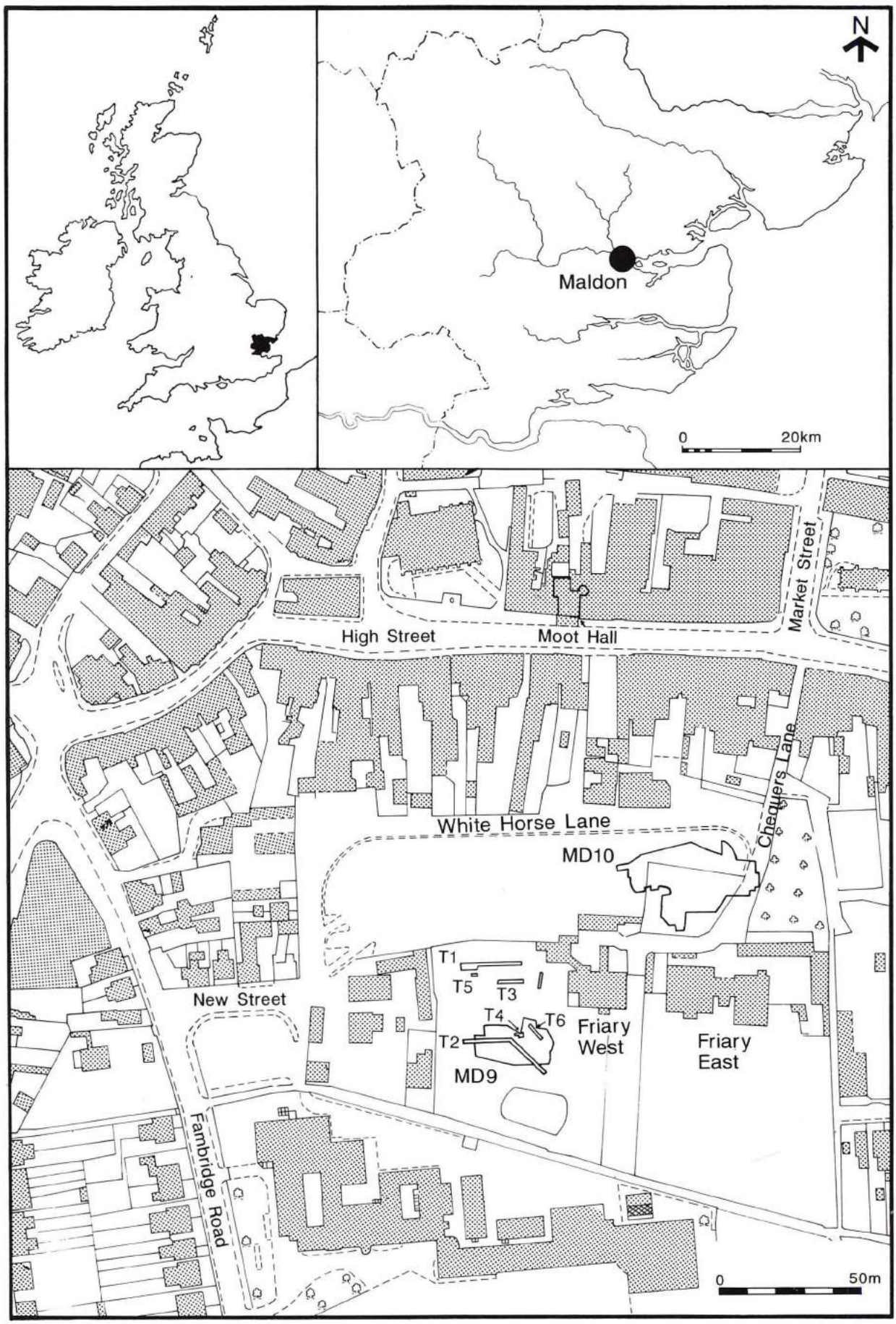

Fig. 1 Maldon Friary. Site location. Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494.

the north was also opened up, but in the event was not excavated because of lack of time.

In summer 1991, an area north of Friary East was opened up before building work started, also supervised by S. Bryant (MD10). Machining revealed part of a courtyard building and a sequence of burials, but little destruction debris was noted below the garden soil. In winter 1991, when construction works were already under way, the author was asked to investigate the northernmost portion of MD10, under what were rescue conditions. Archaeological recording was also considerably restricted by the high water table.

Organisation of the report

This text supersedes previous interim accounts (Gilman 1991, 155-6; Gilman 1992, 106-7; Groombridge 1991; Robertson 1992). It is based upon the excavators' archive text, amended by the present author in the light of further fieldwork and documentary research. Overall phasing of the development of buildings and major features is set out for both the excavation areas, MD9 and MD10 (Table 1). These are described separately, period by period, with summaries of dating evidence, aided by the ceramic analysis of H. Walker. For some contexts, problems of contamination mean that more reliance has to be placed on documented dates than mixed or poor pottery groups, especially for MD9. The direct consequences of the changes brought about by the Dissolution to the structural history or to the local topography are then discussed.

Within the excavation texts, buildings are numbered consecutively (1, 2, etc.) and subdivided into rooms (A, B, etc.); *note that the building numbers are unique to each excavation area.* Specialist reports follow on (i) building materials; (ii) pottery; (iii) small finds; and (iv) osteo-archaeology and other environmental evidence. A final discussion deals with the major points to emerge from both excavations, and examines the roles of the buildings as parts of the monastic precinct and the development of the precinct over time as a part of Maldon's urban landscape.

Table 1. Sequences of medieval and post-medieval land use at Maldon Friary

Numbers in bold denote periods and phases of activity on each site, followed by dating in brackets

Site MD10	Site MD9	Land use	Documentary evidence
1 (13th C) Pits/tree-boles	**1** (13th C) Pits/tree-boles	**Wasteland**	
2A (late 13th/early 14th C) Cloister and surrounding ranges built Burials in cloister	**2** (late 13th/early 14th C) Boundary ditches dug Outbuilding built Covered drain built	**Monastic foundation**	1292/3-1300+ Construction of friary buildings
2B/C (14th C) Cloister refloored Burials in cloister		**Monastic precinct**	1314 Expansion for cemetery
3A (late 14th C +) Cloister and ranges rebuilt New room layout in East range	**3A** (late 14th/late 15th C) Outbuilding extended Yard surfaced Covered drain added		
3B (15th/early 16th C) East range rebuilt	**3B** (late 15th/mid 16th C) Outbuilding refloored External dumping Drains disused		
4 (mid 16th C) Cloister demolished	**4** (mid 16th C) Outbuilding demolished	**Dissolution**	1536-8 + Initial demolition
5 (mid 16th-18th C) Post-hole structures for staging? Boundary fence erected Drains built	<u>Or</u> Outbuilding demolished after period of decay	**Derelict land**	1537-43 + Annual theatre 1544-70/4 Final demolition of friary buildings
	5 (later 16th/18th C) New culverts built Fences erected Pits dug	**Mansion and garden, wasteland to the west**	1563-70/4 Harris' mansion built and garden laid out
6 (19th C) Cold frame	**6** (19th C) Garden features	**Houses and gardens**	1805-7 Friary West and East built

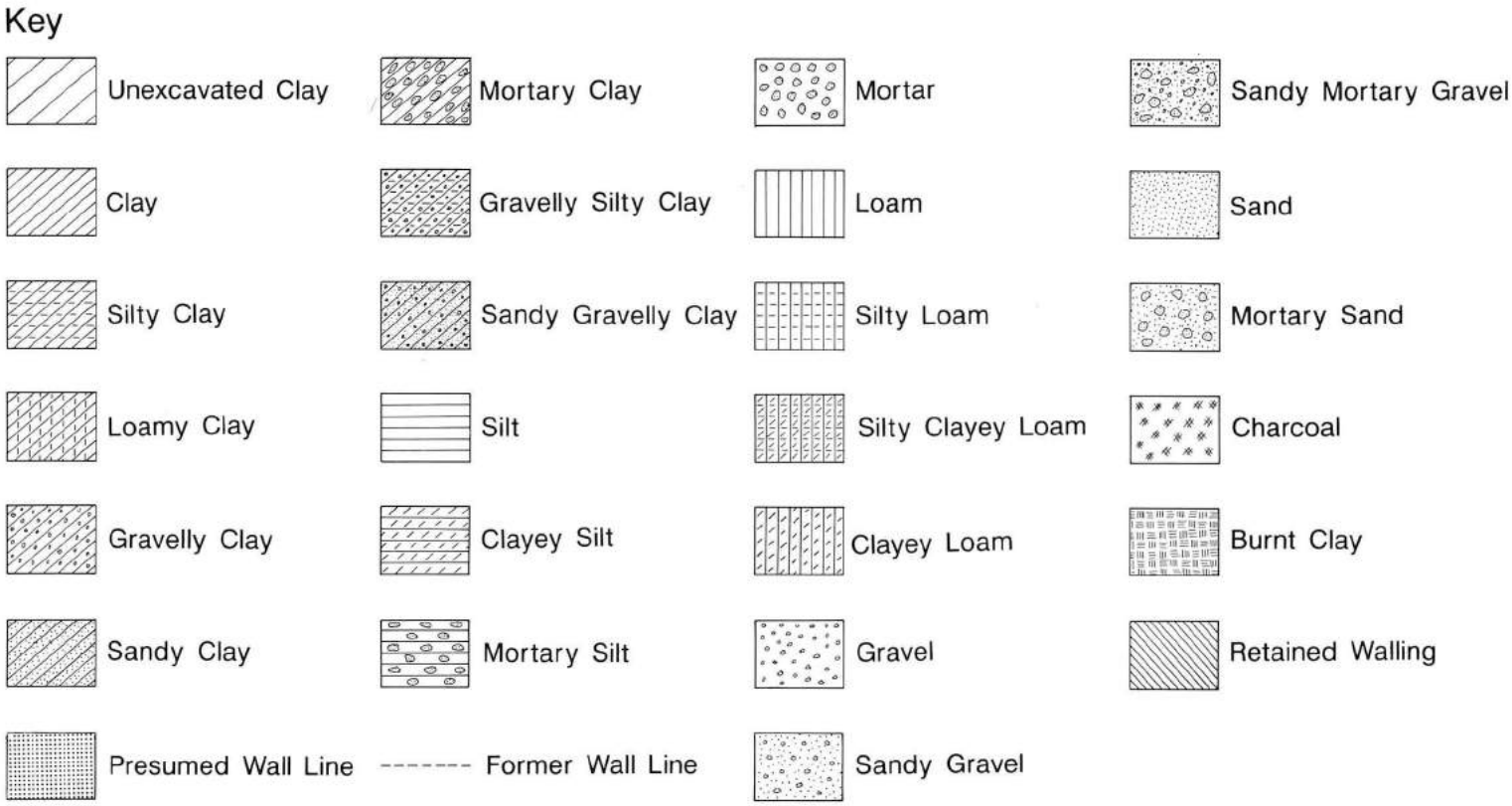

Fig. 2 Maldon Friary. Drawing conventions

SITE MD 10: THE CLOISTER AND NORTH AND EAST RANGES

Summary of development (Fig. 3)

A group of 13th-century pits dug in open ground to the rear of tenements on the High Street were probably tree boles dug out during site clearance (period 1). A large stone courtyard building was constructed, identified as the cloister and north and east ranges of the Carmelite friary, built in the years following 1292/3 (period 2A). Eight burials were interred in the east cloister walk in three phases, all dated to the 14th century (period 2A-C). Extensive rebuilding was carried out in the late 14th century, and the room layout of the east range was remodelled (period 3A). The east range was again rebuilt, in the 15th or early 16th century, with further remodelling of the internal layout (period 3B). Development after the Dissolution in 1536-8 (not illustrated) is represented by demolition and clearance of the friary buildings (period 4), followed by features related to the gardens of Harris' mansion, built in 1563-1570/74 (period 5), and a 19th-century cold-frame (period 6).

Period 1. Open ground (12th - 13th century) (Figs 4, 6)

A group of pits probably represent the boles of trees dug out during site clearance.

Three large pits (1400/1337/1320/1020), dug into natural clay, were partly investigated. Pit 941/1049 was at least 0.85 m deep; pit 1018A was at least 0.35 m deep; and pit 972 (not shown on Fig. 4) was very heavily truncated. Their fills (Fig. 6, S.2-4) were mixed variants of silty or loamy clay; among their inclusions were charcoal, mortar and brick, typical of later disturbance. Pit 941 is known to have been heavily contaminated.

Dating evidence

A total of 43 sherds weighing 808g was excavated from this phase, although most of this material is discounted as obviously intrusive in pit 941. Early medieval ware and shelly wares indicate 12th or early 13th-century activity (and are present as residual material in later periods), and a single sherd of Mill Green ware is also present, with a date range of mid 13th to mid 14th century. The pottery is consistent with a phase of pit-digging predating the documented foundation date of the friary, AD1292/3.

Discussion

The purpose of these pits is uncertain. They may represent clay quarries for brick or tile making, but it is more likely that they were tree-boles resulting from the felling of trees during site clearance.

Period 2A. Building 1: the first building phase (1292/3-14th century) (Figs 5-7)

A large courtyard building was constructed. Its late 13th/early 14th-century date and its form suggest it represents the Carmelite friary, with buildings ranged around the north and east sides of a cloister (building 1,

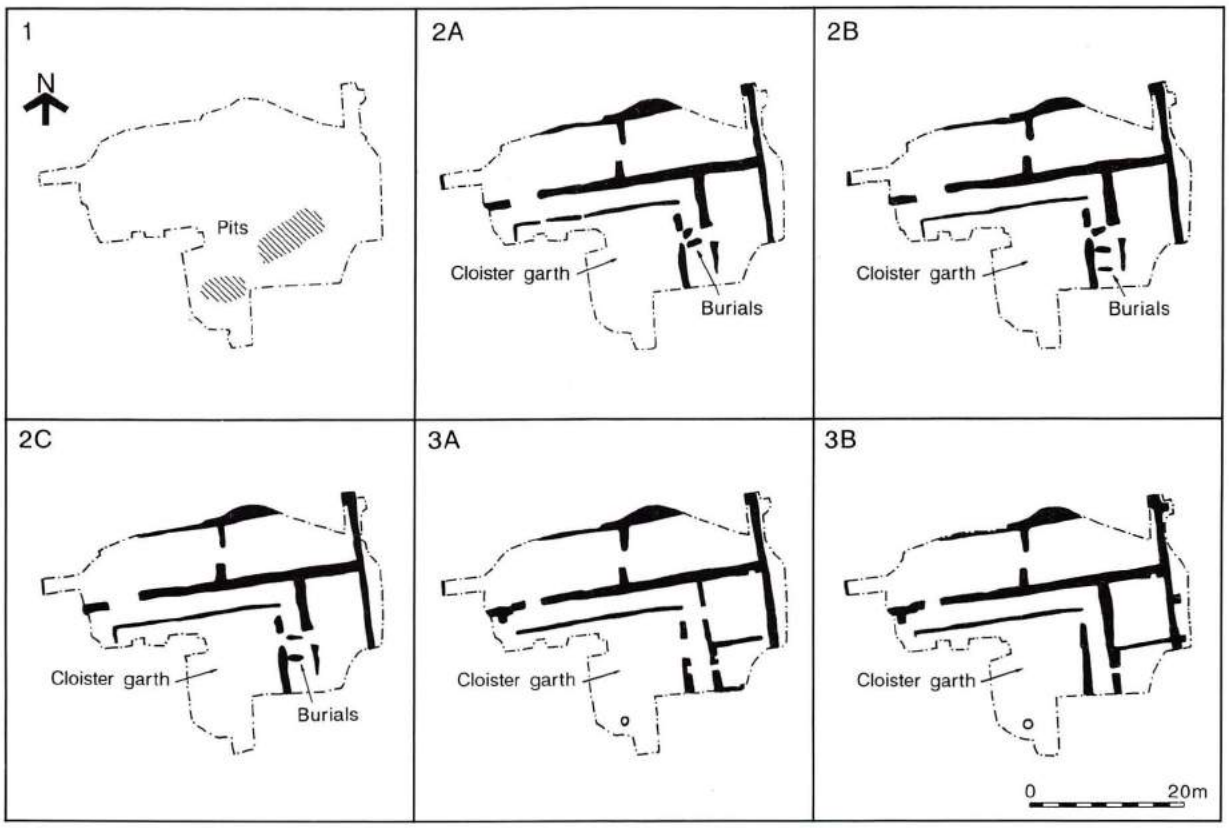

Fig. 3 Maldon Friary. MD10 sequence; periods 1-3B

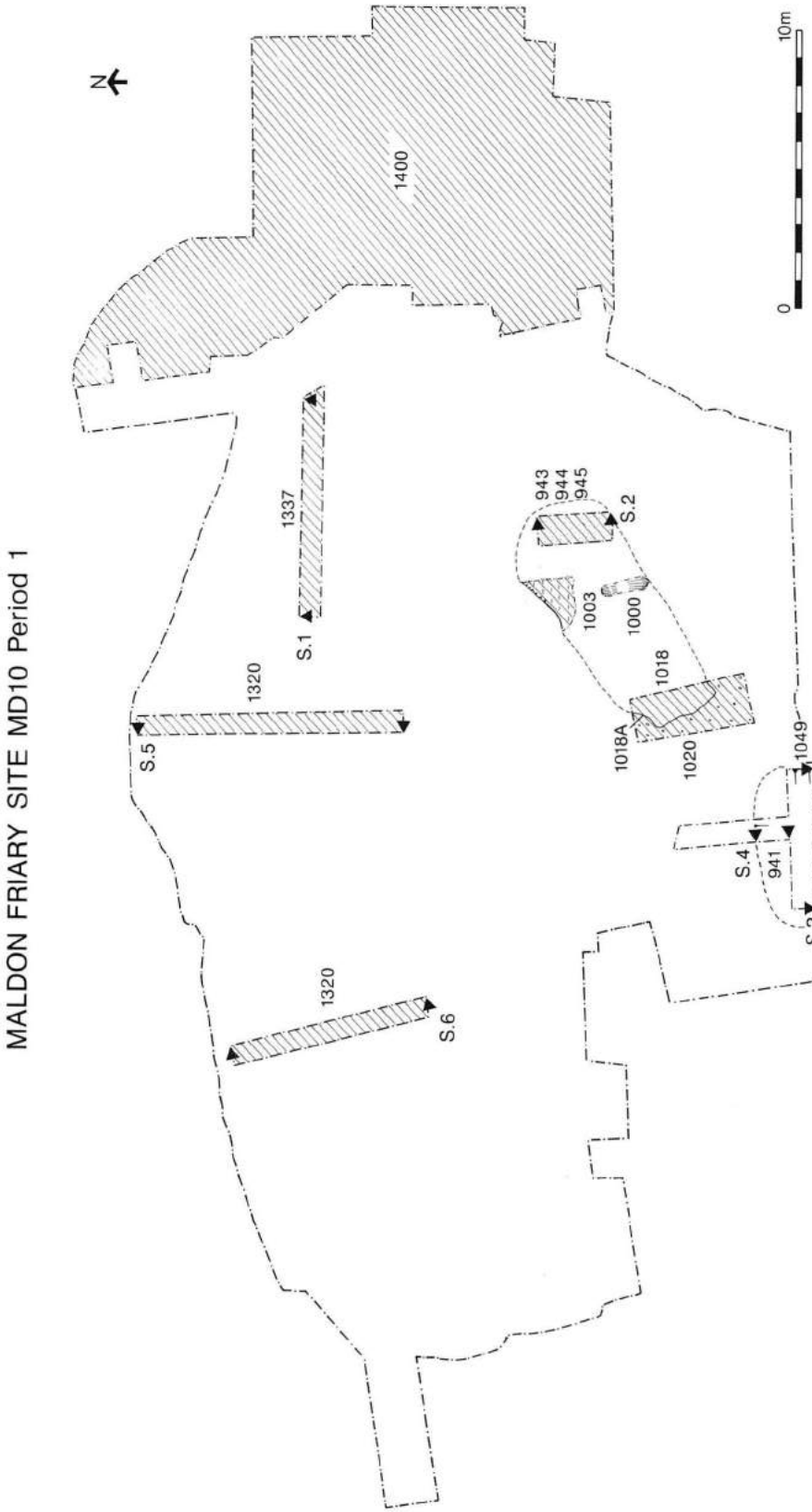

Fig. 4 Maldon Friary. MD10, period 1

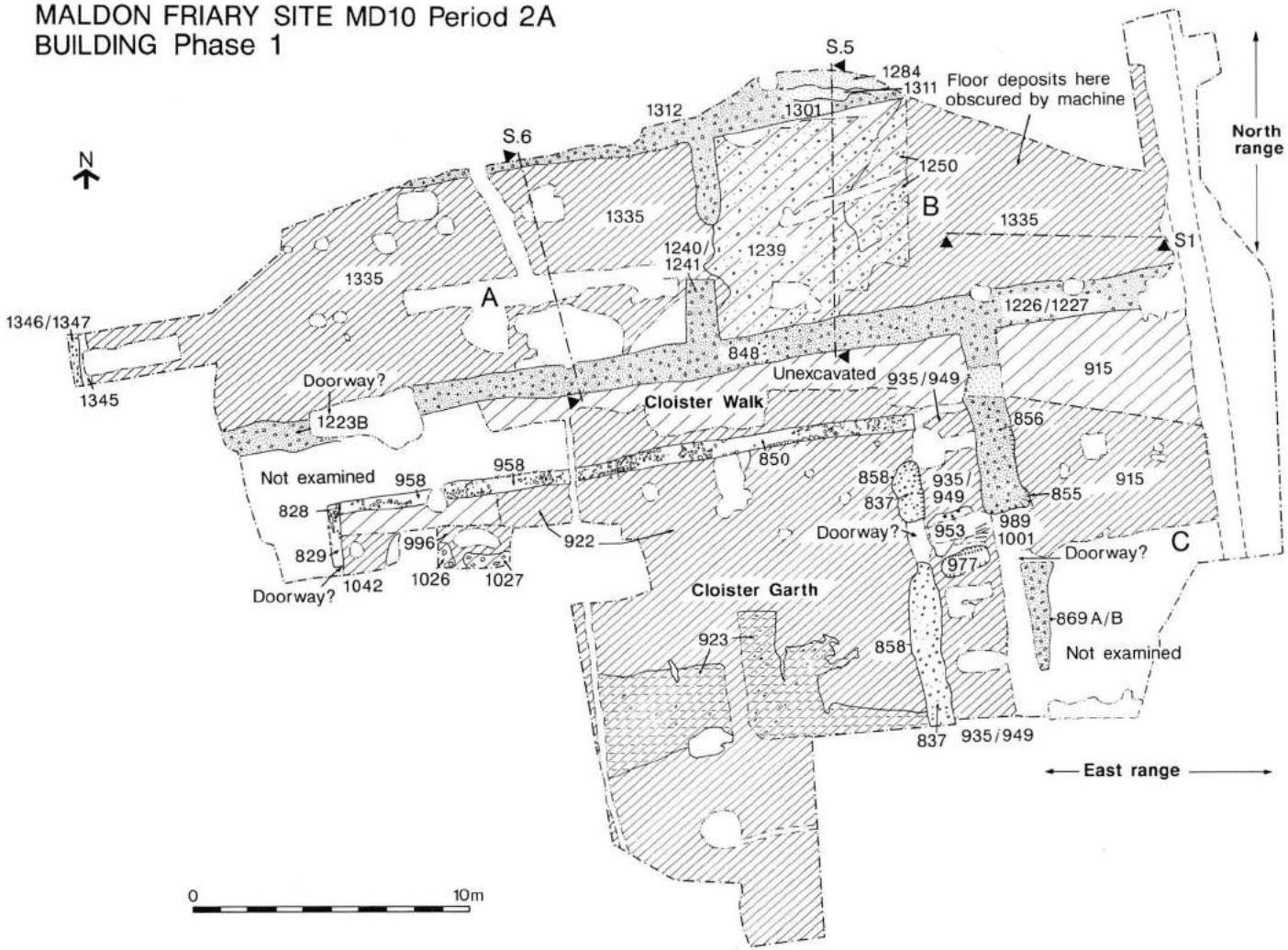

Fig. 5 Maldon Friary. MD10, period 2A

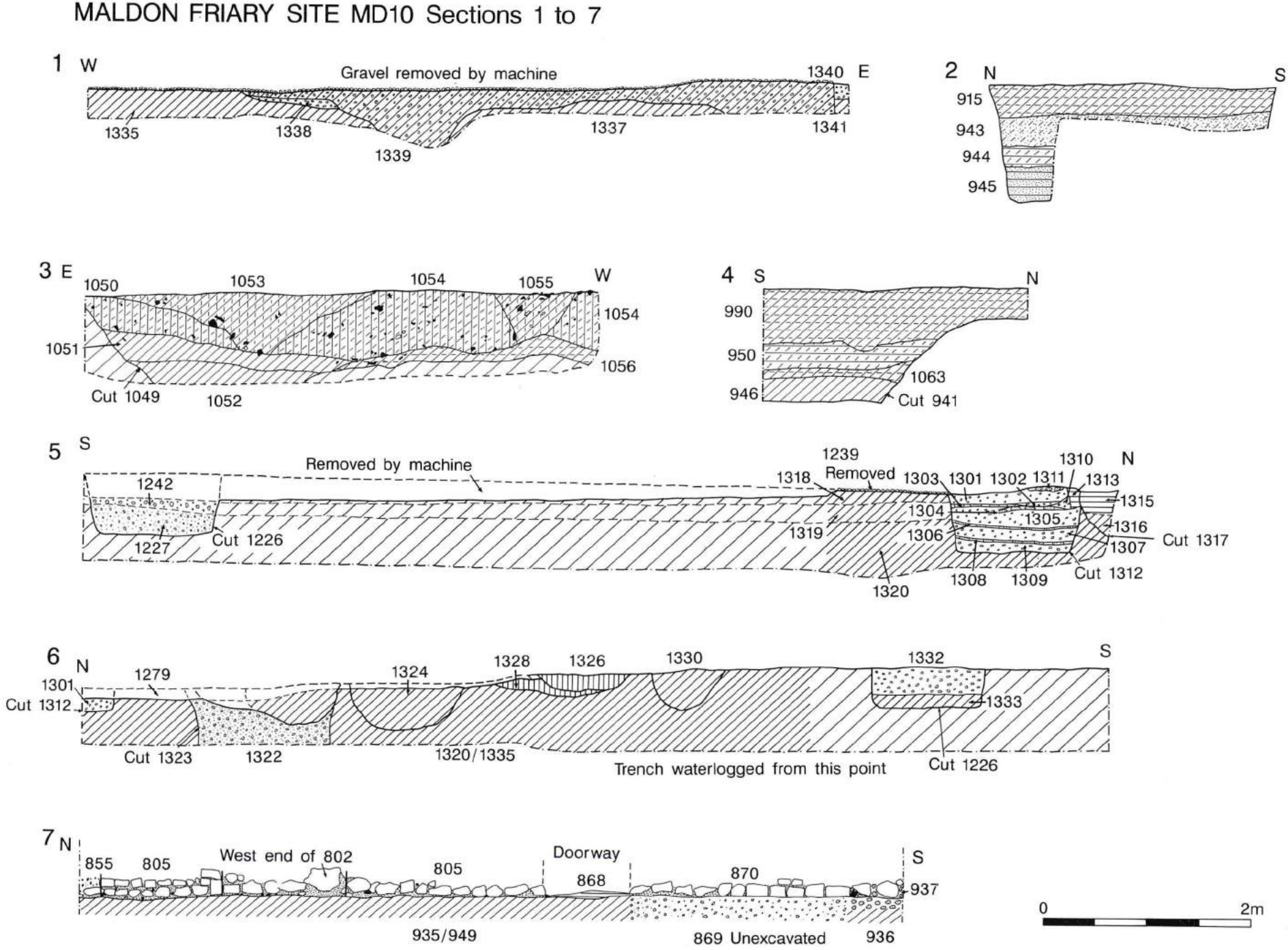

Fig. 6 Maldon Friary. MD10, sections 1-7

rooms A-C). The walls of the building were constructed on a clay raft, but were robbed down to foundation level; floor make-ups have survived in some areas. Several interments were made in the east cloister walk shortly after building work had been completed.

Building layout and recording

The north-east corner of a large courtyard building (building 1) was recorded within the excavated area. The building remains consisted of two rooms (A and B) forming the north range, and a third room (C) at right angles forming part of the east range. An internal passage or walkway around the central courtyard is typical of a cloister walk. The north and east sides of the cloister are clearly defined, and a short length of return wall suggests the location of the west cloister walk, although this lies mainly outside the excavated area. Although the ground plan of the building was clearly visible, recording of the northern half of the excavated area was hampered by flooding and disturbance from contractors' work, hindering full understanding of this and subsequent phases (the areas affected are indicated by a broader cross-hatch on plans and sections). Although a full plan of the site was recorded, detailed recording and excavation were selective, and many parts of the area were left unexcavated.

Construction

The foundations of the building were constructed from the surface of a clay raft laid over the whole of the excavated area, sealing earlier features (the raft was not recorded under controlled conditions for its full extent). The raft consisted of silty or gritty clay with gravel and/or building materials (1335, 1318-19, 915, 935/949 and 922). It was typically 0.35m thick, but where observed in section, much had been removed by machine (Fig. 6, S.5). A group of pits were dug into the clay raft in the truncated area within room A. They have no clear relationship with the building and are best regarded as builders' pits (shown as intrusions on Fig. 5). Pit 1323 in particular has a profile typical of a well, robbed of its timber lining and infilled (Fig. 6, S.6).

Foundation trenches were dug through the raft into the subsoil, and filled with consolidated sand and gravel to provide firm footings on which the walls were erected. The foundations recorded were as follows:

North range		
west wall	trench 1346	foundation 1347
north wall	trench 1312	foundation 1301-1311
south wall	trench 1226	foundation 1223B/1227/1242/1332
north-south partition	trench 1241	foundation 1240
east wall	presumed removed by later rebuilding in period 3A	
East range		
west wall	trench 855/869B	foundation 856/869A/806/817
east wall	presumed removed by later rebuilding in period 3A	
east-west partition	presumed removed by later rebuilding in period 3A	
Cloister		
west walk	trench 828	foundation 829
north walk	trench not recorded	foundation 850/958
east walk	trench 858	foundation 837

The foundation trenches were typically 1.2-1.3m wide and 0.6m deep (although truncated in places), with regularly cut vertical sides and flat bases. The foundations consisted of layers of highly compacted gravel and mortar packed within the trenches (a good example is trench 1312 and foundation layers 1301-1311, Fig. 6, S.5). Where foundations joined, abuttals could not be distinguished from one another, implying that they were all constructed in one operation. The foundations for the cloister were less substantial, measuring only 0.8-1.0m wide and 0.2-0.4m deep, but like the foundations of the main building ranges they consisted of compacted gravel and mortar within regular square-cut trenches. No evidence of the original superstructure survived, as all walls were demolished down to foundation level. Even in the east range, where walls survived to a height of 0.4m, the original period 2A superstructure was demolished during later rebuilding in periods 3A and 3B. However, a few scraps of evidence for building construction survive along the line of the north cloister wall 850/958. A mortar construction spread (896) along the south side of the wall contained small fragments of flint, septaria and tile, and a fragment of an unusual green shelly limestone. Apart from the absence of ragstone, this builders' debris is typical of later rubble wall construction in periods 3A and 3B, with the limestone possibly representing a waste fragment from a moulding. Whole bricks within foundation 850/958 suggest that brick was also used in the original period 2 construction.

North range and north cloister walk

The north range was divided into two (rooms A and B) by partition-wall 1240, which was pierced by a doorway. The junction of the western wall of room A (1347) with the northern and southern walls (1301 and 1227) lay outside the excavated area, but their relationship can be assumed. The foundation of the eastern wall of the north range was not apparent in this period, but was probably on the same line as the east-end wall of period 3A and 3B (compare Figs 9 and 10), and again its line is assumed. The original wall was presumably robbed out or incorporated in the later rebuilding. A drain (1284/1317) was dug along the north side of the north range (Fig. 6, S.5). It was filled with silt-clay. An adjacent silt-filled feature (1314) may be the remains of some sort of lining or shuttering. A gap in the southern wall (1223B) may represent a doorway from the cloister walk into the north range, although this is uncertain as the area was affected by later disturbance. The clay-with-mortar flooring in room B (1239/1250) could have been deposited either in this or later periods (it is therefore shown on later plans also).

East range and east cloister walk

No trace of partitioning was found in the east range, so it is regarded as a single undivided room at this stage (room C). In similar fashion to the north range, the eastern and southern walls of room C were not apparent

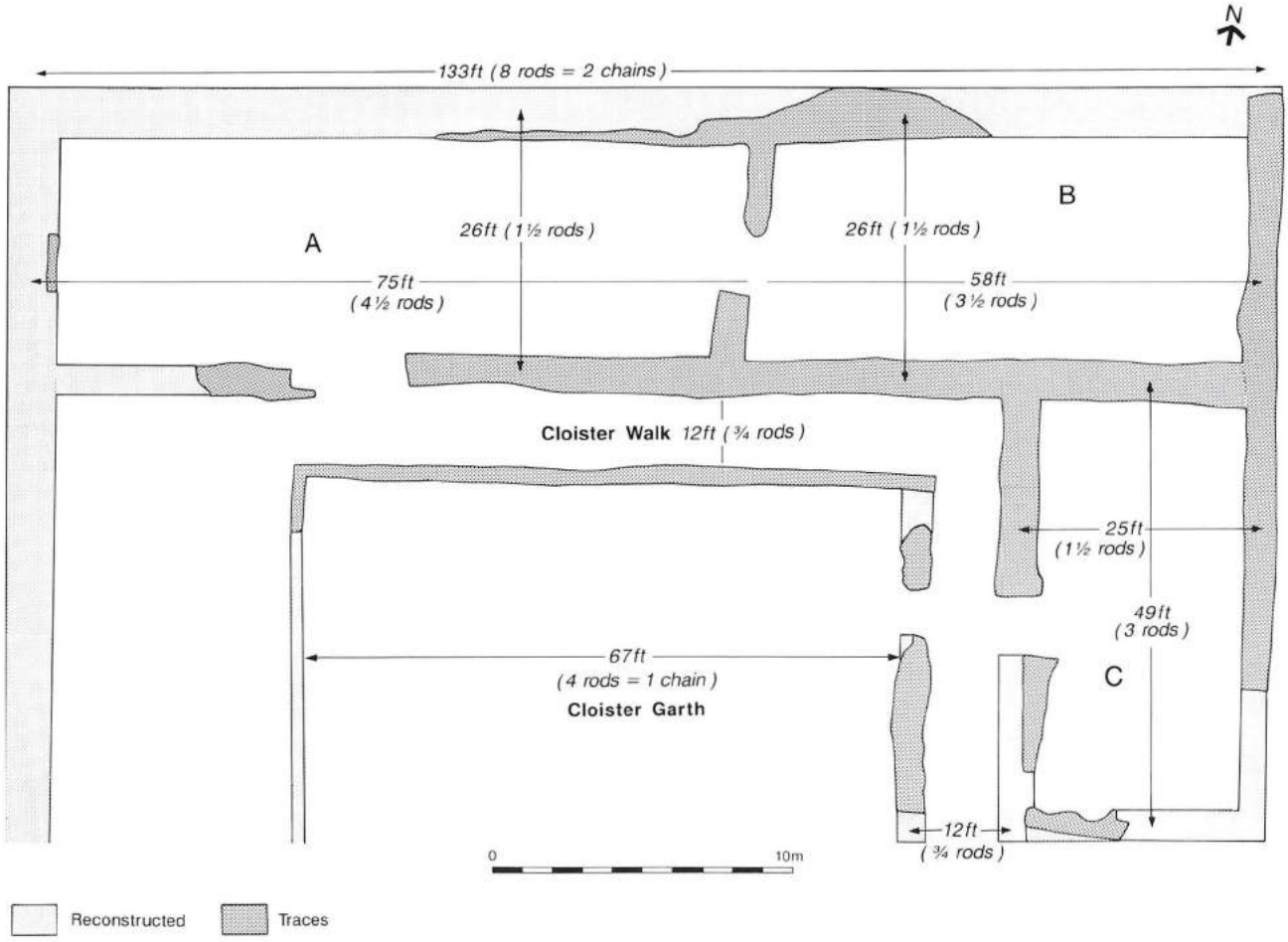

Fig. 7 Maldon Friary. MD10, survey modules

in this period, and it is assumed that they followed the line of later walls as rebuilt in period 3A. A gap in wall 858 represents a doorway between the cloister walk and garth. Significantly, this lies opposite a gap between walls 855 and 869B, representing a corresponding doorway from the cloister into room C in the east range. A further doorway is apparent at the north end of the cloister walk, but this was probably inserted during period 3A.

Burials in the east cloister walk

A group of three burials (953, 977 and 989) cut the floor of the east cloister walk, in a discrete area between walls 858 and 855/869. They were all aligned east-west, respecting the line of the cloister walk, and appear to have been deliberately positioned in the space between the opposing doorways leading to the cloister garth to the west and room C to the east. The burials were all of adult males (see Human skeletal remains, below), and were as follows:

Grave 953	skeleton 987
Grave 977	skeleton 985
Grave 989	skeleton 1001B (disturbed).

Grave 977 was 0.2 m deep, and grave 953 was probably of similar depth; both were infilled with successive tips of pebbly silt clay, mortar, tile and charcoal (954, 976). Skeleton 1001B in grave 989 was disjointed, and was recorded as part of later interment 1001. Their position early in the stratigraphic sequence suggests that they were deposited within a short space of time, soon after the building was completed.

Cloister garth

Patches of surfacing (1026/1027) were recorded to the south of cloister wall 850/958 and a more extensive area of gravelly silt, probably general trample (923; not fully planned), was recorded nearer the centre of the cloister garth. Both surfaces overlay clay raft layer 922, and could have been deposited both in this and later periods (they are shown on later plans also).

Dating evidence

The documentary evidence (Historical background, above) suggests that building work may have started in 1293, a year after the foundation of the friary, and was still in progress in 1300. The pottery dating broadly supports this evidence.

A total of 92 sherds weighing 986g was excavated from period 2A deposits, much of it residual, with occasional intrusive sherds. However, late 13th/early 14th-century pottery is present, which matches the documented date for the friary's foundation and construction. A silver long-cross penny datable to the late 13th to 15th centuries came from floor make-up 915. Very little pottery came from the clay raft or the

foundations, although foundation 837 produced early medieval ware, and sherds from a sandy orange ware vessel which could almost be early medieval ware. Most of the pottery was recovered from floor make-up 935, and surface 923 in the cloister garth. Medieval glazed wares in these include: Hedingham ware with applied strip-decoration; sandy orange ware fabric resembling Harlow ware, with stamp decoration; Colchester-type ware; and green-glazed Mill Green and Kingston-type wares. The little pottery recovered from graves 953 and 977 included a sherd of Hedingham ware. Flemish-type cream and grass-marked bricks recovered from period 2A foundation 850/958 are both dated to the 14th century (see Medieval bricks, below).

The pottery is mainly consistent with period 2A being dated to the late 13th to 14th century, although the latest pottery from surface 923 and the coin from floor make-up 915 could both have been deposited later. However, both 923 and 915 remained in use in period 3A, explaining the presence of later material. The ?medieval Harlow ware stamped sherd, and the sherds of ?Colchester, Mill Green and Kingston-type ware all fit well with a date of around 1300.

Discussion

The friary buildings were constructed on a clay raft laid down to create a stable, level base and to raise the ground above the high water table. Foundation trenches dug into the raft stopped above the water table and were filled with compacted ballast, providing strong load-bearing footings. The foundations were capable of supporting substantial buildings, possibly with upper storeys, although evidence for period 3A suggests that these may have been added, or at least extensively rebuilt, at a later date (see below). Pit 1323, interpreted as a well, could have supplied the water required for mortar mixing while building work was in progress.

Much of the excavated area was occupied by an open cloister, with building ranges to the north and east. Almost all of the north range and part of the east range was recorded, although reconstruction of their plan assumes that original period 2 wall lines are reflected in the line of later rebuilds in period 3A and 3B. The two large rooms A and B forming the north range were linked by an internal doorway, and were approached from the cloister by a large doorway in the south-west of room A. Opposing doorways in the east cloister walk gave direct access from the cloister walk and garth to room C in the east range, and were apparently aligned centrally on room C. The line of the west cloister walk can be projected, but the south and west sides of the cloister lay outside the excavation area and the layout in these areas remains unknown. The function of the rooms is not immediately apparent, and finds were few (largely because of the poor survival of floors) and undiagnostic. An attempt to reconstruct the cloister layout and identify the purpose of individual rooms, using architectural parallels, is made in the final Discussion.

The dimensions of the rooms and the cloister can be reconstructed and survey modules can be suggested, based on the most common medieval unit of measurement, the Rod of 16½ft. Dimensions recorded during excavation are given on Table 2 and Fig. 7, measured to the centre line of walls, together with 'target' dimensions of the suggested modules in rods. There is a reasonably close correspondence between site dimensions and the suggested modules in most cases, but in others there is a discrepancy of around 1 yard. Unfortunately the conditions of excavation and the poor survival of the walls do not allow precise measurement or interpretation.

However, despite these qualifications, there is evidence of a systematic layout. Both the north and east ranges were laid out to a standard width (c. 7m/23ft internally; c. 8m/26ft to wall centres), which suggests a module of 1½ rods (24¾ft). Rooms A and C were laid out to regular proportions of 3:1 and 2:1 respectively, corresponding to 4½ x 1½ and 3 x 1½ rods. The proportions of room B were less regular, but the length of rooms A and B combined gives an overall length of 8 rods for the north range. The width of the cloister garth corresponds to 4 rods, and including the walks on either side, the overall width of the cloister is projected at 5½ rods. However, without a more complete ground plan, it is not possible to test the consistency of the modules for the cloister area as a whole. A regularly surveyed layout is implied, but cannot be proven in detail.

Wholesale demolition and clearance at the Dissolution (period 4) has left little evidence to suggest the

Table 2. Site MD10: Survey modules

	Length		Width		'Target'	Rods
	m	ft	m	ft	ft	16½ft units
North range						
Room A	22.8	**74.8**	8.0	**26.2**	**74.25 x 24.75**	**4½ x 1½**
Room B	17.6	**57.7**	8.0	**26.2**	**57.75 x 24.75**	**3½ x 1½**
Overall	40.4	**132.5**	8.0	**26.2**	**132 x 24.75**	**8 x 1½**
East range						
Room C	15.0	**49.2**	7.8	**25.6**	**49.5 x 24.75**	**3 x 1½**
Cloister						
North walk			3.5	**11.5**	**12.4**	**¾**
East walk			3.5	**11.5**	**12.4**	**¾**
Garth			20.4	**67.2**	**66**	**4**
Garth + 2 walks			27.4	**89.9**	**90.75**	**5½**

architectural style of the cloister and related buildings. The main walls were probably of ragstone, septaria and flint rubble construction, as in later rebuilding in periods 3A and 3B. The cloister walls were thinner than those of the north and the east ranges, suggesting dwarf walls supporting arcading, presumably with decorative mouldings. A moulded door surround is certainly implied by slight bulges in the west doorway of room C. Fragments of door and window mouldings in clunch and Caen stone were recovered from period 4 demolition rubble in the cloister walks (Medieval building stone, below), and may relate to the original construction of the friary. However, all but one of these were recovered from the east cloister walk, which was completely demolished and rebuilt in period 3A, and they are more likely to relate to this later phase of construction. Nevertheless, period 2A construction deposits provide evidence of other materials which would have been used in the original friary buildings. A small piece of green shelly limestone resembling porphyry probably represents a waste fragment from a moulding. The presence of whole Flemish-style bricks suggests that these were also used, although probably for dressings, rather than as one of the main construction materials (see Medieval bricks, below). Even so, this represents a very early use of brick. In addition, fragments of coping and quatrefoil window recorded in secondary contexts in the garden of Friary East may have originally come from the friary. Despite their uncertain provenance, most of the mouldings are Early English in style, which would be appropriate for the original friary buildings.

There is very little evidence of floor make-ups or surfacing within the excavated rooms, even in room C and the cloister walks where later floors are known to have existed (see period 3A). It is assumed that most or all of the rooms would have been provided with tile floors, either robbed when later floors were laid, or truncated by later disturbances. Several types of decorated floor tile contemporary with the construction of the friary were recovered from later phases, and these may represent the original floors.

The graves in the east cloister walk respect the layout of the cloister walls and opposed doorways precisely. Flooring would have been lifted in order to dig them through make-up, and then replaced. This is suggested by tiles slumped into the fills of the graves. Alternatively, they may have marked the positions of graves in an otherwise austere, untiled cloister walk. The burials could represent individuals who died while work was in progress or shortly after it had ceased - or be the graves of individuals who wished to be buried in the friary, and were re-interred for this purpose. This may explain the disjointed condition of one of the burials, perhaps removed from elsewhere in the complex, unless it was disturbed by later grave digging. What is clear is that they were located in a significant position, along the central axis of both doorways. They could be walked over either when crossing from room C to the cloister, or when progressing along the cloister walk. If this argument is accepted, then it seems likely that disturbed interment 989 was the primary burial, being flanked by the other two shortly afterwards. For reasons discussed in period 2C, it is likely that they were marked by grave slabs in the floor of the cloister walk.

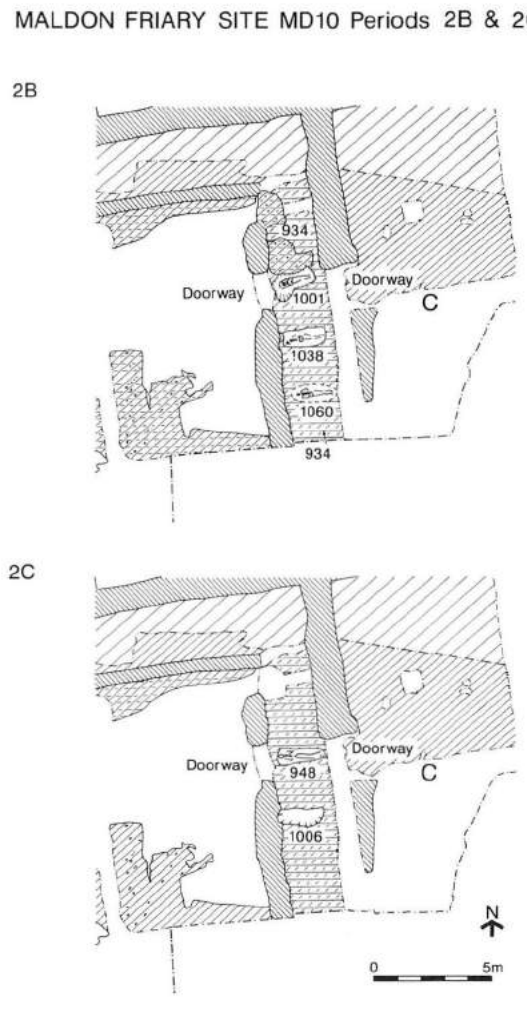

Fig. 8 Maldon Friary. MD10, periods 2B-2C

Period 2B. Burials (14th century) (Fig. 8)

The east cloister walk was refloored, and a second group of burials was interred.

East cloister walk

A layer of gravelly clay silt (934) was deposited over the fill of the period 2A grave 953. Subsequently a group of three burials was dug into the surface of the east cloister-walk (graves 1001, 1038, and 1060). Grave 1001 cut layer 934 and grave 989 of period 2A, disturbing the earlier burial.

As in period 2A, the graves were all aligned east-west 0.9 metres apart, respecting the line of the cloister-walk, and appear to have been deliberately positioned outside the doorway leading from room C. The burials were all of adult males, as follows:

Grave 1001	skeleton 1001A
Grave 1038	skeleton 1028 (Plate I)
Grave 1060	skeleton 1046

Plate I Maldon Friary. MD10; skeleton 1028 in grave cut 1038 (period 2B, 14th century). Linear scales 1m and 0.5m.

The limit of grave 1038 was hard to determine, while no detailed plan survives for grave-cut 1060. There are no records of grave depth. Grave 1038 was filled with silty clay (1017), and grave 1060 with tips of pebbly clay silt, tile and mortar fragments (1058/1059). The fill of 1001 was not recorded.

Dating evidence

See period 2C.

Discussion

Deposit 934, unless the only surviving portion of cloister walk make-up, may be re-flooring over the subsided fill of a grave, laid north of the doorway of Room C. If it extended south of the doorway as records hint, then it was removed by later grave digging. Grave 1001 was probably the earliest burial in this phase since it occupied the significant position between the doorways of cloister walk and east range. Graves 1038 and 1060 followed in succession southwards at one-yard intervals, in a row possibly extending beyond the limit of excavation. Poor recording prevents more detailed interpretation.

Period 2C. Burials (14th century) (Fig. 8)

A third and final group of burials was interred in the east cloister walk.

East cloister walk

Two further graves (948 and 1006) were dug in the east cloister-walk. As with the burials of period 2B, which they cut, they were aligned east-west and were located at the doorway between room C and the cloister walk and south of it. The burials were both adult males, as follows:

Grave 948	skeleton 969
Grave 1006	skeleton 1008

Grave 948 was 0.35 metres deep; the depth of grave 1006 is not recorded. Grave 948 was filled with pebbly silt-clay; and grave 1006 with silt-clay, with tile, oyster and charcoal fragments, and a nail.

Dating evidence

The pottery from periods 2B and 2C (5 sherds weighing 24g) cannot be demonstrated to be any later than that from period 2A; indeed the pottery may be wholly residual.

Discussion

Maintaining the same burial location would be helped by laying memorial slabs or tile surfaces, set into and level with the surface of the floor, all presumably removed during re-flooring in period 3A. These (inferred) memorials were the only indication of any personal identity permitted by an austere universal discipline; there were apparently no grave goods or coffins.

Period 3A. Building 2: rebuilding (late 14th century) (Figs 6, 9)

This was a period of substantial rebuilding (building 2). In the north range the layout of rooms A and B remained unchanged, but the east-end wall of the range was renewed as part of the rebuilding of the east range. There is evidence of scaffolding connected with other building work in the north range, and a stair was inserted at the west end of the north cloister walk. The east range and east cloister walk were completely rebuilt, and the period 2 room C was subdivided to create rooms D and E. The cloister walks were completely resurfaced as part of the rebuilding.

North range and north cloister walk

A series of pits was dug into the floor of room A (1268, 1217, 1298, 1281) and a further pit was dug in room B (1236). Although not excavated they were filled with stony or gravelly silt-clay, apart from 1236, which excavation showed to be 0.13m deep and filled with mortar. At the west end of room A, a long rectangular pit was dug (1344), filled with pebbly charcoally loam (1343). Into the fill a shallow bowl-hearth (1299) was inserted, lined with clay (1336) and filled with pebbly charcoally loam (1300). Lead fragments came from this feature. Room B was largely unaffected by these alterations, although the east wall was rebuilt from foundation level as part of the rebuilding of the east range (see 1321A, below). The period 2 floor make-up 1239/1250 may have continued in use.

Along the north cloister walk, layers of pure or pebbly silty clay (960/848) represent extensive resurfacing. Immediately to the south of the south doorway of room A an irregular pit was dug (1351), filled with tips of mortary gravelly clay and silt-clay (1349/1350). It was cut by a sub-rectangular pit (1209) filled with silt-clay (1208), right in the doorway, cut to its west by a further sub-rectangular pit (1223A), 0.27m deep and filled with sandy clay (1222A). To the west a short stretch of chalky mortar walling (1031/1045) was constructed, aligned north-south, and built into the original period 2 wall (1044). Deposits of mortar both to its east (984) and west (978) may be related to this structure. To the south, chalky mortar (1011) was laid in the cloister walk, with clay and building rubble dumped on top (1010/1012/1005/1036).

The sequence indicates remodelling of the north-west corner of the cloister walk. It consisted of the digging-out of a jamb stone (1351) and the blocking-up of part of the doorway (1223A, with 1209 acting as a foundation-trench). The reveal for the doorway was probably concealed by the mortar make-ups, not all of which were removed by excavation. Wall 1031/1045 may have been constructed as the base of a flight of stairs. Poor excavation records unfortunately limit understanding of this area.

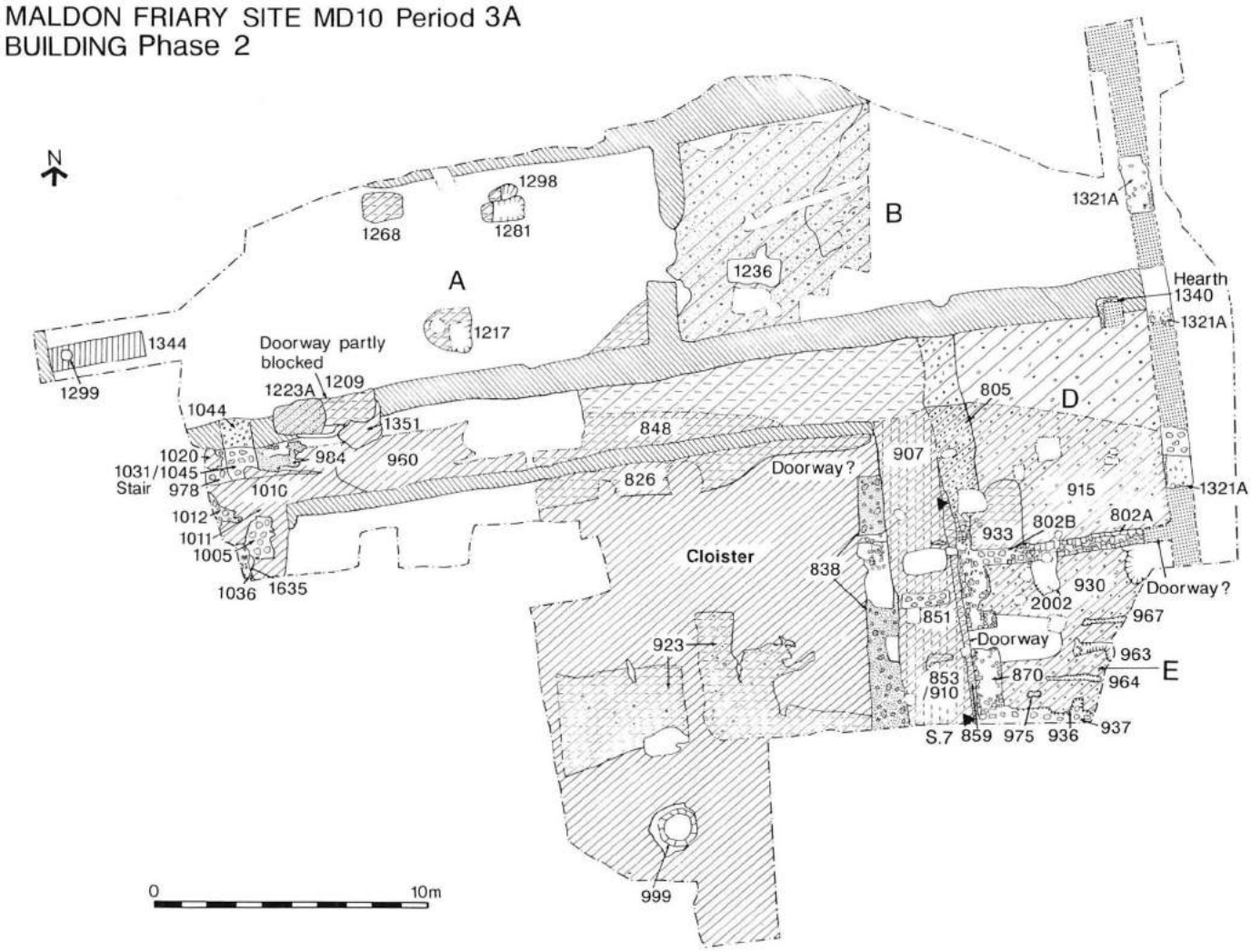

Fig. 9 Maldon Friary. MD10, period 3A

East range and east cloister walk

The east range and the east cloister walk were completely rebuilt. The west wall of the east range was built of ragstone, flint, chalk, septaria, and brick rubble in yellow mortar (805/870), set on a packed foundation of mortary gravel (806) and chalky pebbly clay (882), also visible as a strip of silt-clay and building material (859) in a linear depression along its western edge. This may represent the outline of a robbed string course or moulding at the base of the wall. The foundation trench (855/881) was very shallow, and the new wall was built on the foundation of its period 2A predecessor (Fig. 6, S.7, 869).

The adjacent cloister wall must have been reconstructed at the same time as the west wall of the range, as both walls cut the make-up for the resurfacing of the cloister walk. This consisted of layers of silty clay, similar to those in the north cloister walk, except that in the east walk they were mixed with building-materials (907/853/910), including a rectangular patch of mortar (851) at the surface. This could be an attempt to stabilise subsidence caused by grave 977. The foundation for the new cloister wall consisted of sandy mortary gravel (838), up to 0.3m deep, again making use of the foundation of its period 2A predecessor (858).

Only short lengths of the east wall of the east range (1321A) have survived truncation by a further phase of reconstruction in period 3B. The wall was of similar build to the west wall 805/870, and extended northwards to form the east wall of the northern range also. Unlike the wall 807/870, there is no evidence of it having replaced an earlier wall on the same line, but this may be because earlier footings were destroyed by the more substantial reconstruction of later versions of the east wall in periods 3A and 3B.

Within the east range, a wall (802A) aligned east-west at right angles to walls 805/870 and 1321A was constructed of alternating brickwork and chalk blocks laid in grey mortar (Plate II). Where it had been robbed, underlying portions of mortar (802B) were visible, probably foundation trench fill. This wall 802A/B divided the original period 2A room C into two separate rooms, D and E. The south wall of room E is represented by an irregular mortar and sand foundation (937) abutting the west wall 870, and set in a shallow trench (936), but unfortunately very disturbed and lying at the limit of the excavation area. Like wall 870, wall 937 was probably built on earlier footings of period 2A, although it was not possible to prove this by excavation.

Each room apparently had a different floor. In room D there is no evidence of a floor above the period 2A make-up 915, which is unusual, as later floor make-ups have survived (see period 3B). It is thought that a tile floor, later robbed, may have existed. The northern part of this room was not recorded in detail, but an L-shaped foundation of chalk was apparently built into the north wall (1340), possibly the base of a hearth in the north-east corner. In the south-west corner of room D, in the angle of walls 802A and 855, a sub-rectangular patch of clay-silt (933) was deposited over make-up 915. Its surface was particularly level and smooth, and it may be make-up for a platform for some internal fixture.

Plate II Maldon Friary. MD10; wall 802 (east range), crude chequer work of alternating chalk blocks and red brick (see Fig. 9 for position). Linear scale 25cm overall.

In room E, pebbly clay and building-material was laid as a make-up across the entire interior (930). Parallel slots (964, 963, 967, 975) dug into it suggest a series of joists supporting a suspended plank floor.

A gap in the west wall 805/870 may be a doorway; floor 930 surrounding it was eroded, as if by wear. Similarly the north-east corner of floor 930, adjacent to wall 802A was somewhat concave, also as if eroded by wear. Wall 802A terminated here, suggesting a doorway connecting rooms D and E. If these hollows do represent wear patterns, the proposed plank floor must first have been removed; alternatively they may represent robbing disturbance, deeper in the areas of access to the room.

Cloister garth

In the cloister garth, surface 923 (first described under period 2A) continued in use. A brick-lined well (999) may have been constructed in this period. The well was not recorded in detail, and no bricks were sampled. It is undatable, but could be a post-medieval insertion (D F Stenning, pers. comm.).

Dating evidence

A total of 105 sherds of pottery weighing 972g was excavated, mostly from the east cloister walk, where period 2 deposits were sealed. Problems of residuality and contamination are quite severe in this phase. In general the pottery is consistent with a late 14th-century date for the rebuilding, although there is little to distinguish the period 3A pottery from that in underlying period 2 surfaces. The most closely datable evidence is a late 14th-century floor tile.

The largest amount of pottery in this phase came from the east cloister walk, from make-up 907, and a smaller amount from make-up 910. Medieval glazed wares comprise Mill Green ware, decorated Kingston-type ware and sandy orange ware including a sherd of Harlow ware, and medieval coarse ware (and a few intrusive post-medieval sherds). Sherd joins show that much of this material is residual from underlying period 2A deposits, foundation 937, graves 953 and 977, and probably also make-up 935. The assemblage from make-up 907 is similar to that from 923 in the cloister garth, which may indicate that 923 actually belongs to period 3A.

A floor tile at the top of make-up 907 is of a type fashionable in the late 14th century but superceded in the 15th century. This type was used in an original floor laid in the church at Bardfield Saling (Essex), which was completed and dedicated in 1380. The tile is near-complete and was probably a damaged remnant of a robbed floor. Flemish-type grass-marked bricks used in the construction of walls 802 and 805 in the east range are of a 14th-century type. The Flemish-type cream bricks present in make-up 907 are also a 14th-century type, but in this instance are probably residual from period 2.

Most medieval pottery from period 3A is residual from period 2, but suggests a 14th- century date, as do the bricks. The floor tile suggests a more precise late 14th-century date, and the rebuilding is unlikely to have taken place much later than this, as the building materials are of types not current in the 15th century.

Discussion

In the absence of documentary references, the sequence (and therefore this discussion) depends entirely upon the excavated evidence.

In the north range there was no alteration to the ground plan, as the walls of period 2A were retained. However pits dug into the floor of room A in particular suggest extensive building work. Though stratigraphically the pits could belong to period 2A, they make best sense in period 3A as containing scaffolding posts for work on the superstructure or roof. In order for this timbering to work effectively, the bases of at least some of the scaffolds would need to have been earthfast, and so the presumed period 2A tiled floor would have had to be removed. Because of the evidence for stairs in period 3A (see below), it is likely that the scaffolding was related to construction or reconstruction of an upper storey. At the west end of the range, the bowl-hearth (1299) containing lead fragments suggests (re)glazing of a west window.

To the south, the doorway between room A and the cloister may have been blocked or narrowed (1209), after decorative masonry door surrounds had first been removed (1351). South-west of room A, material abutting a newly-built spur wall may be the base of a stair leading from the cloister to an upper storey. The cloister walk was comprehensively resurfaced, with evidence of mortar bedding (1010/1005 etc.) for a tile floor in the area of the stair. Rectangular features in the surface of the make-up in the east cloister walk may represent supports for grave-memorial slabs implied in earlier periods, which would have been flush with the tiling. They corresponded quite closely to the locations of the earlier graves of periods 2A-2C, despite the dislocation caused by reflooring and rebuilding in this area. A well in the cloister garth may first have been constructed in this period. The adjacent surfacing 923 stopped short of its immediate vicinity, suggesting that it was surrounded by a well head, perhaps paved and subsequently robbed. No evidence of piping or other plumbing arrangements was uncovered.

Other evidence of heightening is present in the east range. Walls were taken down and rebuilt. Not only were the inner and outer walls of the east range replaced, but also the adjacent east cloister wall. The original period 2 foundations were extensively re-used, although they may have been dug out and completely replaced along the main east wall. This wholesale rebuilding of the east wall from its foundations would have helped take the increased load of a heightened east range, while the reconstruction of the east cloister walk would have had a buttressing effect against the additional thrust. The transverse party wall within the range would also have helped sustain the extra loading. In room D a hearth was constructed adjacent to the outer east wall, which may imply a chimney duct common to both lower and upper floors. The way in which the outer east wall was rebuilt and extended along the east end of the north range, provides some confirmation for heightening of the north range.

There is evidence to suggest that the rebuilt east cloister walk was finished in Caen stone and clunch, as mouldings in these materials were recovered from period 4 demolition rubble directly overlying the period 3A cloister wall. They cannot have been related to the original period 2 construction, as this had already been demolished to make way for the period 3A rebuild.

Although only floor make-ups survived, late 14th-century floor tile in period 3A deposits provides evidence of robbed tile floors. However, much of the floor tile recovered was of earlier types dated to the 13th-14th century. These may represent the remains of robbed period 2 floors, or may have been re-used in floors of period 3A.

Period 3B. Building 2: further rebuilding (15th-early 16th centuries?) (Fig. 10)

The east range was again rebuilt. The outer east wall was completely renewed, using brick facing, and strengthened with buttresses, while rooms D and E were refurbished. The cloister and north range remained unaltered.

East range

Because rebuilding work was confined to one wing of the complex, this is treated as a sub-division in the structural history of the building rather than a separate period. The outer east wall of the east range was demolished and rebuilt (1321B). This had a limestone, ragstone and brick core, with brick facing, and was of variable thickness. Two buttresses formed an integral part of the wall, and a third (1284/1287) was built onto it. The buttresses had dressed Reigate stone quoins. Groundwater conditions at the north end of the wall hampered observation, and as a result there is no definite record of a return wall. However, it is reasonable to assume the northern buttress would have strengthened the junction between wall 1321B and the north wall of the north range. The southern buttress opposed the internal wall between rooms D and E, and an internal projection of wall 1321B blocked a doorway between the rooms. The third buttress, mid-way along the outer wall of room D, was not integral with it, and may have been added at a later date. One broad part of the wall, almost exclusively of bricks laid on edge, may have been related to an internal fixture.

The floor was relaid with pebbly clay (849/1339), probably throughout room D (not all of this area was accessible). A construction cut (912) 80mm deep was dug into the centre of the floor and filled with mortar (911). Peg tiles (823) were laid on this base, with a mortar surround (821), which was later sealed by a dump of clay silt (822). There were no signs of burning. Within room D, tips of mortar and clay make-up were deposited, right up to the doorway of the previous period (868, 834, 833, 869, 872, 871). This implies that the door was still in use, for there was no sign of blocking. These tips may relate to a single episode of flooring activity rather than being deposited as successive patches.

Dating evidence

All the pottery (37 sherds weighing 172g) came from re-floorings. In room D, floor make-up 849 produced Harlow ware, Mill Green fine ware and, appearing for the first time on MD10, Mill Green coarse ware, providing a mid-13th to mid-14th century date for the group, while the floor make-ups 868 and 833 in room E produced a comparable group. Very little pottery was recovered from this phase and much, or perhaps all, of it could be residual. Precise dating is impossible, although stratigraphically this was the last phase of structural alterations before the Dissolution. These could have occurred any time in the 15th or early 16th century.

Discussion

The structural changes in period 3B were concentrated in the area of the main east wall of the complex, and rooms D and E in the east range. The cloister walk on the west side of the range remained unaltered. Although the rebuilt east wall was mainly built of stone rubble, it was faced with brick, with Reigate stone quoins on the buttresses. Although brick appears to have been used from the original construction of the friary (periods 2A and 3A), this is the first good evidence of widespread use in the friary buildings. However, it was used as wall facing rather than as the main structural component.

The buttresses of the east wall hint at greater loading being entertained than previously (perhaps a brick-vaulted upper floor), rather than structural failure, for they were integral with the main wall. The building of new fabric where there were no buttresses implies demolition and rebuilding of the entire east wall, with gaps representing doorways. Where new walling was built, old fabric was grubbed out, but where doorways were required it was merely levelled to the ground. The surrounds to support these implied doorways have been robbed. Likewise, 15th to 16th-century tiles from period 4 destruction rubble suggest that there was a re-flooring at this time. Re-roofing is indicated by lead flashing off-cut in floor 849.

Buttress 1284/1287 was added as a repair to the exterior of wall 1321B. A further repair inside the building is represented by the mortared tile feature 821/823 in room D. It may suggest a firm, level base - in effect, a post-pad - for a Samson-post in the centre of the room, integral with this phase of the building; the underpinning arrangements suggest care was taken. It was clearly not a hearth, as the excavator noted the lack of burning. Nor is the feature likely to have supported a surface-built partition subdividing room D, for wall 805 has no traces of any end.

Period 4. Demolition and clearance (1536/8-1563/74) (Fig. 11)

The buildings were demolished and the site was cleared of demolition debris.

Demolition deposits

The walls were demolished to the level of the footings, and virtually all of the demolition debris was cleared and removed from site. A few patches of rubble, mortar and silty clay survived this clearance of debris, mainly in and

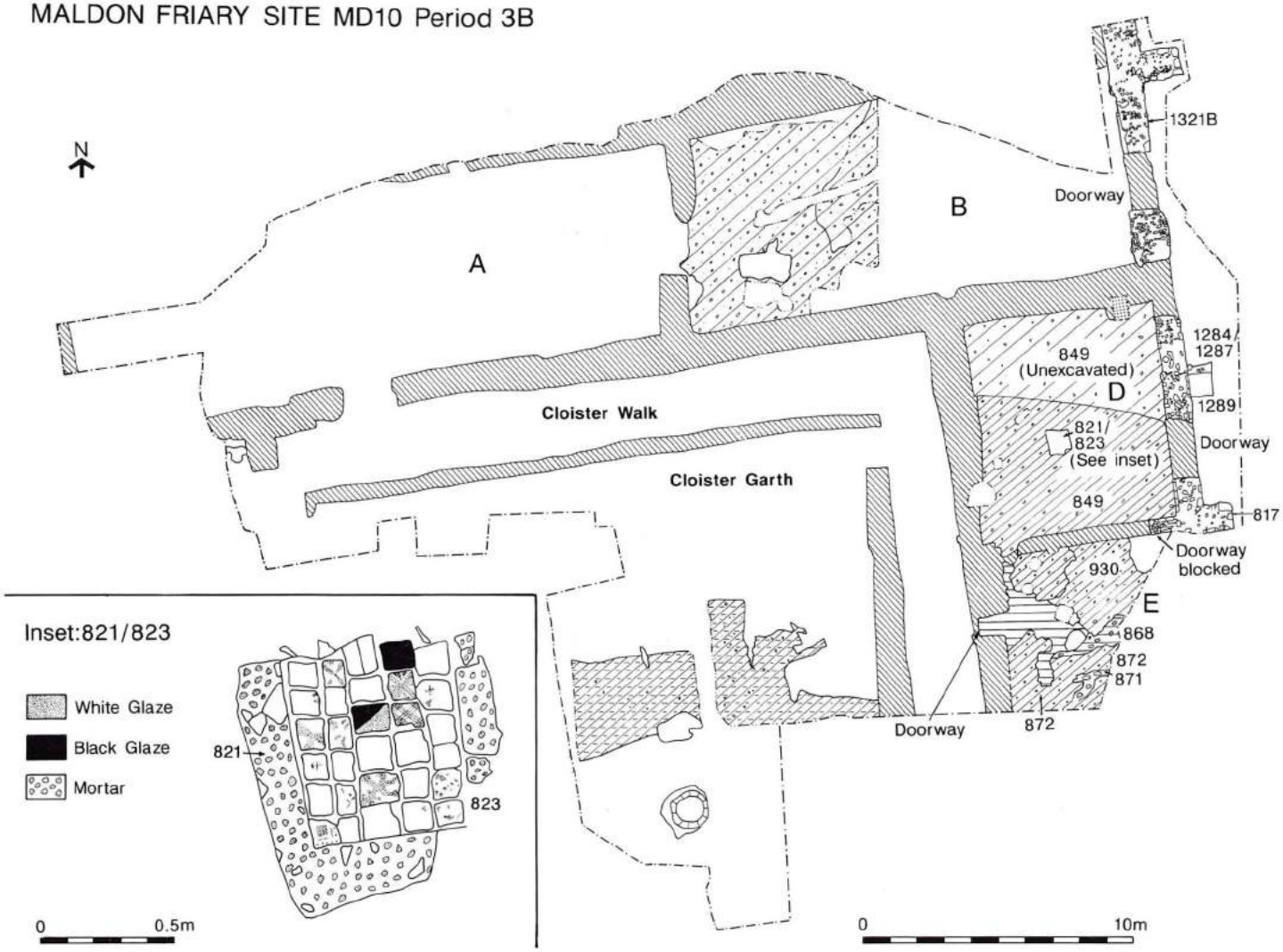

Fig. 10 Maldon Friary. MD10, period 3B

around the cloister walks (917/918/959, 852/892, 995-8, 955/1021/1024/1037/1039, 956/1044/1230/1231, 957/979/1029/1030 (and several not planned: 916; 904; 841; 980 and 983B)). These sealed the foundations of the former north cloister wall 958/850, and may have extended far enough north to seal the south wall of the north range, 848. In the east a spread of rubble (885) overlay the former east cloister wall 837.

Within the former east range a series of irregular patches of mortar, chalk, and burnt or silty clay were deposited, some in shallow hollows (812/813/816, 811, 883, 815, 808, 807, 809 (not planned), 871, 857, 865 (not planned), 913/914, mortar 810/854 (not planned), 942 (not planned). The purpose of hollow 861, filled with clay (862) is unclear. To the south-east, linear spreads of charcoal may represent burnt beams (1013).

Dating evidence

Documentary evidence dates the dissolution of the friary to 1536-8. Demolition of the buildings had begun by 1544, and was completed before the construction of Harris' mansion on the former monastic site between 1563 and 1570 or 1574.

A total of 106 sherds of pottery weighing 1618g was excavated from rubble demolition debris sealing walls of the former monastic buildings. Over half of this (by sherd count) is residual medieval material.

Pottery that could date from the Dissolution was recovered from demolition debris 959, overlying the west cloister wall, comprising 40 sherds of post-medieval red earthernware (PMRE) from a slip-painted jug, and a Raeren stoneware jug. These vessels are both dated to the mid 16th century. Demolition debris 885, which overlapped the east cloister wall, produced a PMRE frilled base in imitation of Raeren stoneware, dated to the late 15th or, more likely, the 16th century. A sherd of Frechen stoneware was recovered from demolition debris 852 and a sandy orange ware ribbed handle, probably from a cistern, in demolition debris 955. The Frechen stoneware sherd is salt-glazed but does not show the tiger-ware effect developed in the later 16th century. A number of PMRE sherds are present but nearly all are undiagnostic and could belong any time in the post-medieval period: including the base of a possible flower pot (955) and a sherd from a chafing dish (1024). At Chelmsford chafing dishes are

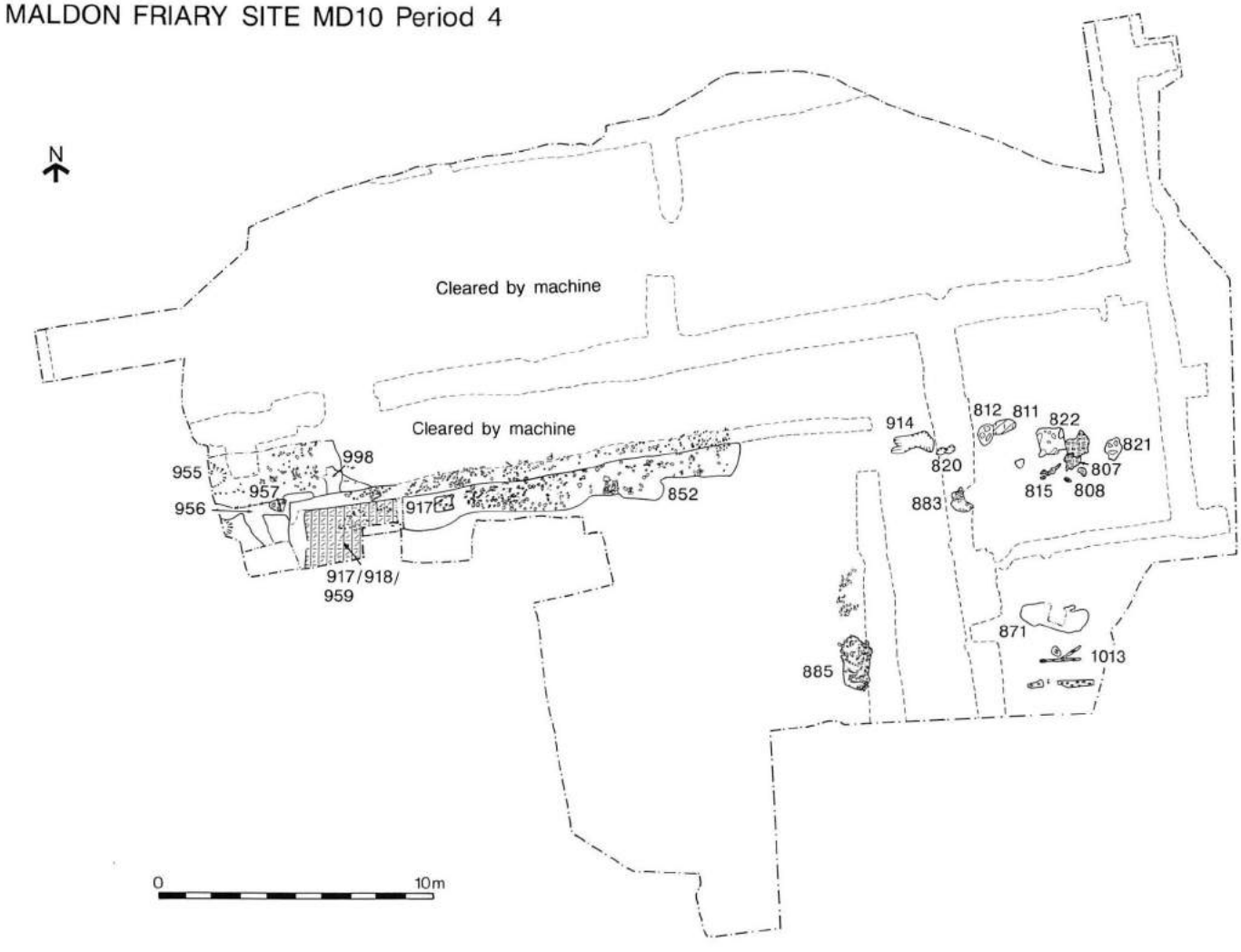

Fig. 11 Maldon Friary. MD10, period 4

present from the 15th century, reaching a peak around 1560-1630, so this could come from a Dissolution deposit.

Wares post-dating the Dissolution are two sherds of Surrey-Hampshire border ware in demolition debris 955, which could just be current with the Dissolution (also from 955 is a fragment of 18th-century Chinese porcelain tea bowl). Intrusive pottery in periods 1 and 3B comprised a Netherlands altar vase.

In at least two instances, the mid 16th-century date for demolition of the friary buildings is supported by well-dated pottery in demolition spreads, although the relative absence of pottery of this date reflects the stratigraphic evidence, which suggests that demolition material was removed from site.

Discussion

Machine clearance of the overlying garden soil may have truncated demolition deposits and robber trenches from the northern range, but not for the eastern range where excavation was less pressured. Only limited understanding of the process of decay or robbing can thus be gained from the stratigraphic evidence. However, spreads of demolition debris overlapping the west and east cloister walls confirm that the monastic buildings were demolished in the mid-16th century, soon after the Dissolution. Nevertheless, topographical and architectural features are mentioned in a deed of 1544 (See Historical background and General discussion), implying that the friary buildings were still standing at that date, although they may already have been reduced to a semi-ruinous state by robbing. Large-scale demolition presumably post-dated the sale.

Demolition is likely to have been completed by the time the Harris' mansion was built, between 1563 and 1570 (Page and Round 1907, 183) or 1574 (Petchey 1991, 85). Cartographic evidence may imply that some portions stood until gardens were laid out in the Victorian period (O.S. 1st ed., 1873). If the walls stood until quite late, then adjacent soil horizons through which their robber trenches cut were removed by machine in the northernmost part of the site.

But it is far more likely that the site was levelled in antiquity, walls demolished, and tile floors robbed. This probably happened as a result of the sale of the site in 1544. Removal of flooring would involve removal of any overlying occupation debris or loam accumulations. Feature 914 was sited precisely between the former walls of the east cloister-walk. It was argued earlier that this was the position for grave-memorial slabs, and it is possible that this feature was dug to remove one of them. No tiles were observed in the northern range, so this probably holds good here too. This is likely to have been followed fairly rapidly by the robbing of the walls down to ground level.

Period 5. Boundary fences and drains (mid-16th-18th centuries) (Fig. 12)

Post holes and drains were dug, possibly concurrently.

Post holes

A series of post holes was dug in the area of the former north range and cloister. Though only a few were excavated, most were filled with variants of clay-silt. Some form distinct groups or rows aligned east-west: one in the north-west of the excavation area (1290, 1292, 1271, 1273, 1269, 1297 and 1298); and another in the east (1232, 1254, 1254A, 1258, 1261, 1266, 1226, 1353). These groups can be related to documented alignments and certainly form part of this phase.

Other post holes in the former cloister garth and east range, form amorphous groups (1295, 1288, 1032B, 1033, 993/1032A, 1009, 1282, 1112, 992, 889, 894, 826, 864, 906, 901, 895, 908, 820, 843, 879, 884, 931, 828, 830, 825, 890, 873). Several of these at the west end of the former north cloister walk cut period 4 demolition rubble and so must post-date clearance of the monastic buildings. They cannot however be related to documented alignments and though they could stratigraphically be of this phase, could equally well be of the previous one.

Drains

Drains were laid in the former north range, cloister walk and garth, but the evidence survives poorly. In the west of the former cloister garth, gully 886, aligned north-south, continued into the former north range as trench 1276. The southern end of this drainage run cut a former cloister wall. The drain was of brick, laid on a bedding (1278) with brick sides (1275) packed with loam (1214/1277) and capped with brick. It had partly silted up (1278). A very short length of a possible feeder drain (1015) aligned north-west to south-east was recorded in the extreme west of the site. The base of an off-shoot at right angles to drain 1275 survived where it cut the flooring of the north range (1220). It was probably octagonal in section originally, and built of mortared hand-made bricks,. To the south, and parallel to it, gully 847 may mark a robbed length of drain, filled with clay-silt (846). A large pit (1249), which cut posthole 1255, lay in between these portions of drain, in the northern range. Its relationship with the drains is uncertain.

Dating evidence

Documentary evidence indicates that the monastic buildings were cleared, and were replaced by Harris' mansion, constructed between 1563 and 1570 or 1574 (period 4 Discussion).

A total of 74 sherds weighing 876g was excavated from period 5 features. Most of the pottery was either residual from medieval contexts or was clearly intrusive.

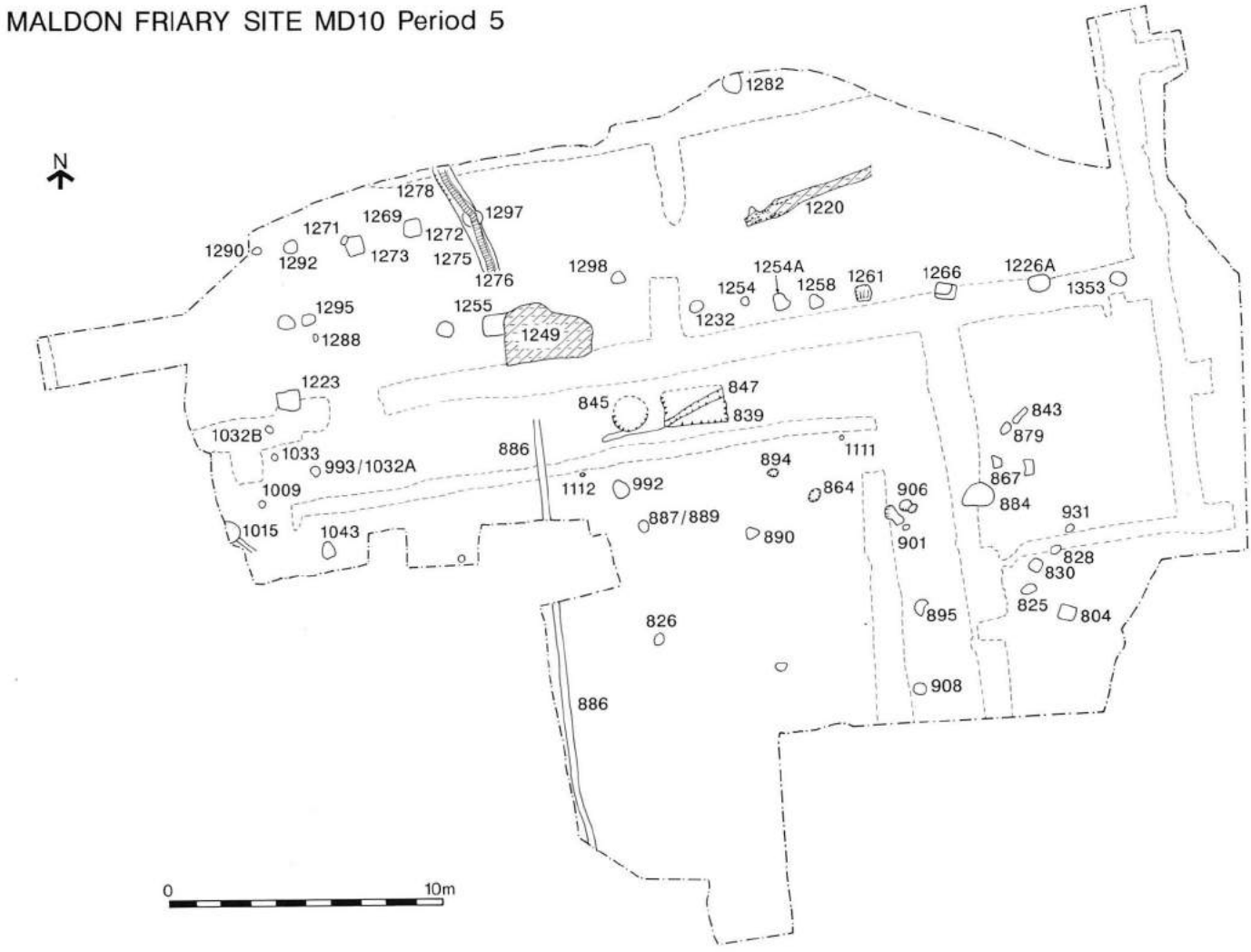

Fig. 12 Maldon Friary. MD10, period 5

Where features contained post-medieval pottery it is rarely possibly to assign a more precise date. A notable exception is the fill of drain/culvert 1276, which contained creamware dating to the mid 18th century. Post-medieval red earthernware flowerpots in drain 847 confirm that the area was a garden. It is likely that period 5 was of long duration.

Discussion

The east-west post hole alignment (post holes 1295-1353) can be related to cartographic evidence for the Harris' mansion, which lay beyond the southern limit of excavation, as its northern boundary fence. Other post-holes, which cannot be related to any known map alignments, may represent more ephemeral structures. In the mid 16th century, plays were performed on the site of the friary, and these post-holes could perhaps relate to stage structures, even though they do not form a coherent recognisable plan. The courtyard setting, a former cloister garth, would be highly amenable to such productions.

The drainage system post-dates the demolition of the cloister. The drain alignments do not respect the friary buildings and are presumably related to the layout of Harris' mansion. The main drain in the system is approximately at right angles to the boundary, which suggests some contemporaneity.

Period 6. Cold frame (19th century) (Fig. 13)

A cold frame was built over the former drainage system.

Cold frame

In the north-west of the site a trench was dug, aligned east-west (1207/1213/1327). Its southern edge sloped gently northwards. Walls of brick, mortared together, were constructed against the three other vertical faces of the trench (1210/1211/1240), and the feature was infilled with loam. Holes were subsequently dug into this feature (1219, 1228) and filled with loam. This linear feature was also recorded in section as cut 1329.

Further south, two walls were constructed (1245, in cut 1244; and 1247, in foundation-trench 1246). Hollows 1202 and 1203 may relate to this feature, or the drain of the previous period. A succession of pits to the

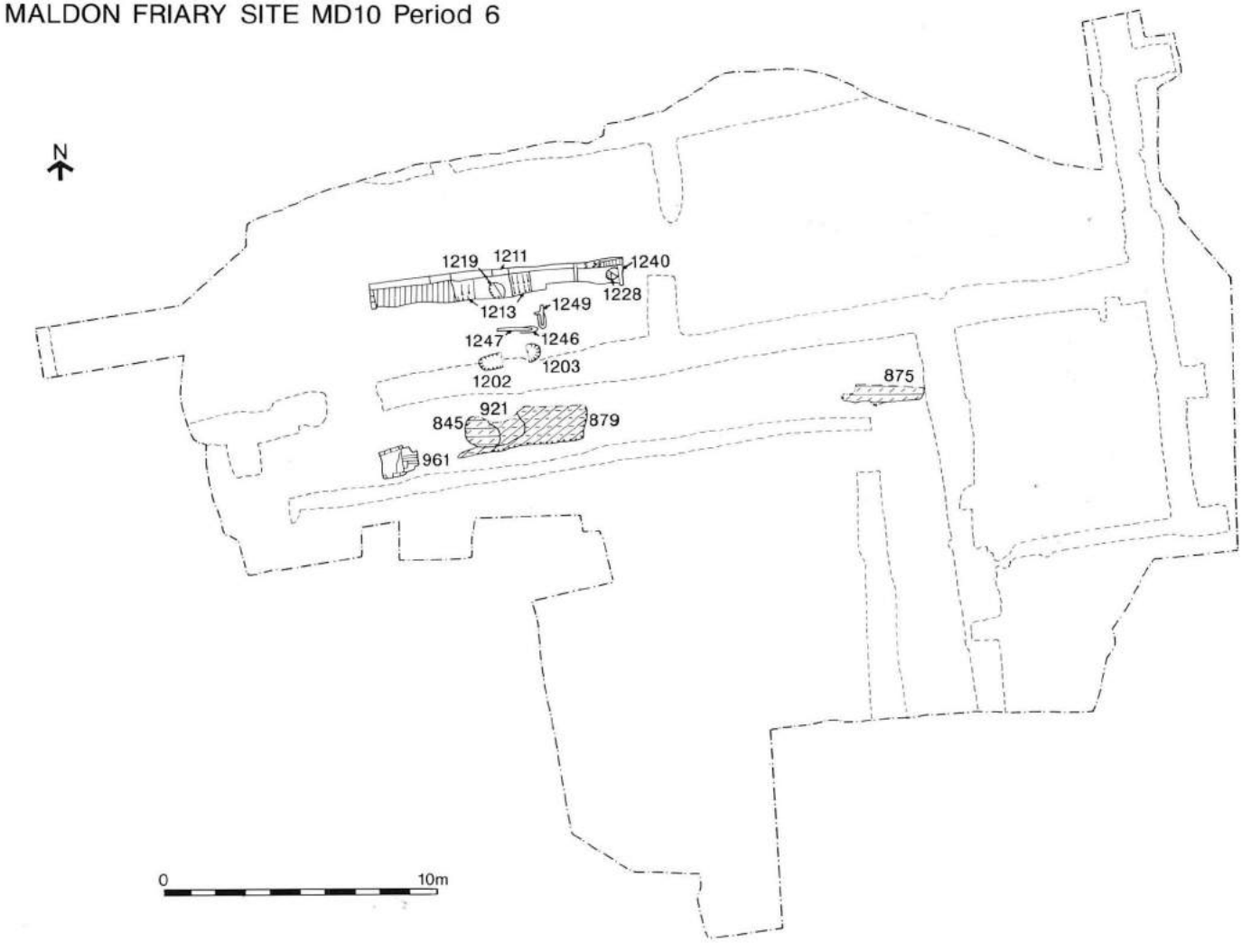

Fig. 13 Maldon Friary. MD10, period 6

south was dug. Pit 845 was 0.33m deep and was filled with clay silt; and pit 839 was filled with clay. Portions of brickwork (920) could be of the preceding period. To the west of them, feature 961, lined with brick 973, may be the base for an incinerator, as it was filled with charcoal. In the east of the site, pit 875 was dug, and was filled with clay silt (876).

Dating evidence

Documentary evidence suggests that subdivision of the properties took place in 1807 (Simpson 1986, 41). As would be expected in a garden, only a small amount of pottery, a total of 31 sherds weighing 250g, was excavated. Pottery was found in several features, but only in very small quantities and much of this is residual medieval material of no intrinsic interest. The assemblage is what would be expected from a garden, a small scatter of assorted sherds and the presence of flower pots. The relatively modern 19th/20th-century pottery seems to have come from the structures, cold-frame trench 1213, foundation trench 1210 and the lining of incinerator 961.

Discussion

In 1805-7 the twin houses Friary East and Friary West were constructed on the site of Harris' mansion. The virtual absence of features in the east of the site, and their predominance on the west, reflect this division. The brick structure may be a type of cold-frame, the elongated handlight, first recorded in 1818 (Huxley 1978, 251). Its south-facing situation, implied by the lack of a southern wall, would be appropriate. The cold-frame is not shown on the 1st edition Ordnance Survey map of 1873, which however depicts a greenhouse, trees and bushes (these Victorian levels were cleared by machine). Pit 839 might well be some sort of storage-clamp, or the base of a compost heap.

SITE MD 9: AN OUTBUILDING

Summary of development (Fig. 14)

A group of shallow pits dated to the 13th century were probably tree-boles dug out during site clearance (period 1). An outbuilding was constructed in the late 13th-early 14th century within an enclosure defined by ditches and

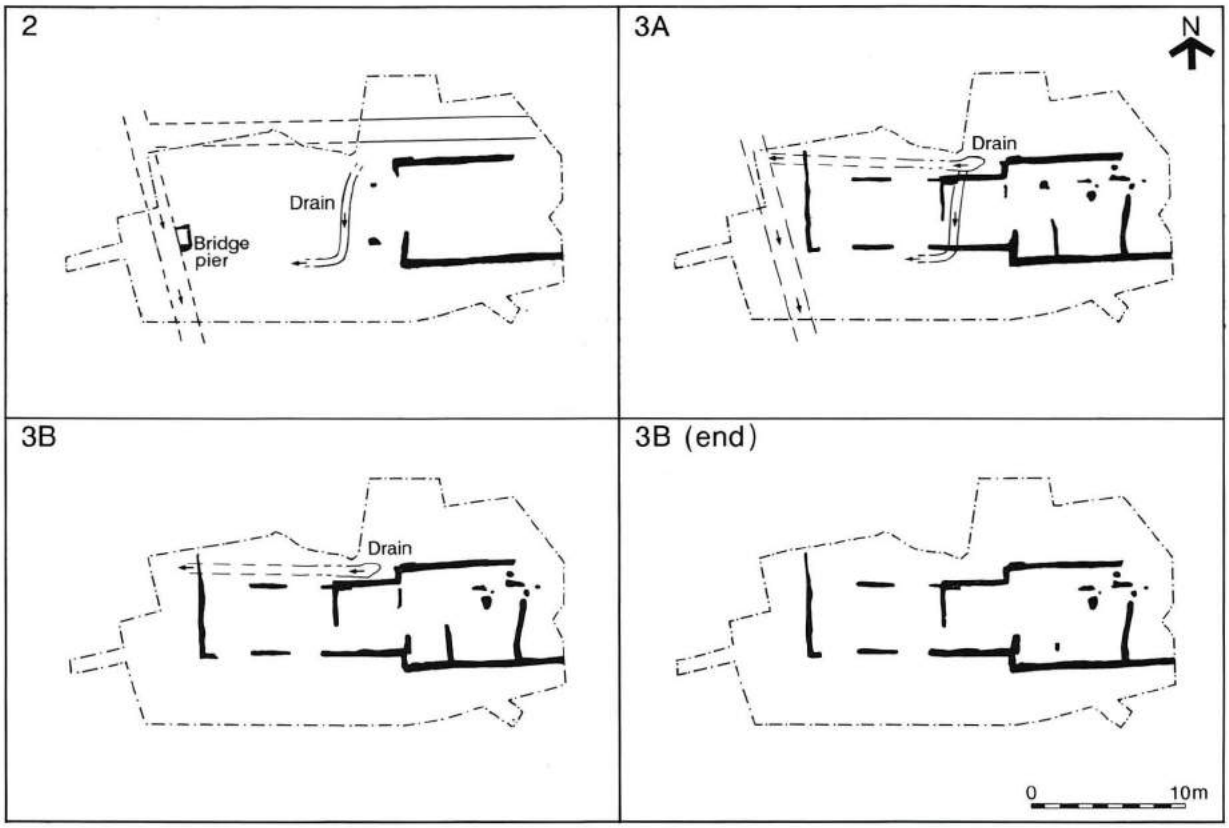

Fig. 14 Maldon Friary. MD9 sequence; periods 2-3B

approached by a bridge, with a culvert for drainage (period 2, building 1). This was part of the original development of the friary precinct after its foundation in 1292/3, and is interpreted as a stable, to the south-west of the cloister (MD10). The building was extended westwards in the late 14th-15th centuries (building 1A), a yard surface was laid to the north, and the drainage system was modified (period 3A). The building was modified internally in the late 15th-early 16th centuries, while rubbish was dumped over external areas and the drainage system became disused (period 3B). Development after the Dissolution in 1536-8 (not illustrated) is represented by demolition of the outbuilding (period 4), followed by culverts, fences and pits related to the gardens of Harris' mansion, built between 1563 and 1570 or 1574 (period 5) and Friary West, built in 1805-7 (period 6).

Period 1. Open ground (13th century) (Figs 16, 18)

A cover loam survived patchily above natural clay. Shallow pits cut into it probably represent tree-boles.

Cover loam and pits

Natural clay (709, 311) was not uncovered in plan in the main excavation area and was only exposed in sections (Figs 16, 18). It was also recorded to the north of the main area in trench 1 (10) and trench 3 (45). In the main area it was sealed by clay-loam (732/743), also present in trial trench 3 (43). Elsewhere, natural clay was not exposed at all, but it is assumed that the earliest layer recorded, a sandy clay loam (568, 573, 579, 593, 722, 725) directly overlay it. Shell and charcoal inclusions were present. This cover loam was cut by a series of shallow pits or scoops, again only recorded in section. These were: pit 102, 2.2m wide and 0.38 m deep, filled with clay-loam (103) (Fig. 16, S.5); pit 212, 0.4m wide and 0.10m deep, filled with clay (211) (Fig. 18, S. 6); and pit 637, 0.2 metres deep, filled with sandy clay (567) (not illustrated).

Dating evidence

Very little pottery was recovered from period 1 deposits, a total of 22 sherds weighing 97g. Pit 102 (fill 103), which was sealed by the make-up for the period 2 building, produced a small group of 13th century pottery, consisting of early medieval ware, medieval coarse ware and a sherd of Mill Green fine ware. Mill Green ware was also recovered from cover loam 43 in trial trench 3. The presence of Mill Green ware, current in the mid 13th-mid 14th centuries, is consistent with the documented date for the foundation of the friary in 1292/3.

Discussion

The cover loam survived only patchily, suggesting stripping of topsoil as preparation for the construction of the overlying period 2 building. Charcoal, shell and pottery inclusions could have been introduced by manuring, or during site clearance itself. The shallow pits probably represent the boles of trees and shrubs removed during site clearance.

Period 2. Building 1 (late 13th/early 14th centuries) (Figs 15, 16 and 18)

An outbuilding was constructed to the south-west of the main friary buildings in the area of the cloister. The building had stone footings which would have supported a timber superstructure, and was established on a clay levelling created from the upcast of digging a series of ditches around it, defining an enclosure. The building's entrance was to the west, and a set of stone abutments suggest that it was approached by means of a bridge crossing the western enclosure ditch. A culvert provided drainage.

Ditches

Ditches were dug to the west and north of the building before it was erected. Only limited lengths of the ditches were investigated, as the site was not fully excavated to the lowest levels. Further ditches were excavated in trial trenches 1 and 3 to the north of the excavation area.

A short length of the northern ditch was recorded in the north-east of the site. It was aligned east-west, approximately 2m wide and 0.9m deep, with gradual sides and a flat bottom (740; Fig. 16, S.1). It was also recorded in trial trench 6 in the north-east of the main excavation area (304). A primary fill of silty clay-loam (738) lay thinly over its bottom. Its course to the west can be recognised by the subsidence of later strata.

The western ditch was recorded in the extreme west of the site. It was aligned roughly north-south (its precise alignment is difficult to project), and was about 2m wide and 0.8m deep, with gradual sides and a flat bottom (641; Fig. 16, S.2). It was almost identical to the northern ditch both in size and profile, and the two must have been contemporary. Again a primary fill of silt-clay (640, 644; not on section) lay thinly over its bottom.

Two further lengths of ditch recorded in trial trenches 1 (9) and 3 (35) to the north of the main area (Figs 1 and 40-1) were aligned south-west to north-east, and were part of the same ditch system. Ditches 9 and 35 together lined up with ditch 641 in the west of the main excavation area, and they all appear to represent the same ditch. Ditch 9 was at least 1m wide (its full width was not recorded) and 0.8m deep, and had a similar profile, with moderately steep sides and a flat bottom, to ditch 641 (Fig. 16, S.3). Neither ditch 9 nor ditch 35 had primary fills. These ditches silted over a long period of time, and their fills are described at the latest point at which they may have formed, in period 3B (see below).

The ditches formed the north and west sides of an enclosure, within which the period 2 building was situated, although there is no evidence of a ditch immediately to the south of the building, since the natural surface there extended unbroken for at least 4m (Fig. 16, S.5). Given the slope of the ground down to the south, the north-south ditch 9/35/641 must also have served as a major drainage channel, with drain 740 acting as a feeder drain.

Stone footings recorded on the eastern side of ditch 641 represent an abutment for a bridge providing access to the enclosure. A wall of flint and ragstone rubble, bonded in hard pale yellow mortar, and capped with tile (649) was built in a construction trench (649A) cut into the eastern side of the ditch. Two crude piers built of the same material (645 and 648; Fig. 16, S. 2) extended out from the wall to form a pair of abutments. These would have supported a planked walkway, with the central recess 651 in wall 649 accommodating a beam supporting one end of it. This had either decayed or been removed, and the recess was filled with silt-clay (650). Any western abutments lay beyond the excavated area of ditch.

Building 1

The upcast from the ditches was deposited above the period 1 cover loam to form a level platform or make-up for a stone-founded building (building 1). The make-up consisted of a homogeneous clay-loam with bone and shell inclusions (575, 576, 615, 617, 632, 654, 674, 714), with occasional areas of clay (639), and silty clay (543, 548, 566). Equivalent layers of clay or clay-loam (110, 99, 84, 210) were recorded in section during trial trenching (Fig. 16, S.5; Fig. 18, S.6, 7). The make-up extended over the entire area of the building, and also over the area to its west. The earliest levels in the extreme west of the site were not recorded in detail, but it is likely that the make-up extended right up to the western ditch 641.

The stone foundations for the building were constructed from the surface of the make-up. The foundation trenches were not always recognised in excavation, although it is clear from both plans and trial trench sections that they existed. The walls for the south, west and north sides of Building 1 were identified, but the eastern wall lay beyond the limit of excavation. The walls and their foundations were not excavated, and cross-sections through them were recorded only in trial trench sections. The base of the foundations was not exposed anywhere.

The foundation trench for the southern wall of the building was not recognised in plan, but was recorded in a trial-trench section (Fig. 16, S.5). It was vertical-sided (83), and cut make-up 99/84 on the inside of the building, and natural clay externally. The south wall (73/447) was 0.5m wide, and was supported on a foundation 1.0m wide, with internal and external off-sets level with the surface of the natural clay (Fig. 16, S.5). It was built of roughly squared Kentish ragstone blocks, flints and septaria nodules, bonded with hard cream-yellow mortar, laid in irregular courses. Two courses survived to a height of 0.3m above the off-set foundation, but only the uppermost course was exposed above the internal floor surfaces. The exposed upper course was made of larger stones and was more regularly laid. At its west end this wall returned to the north for a distance of 1.6m (74), at which point it butt-

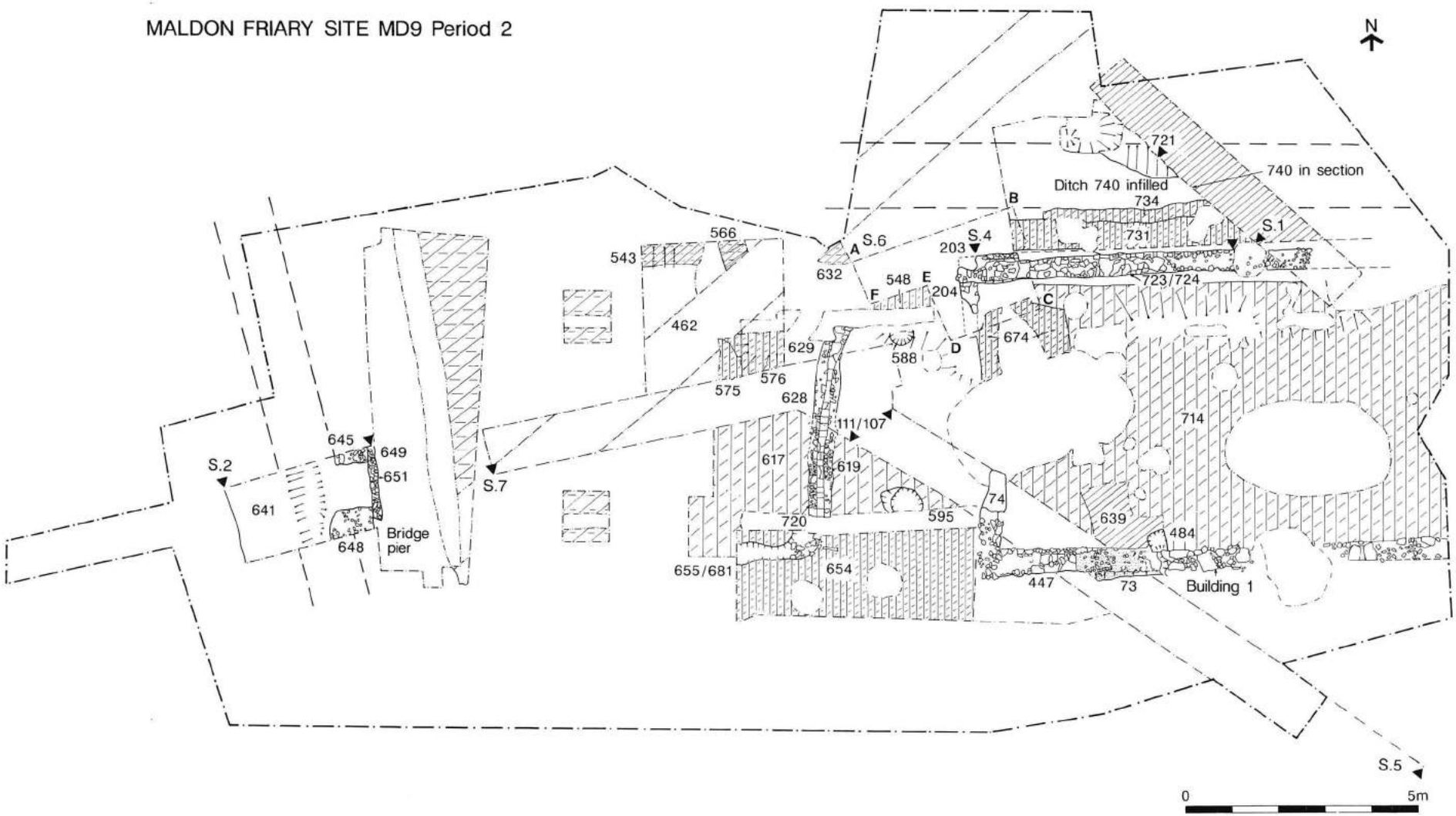

Fig. 15 Maldon Friary. MD9, period 2

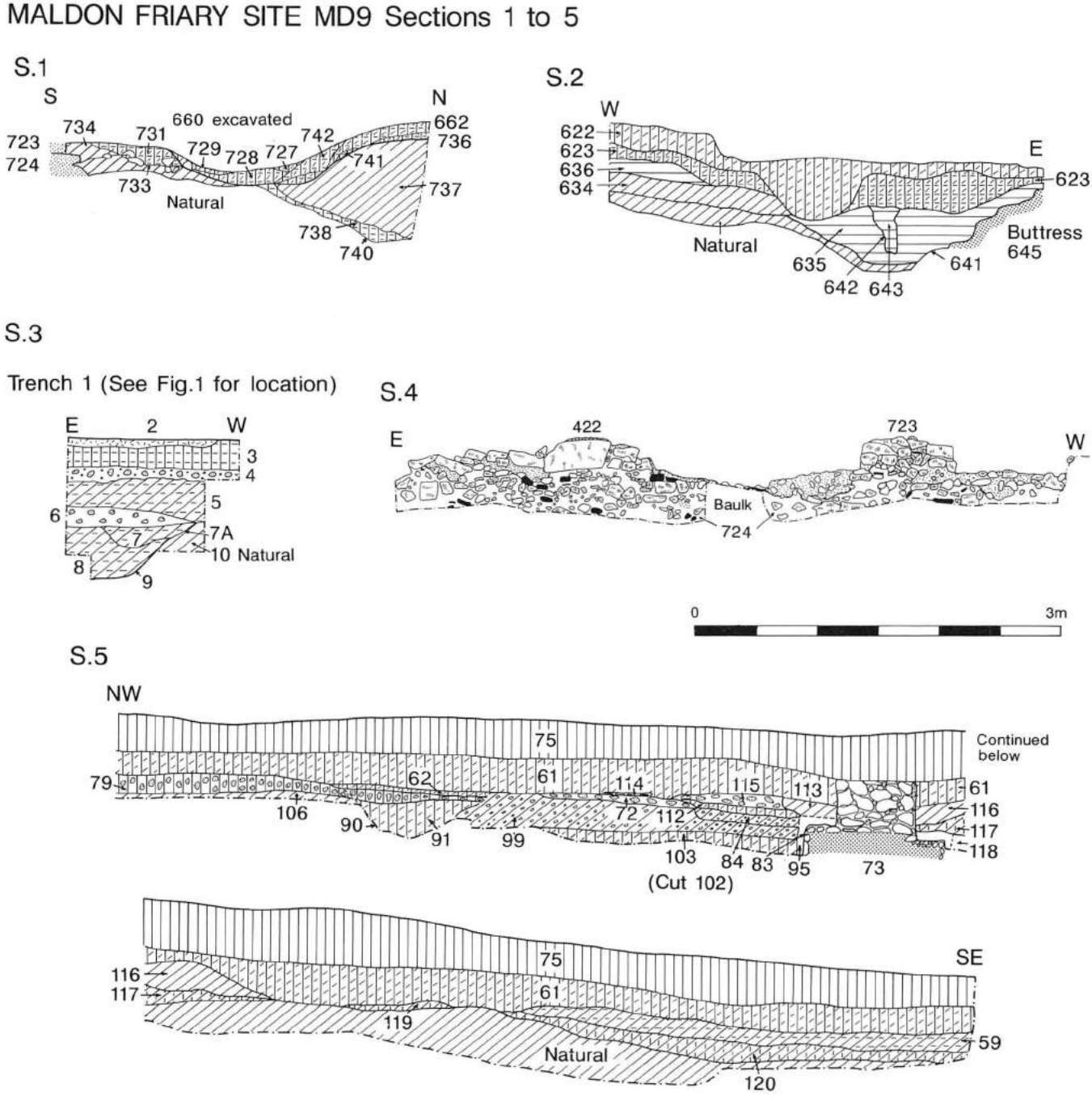

Fig. 16 Maldon Friary. MD9, sections 1-5

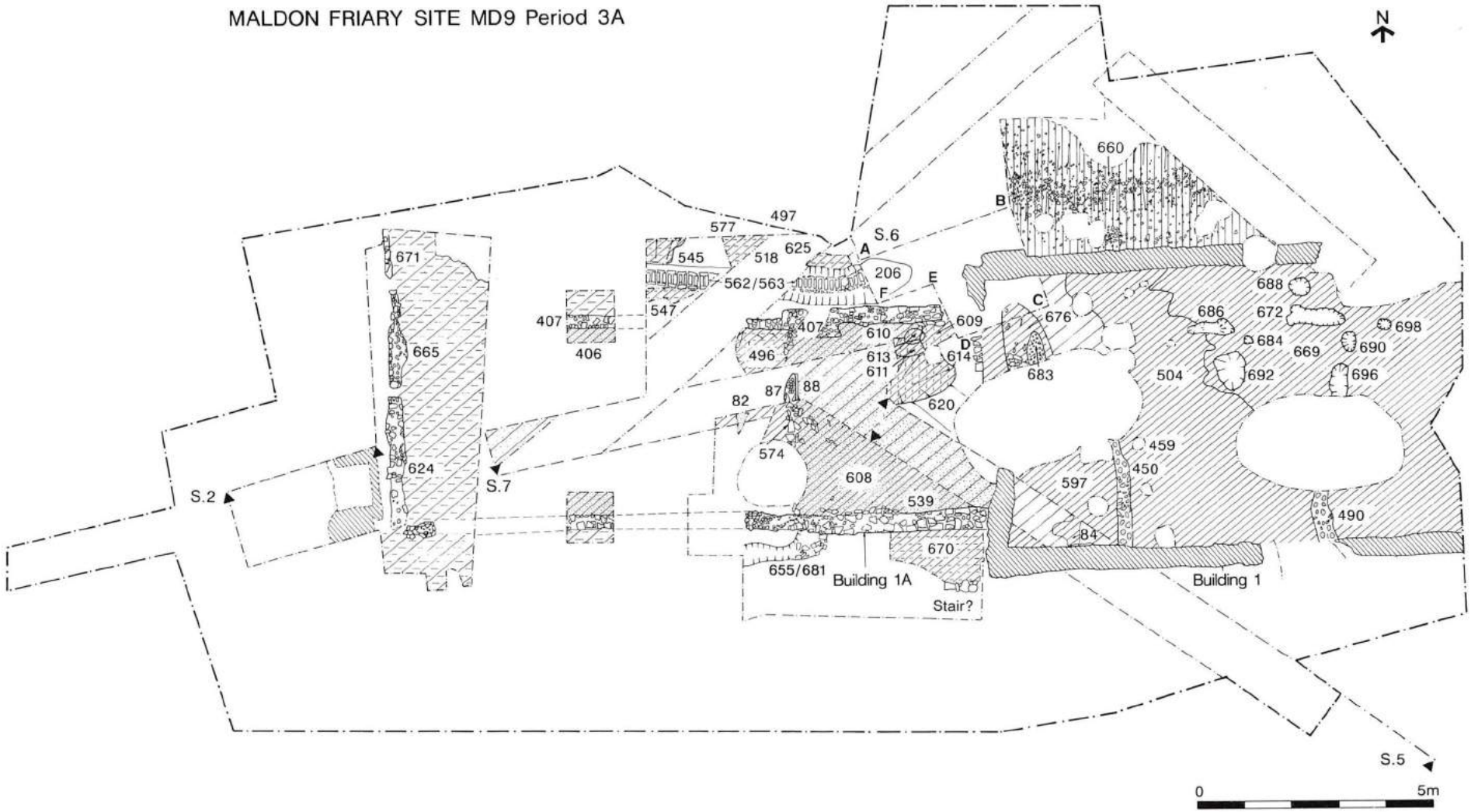

Fig. 17 Maldon Friary. MD9, period 3A

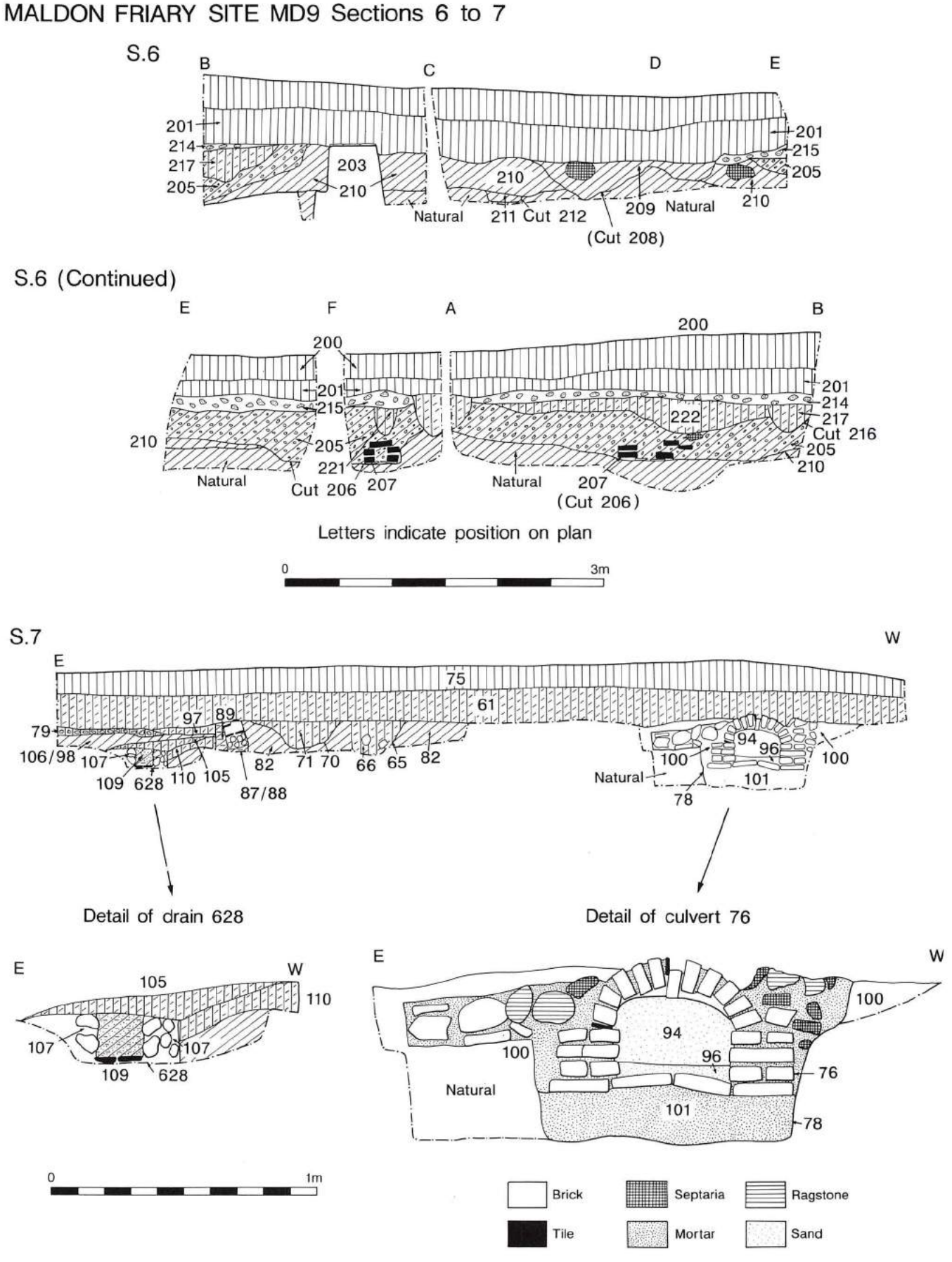

Fig. 18 Maldon Friary. MD9, sections 6-7

ended. The butt-end was severely truncated in the base of trial trench 2.

The foundation trench for the north wall (724A) can be recognised in plan as a narrow linear strip between the wall and the internal make-up 714, which it cut. Externally, the foundation trench cut the natural clay; very little of its profile was recorded. Like the south wall, the north wall (203/723/724) was 0.5m wide, and was based on a foundation 0.9m wide, with internal and external off-sets level with the surface of the natural clay (Figs. 16, S.1; Fig. 18, S.6). It was again built of roughly squared ragstone blocks, flints, septaria and tile, bonded with mortar. As recorded in section it was capped with a tile course (Fig. 18, S.6). Its northern elevation (Fig. 16, S.4) shows that the foundation was built of roughly laid small rubble fragments, with larger and more carefully laid blocks forming a regular course above floor level. The easternmost length of the wall was recorded in trial-trenching (300) however it seems likely that it extended further east, and was robbed. A portion of trench (302) lined with clay (310) on the same alignment may have been a foundation trench and fill (not on plan). At its west end the wall returned to the south (204), where it had been truncated by trial trench 4, but presumably butt-ended in similar fashion to its counterpart to the south.

The west wall of the building, represented by wall returns 74 and 204, was discontinuous, and the gap indicates an entrance perhaps as much as 3m wide. Around 2m to the west, two post-holes, one of which cut make-up 617, flanked building 1 and were aligned on the entrance (595, fill 596; and 588, fill 587). They were up to 0.25m deep and were filled with clay; post-hole 595 was recut (post-hole 705, fill 706). They appear to have formed an entrance porch.

Drain 628/107 west of Building 1

A drain aligned north-south was dug through make-up 617 immediately to the west of Building 1 (Fig. 18, S.7 and inset), within a vertical-sided construction trench (111). The drain's base was formed of tiles, and its sides of flint cobbles and chalk lumps in creamy-yellow mortar (107/618/628/629/720). It may have been open, but it is more likely to have been roofed with tile to form a culvert, especially since sandy clay (631) was packed around the drain lining after its construction. The drainage channel would have been 0.2m wide and 0.2m high internally. The drain continued to the south-west (655/681), although no lining survived. There is evidence that the drain continued in use in period 3A, and the fills marking its disuse are described as part of that phase. The purpose of the drain was to carry water from ditch 740 to the north of Building 1 (see below) around its west side, and discharging to the south, following the natural fall of the ground in that direction.

External areas to the north and south of Building 1

A series of clay deposits (731, 733, 734) formed a make-up along the outside of the north wall of building 1. This overlapped the external offset of foundation 724 and extended as far as the edge of ditch 740 1m to the north (Fig. 16, S.1). An equivalent clay make-up (210) was recorded in section further west (Fig. 18, S. 6), overlapping the external offset of foundation 203 (equivalent to 724). The make-up consolidated the footings of the outer face of the north wall. A similar make-up was recorded in section to the south of building 1 (Fig. 16, S.5), where clay and clay-loam (118, 117, 116) overlapped the off-set foundation 73 and extended 1m to the south of the building. Like the north wall, the make-up consolidated the footings of the outer face of the south wall. Identical make-up deposits (119, 120) extended patchily for 5.5m to the south-east.

These make-ups to the north and south of the building were laid down after its foundations had been constructed, and later than the initial make-up over the interior of the building. The building was constructed on foundations cut into the outer edge of a deliberately prepared building platform, and the later make-ups laid against the outer face of the footings consolidated the ground surface around the outside of the building.

Ditch 740 became completely filled up with loam (737). Equivalent fills in trial trench 6 immediately to the east were recorded as being more clayey with tile and oyster shell (312, 305, 313). A gully with very gradually sloping sides (741), 1.5m wide and up to 0.4m deep, was cut through the top of the disused ditch 740. It was filled with thin deposits of mixed silt-clay-loam, some recorded only in section (742, 728, 668, 730, 727, 731, 729, 662, 735, 736). These fills contained mortar, brick and tile construction debris, either deposited during repairs of this period, or intrusive from the overlying rubble yard surface 660 of period 3A. The fills overlapped the sides of the gully, extending up to the north wall of building 1. The gully represents a rough clearance of the top of ditch 740, forming an eaves-drip channel alongside the north wall of building 1.

Possibly contemporary structures to the north of Building 1

In trial trench 3 to the north of the main area (Fig. 1), a flat-based feature dug into the natural clay (37) was filled with clay, flint, tile and ragstone (36). It is thought to represent a robbed or disturbed foundation. Also in trench 3, a flat-based foundation trench 0.6m wide and at least 0.4m deep (41) was dug through a make-up (46). The related footing was 0.35m wide, and built of chalk, septaria and ragstone capped with a tile levelling course (42), with the foundation trench around it infilled with orange-brown clay, containing chalk and charcoal. Given the limited extent recorded, the relationship of these walls with Building 1 is tentative and not understood.

Dating evidence

The documentary evidence shows that although the friary was founded in 1292/3, it is probable that building work continued into the early 14th century. The pottery dating is consistent with this evidence.

A total of 154 sherds of pottery weighing 1480g was excavated from period 2 contexts, much of it residual and in small groups. Most of the pottery came from make-ups for building 1, with a smaller amount from the fills of ditch 740 and gully 741. Early medieval ware, medieval coarse ware and sandy orange ware predominate, although sherds of Mill Green fine ware, with a date range of mid 13th-mid 14th centuries, were recovered from the make-ups. Several of these were contaminated and some material, a Nuremburg token, a coin of Charles I, and occasional sherds of post-medieval pottery, has been discounted as intrusive. Two sherds of Mill Green-type ware, which may be dated later than Mill Green ware itself, were present in post-hole fills deposited at the end of period 2. The pottery from the ditch sequence to the north of building 1 is no later than that from the building, and is probably largely residual. The pottery is consistent with construction of Building 1 in the late 13th-early 14th century, soon after the documented date for the foundation of the friary.

Discussion

The area to the south-west of the cloister was provided with a system of ditches, which may have defined areas within the friary precinct as well as providing drainage. Ditch 641 at the west end of the site was part of a major north-north-east to south-south-west ditch alignment, while the east-west ditch in the north of the site apparently formed an enclosure within which Building 1 was constructed.

Its position, 30m to the south-west of the cloister, shows that building 1 was not one of the main friary buildings but was an outbuilding. It was solidly constructed on stone footings and a clay raft, although the walls were much narrower than those in the cloister area. It may represent a single-storey masonry structure, or perhaps sleeper walls for a timber superstructure. The tile capping which survived at the top of several lengths of walling would have provided a firm and level base for timber framing. Building 1 measured at least 10m long and 6.6m wide (at least 33 x 22 ft), with a wide entrance and a projecting porch at its west end. It was approached by means of a bridge crossing the western ditch, and the external area between the bridge and the ditch appears to have been an integral part of the building development. Not only was it levelled in the same way as the interior of the building, but it is likely that drain 628/107 was originally covered, so that it would not have obstructed the entrance.

The west end of building 1 is crucial to understanding how it functioned. The location of the entrance in the gable end means that the building cannot have been a traditional agricultural barn, with an entrance, or opposed entrances, in its long side. It may have been a store or a stable; this is reviewed more fully in the discussion for period 3A.

Period 3A. Buildings 1 and 1A: rebuilding and extension (late 14th-15th centuries) (Figs 16-18; Plate III)

Building 1 was rebuilt and an extension, building 1A, was added to the west, again with stone footings which would have supported a timber superstructure. Building 1 was provided with a series of timber partitions, and building 1A was also subdivided in this way. An external stair and evidence of re-roofing suggests that an upper storey was added. A yard surface was laid to the north. The period 2 covered drain was retained and drainage of the yard was provided for by the construction of a new brick-lined culvert. The changed building plan implies that the bridge in the west of the site was abandoned, and the buildings were entered from the north, and possibly also from the south.

Plate III Maldon Friary. MD9; view from the west, with brick culvert 421 in the foreground.

Building 1A

Building 1 of period 2 was extended to the west by the construction of building 1A. The main north and south walls of building 1A (407 and 539) were not recorded continuously, but were related to a western return (624/665/671) just inside the line of the western ditch of period 2. The north wall did not extend up to the west wall, leaving a gap at least 2m wide, indicating a broad

entrance. Furthermore, the west wall extended to the north of the building, beyond the northern limit of excavation. The south and west walls formed a corner (715), although the southern return appeared to form a butt-end, suggesting a further entrance opposite to that in the north wall. Building 1A was sub-divided by a partition wall 574/87 towards its east end. Building 1A was clearly extended from building 1, following the same general alignment, but was slightly narrower, so that the walls at the junction of the two building ranges formed a dog-leg.

The foundations for the walls of building 1A were not recorded in detail, as they were left unexcavated, and unlike the walls of the period 2 building 1 they were not exposed in section in any of the trial trenches. However, they appear to have been built in narrow, probably vertical-sided foundation trenches. The north and south walls 407 and 539 cut period 2 make-ups, and although the early sequence in the west of the site was not excavated, it is likely that the west wall 624/665/671 and the south-west corner 715 would also have cut period 2 make-ups.

The walls of building 1A were mainly built of flint cobbles set in creamy yellow mortar, but also incorporating fragments of brick, septaria, ragstone and, occasionally, Caen stone. The south wall was capped with tile. In the east, the south wall abutted wall 447/74 of building 1, while the north wall would have abutted wall 204 (the relationship was destroyed by the cutting of trial trench 4). Both walls were carried over the period 2 drain 628/107 by brick vaulting, so that the drain could still function. The main walls of the building were 0.4m wide, slightly narrower than the walls of building 1. The north-south partition 574/87 was built of flint, septaria and brick, capped with tile, in a vertical-sided foundation trench (88) infilled with silt-clay packing (89). The partition was only 0.2m wide, had been extensively disturbed by later intrusions and, as seen in section (Fig. 18, S.7), had slumped a little to the east. It followed the east side of the period 2 drain 628/107, and formed a bay 4m square at the east end of building 1A. At the east side of this bay a further partition may be defined by a line of tiles (614) extending the line of period 2 wall 204.

The internal floor surface was added after the construction of the walls. It survived best in the area east of partition 574/87. A sandy clay floor surface (608/612/620) was laid in the eastern bay of building 1A, up to walls 407, 539, 74, and 574/87. A series of small patches of loamy clay, shell and may be highly localised attempts at resurfacing (609, 610, 611, 613, 614) where layers 612 and 620 had been eroded. The only surfaces recorded to the west of partition 574/87 was an area of sandy clay and tile (496/406, not fully planned) which abutted the north wall 407, and clay 82 recorded in section (Fig. 18, S.7). A curry comb for grooming horses was recovered from floor 608.

Building 1

At the same time as the extension was added, building 1 itself was rebuilt. Part of the north wall 723 was reconstructed, using large ragstone blocks capped with a course of tile (422; Fig. 16, S.4), suggesting extensive rebuilding of the superstructure. The large number of tile fragments in the contemporary yard surface to the north (see 660, below) suggests the roof was also replaced at this stage.

To the south, a layer of silt-clay (670) was deposited against the outside of buildings 1 and 1A, in the angle formed at their junction. A line of large stones continued the line of the south wall of building 1 to the west, and ran parallel to wall 539 of building 1A. This feature may have been a foundation for a flight of external stairs.

Clay flooring was laid inside building 1 (459/669/504/597). It sealed the post-holes and floor-levels of the previous period, and butted up against the walls. It was up to 0.1 m thick, but at its east end was severely eroded. A barrel-padlock came from layer 504.

Two partitions, aligned north-south at right angles to the south wall, were cut through the new floor, dividing building 1 into three bays. Partition 450 abutted the south wall and it is likely that partition 490 did also (the relationship was disturbed by a later intrusion). Their footings were built within vertical-sided foundation trenches 0.10m deep (450A, 490A). Both partitions were constructed of flint and septaria in a soft creamy yellow mortar (450, 490), and were truncated by later intrusions, but extended northwards for at least 2m.

Also cut into the new floor across the north of building 1 was a group of slots (672, 686 and 696) and post-holes (684, 688, 690, 692, 698) filled with variants of clay. The post-holes were between 0.14m and 0.30m deep, and the slots were very shallow, at 60mm deep. Slot 696 may have extended the line of partition 490, making it 3.7m long, while slots 686 and 672 ran parallel to the north wall of the building. Their plan and function are uncertain, although they appear to represent minor fixtures within building 1. Stratigraphically, they could have been inserted at any stage in periods 3A or 3B, as later surfaces did not survive in this part of site. Post-holes 684 and 698 contained post-medieval pottery, and these at least should be phased in period 3B.

Further west, an irregular feature (675) filled with clay containing tile, mortar and stone (676, 647, 646) and an oval patch of crushed stone (683) probably represent local patching of the floor surface with rubble.

Yard 660 north of building 1

To the north of building 1, loam 660, containing hundreds of tile fragments, abutted the north wall of the building, sealing the fills of gully 741 (Fig. 16, S.1). The linear depression in its surface represents subsidence in the area of gully 741 and its predecessor, ditch 740. The

very high tile content in layer 660 suggests that this was debris from re-roofing, used to form a heavy-duty rubble surface. To the west, silty clays containing tile, mortar and shell represent equivalents of surface 660 (518, 545, 547); these had also subsided into the earlier gully and ditch.

Drain 563 north of building 1A

A brick-lined drain was inserted along the north side of building 1A, running east-west along the outer face of the wall. In the east it curved a little to the north to avoid the corner of Building 1, but was truncated by trial trench 4. However, since the drain was visible in the north section of the trial trench (Fig. 18, S6, A-B), it must have extended to the north of the excavated area. It was built in a construction trench (520/562/206) 0.6-0.8m wide and up to 0.5 metres deep, with irregular sides becoming steep towards the bottom, and a flat base. It cut a period 2 make-up, but is phased in period 3A because of its alignment with the north wall of Building 1A.

Silt-clay (616) in the base of the construction trench provided a levelling for the tile floor of the drain, whose sides were built of brick, two courses high, and capped with bricks laid across the top (563/207). This formed a covered drain 0.15m wide and 0.15m deep (Fig. 18, S.6). The drain was built exclusively of whole Flemish-type estuarine silt bricks, and a single batch of new bricks must have been used. The construction trench was subsequently infilled with clay, gravel and mortar (205), covering the roof of the culvert and levelling up to contemporary ground level. Similar material to either side of the drain (524, 527 [not on plan], 529, 577, 625) probably represents rough surfacing using building debris from the drain's construction. It was not investigated in detail in the western extreme of the site, but is probably represented by an area of rubble surfacing on its projected line (period 3B, 420).

The culvert was built along the north side of building 1A to provide drainage for the yard area 660, replacing the infilled ditch 740 and gully 741. It presumably discharged to the west into the main north-south drain to the west of the buildings, which appears to have remained in use from period 2.

Drain 628/107 below building 1A

As described above, the period 2 drain 628/107 was incorporated in building 1A and remained in use. The drain was not recognised during excavation of the period 3A floor 608 because its top was disturbed (making it difficult to distinguish from the surrounding floor layers), but it was recorded in section (Fig. 18, S.7). The section evidence shows that the drain was not finally sealed over until floor 106/79 was laid in period 3B, and that in its final state it was open. However, its construction suggests that it would originally have been covered, running beneath the floors of building 1A as an underground culvert, with a tile roof similar to its floor. The line of the drain was extended into the external area to the south of building 1A by ditch 655/681, which turned a corner and changed the direction of flow to the west.

The drain finally became choked with sandy silt-clay (618/630/108/109), representing its disuse (it is likely that earlier sediments formed during the drain's use would have been cleaned out). The top of the drain was finally sealed by silt-clay (105), after its roof had been removed, and this represents the final disuse of the drain. The outlet channel 681 was filled with clay, flint and tile (682); the building material in this fill may represent a disturbed lining similar to that to the north. The drain fill was notable for the occurrence of ceramic drain pipes (618, 655). Other drain pipes were found in the immediate vicinity of the drain: embedded into a period 2 make-up (654); in the construction of period 3A drain 562 immediately to the north (625); and in the overlying period 3B make-up (483). The pipes which would allow the drainage system to continue to operate were most likely inserted late in the life of the drain when it had silted.

The relative positions of drains 563 and 628/107 suggest that they joined immediately to the north of building 1A, forming part of the same overall drainage system. Although the main purpose of drain 563 was to discharge westwards, the retention of drain 628/107 beneath building 1A implies that it would have taken some of the discharge of drain 563, as an extra storm drain. The floors of both drains were at comparable levels, 0.1m below the surface of the natural clay, so that a flow of water would have been possible. A small opening in the wall of drain 563 would have been sufficient to create a junction with drain 628/107.

External surface to the north

In trench 3 to the north of the excavated area, a layer of clay with chalk, brick and tile inclusions (46) was deposited, sealing the fills of the period 2 ditch 35 (not on plan). It may represent an equivalent of surface 660, suggesting the existence of an extensive yard to the north.

Dating evidence

A total of 111 sherds of pottery weighing 3115g was excavated from period 3A contexts, and again was in small groups. Much of the pottery was similar to that from period 2 and is probably residual. A few contaminated contexts contained small amounts of intrusive post-medieval pottery.

However, pottery which may be dated a little later then period 2 was recovered from the floor surfaces within building 1 and its extension, building 1A. Sherds of Colchester ware and Kingston-type ware from building 1 (floors 504 and 669), and Mill Green-type ware from building 1A (floor 82) can all be dated later rather than earlier in the 14th century. Water pipes in medieval coarse ware and sandy orange ware fabrics were recovered from the fill of culvert 619 (618, 655).

Similar pipes from the Dominican friary at Chelmsford are dated to *c.*1340-50, and another possible parallel from Chelmsford is dated to the 14th-15th centuries. Culvert 563, which was added to the drainage system at the beginning of period 3A, was built exclusively of Flemish-type estuarine bricks dated to the 14th century. The evidence suggests that building 1A, the extension of the original building 1, was constructed in the 14th century, probably towards the end of the century.

Yard 660 to the north of the buildings produced the largest and best-dated pottery assemblage. As well as the usual range of residual early medieval fabrics and Mill Green ware, this context contained distinctly late medieval pottery. This included a sandy orange jar dated at King John's Hunting Lodge, Writtle to after *c.*1425, Langerwehe stoneware dated to the late 14th-15th centuries, and Cambridgeshire sgraffito ware, another late medieval type. The latest pottery from yard 660 was a post-medieval red earthenware chafing dish with a date range of the 15th-16th centuries. Cross-fits between pottery from 660 and the overlying period 3B accumulation suggests disturbance of the yard surface, with the possibility that some of the later pottery may have been introduced during later usage of the yard. Nevertheless, the pottery from yard 660 suggests a 15th-century date, later than the exclusively 14th-century material from construction deposits related to the buildings and drains. The most likely conclusion is that period 3A began with an intensive phase of construction in the late 14th century, but it extended well into the 15th century, as reflected by later pottery being deposited over the external yard surface.

Discussion

Building 1 of period 2 was extended to the west by the addition of building 1A. The new extension measured 12.5m (41 feet) long and 4.6m (15 feet) wide and greatly increased the size of the outbuilding. It extended the original alignment of building 1, but was slightly narrower, so that the junction of the two building ranges is marked by a minor realignment of their walls. Building 1A involved a major change in layout, since it was constructed over the entrance porch to building 1, and blocked access via the bridge in the west, which now became redundant. Instead, the buildings were approached from the north, and possibly also from the south. There was certainly a wide entrance at the west end of the north wall of building 1A, and there also appears to have been an opposing entrance at the west end of the south wall of building 1A.

It is possible that others may have existed in the north wall of both building ranges. The north wall of building 1 in particular had several gaps which may have been entrances and not merely the result of robbing.

Like building 1, building 1A was built on narrow stone footings, sufficient only to support a timber superstructure. It appears that the opportunity was taken to rebuild building 1 at the same time as building 1A was added, since there is evidence to suggest rebuilding of the north wall and re-roofing. Indeed, the building range as a whole was probably heightened to include a second storey, or at least a loft, because in addition to evidence for re-roofing, the footing of an external stair was recorded against the south wall of the buildings.

A rough yard surface was laid to the north of the buildings, again emphasising that this was the focus of activity, and drainage was provided for by the construction of a new culvert and modification of the period 2 drainage system. These culverts display a sophisticated approach to resolving problems of drainage. Being covered, they also avoided problems of open channels causing obstructions both inside and outside the buildings.

There were also important changes internally, as both building ranges were sub-divided by insubstantial stone footings which would have supported timber partitions. These were much too slight to have been major load-bearing supports, and probably represent an internal arrangement relating to the use of the buildings. It is possible that the partitions defined a series of storerooms, or alternatively they could represent animal stalls. A curry comb for grooming horses found in floor 608 strongly suggests that the building may have been a stable. The bays within both building ranges generally measure greater than 4m x 4m, and would have been sufficiently large to stable a horse (the exception is the narrower bay at the west end of building 1).

The rebuilding in period 3A significantly increased the size of the outbuilding and changed its layout. However, if the building is interpreted as a stable in period 3A, can this interpretation also be applied to the original period 2 structure? The rebuilding in period 3A may represent conversion of a building with a different use into a stable, but could equally represent an enlargement and improvement of an existing stable. Unfortunately, the site evidence does not allow a firm conclusion to be reached either way.

Period 3B. Buildings 1 and 1A: later use (late 15th-mid 16th centuries) (Figs 16 and 18-20)

Buildings 1 and 1A were re-floored. Material was dumped or accumulated over external surfaces on all sides of the building. Part of the drainage system was abandoned. At least two internal partitions were removed during further re-flooring late in the life of the buildings.

Re-floorings within buildings 1 and 1A

At the west end of building 1 a silt-clay floor (580) was laid up against the the northern and southern walls and the internal partitions. In the south-west corner of building 1, a floor of clay and mortar (610), sealed by a further clay surface (605, 606) butted up against south wall 447. A floor of silt-clay-loam with mortar (502, 586) was laid in building 1A. A horseshoe came from context 586. This floor surface was repaired with crushed chalk (67/591, not on plan). In sections in trial

trench 2 (Fig. 16, S.5 and Fig. 18, S.7), the equivalent of these floors was a layer of clay (98/106) capped by mortary silt-loam (79, 72, 112/113/114/115). This floor surface capped drain 628/107 of period 3A.

Further west, clay-loam (495) and silt-clay-loam (621), butted up against the internal partition of building 1A. Clay-loam (482) was also deposited further west; heavily truncated, 482 may have been more widespread. At the east end of building 1A, a post-hole (63) cutting floor 502 probably belongs to this period. It was 0.2m deep and was filled with clay-silt-loam (64).

External areas

In the north-east of the site yard surface 660 of period 3A was sealed by clay-loam (663/664/667) and silt-loam (659), representing rubbish from occupation either accumulated or dumped over the external area. A linear hollow in the surface of these deposits formed through subsidence into the underlying ditch of period 2. These deposits were cut by a post hole (652), 0.48 m deep, filled with silt-clay-loam (653).

Further west, the culvert 563/207 appears to have continued in use. However, the ground surface in the immediate area of the drain was disturbed, with clay-loam (483, 497, 508, 528, none on plan) deposited in and around the drain trench, or slumped into it (499, 531/532). In some areas the clay-loam was overlain by a rough surface made up of patches of tile and mortar (498, 523) overlain by loam (448/449) and crushed chalk (409, not on plan). An equivalent of 409 in the extreme west (420) overlay period 3A make-up 455. It is possible that this sequence was related to the drain's construction in period 3A, but the patchy and disturbed nature of the deposits suggests that they were related to resurfacing over the top of the drain. This could have taken place after removal of the roof of the drain to clean it out. The latest fill within the drain was a green-stained loamy silt (589). The lower parts of the drain and the levelling in its base were stained green by seepage (?cess).

Loamy clay was also deposited over the external area west of the buildings (458 (not on plan), 702, 701 and 710 (not on plan)). This extended outside the west wall of the building up to the edge of the western ditch 641, dug in period 2. The ditch itself was infilled with clay-silt (635) which was overlapped by clay (634) extending beyond its western edge (Fig. 16, S.2). This sequence represents the final disuse of the ditch.

A similar sequence was recorded to the south, where the stairs of period 3A were sealed by an extensive layer of clay silt (585) and, to the east, by silty clay-loam (540), also recorded in section (59; Fig. 16, S.5). Like the area to the north of the buildings, these deposits may represent material either accumulated or dumped over an external area.

Later re-floorings within buildings 1 and 1A

Inside building 1, partition wall 450 was demolished and only a stub remained (Fig. 20). The demolished wall was sealed by a clay-loam floor (592/458/429), which abutted the south wall of the building. In the north-west of the building clay loam (513) formed an equivalent re-flooring. This was abutted to the west by a layer of clay loam, brick and tile (492), which formed a heavy-duty surface at the east end of building 1A. This overlapped wall 204, and it appears that this partition had also been demolished by the end of period 3B. Surfaces 492 and 513 were both contaminated by post-pit 581 of period 5.

External area to the north of the site

To the north of the main excavation area, ditches originally dug in period 2 were not finally filled until period 3B. In trench 1, ditch 9 was filled with organic silt clay and tile (8). A secondary fill of silt-clay and tile (7) may indicate a shallow recut (Fig. 16, S.3). In trench 3, ditch 35 was filled with silt-clay (38), a lead pipe (39) and clay (34). All of these were sealed by period 4 demolition debris.

Dating evidence

A total of 156 sherds of pottery weighing 2119g was excavated from period 3B deposits, but again much was residual, and it was in small groups. Surfaces towards the west end of building 1A and in the north-west corner of building 1 were contaminated, containing intrusive post-medieval pottery. However, most areas were free of contamination.

Much of the pottery is similar to that from periods 2 and 3A, and is obviously residual. However, late medieval and post-medieval pottery was recovered from within the buildings, but mainly from external accumulations and dumps around them. Sandy orange ware was common, and Mill Green-type ware and Cheam white ware were also present. The latest pottery, found in small quantities in most parts of the site, included imported Rhenish stonewares and post-medieval red earthernware (PMRE).

Pottery from within buildings 1 and 1A consisted mainly of sandy orange ware, although occasional sherds of PMRE came from uncontaminated contexts, such as 591, the repair of floor 586. Deposits probably related to clearance or repair of drain 563 to the north of the buildings contained more diagnostic pottery. Levelling 528 contained Cheam white ware, while resurfacing 523 contained a Colchester ware jug with decoration which indicates a 15th to 16th-century date.

Most of the pottery came from external surfaces, accumulations and/or dumps, all of which produced late medieval glazed wares, imported Rhenish stonewares and PMRE. Accumulation 659, which overlay the period 3A yard surface to the north of building 1, contained Langerwehe stoneware and a PMRE faceted base. Surface 701/702 to the west of building 1A produced slip-painted Mill Green-type ware, Frechen stoneware, and PMRE. A similar range of pottery came from 634 and 635, filling the ditch immediately to the west, notably late medieval sandy orange ware cistern and jug forms, Raeren stoneware, and glazed PMRE,

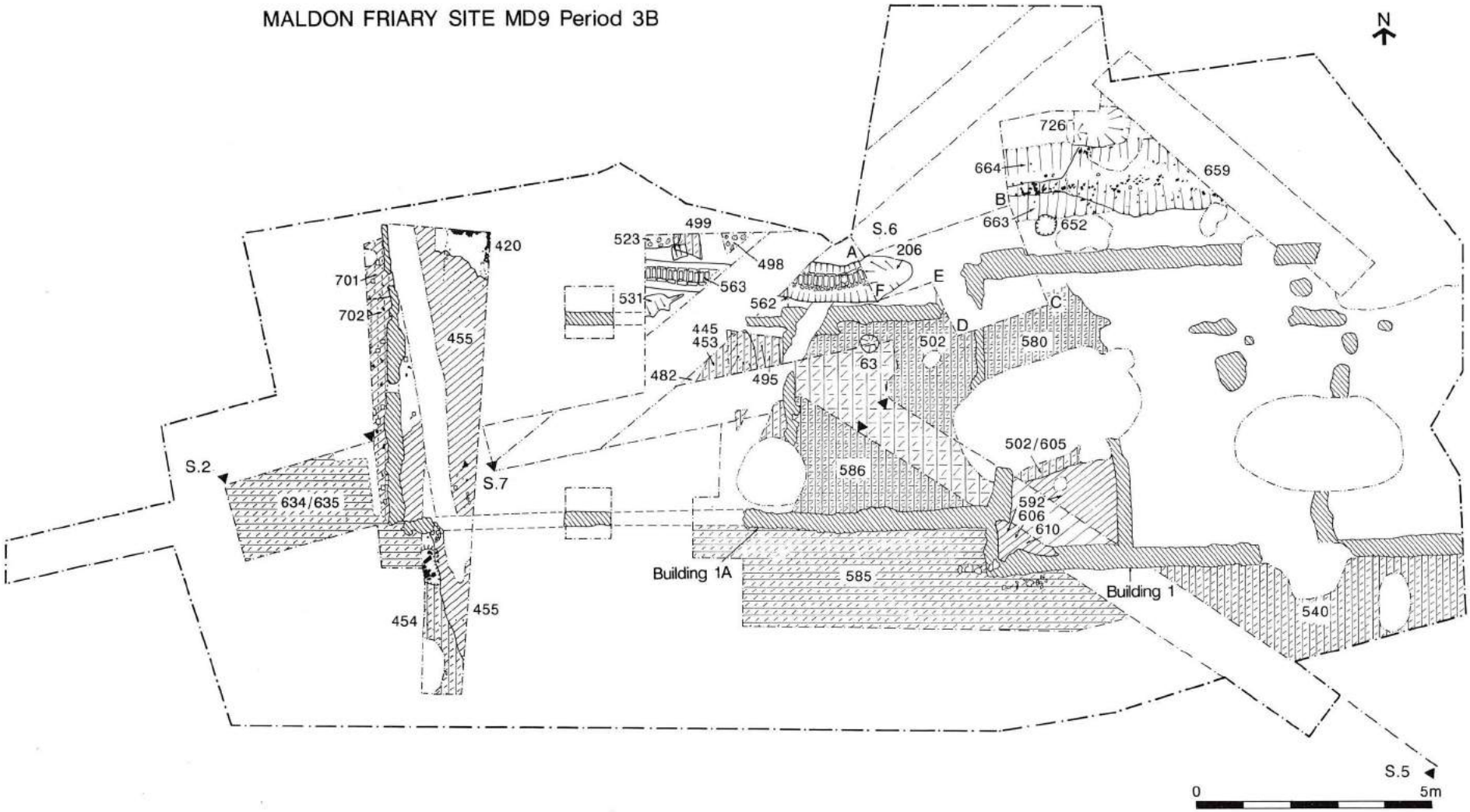

Fig. 19 Maldon Friary. MD9, period 3B

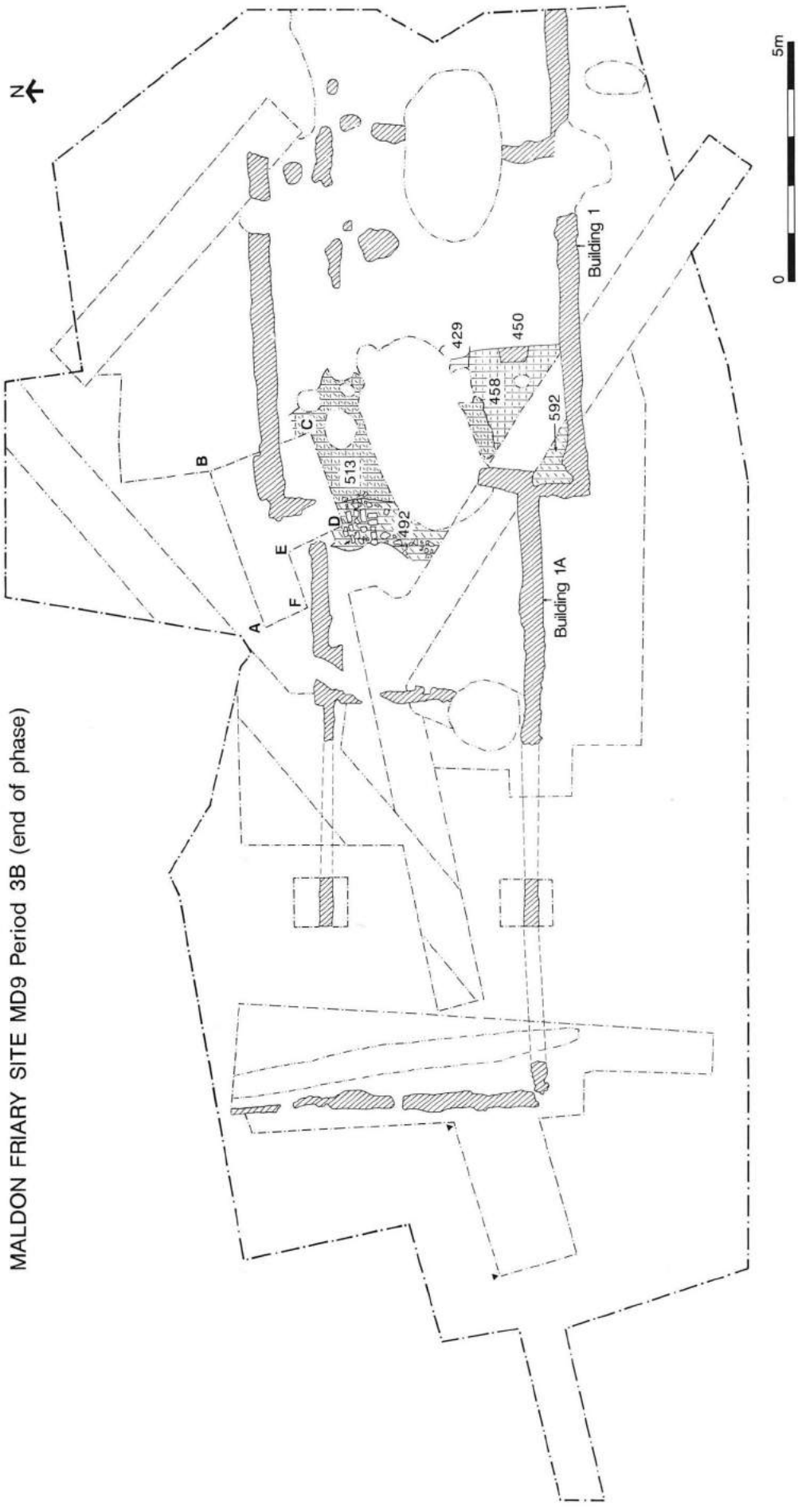

Fig. 20 Maldon Friary. MD9, period 3C

including a dripping dish. The largest group of pottery came from external dump 585 to the south of the buildings. The pottery is heavily residual, but the latest pottery was similar to that in the other external areas, consisting of Mill Green-type ware and internally-glazed PMRE.

Despite problems of residuality and contamination, small amounts of late medieval and early post-medieval pottery were recovered from most areas of the site, suggesting a date for period 3B of the late 15th-mid 16th century, the period immediately preceding the Dissolution in 1536-8.

Discussion

Structurally, the building range remained the same as in period 3A, and the evidence of period 3B consists of re-floorings within the buildings, and accumulations or dumps of material outside them. This merely represents a later stage in the use of the building. The culvert 628/107 running under Building 1A, the western extension to the range, was abandoned, but drain 563 along its north side remained in use, with evidence for maintenance and resurfacing above it. However, by the end of period 3B there was a general deterioration in the drainage arrangements, and even the major ditch to the west of the buildings had become filled. Other ditches to the north of the main area were also filled by the end of period 3B. The latest re-floorings within the outbuilding overlapped demolished partitions, and it would appear that the internal layout seen in period 3A had been abandoned before the end of period 3B. Nevertheless, a horseshoe recovered from floor 586 suggests that the building continued to be used as a stable.

The situation at the end of period 3B represents the latest use of the outbuilding, since period 3B surfaces were all sealed by demolition debris of period 4. The dating evidence suggests that the outbuilding was in use at the Dissolution and was demolished not long afterwards.

Period 4. Demolition and clearance (mid 16th century) (Figs 16, 18 and 21)

Building 1/1A was dismantled, and the building remains were sealed by levelled demolition rubble, consisting mainly of roofing tile. It would appear that the area of the building was cleared and became waste land. These changes occurred in the period following the Dissolution of 1536-8.

Demolition rubble

Layers of loam or silt-clay containing building material and domestic rubbish formed a continuous layer of demolition rubble over the latest surfaces both inside and outside building 1/1A. It would originally have extended over the entire site, but due to truncation only recognisable parts of this layer are shown on plan.

The demolition debris survived best in the central area of the building. Against the south wall it consisted of tile, brick, pebbles, chalk and mortar (558) sealed by silt clay loam, containing tile, shell, chalk and mortar (549). The equivalent layer to the north was clay-loam, with tile, charcoal, brick and stone (476, and 503, not on plan). Other silt layers mixed with clay, loam and building material overlay surfaces outside the building (559 and 536 (not on plan) to the south, 405 and 419/666 to the west, and 403, 426 and 626/607 to the north). In trial trench 6 in the north-east of the site, a layer of loamy clay containing tile, oyster and gravel (309, not on plan, probably equivalent to 626) was dumped over the depression left by the subsidence of the earlier period 2 ditch.

The debris consisted mainly of roofing tile, with relatively little building stone, which was presumably cleared from site. The layers to the north of the building were notable for containing numbers of iron nails, especially 626 which contained 35 alone. These were presumably derived from timber elements of the demolished building. Several layers also contained animal bone and shell, suggesting that they were partially made up of domestic rubbish.

The demolition debris was generally only 0.1-0.2m thick, and the stone footings of the north and south walls of the demolished building survived as wall stubs visible in the top of the debris. It is possible that the footings were reused to support a timber structure, but this seems unlikely. It is much more likely that the top of the stone footings was a convenient point at which to level off the debris. However, some lengths of wall were robbed, although the evidence was not recognised in plan and was recorded from sections. The elevation of the north wall of Building 1 (Fig. 16, S.4) shows evidence of robbing of the upper courses. Further east trial trench 6 shows that the east end of the wall had been completely robbed, with evidence of a trench (303A) filled with loam, stone and tile (303). This was, however, heavily contaminated, and it may be that intrusive features were excavated together with trench 303A.

In section in trial trench 4 (Fig. 18, S.6) a small pit (216), 0.13m deep and filled with clay-loam and gravel (217) was cut into demolition debris 222. A stakehole (220), 0.22 m deep, was cut from the same level, and was filled with clay-loam and tile (221). At the end of the period, pit 216 was sealed by a mortar and tile destruction layer (214/215), equivalent to 476 in plan.

In Trench 1 beyond the main area of excavation (Fig. 16, S.3) ditch fills were sealed by mortar and tile-debris (6). In trial trench 3, also to the north of the main area, clay with brick, tile, septaria and chalk inclusions was deposited over wall 32/33, and was sealed by silt-clay containing tile and septaria (31). These demolition deposits to the north suggest a widespread operation.

Dating evidence

The most likely historical context for the demolition of the outbuilding is the dissolution of the friary, dated by documentary evidence to 1536-8. The pottery is

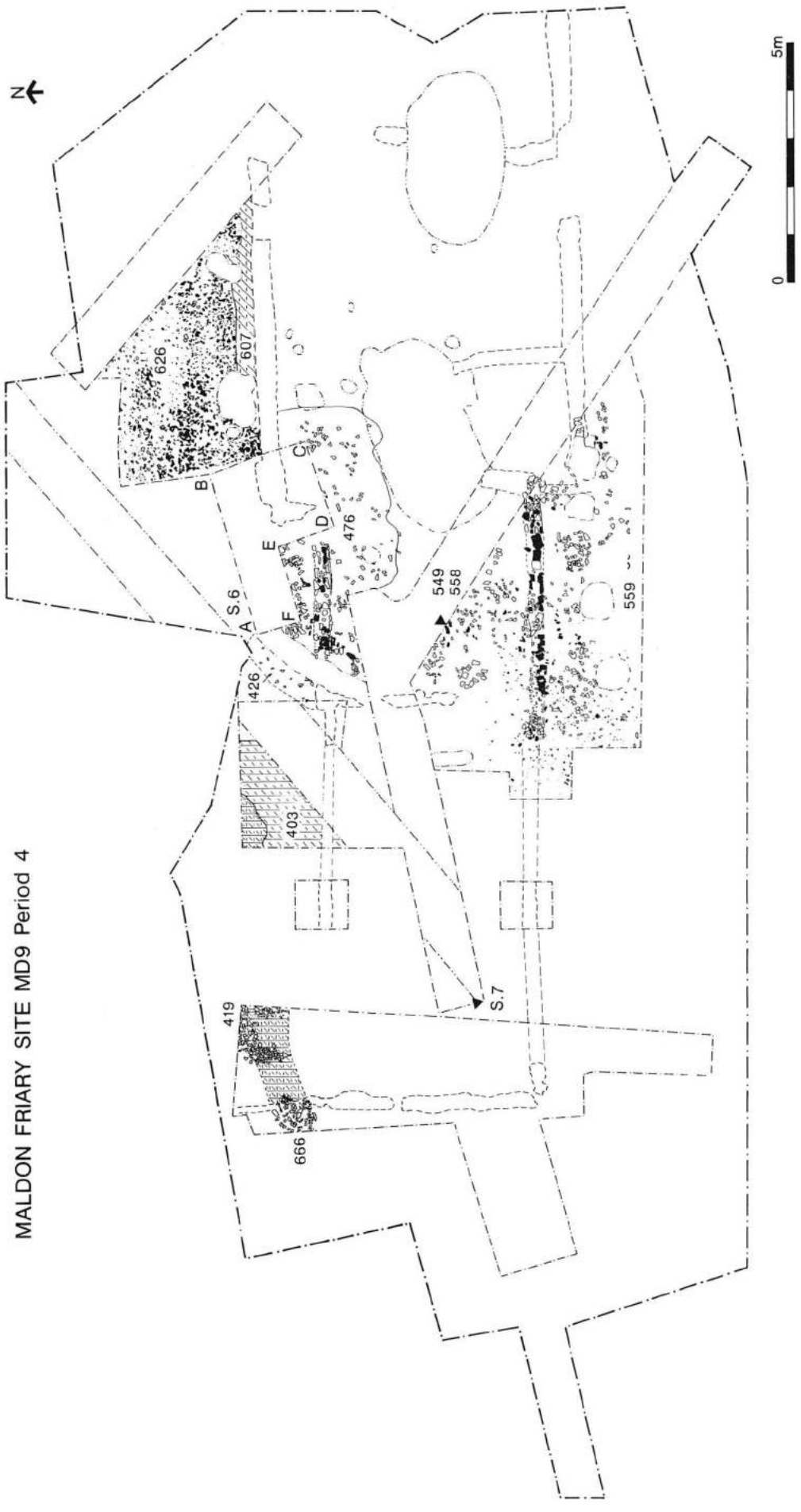

Fig. 21 Maldon Friary. MD9, period 4

consistent with this date, although given the broad date-range, it is conceivable that the building survived as late as the building of the Harris' mansion in 1563-70/4.

A total of 123 sherds of pottery weighing 1934g was excavated from period 4 deposits. With the exception of occasional intrusive sherds, the pottery is dated to the late 15th-16th centuries, and is characterised by late medieval sandy orange ware, imported Rhenish stonewares, and post-medieval red earthernware, some with early forms of decoration. A Nuremburg token came from demolition rubble 476. The dating of the assemblage is consistent with the time of the Dissolution, but hardly constitutes a large Dissolution deposit.

Discussion

The building must have been dismantled wholesale, although the stone footings remained relatively intact, with only partial robbing. The demolition rubble was mainly roofing tile and there was little stone rubble, although there was much fragmented mortar and chalk. The absence of stone rubble may imply that it was cleared from site and reused elsewhere. However, an alternative explanation is that the building was mainly built of timber. The evidence for tile capping of the stone footings (Discussion for periods 2 and 3A) suggests that they formed plinths for a timber-framed superstructure, and that they survived to their full height.

The distribution of the roofing-tile debris is of interest. The densest concentration lay within the confines of the building or within 2m of its outer walls, forming regular limits parallel with the wall lines. This may be consistent with a pattern of breakage during dismantling of the roof, but could also have resulted from progressive collapse of the roof onto the floor of the building, with tiles also sliding off the roof onto adjacent external areas. The large numbers of nails over the external areas are likely to have derived from the roof timbers, but again their deposition could equally have been the result of dismantling or of tiles spalling off nailed roof timbers as they collapsed.

Unfortunately, the evidence both of the roofing tile and the pottery dating is insufficiently precise to decide whether the building was deliberately dismantled or decayed gradually. There is some evidence of decline in standards of maintenance in period 3B (above), but the pottery dating suggests continuous use of the building up to the Dissolution, and possibly beyond. The building may have been retained as a store until work on the building of the Harris' mansion was completed. Alternatively, it may have been demolished along with the buildings in the cloister area, with the levelled tile debris perhaps forming a heavy-duty yard surface. However, even if the transition from monastic precinct to post-Dissolution land use was more gradual than in the cloister area, the building would almost certainly not have survived the completion of the mansion and the laying out of its gardens.

Period 5. Culverts, fence lines and pits (later 16th-18th centuries) (Figs 18, 22)

The site of the former friary outbuilding was now open ground. Culverts were built to provide drainage, probably as part of the laying out of the gardens of Harris' mansion. Post holes may represent fence lines. Two large pits were dug, either before the garden was laid out, or to remove trees.

Culverts 76/411 and 421

A culvert (76/411) aligned north-east to south-west was dug through the ruins of the building. It was investigated in the area of trial trench 2 (Fig. 18, S.7). It was constructed in a vertical-sided, flat-bottomed trench (78/744), 0.7m deep and with a shallow ledge at the top along its east side. Chalky mortar (101) was laid as a bedding for the culvert lining (76/411), which consisted of a base of bricks laid on bed, supporting brick side-walls laid in English bond, three courses high, from which was sprung a semi-circular arched roof of bricks laid on edge. The construction trench was backfilled around this lining with ragstone, brick and tile rubble, consolidated in mortar (410 to the north-west, 415 to the south-east, recorded in trial trenching as 100) and was then levelled up with mortar (77). A thin layer of sand formed over its base (96), and it eventually

Plate IV Maldon Friary. MD9; view of the roof of brick culvert 421. Linear scales 2m and 0.5m.

became choked with sand-loam (94). The culvert was 0.4m wide and 0.35m high internally and was clearly a major drainage channel.

The north-eastern length of this culvert was not investigated in detail, but a change in the brickwork suggests a repair of the roof (413); the length crossing the extreme north of the site was not recorded at all. Further west, another, rather narrower, brick-lined culvert (421; Plate IV), aligned north-south, was built to feed into it, but was not investigated in detail.

Levelling

In several areas east of culvert 76/411/413, variants of silt-clay and loam (491, 544, 598) were deposited, and in the area to the north of the former building they compensated for subsidence of earlier ditches and drains. It is likely that this soil was imported, although its loam content suggests it may have formed a garden soil. In trial trench 1 to the north of the main excavation area (Fig. 16, S.3), a loam soil (5) clearly formed a separate horizon above period 4 demolition rubble and below period 6 strata, representing the formation of a soil in period 5. Both this soil and the soil layers in the north of the main area survived because they were sealed by rubble layers at the beginning of period 6, protecting them from downward disturbance.

A distinct period 5 soil horizon is not recognisable over the majority of the excavation area, although its existence is suggested by section evidence (Fig. 16, S.5; Fig. 18, S.6 and S.7.). Here, the overlying period 6 garden soil 61/201 directly overlay period 4 demolition rubble and abutted the stub of wall 73, while it also directly overlay the top of the period 5 culvert 411. It is inconceivable that these features remained exposed throughout period 5 with no soil deposited or forming above them. The latest pottery from the period 6 soil (e.g. 408) is 18th-19th century in date, but given the large amount of medieval and 16th to 17th-century pottery present, it is likely that the period 6 soil represents the latest disturbance of a developing soil horizon which first formed in period 5.

Post holes

Two sets of intercutting post holes filled with silt-clay-loam mixtures were dug into the levelling in the north-east of the site. These formed a western group (554, 556 and 551) and an eastern group (515, 522 and 506), with others in between (526 and 542 (not planned)). Most were 0.34-0.37m deep, but 514, 506 and 526 were only 0.09-0.12m deep. At the end of the sequence clay-loam (552) was deposited over them.

A large number of post holes, mostly 0.08-0.25m deep, and filled with variants of sand, silt, clay and loam, were dug over the area to the south. A feature 0.50m deep (581/208) which cut the north wall of the former building may have been a post pit, packed with clay (582/207), for a small post hole (583). Several fairly large post holes (560, 500, 717/511, 718/427, 509) were located to the south of the western group described above and may be related to them. All were circular, but 511 and 427 were set in nearly square post pits 717 and 718. Post hole 509 was cut by pit 435 (see below) but post holes 429 and 433 (not shown) cut the pit. Several small post holes and stakeholes were also scattered around this area (460, 463, 493, 600, 602, 679). In the south of the site there was an east-west alignment of post holes (533, 537, 541 (not shown) and 564. A number of post holes which were not recorded in detail are not included on Fig. 22.

Some of the post holes were quite large and capable of supporting light timber structures, but overall there is no clear pattern and most of the post holes cannot be interpreted, though some alignments may represent fence lines.

Pits 435 and 439

Two large pits (435, 439) were dug through demolition debris of the previous period. One end of pit 435 was cut obliquely by trial trench 2 and was recorded in section as cut 90 (Fig. 16, S.5). The pits were both filled with silt-clay-loam, and although several tips of material were visible within the fills, some of which may be slumping, they were excavated as if they were a single deposit. Pit 435 had steep sides and rounded base, and was 1.0m deep. Its fill (436) contained building material, nails, an iron bar, ash and clinker, two Nuremberg tokens and a metal vessel. Pit 439 had a similar profile to pit 435, and was 0.95m deep. Its fill (440) contained nails, a pin, button, a book-clasp and a key. A gold ring may also have come from this pit. The pits thus produced a range of artefacts, many of which could have been residual from clearance of the friary buildings in period 4, although other artefacts, especially the vessel and bottle glass, is clearly post-medieval. The pits also contained the largest amount of animal bone recovered from either MD9 or MD10.

Dating evidence

Documentary evidence indicates that the Harris' mansion, to which the period 5 features are related, was built between 1563 and 1570 or 1574. It was mapped by Chapman and Andre in 1777, and was finally replaced by later buildings in 1805-7. The pottery evidence is consistent with period 5 activity being contemporary with the Harris' mansion.

A total of 345 sherds of pottery weighing 6991g was excavated, mainly from two large pit groups. The pottery assemblage is dominated by post-medieval red earthenware (PMRE), with decorated variants dating from the later 16th century to the early 18th century. It was often associated with Rhenish stonewares and Southern white ware of later 16th to 17th-century date. However, a range of later pottery, consisting of English stonewares, including salt-glazed types, tin-glazed earthenware, Staffordshire slipware, and Chinese porcelain, indicate that period 5 activity continued well into the 18th century.

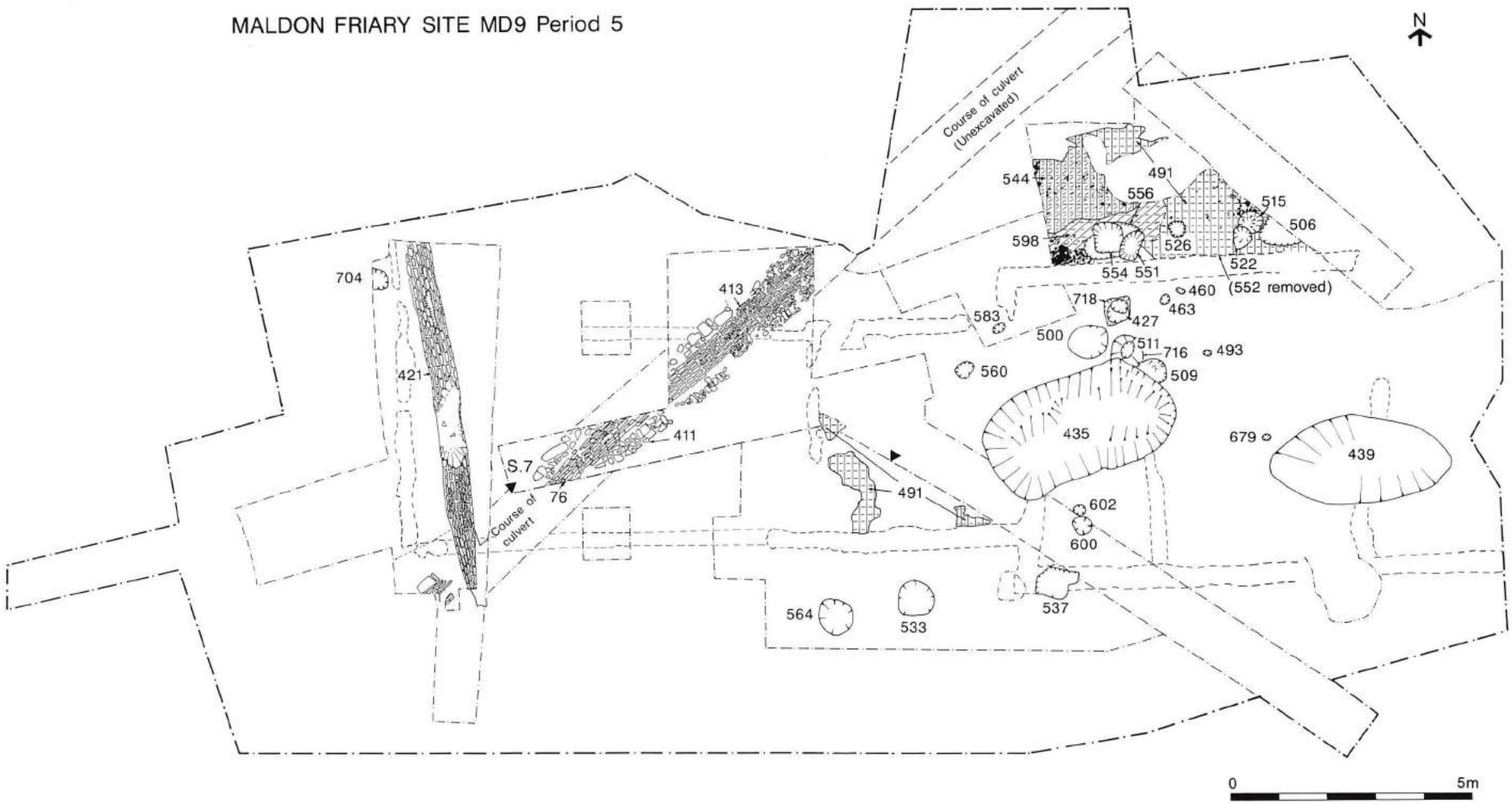

Fig. 22 Maldon Friary. MD9, period 5

The construction of the two culverts, 76/411 and 421, is dated by the Tudor bricks of which they were built. Repair 413 to culvert 76/411 contained Staffordshire slipware dated to the late 17th-early 18th centuries (412), while the disuse fill (94) within the culvert contained 18th-century stonewares and late 18th-century cream ware. Culvert 76/411 was clearly directly contemporary with Harris' mansion.

The two pits, 435 (fill 436) and 439 (fill 440) contained large amounts of PMRE, including decorated examples dating to the later 16th-17th centuries. They also contained Raeren and Frechen stoneware jugs dated from the 1570s and 1580s into the 17th century, and Southern white ware with a similar date range. Pit 435 also contained a Nuremberg token. Pit 435 can be dated no later than the 17th century, but pit 439 contained some glazed PMRE and salt-glazed pottery datable to the early 18th century. There was minor contamination from a modern ceramic teapot lid! The pottery in both pits was very fragmented, and the assemblages probably represent a range of residual rubbish, mainly from the Harris' mansion, but also from disturbance of medieval levels.

The levelling layers 598/544/491 contained residual 15th to 16th-century pottery, although a clay-pipe from 598 suggests that deposition may have continued to take place at a later date. The post holes cutting the levelling are mainly dated to the18th century on the basis of salt-glazed stonewares and English tin-glazed earthenware. A Nuremberg token dated 1580-1610 was recovered from post hole 533, but the associated pottery shows that it is residual. Most of the other post holes which did not cut the levelling were similarly dated, with the latest pottery from the phase being a sherd of late 18th-century Chinese porcelain from 510, the fill of post hole 509.

Discussion

The features of period 5 are almost certainly related to the gardens of the Harris' mansion, which lay only 30m to the north-east (Fig. 43). The two culverts represent an impressive drainage system which was constructed at the same time as the mansion, discharging downhill to the south. Culvert 76/411, which had a large internal diameter, was the main channel in this system. It was aligned on the mansion and must have been the main drain for the mansion itself as well as its surrounds. The drainage system was evidently maintained, as indicated by the evidence for repairs, and the fact that it remained in use until the late 18th century. This in itself imples a high standard of maintenance of the grounds of the mansion throughout its life.

The two large pits, 435 and 439 were also contemporary with the mansion, although it is curious that they should have been dug so close to a high-status building. If they were purposely dug as rubbish pits, their presence may imply a time lag before gardens were laid out around the mansion. After the Dissolution the west end of the site was a wasteland, and as late as 1600 the town dunghill was located at the western boundary of the former monastic precinct. The wasteland may not have been landscaped straight away. Alternatively, the pits may have been dug to grub out trees during changes to an existing garden attached to the mansion.

The broad date range of the pottery, and its mixed and fragmentary nature, suggests that the material in the pits was largely residual. It appears to represent a wide range of rubbish from the Harris' mansion, as well as earlier rubbish disturbed from medieval levels. Some of this debris was most likely derived from clearance of the monastic buildings, especially a book mount of a type which may be dated to the last years of the friary (Small finds, No. 23). The relatively large amounts of animal bone and oyster shell represent domestic rubbish, possibly from the mansion's kitchens, although again much of this assemblage is likely to be residual.

The post-holes (where datable) are dated to the 18th century, and presumably represent fence lines or light structures within the gardens of Harris' mansion. Two alignments are apparent, roughly following the north and south walls of the former monastic outbuilding.

Period 6. Garden features (19th century) (Fig. 23)

The area was landscaped, probably as part of the construction of Friary West in 1805-7.

Levelling and pits

In the north-east of the site, silt-clay-loam with brick and tile (479) was laid over the period 5 soil horizon, representing either demolition debris or a rough external surface. Silt-clay-loam (423, 481) and gravel (480) were dumped on top of it. To the north of the main excavation area, in trial trench 1 (Fig. 16, S.3), a layer of mortar, brick and gravel (4) was deposited over the period 5 soil.

A series of features cut these levels. Pit 467 was 0.4m deep, and filled with silt clay loam (466) and loamy clay silt (465). Pit 475 (not on plan) was 0.3 m deep and filled with silt-clay-loam (474). In trial trench 6, over layer 306 was dumped a thick layer of black brown silt clay loam, containing oyster charcoal and mortar (307) with lenses of yellow mortar in it (308).

Drainage gullies and pits

Two drainage-gullies (424 and 470/472) were dug in the centre-north of the site, in the area of the former culverts. Like them, drain 424 ran down from the north-east to the south-west, and would have been joined by drain 470/472 running north-south (the relationship between the two features did not survive). Drain 424 was 0.2m deep, and was filled with mortar, crushed tile and pebbles in a silt clay loam (425). It was aligned parallel to the culvert of period 5 and cut pit 571. The second drain 470/472 was 0.3m deep, and was packed with brown-black clay loam and cattle horn-cores (66/471, 473).

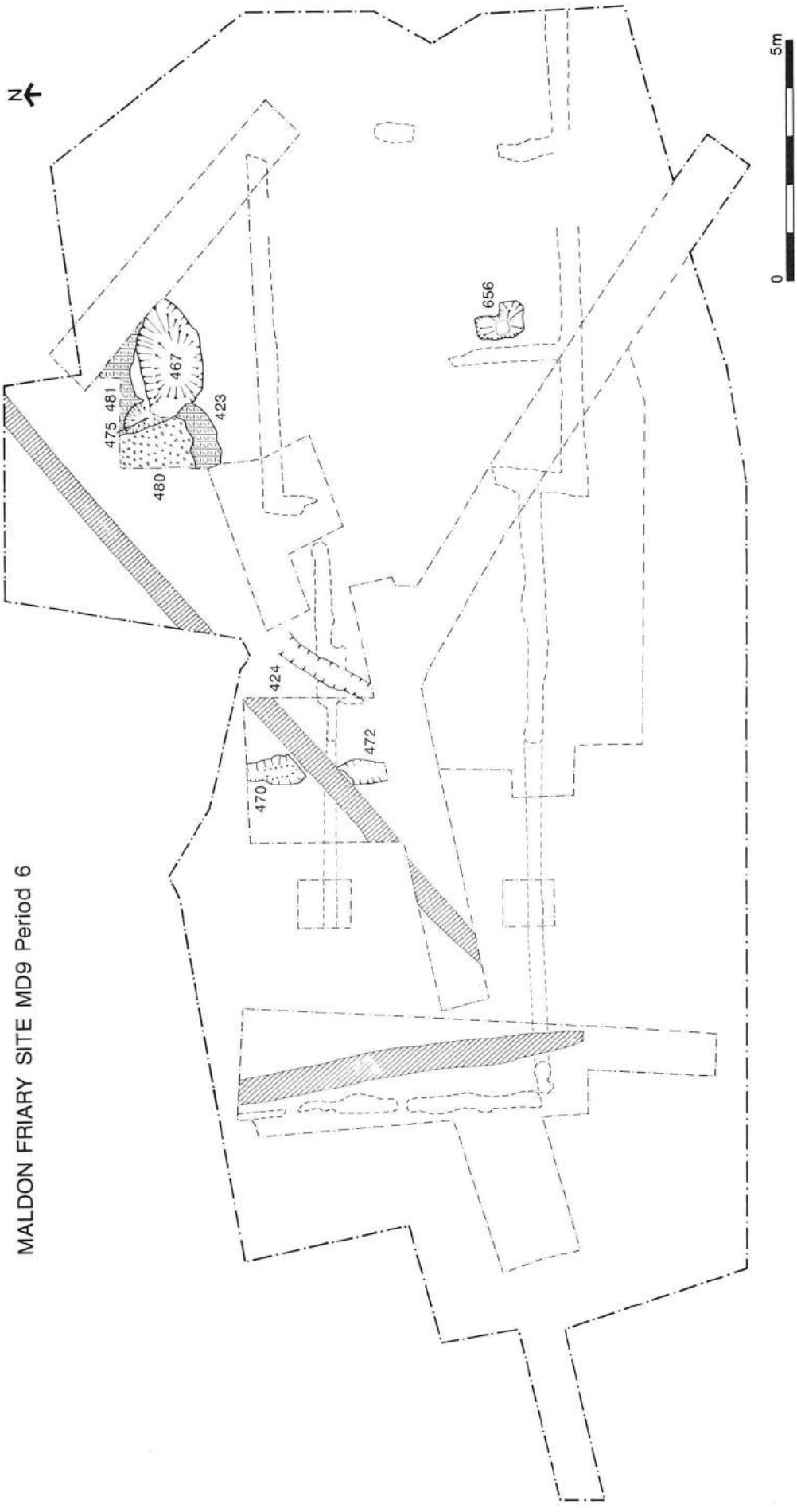

Fig. 23 Maldon Friary. MD9, period 6

A series of shallow pits was also dug (443, 451, 571, 638, 656, none illustrated). Pit 443 was 0.3m deep and may have been lined with clay; it was filled with silt-clay-loam (444). Pit 451 was 0.15m deep and filled with silt loam (452). Pit 571 was 0.25m deep and filled with clay loam (572). Feature 656 was aligned north-south and was 0.40m deep. In its base a row of three posts 0.10 m square had been inserted (658). The gully was infilled with clay loam (657).

Soil horizon

The levelling and features in the north-east of the main excavated area were sealed by a brown loam soil (408). The equivalent of this in sections across the rest of the area (Fig. 16, S. 5; Fig 18, S. 6 and S.7) was recorded as a clayey loam 0.2m thick. Soil 408 apparently sealed the rubble layer and pits in the north-east of the excavation area, but the relationship of the drainage gullies and other pits with the soil horizon was truncated by machine clearance.

Although containing 18th and 19th century pottery, the soil may first have been deposited in period 5, as it directly overlies period 4 demolition debris and was deposited up to wall stubs of the demolished medieval outbuilding (period 5). It presumably represents a garden soil formed over a period of time, with the large amount of residual pottery suggesting a developing soil horizon affected by downward disturbance.

Dating evidence

The transition from period 5 to period 6 most likely reflects the demolition of the Harris' mansion, and the subsequent construction of Friary West in 1805-7 (see Location and geology). Rubble layers (e.g. 479) deposited at the beginning of period 6 may be related to this change.

A total of 989 sherds of pottery weighing 14,695g was excavated from period 6 contexts, mainly from machine-cleared soil horizons, although the sequence on the north-east of the site was excavated by hand. The pottery is dated from the late 18th to 20th centuries, but includes much residual medieval and 16th to 18th-century material.

The pottery from the excavated features was almost entirely residual, but rubble layer 479, the earliest period 6 deposit, contained blue-painted Chinese porcelain and creamware, consistent with a late 18th/early 19th-century date. The largest and best-dated pottery group came from pit 467, which cut layers sealing rubble 479. Pit 467 (fills 466, 465) contained 18th-century stonewares, English tin-glazed earthenware, blue-painted Chinese porcelain, and pearlware of a late 18th century style. Two creamware pieces are closely datable: a plate with an octagonal rim dated to 1770-5; and a bowl with whose decoration is parallelled in a teapot at the Victoria and Albert Museum dated to 1780-1800. These suggest a late 18th or very early 19th-century date for the pit. The pottery from soil 408 above the pit is very similar, including stonewares, especially white salt-glazed stoneware, and creamwares, with the latest types current around 1770.

A total of 24 clay tobacco pipes was recovered from the fills of pit 467, dated to the mid 18th century onwards, while 13 clay pipes, including types datable to 1800 or later were recovered from 404, an upper part of soil horizon 408.

Later pottery dated to the 19th or even 20th centuries is found in equivalents to soil 408 over the rest of the site, in pit 656, and in the modern topsoil. However, the pottery from the excavated features is predominently late 18th century. This broadly supports the documented date of 1805-7 for the landscaping of the site and the replacement of the Harris' mansion with Friary West and East. The pottery is likely to represent rubbish from the latest occupation of the mansion, redeposited during landscaping.

Discussion

The rubble layer 479 deposited at the beginning of period 6 is interpreted as a building level related to the demolition of the Harris' mansion, and the construction of the house now known as Friary West in 1805-7. A large rubbish pit 467 probably represents clearance of rubbish from the demolished mansion. New drainage gullies replaced the blocked period 5 culverts. The pottery in soil horizon 408 and its equivalents 61/201 suggests that the latest disturbance of this horizon occurred in the late 18th century or the very beginning of the 19th century, and represents landscaping of the gardens of Friary West. However, the soil directly overlay period 4 demolition debris, and contained a quantity of residual pottery, suggesting that it was first deposited, or first formed, in period 5. Overall, the site evidence represents the garden both of the Harris' mansion and the later Friary West, with the period 6 strata related to the construction of Friary West. The uppermost soil and features such as pit 656 represent recent development and use of the Friary West gardens.

BUILDING MATERIALS

by D.D. Andrews, Raphael M.J. Isserlin, Hilary Major and Pat Ryan

Items in this section are discussed by function, proceeding broadly from the bottom to top of a structure (wall construction, including door and window mouldings, flooring, roofing, glazing), and then within these catagories by material type. All of the reports below are abridged results of macroscopic visual analysis of the material, and are supported by fully detailed catalogues and discussion in archive.

Medieval building stone

by D.D. Andrews, with a contribution by Dr. O. Williams-Thorpe

Only stratified architectural fragments retained during excavation are described here. Although the building stone recorded in the fabric of

the friary buildings is summarised, the reader is referred to the excavation texts for detailed description of structural remains. Architectural fragments found in a wall and a rockery in the garden of Friary East may have been derived from the friary buildings, but as their original provenance is uncertain they are described separately in the Archive.

Excavation records show that the main material used in the construction of the friary was Kentish ragstone, with some use of septaria and flint. These materials were used in the walls of the outbuilding and its extension (MD9). Evidence of the stone used in the cloister (MD10) is more limited because of clearance of the site after the Dissolution, but ragstone, sometimes with septaria, flint and chalk, was used in successive rebuildings of the east range (periods 3A and 3B). The post-medieval garden wall which survives today and encloses what was probably the original friary precinct was also largely built of ragstone, most of which must have been salvaged or recycled from the friary buildings.

No mouldings survived *in situ* in the cloister area (MD10), although Caen stone and clunch mouldings were found in demolition deposits dating to the Dissolution. There is evidence of dressed stone being used in conjunction with brickwork in later rebuilding of the east range. Chalk blocks were used in a chequerwork internal partition (period 3A), and Reigate stone was used for the quoins of a buttressed brick facing (period 3B). The use of brick is discussed below.

The stone collected during the excavations consisted mainly of Kentish ragstone (8 fragments) and septaria (12 fragments). Kentish rag was one of the commonest building stones used in Essex in the Middle Ages, and was the main stone used in the construction of the friary. Septaria is fairly common in coastal parts of the county. The lumps, which were fairly small (e.g. 100 x 70mm), were apparently incorporated sporadically into the walling. Septaria has, however, been found in Maldon in the sill walls of timber buildings, and these pieces may have been associated with timber outbuildings in the friary precinct.

The other principal stones used in medieval Essex were oolite, clunch, Reigate stone and Caen stone. These are freestones and therefore used for dressings, i.e. window and door surrounds, and quoins, etc. The first three types were all represented by one or two examples. A single block of chamfered oolite was found in the initial machine clearance for MD9, and the same site also produced a fragment of Reigate stone with a dressed surface. From MD10 came a small fragment of clunch with a double ogee moulding (No. 1), while another fragment of clunch, from MD9, has a chamfered face and a rebate. The double ogee moulding from MD10 is the most distinctive piece of worked stone recovered, being characteristic of Decorated, or more especially Perpendicular, work. It is most likely associated with the period 3A reconstruction of the east cloister walk, dated to the late 14th century. It is unweathered and must have come from an interior location.

From the point of view of the friary buildings, it is the Caen stone which is the most interesting, as it seems clear that this stone was generally used for the dressings. (However, it is by no means unusual for more than one stone type to be used in the same building phase, or even the same window or door). Unfortunately, these pieces (10 in all) are also too fragmentary to say much about them beyond the fact that they were mostly from window or door surrounds. They preserve nothing more significant than a chamfered face, or in two cases have a hollow chamfer (No. 2). Several stones bear traces of lime-wash.

A fragment of green limestone with shell fragments (identified by Dr O. Williams-Thorpe of the Open University), with no worked edge surviving, came from MD10. It was recovered from period 2A 896, a rubble spread deposited during the original construction of the friary buildings. Such limestones are plentiful in Britain. 'Exotic' stones were valued in the medieval world (Peacock 1997) and their appearance imitated. This stone was probably chosen because of its superficial resemblance to porphyry, which was certainly used elsewhere in medieval Essex churches (e.g. Rivenhall; Rodwell and Rodwell 1993, 1-2). It is reasonable to assume that it was used for decoration within the original friary buildings, even though the excavated example was a waste fragment.

Catalogue (Fig. 24)

1. *Clunch.* One piece, fragmentary, but with a double ogee moulding. MD10, 885, demolition rubble in the east cloister walk, period 4 (mid 16th-century context)
2. *Caen stone.* Two pieces with a hollow chamfer, battered but unweathered. MD10, 885, demolition rubble in the east cloister walk, period 4 (mid 16th-century context)

Other finds of interest (Fig. 24)

As well as the building stone described above, the following items of interest were present amongst the collected finds. One has been illustrated:

3. *Moulded stucco, or possibly plaster of Paris.* One piece, limewashed, from the surround of a relatively small aperture. MD9, 416, cleaning after machining, period 6 (19th-century context)

The following are not illustrated:

Daub. A small piece from context 81, post-hole 80, MD9, period 5 (later 16th to 18th-century context)

Reddish sandstone. Three fragments with a laminated fracture, of a type unusual in Essex. MD9, 428, post-hole 427, period 5 (later 16th to 18th-century context)

Coarse red sandstone. Two fragments, coarser than above. MD9, 436, pit 435, period 5

Greyish white stone slab. One piece, 43mm thick, with one side worn smooth, indicating that it had been used for paving. This

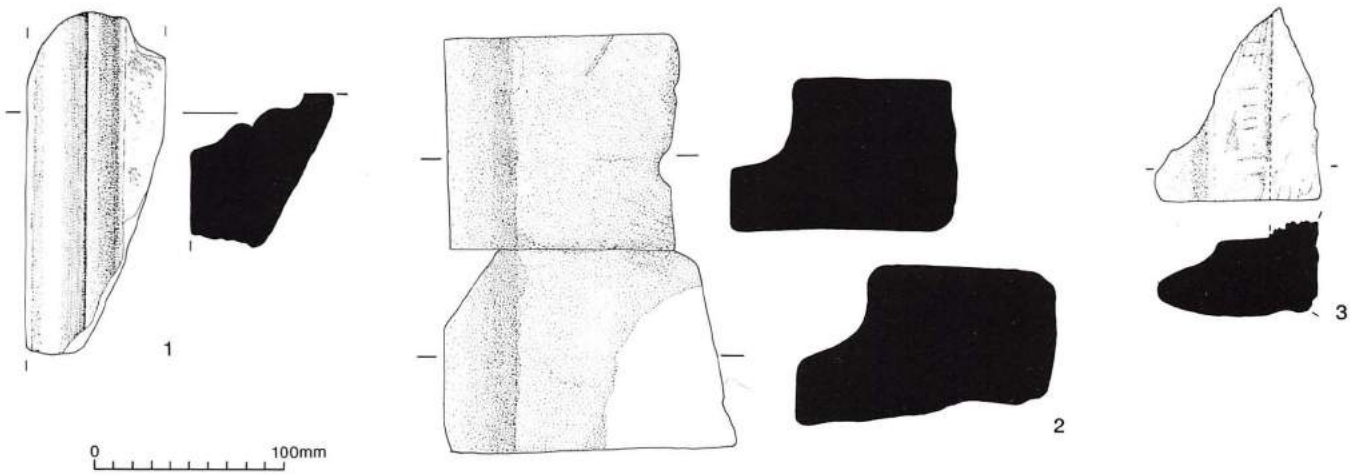

Fig. 24 Maldon Friary. Moulded stone and stucco

looks post-medieval, probably from the Harries mansion. MD9, 466, pit 467, period 6 (19th-century context)

Medieval brick

by Pat Ryan

Medieval bricks only are discussed as these are components of the main structures represented on site; but post-medieval types are also present, in minor garden structures (drains and a cold-frame), as are very small quantities of Roman *tegulae*. A fuller text (which details criteria used in the examination of all bricks) is available in the archive, together with details of incidence by context for each site and a discussion of post-medieval bricks (Tudor; 17th century; late 17th/early 18th-century; 19th century). In total 172kg of bricks were examined from the outbuilding (MD9) and 113kg from the cloister area (MD10).

All examples of the medieval bricks have the dimensions 4:2:1. They are capable of being held in one hand, and were mould-made from fine-particled estuarine silts in which lime was present. Three variations can be distinguished: Flemish-type cream and Flemish-type grass-marked bricks, which mostly occur at the cloister (MD10); and Flemish-type estuarine silt bricks, which only appear in the outbuilding (MD9). A record of the brick types present by site, phase and feature is given below, to place the bricks within their site context (Table 3). Material residual in post-Dissolution features, and obviously intrusive or unstratified material, has been omitted.

Descriptions of the brick types, and their stratification, are as follows:

Flemish-type Cream. Colour white or cream throughout, with occasional pale orange/purple patches, on the exterior (the lime content causes over-fired areas to be vitrified pale green); arrises generally rounded; sunken margins common; faces usually creased; bases fairly rough; grass impressions relatively rare. Length 210-215mm; width 100-115mm; thickness 40-55mm.

These first occur in the cloister area (MD10) in period 2A, where whole bricks were recovered from a foundation built during the original construction of the friary soon after 1292/3. This evidence imples that cream bricks were used in the original friary buildings, with the excavated examples

Table 3. Medieval bricks from the outbuilding (MD9) and the cloister (MD10) by phase and feature

MD9

Context	Feature	Flemish-type bricks		
		Cream	Grass-marked	Estuarine Silt
Period 3B (late 15th/early 16th C)				
8	ditch 9			1
34	ditch 35			F
38	ditch 35			1
36	gully 37			1
659	external dump			F
Period 3A (late 14th C)				
660	external surface	F		
693	post-hole 692			F
563	conduit lining			**55** + 7
Period 2 (late 13th/early 14th C)				
668	gully 741		F (L)	
728	gully 741		F?	

MD10

Context	Feature	Flemish-type bricks		
		Cream	Grass-marked	Estuarine Silt
Period 3B (15th-early 16th C)				
822	foundation pad 823		F?	
817	E wall of E range		**2** + 3 (L,M,S)	
Period 3A (late 14th C)				
923	cloister garth surface	1	2 (M)	
966	slot 967		1 (S)	
933	floor make-up		2 (L,M)	
1036	floor make-up		F	
907	cloister floor make-up	1	2 (L,M)	
802	partition in E range		7 + 10 (L,M)	
805	W wall of E range		7 (L,M)	
806	foundation of 805		F	
Period 2A (late 13th/early 14th C)				
1001	burial		F	
949	cloister floor make-up		F?	
850	N cloister foundation	**4** + 3	3 (M,S,?)	
958	N cloister foundation		1 (L)	

Bold numbers = whole bricks; normal numbers = part bricks; F = fragments only
? = uncertain identification
Grass-marked bricks: L = large; M = medium; S = small

representing discards. The two bricks in period 3A contexts are almost certainly residual (the pottery from this phase is highly residual). In the area of the outbuilding (MD9) virtually all the examples are residual in post-Dissolution contexts. It is likely that none of these bricks originally came from MD9, as much of the material in post-Dissolution deposits there is thought to have been derived from the clearance of the cloister and main buildings in and around MD10.

There is thus a strong argument that the cream bricks recovered from both sites were used exclusively in the original construction of the main friary buildings around the cloister. Cream bricks identical to these have been identified at Purleigh church, in 14th-century contexts.

Flemish-type Grass-marked. Colour cream, yellow, orange, pink, purple or brown exterior, the interior streaked or marbled. Occasional examples of (accidental?) incorporation of grass into the clay. Shape irregular; arrises irregular (rounded or sharp); occasional sunken margins. Grass impressions fairly common on the base, sometimes faces and upper surface. There are three sizes:

Large. Length 270-275mm; width 130-140mm; thickness 55-70mm

Medium. Length 240-260mm; width 115-125mm; thickness 55-60mm

Small. Length 210-215mm; width 100-115mm; thickness 45-60mm

In the cloister area (MD10) these bricks first occur in period 2A, in foundations built during the original construction of the friary soon after 1292/3, and were used in the rebuilding of the east range in period 3A, dated to the late 14th century. They survived best in wall 802, where brickwork was combined with chalk blocks to create a chequer pattern. Bricks present in the further rebuilding of the east range in period 3B were probably reused. The bricks were employed without apparent regard to their size.

Material identical to the small bricks occurs at Asheldham church tower, and (re-used) at Rivenhall (Rodwell and Rodwell 1993). Medium and small bricks occur at Witham, Rochford, Purleigh and (?re-used) at Great Stambridge. Bricks of the large size are found at All Saints, Maldon in the crypt and 14th-century south aisle, while a small number occur in the chancel of Purleigh church.

Flemish-type Estuarine Silt. Colour: exterior dull yellow - dull brown; interior cream, buff, pale orange, salmon pink or brown, which may be streaked or marbled. Otherwise similar to cream bricks. Whilst it is thought that all the Flemish-type bricks were made from estuarine silt, this is the only type to present definite evidence of the use of silt, i.e., the inclusion of small estuarine gastropod shells or shell casts. However, both grass-marked and cream bricks were probably also made from similar material. Length 210-220mm; width 100-110mm; thickness 45-55mm. Weight 1.3-1.7kg.

In the area of the outbuilding (MD9) these bricks first occur in period 3A, where building work at the beginning of the phase is dated to the late 14th century. They were used exclusively in the construction of an underground conduit. The few other examples from MD9 are from typically residual contexts, a rubbish dump and ditches which silted over a long time.

Discussion

Bricks were being made from estuarine silts and clays in the Netherlands during the late 13th and 14th centuries, a period when there was a particularly strong alliance between England and Flanders. Most of the Flemish-type bricks identified in Essex have been from sites within 10 miles of the coast and were probably imported from the Low Countries (Ryan 1996, 31-6 and 45). The largest Flemish-type bricks were found in the foundations of the friary, which was founded in 1292/3. According to Hostelle (1961, 77-9), most of the bricks produced in the Netherlands prior to about 1300 were very large, 280-340mm long by 140-160mm wide and 70-100mm thick. After the turn of the century most of the bricks from the Low Countries were made to smaller dimensions, although some larger ones were made for use in town walls and important buildings.

Medieval floor tile

by Pat Ryan

Medieval tiles only are discussed as these relate to the main structures represented on site, but late medieval and post-medieval types are also present, as well as residual Roman (although this may have been used for wall construction). A fuller text (which details criteria used in the examination of all floor-tiles) is available in archive, together with details of incidence by context for each site and a full discussion (the numbers used in the descriptions below refer to archive catalogues). Because of the problems of robbing, re-use of building material, and deposit contamination, it is not possible to produce any statistically meaningful statement of the incidence of floor-tile type by phase for each site. However, not surprisingly the decorated tiles come mainly from the buildings ranged around the cloister (MD10), and the tiles in the area of the outbuilding (MD9) are almost all residual in post-Dissolution contexts.

Medieval tiles are 100-140mm square and 18-25mm thick, with a sandy fabric. They may be monochrome or decorated. All but one of the variants below are from unlocated kilns.

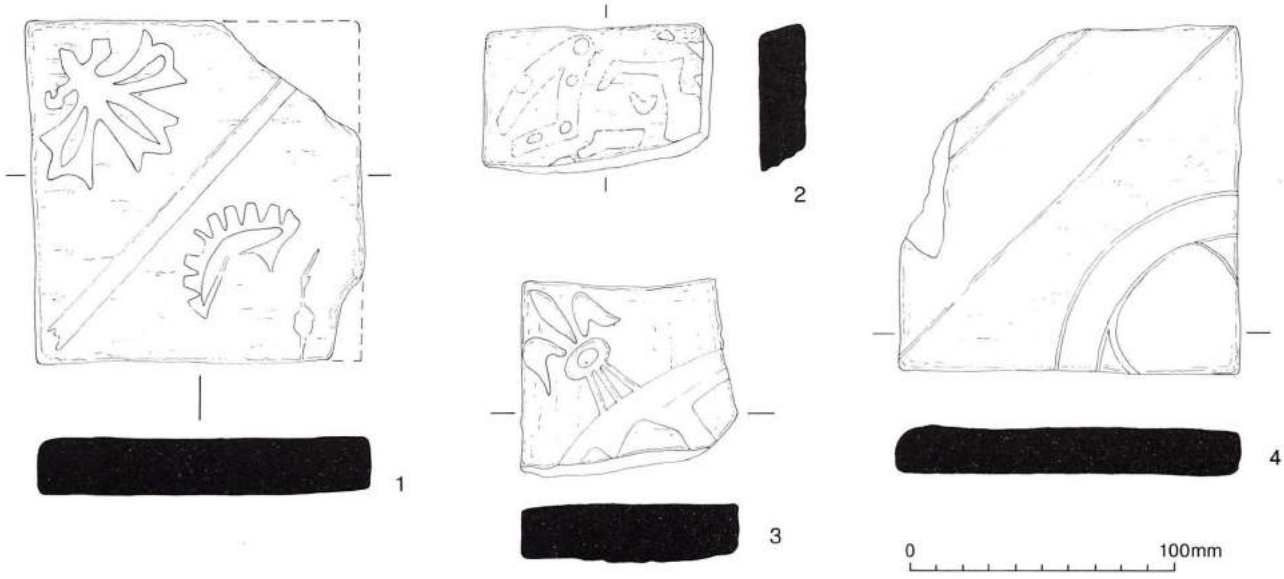

Fig. 25 Maldon Friary. Medieval floor tile

Small Pebble Fabric (SPF)

Fabric: sandy with frequent flint and quartz pebbles (2-5mm). Reduced cores common. Edges undercut, knife-trimmed, and bases usually smoothed off.

Decoration: slip-painted on surface, MD10, 823, nos. 14, 20 and 23, period 3B (cf. Eames 1980, nos. 1695 design 9 (Dunmow Priory) and 13561 design 11 (Witham), both 13th-14th century); MD10, 949, period 2A; and MD10, 910, period 3A (this report, Fig. 25.1). Line impressed, MD10, 823, no. 27, period 3B.

Length 125mm; width 125mm; thickness 25mm (18mm+ if very worn).

Danbury Kiln Products (DAN)

Fabric: sandy; reduced cores.

Decoration: stamp-on-slip, two colour, MD10, 823, period 3B; two gyronny examples, one reversed (cf. Drury & Pratt 1975, fig. 48, designs A3, B13, B14). The decorations on two examples which may be from the Danbury kiln, but which had an undiagnostic sandy fabric are illustrated: MD10, 910, period 3A (Fig. 25.2); and MD10, 885, period 4 (Fig. 25.3).

Length 110mm; width 110mm; thickness 25mm (18mm+ if very worn).

Central Essex Group (CEG)

Fabric: sandy; reduced cores

Decoration: stamp-on slip, two colour, MD9, 416, period 6, residual (cf. Drury & Pratt 1975, fig. 63. 165 (Pleshey Castle)).

Length, width not defined; thickness 20mm.

Line Impressed (LI)

Fabric: sandy.

Decoration: line impressed. Designs. Rosette: MD9, 71, period 6, residual; MD9, 503, period 4 (cf. Rivenhall: Drury 1993a, fig. 5.2); and Solomon's knot: MD10, 941, period 1, intrusive - also on SPF: MD10, 823, period 3B) (cf. Rivenhall (Drury 1993a, fig. 5.1).

Length 125mm; width 120mm; thickness 20mm.

Slip Painted On Surface (SPS)

Fabric: sandy.

Decoration: slip-painted on surface

Length, width unspecifiable; thickness 22mm. Small fragments from MD9, 674, period 2; MD9, 728, period 2; and MD9, 594, period 6, residual.

Miscellaneous Sandy A

Fabric: sandy.

Decoration: stamp on slip. MD10, 904, period 4 (Fig. 25.4).

Length 130mm; width 125mm; thickness 18-23mm. MD10, 941, period 1intrusive; MD10, 907, period 3A.

Miscellaneous Sandy B

Fabric: sandy.

Decoration: not specified

Length 135mm; width 135mm; thickness 18-23mm. MD10, 907, period 3A; and 852, period 4.

These types occur in late 13th and 14th-century contexts elsewhere in Essex. Danbury kiln was in production AD 1275-1325/35 (Drury & Pratt 1975). A later type was also present:

Late 14th century

Fabric: fine-particled orange fabric with small darker patches.

Decoration: monochrome, clear glaze or slipped with cream slip and glazed.

Length *c.* 125mm; width *c.* 125mm; thickness 25mm. MD10, 1056, period 1, intrusive; MD10, 907, period 3A.

The small fine fabric tiles lie stylistically between the small sand-tempered tiles of the earlier period and the large fine-particled monochrome tiles popular in the 15th and 16th centuries. Monochrome or diagonally divided tiles became fashionable in the last quarter of the 14th century (Drury 1977, 105-8). At Bardfield Saling they were laid before the church was completed and dedicated in 1380 (Drury 1976a, 78).

Roof tile

by Pat Ryan

This text presents the abridged results of a macroscopic visual analysis of items from sites MD9 and MD10. A fuller text (which details criteria used in their examination) is available in the archive, together with details of incidence by context for each site. In total 17.5kg were examined from the the area of the outbuilding (MD9) and 21.75kg from the cloister area (MD10).

The tile from both sites is mainly Fabric 1, a fine-particled fabric common throughout Essex. Larger sand grains occasionally occur through accidental inclusion during moulding. Only six tiles provide information of their length (250-270mm) and width (150-175mm). Most are 160-170mm wide; 29 complete widths occur. All fragments are 10-15mm thick, except for thicker hip, ridge and gutter tile. Almost all peg-holes are circular except for two or three triangular or square examples. In most instances, a sharp pointed instrument left a raised ring on the reverse of the tile, but in some instances the peg-hole was clean cut, and the reverse of the tile relatively smooth (MD9, period 2 onwards; MD10, period 2A onwards). A different tool must have been used for these.

A few examples both of flat and cambered tiles occur (notably a flat tile 270x175x12mm, re-used in a period 2 drain in MD9), but most data are imprecise. Flat tiles also occur in period 3B (MD9) and period 4 (MD10). Only curved tiles show evidence of knife-trimming. No nibbed or large peg tiles occur, further proof that their production had ceased before the foundation of the friary in 1292/3. The tiles are similar to those manufactured at Danbury in 1272/85-1325/35 (Drury and Pratt 1975, 111).

Roof slate

by H. Major

Seventeen small fragments came from the cloister area (MD10). The majority came from medieval contexts, but is likely that many are intrusive. Given the extent of later contamination, it seems unwise to assume that any of the slate is medieval - indeed medieval ceramic roofing tiles have been recovered from the site (see above). They are therefore likely to belong to period 6 structures (Friary East and West), beyond the limit of excavation.

Window glass

by D.D. Andrews

The window glass can be divided into five main types:

Late medieval glass, identifiable because of its thickness, generally in excess of 2mm, and its poor condition. It is badly devitrified, now usually a dark opaque green-brown in appearance, and laminated as a result of chemical alteration. This glass must come from the Friary buildings. It occurs in almost all periods, but is not present in any quantity, and cannot be used to highlight, for example, the dismantlement of the Friary buildings at the Dissolution. Four fragments bear traces of paint in what is now a dark dull red. One may be a piece of grisaille, but none are big enough to be reconstructable or to warrant illustration.

Greenish or green glass about 1-2mm thick, sometimes in poor condition and opaque but more often with an opalescent flaking surface. The date range suggested for this is the 16th-18th

centuries. Some of it may be from the latest phases in the life of the friary, but most of it must be from the Harris' mansion.

Blue greenish glass (the most numerous category) usually in fairly good condition though invariably iridescent with more or less surface flaking. This relatively good quality glass must be associated with the Harris' mansion, if not with its earliest phases then certainly with later rebuilding and reglazing. Blue-greenish glass was also found in some quantity at the site of the Tudor mansion at Copped Hall, Epping, possibly associated with the early 17th-century works there (cf. Andrews 1986, 105).

Reasonably colourless and only slightly altered glass, 18th-19th century in date, present in only a very small quantity.

Brilliant colourless 20th-century glass in excellent condition, of which only a very few fragments were found.

In view of the fact that the site was occupied by only three building complexes for the last 700 years, it is disappointing that there is no very clear correlation between these buildings and the window glass, although probable equations have been suggested above. One would expect, for example, dumps containing glass from the Dissolution in 1536-8, and from the clearing away of the Harris' mansion in the early 19th century. It is unfortunate too that very few fragments had identifiable edges which could be used to reconstruct the pattern of glazing. Only three fragments could be recognised as coming from quarries. About half-a-dozen fragments had rounded edges suggesting that they had been made on the cylinder or muff method. Curving striations on one or two fragments show them to be crown glass. A full catalogue is contained in archive.

Lead window cames

by H. Major

Examples were found in three contexts (not illustrated). One piece (MD9, 402, period 6) was a cast came of Knight's type B (Knight 1984), which implies that it is pre-mid-16th century. It is therefore probably derived from the friary buildings, although stratified in post-medieval garden soil. The other fragments (MD9, 408, period 6; and MD10, 822, period 4) were in much thinner metal, and were probably all milled, although the pieces from 822 had no tooth-marks. These pieces are almost certainly derived from the friary buildings, as cames made in a toothless mill could be as early as the late 15th century. Also, they are stratified in Dissolution-period debris directly sealing the latest floors in room D in the east range of the cloister. The piece from MD9 is probably post-medieval; it was derived from post-medieval garden soil.

MEDIEVAL AND LATER POTTERY

by Helen Walker

Introduction and method

Pottery was excavated from both sites MD9 and MD10 and has been written up as separate reports, but as most of the fabrics are common to both sites, the fabrics are described in the same section. The percentages quoted in the fabrics section however, are calculated from the total weight of pottery from each site, and not the combined total from both sites.

The pottery has been recorded using Cunningham's typology (Cunningham 1985a, 1-16) and her fabric numbers and form codes are quoted in this report. The cooking pot rim-form codes are defined by Drury and can be paralleled by examples from Rivenhall (Drury 1993b, 81-4). Featured sherds of Hedingham ware from MD10 are also paralleled by examples from Rivenhall, while post-medieval red earthenware forms have been compared to those from Moulsham Street, Chelmsford (Cunningham 1985a and b). The pottery has been written up in phase order and the fabrics present in each period are summarised by means of tables, giving sherd count and total weight of pottery within each context (Tables 4-11). Tables are only set out for the most significant groups of pottery: those from the area of the outbuilding (MD9) periods 2-6; and those from the cloister (MD 10) periods 2 and 4. The presence of prehistoric, Roman and Saxon pottery is also noted on the tables as an indication of residuality.

The stratigraphy of both sites suffered from a high degree of contamination, and so the discussion of the pottery includes an assessment of deposit reliability, with potentially and definitely contaminated contexts highlighted. Because much of the pottery is disturbed, only the pottery that is likely to be current to its period is discussed, although any intrusive or residual material of intrinsic interest is described in the fabrics section or in the catalogue.

The fabrics

Fabric 10 St Neots ware: A Saxo-Norman ware described by Hurst (1976, 320-3) and Vince and Jenner (1991, 54-6) dating from the late 9th to 12th centuries and made from Jurassic clays naturally containing fossil shell fragments including bryozoa. Here it occurs outside its main area of distribution of the south and east Midlands, although it is present in central Essex and is found at nearby Rivenhall (Drury 1993b, 78).

MD9: Not present

MD10 (<0.5% of total): Only two sherds were found, both residual in later contexts, they comprise one thickened, everted rim probably from a cooking pot (cf. Hurst 1976, fig. 7. 18. 4) in period 2A/3A surface 923, and a body sherd in period 3A make-up 907.

Fabric 12A Shell-tempered ware: an early medieval fabric dating from the 10th to 13th centuries, described by Drury (1993b, 78-80).

MD9 (<0.1% of total): Only two body sherds are present, both residual in period 3A.

MD10 (1% of total): Occurs residually from period 3A. Forms: none

Fabric 12B Shell-and-sand-tempered ware: an early medieval fabric dating to the 10th to 13th centuries, described by Drury (1993b, 78)

MD9: Not present

MD10 (0.5% of total): It first appears in period 2. Forms: none.

Fabric 12C Sand-and-superficial-shell-tempered ware: an early medieval fabric dating from the 10th to 13th centuries, described by Drury (1993b, 78-80).

MD9 (<0.1% of total): Only one body sherd is present and is residual in period 3B.

MD10 (0.5% of total): One developed cooking-pot rim (sub-form H2) was found in period 1 (No.2)

Fabric 13 Early medieval ware: This ware dates from the 10th to 13th centuries and is described by Drury (1993b, 78-80). On both sites, especially MD 10, it is much more frequent than the early medieval shelly wares.

MD9 (0.5% of total): It first occurs in period 1 and is commonest in the make-up layers for Building 1 in period 2. Forms: one cooking-pot fragment with a sloping rim above an upright neck, corresponding to Cunningham's sub-form H2, an early to mid-13th century type (Drury 1993b, 81).

MD10 (8% of total): It first appears in period 1, and is most numerous (though residual) in period 2A surface 923, where thickened everted cooking-pot rims were found. In addition, a simple everted cooking-pot rim was excavated from make-up 907 in period 3A, and a complete cooking-pot profile with a thickened everted rim was found unstratified (No.13). None of the later, more developed B2, B4 or H2 rims are present (unlike MD9), and all could be contemporary with the St Neots ware. A strap handle from a jug or tripod pitcher was found in period 2A. The only decoration is a sherd exhibiting a horizontal incised line from make-up 907.

Fabric 20 Medieval coarse ware: This spans the 12th to 14th centuries and is described by Drury (1993b, 81-6).

MD9 (5.5% of total): It first appears in period 1, is commonest in period 2, and is present in nearly all periods, although much is residual. Forms: cooking pots; a 13th century type flat-topped rim

above an upright neck was found in period 1 (sub-form H1). All the remaining cooking-pot rims in subsequent periods have either blocked, neckless rims (sub-form H3) or horizontal flanged rims (sub-form E5A) both belonging to the late 13th to 14th centuries (Drury 1993b, 81-2). Other forms comprise; fragments from water pipes (No.1), a jug fragment with a thickened-pointed rim, residual in period 3A yard surface 660, and two handles from large jugs or curfews residual in period 6 context 401. One handle has a thumbed applied strip running along its centre, while the second shows slash marks, and thumbing along the edges. The only other instance of decoration is a sherd with a thumbed, applied strip from make-up 654 in period 2.

MD10 (22.5% of total): It is one of the commonest wares to be found here, with a much higher proportion of the total than in MD9. It is present in all periods and was found unstratified. Forms comprise cooking pots, with early to mid 13th-century type curved-over rims (Cunningham's sub-form D2), first occurring in period 1. The remaining cooking-pot rim forms are of the same types as those in MD9, with H1-type rims which first occur in period 1, and H3 and E5A rims which are present by period 3A. Other forms comprise a ?dripping dish (No.1), fragments from flanged rim bowls, (cf. Drury 1993b, fig.41.90), a curfew handle (No.9) and sherds from jugs, comprising a handle and an inturned or carinated rim from period 4 (context 916). As with MD9 the only instance of decoration is a sherd with a thumbed applied strip (residual in period 6). The greatest concentrations of medieval coarse ware were found in make-up 907 in period 3A and residually in rubble spread 916 in period 4.

Fabric 20C Mill Green coarse ware: A type of medieval coarse ware made at Mill Green near Ingatestone (south of Chelmsford) and described by Pearce et al. (1982, 289-92), dating to the mid-13th to mid-14th century, but see Fabric 35 for a further discussion of dating.

MD9: Not present

MD10 (<0.5% of total): Only one sherd was found, showing a partial internal plain lead glaze; it occurred residually in period 3B.

Fabric 21 Sandy orange ware: Described by Cunningham (1982, 359), sandy orange ware includes any locally made sand-tempered oxidised fabric, with a date range of 13th to 16th centuries. For a discussion of late medieval sandy orange ware, see Cunningham (1985a, 1). Some of the sandy orange ware has a dull red fabric and is tempered with red and amber sands resembling medieval Harlow ware. Nevertheless, such an origin is unlikely because Harlow and Maldon are situated at opposite sides of the county and there were centres of production much closer to Maldon, i.e. at Colchester and South Woodham Ferrers (Eddy 1979, 67-9).

MD9 (13.5% of total): It first appears in period 2 and forms comprise mainly fragments from jugs (No.24), two sherds show raspberry-stamped decoration (No.2), but cream slip-painting, usually under a plain lead glaze is the commonest method of decoration. One sherd in period 2 shows slip-painted stripes and dots, and appears to be a debased form of Rouen-style decoration. Other sherds exhibit a coating of cream slip under a mottled green glaze which is sometimes accompanied by vertical combing and may be in imitation of Mill Green ware. More utilitarian forms are also present, comprising two large sections of water pipe from period 3A (Nos 3a and b) and a curved perforated tile-like object (No.4). In addition, there is a cooking pot with an H3 type rim, along with flanged rims from cooking pots or bowls. Late medieval examples are also frequent here. Forms: an inflected flanged jar rim (No.5); rims from unglazed or sparsely glazed cisterns which are often slip-painted (cf. Cunningham 1985a, fig.6.37). These first appear in gully 741 in period 2 and also occur in periods 3B and 5. Cisterns are a common find in 15th and 16th-century contexts and were used mainly for domestic brewing (Cunningham 1985a, 4 & 14). A couple of late medieval jug rims were also found but are too small to draw or parallel.

MD10 (16% of total): It is present in all periods and was also found unstratified. Forms comprise fragments from jugs, showing the same types of decoration as those from MD9, including another example of a raspberry stamp (No.6), a slip-painted and glazed fragment is also illustrated (No.7). Jug handles and thumbed jug bases were also found, but there is only one small fragment from a jug rim, found in period 6. All the above are medieval examples. Unlike MD9 late medieval products are rare, the only stratified examples are a jar fragment with a thickened flat-topped slightly everted rim in surface 923 in period 2A/3A, and a ribbed cistern handle in demolition rubble 955 in period 4.

Fabric 21A Colchester ware: This is a variant of sandy orange produced in Colchester between the 13th and mid-16th centuries, described by Cunningham (1982, 365-7) and Drury (1993b, 89-90). It is distinguishable from other sandy orange ware by its heavy tempering of white quartz inclusions.

MD9 (0.25% of total): Only two sherds are present, in periods 3A and 3B, including a jug rim (No.7).

MD10: Not present

Fabric 21C Sgraffito ware: This is a type of sandy orange ware manufactured in Cambridgeshire in the 14th to 15th centuries (Bushnell and Hurst 1952, 21-6) and may also have been produced in other areas.

MD9 (0.25% of total): Sherds from the same dish were found in period 2 and 3A contexts, and a body sherd was found residually in period 6. None of the sherds actually show sgraffito decoration but possess the characteristic cream slip coating under a plain, green-flecked glaze

MD10: Not present, but see Fabric 35B

Fabric 22 Hedingham fine ware: This is described by Drury (1993b, 86-9); it has a fine micaceous fabric, usually creamy orange in colour and normally without a reduced core. The main vessel produced is the jug, usually highly decorated, with a mottled green, or sometimes a plain lead, glaze. It was made at several production sites centred on Sible Hedingham in north Essex and has a wide distribution throughout the northern half of Essex, East Anglia and down the Essex coast. It seems to be commonest from the later 12th to 13th centuries.

MD9: Not present

MD10 (0.5% of total): This occurs in periods 1 to 3A. All sherds appear to be from jugs, there are examples of applied strip decoration including an unusual applied rouletted strip (No.5) in period 2A/3A surface 923. Rouletted decoration occurs on London-type ware and the closest parallel is to be found on a London-type ware tripod pitcher of the mid 12th to early 13th century (Pearce *et al.* 1985, fig.23.47), although here the applied strip is horizontal rather than vertical. Period 2A grave fill 976 produced a sherd with a buff fabric, a variant found on 12th-century jugs. It is decorated with an applied strip under a pale green glaze. A sherd from period 3A floor layer 930 also has a buff fabric and shows a coating of red slip partially overlain by an applied strip of pale coloured clay.

Fabric 23D Kingston-type ware: A Surrey white ware (described by Pearce and Vince 1988), it has the extreme date range of mid-13th to the end of the 14th century, but flourished during the period *c.*1270-*c.*1340.

MD9 (<0.1% of total): Only three sherds were found, each with a mottled green glaze, from periods 3A and 6.

MD10 (1% of total): Green-glazed sherds from jugs are present, first appearing in period 2, decoration comprises applied pellets (No.8) and the remains of a fleur-de-lys stamp.

Fabric 23E Cheam white ware: Another Surrey white ware (described by Pearce and Vince 1988), with the slightly later date range of second half of the 14th to mid 15th century or later.

MD9 (<0.1% of total): Two body sherds were found in period 3B, one is unglazed and the second has a partial green glaze. Part of a small, narrow, hollow ware vessel with an internal green glaze was excavated from period 5, it may be from a measure and because it is internally glazed, may have been used for liquids (Pearce and Vince 1988, 75, fig.123, 560-3).

MD10: Not present

Fabric 34 Unclassified buff ware:

MD9 (0.25% of total): Unclassified buff ware occurs from period 3B onwards, forms comprise a jug rim, a lid-seated jar rim and part of a shallow dish, all are described in the text.

MD10: Not present

Fabric 35 Mill Green fine ware: A red-firing micaceous fabric described by Pearce et al. (1982) and by Meddens and Redknap (1992, 11-43). It has been dated by its occurrence in Thames waterfront deposits to the later 13th to mid 14th centuries, but at some excavations in Essex, for example at King John's Hunting Lodge, Writtle (Rahtz 1969), it seems to be present by the mid 13th century. Mill Green ware has therefore been given the expanded date range of mid 13th to mid 14th century. On both sites this ware first appears in period 1, all sherds are from jugs, and as might be expected, similar rim forms and methods of surface treatment are common to both sites. Nearly all examples are typical Mill Green products.

MD9 (1.5% of total): It first appears in period 1, commonest in periods 2 and 3A, and is residual in later periods. Only two jug rims are present; one has an inturned rim (classified as a carinated neck in Meddens and Redknap 1992) with a coating of cream slip under a mottled green glaze (too fragmented to draw or parallel). The second, residual in period 6, has a slightly beaded rim and a handle which is oval in section, it has been dipped in slip, but is unglazed. A rod handle and a ribbed handle are also present. Cream slip-coating under a mottled green glaze is the commonest type of surface treatment, sometimes accompanied by vertical combing, two fragments from period 3A show more unusual horizontal combing. On some sherds the slip coating is absent so that the green glaze appears a much darker olive green. There are only two examples of cream slip painting under a plain lead glaze.

MD10 (5% of total): One jug rim from period 2A is illustrated (No.4). In addition, two Mill Green ware jug rims were found in period 3A make-up 907, where they may be residual. One is inturned or carinated with a mottled green glaze overlying a cream slip-coating. The second has an upright rim with a rod handle, showing applied 'ears' and a row of stab marks down each side of the handle. It is comparable to pottery found at the Mill Green kiln site (Meddens and Redknap 1992, fig.9). Methods of surface treatment comprise slip-coating beneath a mottled green glaze, but there are no examples of slip-painting.

Fabric 35B Mill Green-type ware: This fabric is the same as that of Mill Green ware but the forms and decoration are different. This classification often applies to late medieval and early post-medieval material.

MD9 (4% of total): At MD9, this ware first appears in period 2. Forms comprise fragments from large jugs and cisterns, often slip-painted under a sparse or absent glaze.

MD10 (<0.5% of total): Here only one sherd has been classified thus, part of a slip-decorated flatware, perhaps from a flanged-rim dish, from period 4 rubble spread 997 (No.10). This form is unknown in Mill Green ware and it appears to show sgraffito decoration (see catalogue entry for full description of sherd). Sgraffito ware with a sandy orange fabric was made in Cambridgeshire (see above) and is also known on Mill Green ware (E. Sellers pers. comm.). However, the sherd also has a continental parallel, as dishes featuring sgraffito and stabbed decoration were produced in Low Countries slipware (cf. Hurst *et al.* 1986, pl.23, dated 1400-25).

Fabric 36 London-type ware: This is a red-firing fine ware described by Pearce *et al.* (1985) which can be differentiated from Mill Green ware by its, coarser matrix and thicker walls. London-type ware was produced from the mid-12th to late 14th centuries and was traded along the North Sea coast, its probable route to Maldon, up until the late 13th century (Vince 1985, 84).

MD9 (<0.1% of total): Only one sherd is present, residual in period 3B, it is from the rilled neck of a jug showing traces of white slip decoration under a partial plain lead glaze and probably dates from the late 12th to late 13th century.

MD10: Not present

Fabric 40 Post-medieval red earthenware: Dating from the late 15th/16th to 19th centuries, this ware is described by Cunningham (1985a, 1-2) and was made at several centres in the county including Harlow, Loughton and Stock, near Ingatestone.

MD9 (42% of total): Although it appears intrusively in period 2, it is first present in stratified contexts towards the end of period 3A, and especially in 3B where fragments from two late 15th/16th-century cisterns were found (cf. Cunningham 1985a, fig.6.36). Post-medieval red earthenware is common in all subsequent periods, where forms comprise dripping dishes, bowls (Nos 14, 17,18), jars, jugs, cups (No.9), a costrel (No.13), a chafing dish (No.6), a fuming pot (No.16), a rather strange truncated rim (No.8) and a paint pot in period 6. Decoration consists of the occasional slip-painted sherd and two sherds from flanged rims showing incised zigzag decoration on the inside of the flange.

MD10 (33% of total): It is intrusive in period 1, but is mainly present from period 4 onwards. Most is very fragmentary; part of a slip-painted jug from period 4 is illustrated (No.11a, b), otherwise slip painting, characteristic of the late 15th/16th century, is rare. Other forms include fragments from drinking vessels, flowerpots and bowls. The latter includes two flanged bowl rims (intrusive in tree-bole 941, in period 1), one is unglazed and is paralleled by an example from a late 16th-century pit at Moulsham Street, Chelmsford (Cunningham 1985b, fig.44.15). The second has an internal glaze and is decorated with incised zigzags on the inside if the flange, rather in the manner of Surrey-Hampshire border ware bowls of the late 16th and 17th centuries (Pearce 1992, 10-11).

Fabric 40bl Black-glazed ware: Black-glazed post-medieval red earthenware is described by Cunningham (1985b, 71), and dates from the beginning of the 17th to early 18th centuries

MD9 (1% of total): It first appears intrusively in period 3B, and in periods 5 and 6. No forms are present but there are a couple of pad bases probably from cylindrical mugs (Cunningham's form E12). Most show an all over black glaze both inside and out, while others have an all-over external glaze with a partial internal glaze and may be from jugs.

MD10: Not present

Fabric 40A Metropolitan slipware: This is a type of post-medieval red earthenware decorated with crude, white slip-trailed patterns under a gingery glaze. It was made at Harlow and other local production centres, at Stock and Loughton, from the early 17th and in to the 18th centuries (Cunningham 1985b, 64).

MD9 (1.5% of total): Single sherds occur in period 2 and 3B and it is commonest in period 6. Most sherds are very fragmented, but parts of dishes, jars and bowls were identified. A straight-sided jar and bowl with horizontal handles have been illustrated (Nos 23 and 28 respectively).

MD10 (<0.5% of total): Only three small body sherds of this ware were recovered, from periods 3 (intrusive) and 6.

Fabric 40D Non-local post-medieval red earthenware: A number of sherds of post-medieval red earthenware are present with a darker, more highly fired fabric than the local product and usually have a brown or lustrous black glaze. They do not appear to be Cistercian ware but could have been made in the Midlands or north of England.

MD9 (0.25% of total): It occurs in periods 5 and 6, no forms are present, but there is one strap handle probably from a tyg. As well as the plain examples, two sherds show cream slip trailing under a brownish glaze.

MD10: Not present

Fabric 41 'Tudor Green' ware: This is described by Pearce and Vince (1988, 79-81) and by Pearce (1992). It is a very fine late medieval Surrey white ware, made principally in the late 15th century but with an overall date range of *c.*1380-1550.

MD9(<0.1% of total): Only one sherd is present, a body sherd with an all-over apple-green glaze, residual in period 6.

MD10: Not present

Fabric 42 Southern white ware: Perhaps better known as Surrey-Hampshire border ware, this is a fine sand-tempered white ware with an off-white to buff fabric and usually a green or yellow glaze. It evolved from the medieval and late medieval Surrey white ware industries and can easily be distinguished from 'Tudor Green' ware, because it is coarser and thicker-walled with more emphasis on the production of utilitarian forms. This ware is fully described by Holling (1971) and Pearce (1992).

MD9 (0.5% of total): It occurs in periods 5 and 6, and both green-glazed and yellow-glazed sherds are present. Forms comprise a ?pipkin rim (No.12) and a green-glazed pierced sherd from a strainer or fuming pot, residual in period 6.

MD10 (0.5% of total) Four sherds were excavated from periods 3A, 4 and 5. Featured sherds comprise a yellow-glazed flanged rim from period 3A make-up 907, and one unusual sherd with a bi-chrome glaze from period 4.

Fabric 45 Stoneware: Unattributed stoneware, 15th century onwards.

MD9 (0.1% of total)

MD10 (<0.5% of total)

Fabric 45A Langerwehe stoneware: A German stoneware described by Hurst *et al.* (1986, 184-90). It was imported into London from c.1360 and increased in frequency into the early to mid 15th century (Vince 1985, 59), but later 15th and 16th-century types can be difficult to distinguish from Raeren stoneware.

MD9 (0.25% of total): This ware occurs in small quantities from period 3A onwards, most sherds are under-fired and have an iron wash. Forms: one jug rim showing a rouletted band.

MD10: Not present

Fabric 45B Siegburg stoneware: A German stoneware described by Hurst *et al.* (1986, 176-84) and imported from the mid 14th to 16th centuries.

MD9 (<0.1% of total): Finds comprise two sherds of Low Countries Green-glazed Siegburg stoneware residual in period 6. This is a 15th-century development, when some Siegburg products were sent to production centres in Flanders and the Netherlands where they were refired and given a glossy green glaze. This is ware is found widely in north-west Europe but only in small quantities (Hurst et al. 1986, 129).

MD10 (<0.5% of total): A jug rim with an ash glaze was found in period 4 rubble spread 916; it has an upright rim but is too squat to be from a Jacobakanne, it probably dates from the mid 14th to 15th centuries. A body sherd also with an ash glaze was found unstratified.

Fabric 45C Raeren stoneware: A German stoneware described by Hurst *et al.* (1986, 194-208) and imported from the later 15th to 17th centuries

MD9 (2% of total): A single sherd of Raeren stoneware was found in period 3B and it is a common find from period 4 onwards. Forms: fragments from the familiar squat, bulbous drinking jugs with frilled bases dating from about 1485 to 1550. Also present are fragments from much rarer highly decorated jugs (Nos 10, 11, 15 and 27); see catalogue entries for descriptions and dating.

MD10 (2.5% of total): It is present from period 1, where it must be intrusive. All sherds appear to be from squat, bulbous, drinking jugs as found in MD 9.

Fabric 45D Frechen stoneware: A German stoneware described by Hurst *et al.* (1986, 214-21) and imported from the mid 16th to the late 17th century.

MD9 (0.5% of total): A single sherd occurs in period 3B and it is present in small quantities in periods 5-6. Forms: fragments from jug rims occur in period 6.

MD10 (1% of total): Three body sherds only were found, first appearing in period 1, where it must be intrusive.

Fabric 45F Westerwald stoneware: Described by Hurst *et al.* (1986, 221-5), this is a distinctive grey German stoneware decorated with cobalt blue and imported from the early 17th and into the 18th centuries.

MD9 (1% of total): It first occurs in period 5 and several sherds were found in layer 408 in period 6. Forms: the rim of a chamber pot and sherds from jugs or mugs. Decoration: incised floral motifs, applied stamped pads and medallions.

MD10: Not present

Fabric 45G Nottingham/Derbyshire stoneware: Stoneware from this area was produced from the 18th century onwards and is distinguishable from other English stonewares by its lustrous glaze and use of lathe turning.

MD9 (0.25% of total): A single sherd occurs in period 5, with more in period 6. Forms comprise the spout of a teapot and a cup rim. One sherd in period 6 is definitely of Nottingham (rather than Derbyshire) origin and dates to the 18th century. Rouletted decoration is common.

MD10 (<0.5% of total): Flanged rim sherds were found intrusively in period 3A and unstratified.

Fabric 45M English stoneware: This was produced from the later 17th century onwards.

MD9 (3% of total): It appears in periods 3B and 4 where it is intrusive, one sherd is present in period 5, and it becomes common in period 6. Forms comprise part of a barrel-shaped vessel and 18th-century tavern mugs including one incised '....eth B...' in joined up lettering from period 3B. The use of incised lettering generally dates to the first half of the 18th century (Hildyard 1985, 24). Period 6 produced Victorian forms including marmalade jars and a bottle stopper.

MD10 (3% of total): Only one sherd was found stratified, an undiagnostic body sherd from period 6. Part of a modern cider jar was found unstratified, along with a sherd showing the letters '...malt' in black transfer printing.

Fabric 46 Tin-glazed earthenware: Unattributed tin-glazed earthenware, with a possible date range of 15th to 18th centuries.

MD9 (0.1% of total): Forms: tile fragments and a possible albarello in period 5

MD10 (<0.1% of total): No forms

Fabric 46A English tin-glazed earthenware: This was manufactured principally in the 17th and 18th centuries.

MD9 (1.5% of total): It is common in period 6, forms comprise an ointment pot (No.19), plates, including Nos 20 and 25 which may be Lambeth products, bowls, and a possible chamber pot handle. Decoration: blue painting is common, while some sherds are painted in several colours.

MD10 (<0.1% of total): One sherd was found in period 5, it has an all-over tin glaze of eggshell thickness and is probably 18th century.

Fabric 46A/C Anglo/Netherlands tin-glazed earthenware: It can be difficult to distinguish some English tin-glazed earthenwares from Netherlands products and such sherds have been designated as Fabric 46A/C and generally date to the 17th century.

MD9 (0.25% of total): Small amounts occur in period 3B with more in period 6. Forms comprise the footring base from a plate showing a simple blue-painted floral pattern and an albarello fragment.

MD10 (<0.5% of total): Only one vessel has been identified, and is illustrated (No.12).

Fabric 46C Netherlands tin-glazed earthenware

MD9: Not present

MD10 (<0.5% of total): The only sherds classified as this ware come from altar vases (No.3). It is very similar to an altar vase found

at Norwich dating to the early to mid-16th century (Jennings 1981, fig.90.1424). The remains of lettering can be seen at the front of the vase which may denote the religious monogram IHS, sometimes found on altar vases (Hurst *et al.* 1986, 117).

Fabric 47 Staffordshire-type white salt-glazed stoneware: This was made in Staffordshire and other centres from the 1720s to 1770s (Draper 1984, 36-40) and can be distinguished from other 18th century wares by its orange-peel texture produced by the salt glaze.

MD9 (2.5% of total): It is the commonest 18th-century fine ware and first appears in period 3B, where it must be intrusive, but does not become common until period 5 and is most frequent in period 6. Forms and decoration: plates, usually with moulded rims, bowl rims including one with sprigged decoration and one with enamelled colours, saucers, part of a ?gravy boat and part of a cylindrical tavern mug. One sherd shows scratch-blue decoration.

MD10 (0.5% of total): This occurs only in period 6 and unstratified, where forms comprise a recessed base probably from a cylindrical tankard, and a footring base.

Fabric 48A Chinese porcelain: This was imported mainly from the 17th to end of 18th centuries.

MD9 (0.5% of total): Small quantities are present from period 5. Forms comprise fragments from footring tea-bowls and saucers and larger footring bowls. Blue painting and polychrome painted sherds are present, one unusually decorated sherd has been drawn (No.21).

MD10 (<0.1% of total): The only example of this ware, is the rim of an 18th-century tea bowl from period 4.

Fabric 48B English porcelain: This was manufactured from the mid 18th century onwards.

MD9 (1% of total): It occurs in pit 439 in period 5 and in period 6. Apart from one possible 18th century sherd in period 6 layer 404, all the porcelain is modern, dating to the 19th or 20th century. Forms comprise plates and saucers.

MD10: Not present

Fabric 48C Creamware: This is a lead-glazed cream-coloured earthenware manufactured by Wedgwood and others from the mid 18th century. As time went on, whiter versions of this ware were produced.

MD9 (2% of total): It occurs from period 4 onwards and is commonest in period 6. Forms comprise bowls and saucers, often with footring bases; there are also plate fragments sometimes with moulded rims, including fragments from octagonal plates. One bowl in period 6 also shows lathe-turned band decoration, while a second bowl in period 6, is painted. In addition, part of a cylindrical mug and a teapot spout with moulded decoration were found.

MD10 (<0.5% of total): Only one undiagnostic body sherd was found, from period 5.

Fabric 48D Ironstone: This is a robust, chunky fabric first manufactured in 1805 and patented by C. J. Mason in 1813.

MD9 (1% of total) It is intrusive in period 5 pit 439, and is commonest in period 6. Forms comprise mainly plates, often transfer-printed. Cylindrical jars and pot lids occur in period 6.

MD10 (0.5% of total) This is intrusive in periods 3B and 5, and is current in period 6. Several sherds show transfer-printed decoration and one plate rim was found.

Fabric 48E Yellow ware: This is a thick-walled, drab yellow ware, decorated with bands of light blue and raised edges in white (Noîl Hume 1970, 131). Its date range is late-18th to 20th century.

MD9 (<0.1% of total): Only three body sherds were found, all in period 6.

MD10: Not present

Fabric 48L Lustre ware: This ware was popular during the first half of the 19th century and its lustrous sheen was achieved by a applying a thin film of metallic oxide to the glazed surface (Gibson 1993).

MD9 (<0.25% of total): Only one sherd was found, from period 6 and is described in the text.

MD10: Not present

Fabric 48P Pearlware: Pearlware is similar to creamware but made whiter by the addition of cobalt to the glaze and was manufactured from 1779 to *c.*1830.

MD9 (0.25% of total): It is present in period 6 where forms comprise fragments from tea-bowls with floral or Chinese-style blue-painted decoration. One sherd shows polychrome painted decoration, while a second sherd shows a transfer-printed willow pattern.

MD10 (<0.1% of total): One blue-painted footring base was found in period 6.

Fabric 48R Red stoneware: This was first made in London in the late 17th century in imitation of Chinese red stonewares, and production restarted in Staffordshire and Yorkshire in the 1740s (Draper 1984, 35-6, 41).

MD9 (<0.1% of total): Two sherds from teapots were found in period 6, both dating to around 1770

MD10: Not present

Fabric 48W Whieldon wares: A colour-glazed earthenware produced mainly in Staffordshire and dating to the mid 18th century.

MD9 (<0.1% of total): Only one sherd was found, a bowl rim from period 6, described in the text.

MD10: Not present

Fabric 48X Miscellaneous post-1750:

MD9 (<0.1% of total)

MD10: Not present

Fabric 49 Black Basalt ware: This is a hard black stoneware produced from the mid-18th century (Draper 1984, 43).

MD9 (<0.1% of total): Only one sherd is present, in period 6, and is described in the text.

MD10: Not present

Fabric 50 Staffordshire-type slip-trailed wares: these are described by Barker (1993, 14-8) and were produced from the 1640s, with trailed and combed slip decoration becoming increasingly popular from about 1670. Similar wares were also made in Bristol.

MD9 (1.5% of total): Forms: Slip-trailed dishes with pie-crust edges, these are by far the commonest type and first appear intrusively in period 3B. These reached their peak of popularity in the early 18th century and lasted well into the second half of the 18th century (Barker 1993, 18). Much less common, are fragments from hollow wares, which first appear in period 3A. These have a similar date range to the dishes, reaching their peak between about 1700 and 1720 (Barker 1993, 14). A hollow ware base was found in periods 3B and 5. It is quite large, about 120mm in diameter and shows an all over plain lead glaze with traces of slip-trailing on the external surface and may be from a chamber pot (cf. Jennings 1981, fig.44.710) perhaps dating to the earlier 18th century. In addition, one cup is illustrated (No.26).

MD10: Not present

Fabric 51 Late kitchen earthenware:

MD9 (<0.25% of total): Only one sherd has been classified thus, a modern teapot lid in period 5 pit 439.

MD10: Not present

Fabric 51A Late slipped kitchen wares: This has a hard red brick-like fabric with an internal white slip-coating and a plain lead glaze giving a yellow colour to the slip. It is a common find in modern

assemblages and is most likely to be Victorian, and made in Staffordshire and Yorkshire.

MD9 (1% of total): It occurs in period 6 and forms comprise a casserole dish with lug handles and a bowl rim.

MD10 (<0.1% of total): One slip-coated sherd of this ware was intrusive in period 5.

Fabric 51B Modern flowerpots:

MD9 (9% of total)

MD10 (1.5% of total): Fragments from modern flowerpots were found in periods 5 and 6. Unidentified:

MD9 (<0.1% of total): One jug rim (No.22) could not be identified but may well be an example of late medieval Low Countries greyware, and is comparable to a jug excavated from kilns at Leiden dating to *c.*1275-1350 (Janssen 1983, 143-5, fig.9.9,5).

Pottery from MD9: the outbuilding

A total of 1921 sherds pottery weighing 30.8kg was excavated from phased contexts. Late 13th to 14th-century pottery current with the founding of the friary is present and includes Mill Green ware and raspberry-stamped sandy orange ware sherds. Late medieval pottery, predating the Dissolution was also found, including ceramic water pipes. There are very few significant Dissolution deposits but relatively large amounts of post-Dissolution pottery dating from the later 16th to 17th centuries were excavated from two pits. Much 18th-century pottery is also present. Imports include some unusual Raeren stoneware examples. Because the site was highly contaminated, discussion of the pottery includes an assessment of the degree of deposit reliability.

Period 1 (13th century)

As would be expected from a natural ground surface, very little pottery was recovered, a total of 22 sherds weighing 97g from four contexts. Although these contexts were mainly from machine trenches, there is no reason to suspect contamination.

Cover loam 579 produced a single sherd of medieval coarse ware. This layer was in turn cut by tree-bole 637, which produced two sherds of early medieval ware from fill 567.

More closely datable pottery was recovered from tree-bole 102 in trench 2, which also cut the pre-existing ground surface. Sherds of early medieval ware, medieval coarse ware and Mill Green fine ware were excavated from fill 103. The sherd of Mill Green ware shows a cream slip-coating under a mottled green glaze on both the internal and external surfaces. It appears to be from a small vessel and is carinated, it may be from the body of a miniature jug (cf. Pearce *et al.* 1982, fig.9). Also from fill 103 is a medieval coarse ware cooking-pot rim of Cunningham's type H1, datable to the 13th century; it is comparable to an example from Rivenhall (Drury 1993b, fig.40.67).

In trench 3, natural layer 45 produced two sherds of prehistoric pottery only. This layer was overlain by layer 43 which contained another sherd of Mill Green ware showing cream slip-coating under a mottled green glaze and vertical combed decoration, a typical Mill Green method of surface treatment (cf. Pearce *et al.* 1982, fig.3).

Discussion

The small amount of 13th-century pottery suggests there may have been some activity on site before the founding of the friary, documented in 1292/3. The mid 13th to mid 14th-century sherds of Mill Green ware are broadly consistent with the date of the foundation, but could indicate that activity took place immediately before this part of the friary complex was built.

Period 2 (late 13th-14th centuries)

A total of 154 sherds weighing 1480g was excavated from 23 contexts. Although most period 2 contexts contained pottery, it occurred in

Table 4: Quantification of pottery from MD9 period 2 by feature, fabric and sherd count

_= contaminated P = prehistoric pottery present R = Roman pottery present S = Saxon pottery present

No.	Feature	Relationship	Fabrics								Wt	
			13	20	21	21C	35	35B	40	40A	(g)	
Ditch 740 and gully 741												
729	gully 741	fill	-	-	1	-	-	-	-	-	130	
668	gully 741	fill	-	1	4	1	-	-	-	-	224	
728	gully 741	fill	-	-	5	-	-	-	-	-	167	
737	ditch 740	disuse fill	-	7	-	-	-	-	-	-	22	
738	ditch 740	primary fill	-	-	2	-	-	-	-	-	16	
Foundations and p-h's for building 1												
487	p-h 486	cut make-up 714	-	2	-	-	-	1	-	-	18	
577	p-h	cut make-up 576	-	1	-	-	-	-	-	-	9	
706	p-h 705	recut of p-h 595	-	1	-	-	-	-	-	-	6	
705	p-h	recut of p-h 595	-	1	-	-	-	-	-	-	6	
596	p-h 595	cut make-up 617	-	1	-	-	-	1	-	-	12	
95	f. tr. 83	cut make-up 99	-	1	-	-	-	-	-	-	10	
Make ups for building 1												
575	make-up	above natural	-	1	-	-	-	-	-	-	3	
617	make-up	above natural	4	6	10	-	1	-	-	-	140	
632	make-up	above natural	-	8	-	-	-	-	-	-	47	
654	make-up	above natural	1	7	2	-	-	-	-	1	105	
674	make-up	above natural	1	2	5	-	-	-	-	-	79	
714	make-up	above natural	4	27	4	-	3	-	2	-	315	P R ?S
543	make-up	above natural	-	7	1	-	-	-	-	-	47	P
566	make-up	above natural	2	2	-	-	-	-	-	-	18	
110	make-up	above natural	-	5	1	-	-	-	-	-	15	
99	make-up	above period 1	-	8	1	-	-	-	-	-	50	R
548	make-up	above natural	-	2	1	-	-	-	-	-	15	
210	make-up	above period 1	-	4	-	-	1	-	-	-	26	

very small quantities, with only three contexts containing more than ten sherds. Much of the pottery came from the make-ups for building 1. Most deposits are sealed and reliability is generally high, although make-ups 714 and 617 were excavated under difficult conditions and are clearly contaminated, as both contained intrusive material, including a Nuremberg token and a coin of Charles I.

Make-ups for building 1

Make-up contexts 575, 617, 632, 654, 674 and 714 are all from a homogeneous clay-loam layer, and this uniformity is reflected in their pottery, which comprises mainly medieval coarse ware, early medieval ware, sandy orange ware and Mill Green ware. As these layers are derived from ditch upcast, at least some of the pottery is likely to be residual. Indeed, make-ups 99, 543 and 714 also contained residual sherds of prehistoric, Roman and possible Saxon pottery.

Make-up 654 produced fragments from two cylindrical vessels, one is of medieval coarse ware (No.1) and one of sandy orange ware. These are almost certainly water pipes intruded from period 3A.

Other medieval sherds of interest in this set of make-ups comprise two sherds of sandy orange ware, showing raspberry stamps, one from make-up 674 (No.2), and the second, which is too fragmentary to draw, from make-up 714. Sherds of sandy orange ware with typical slip-painted decoration were also found in these contexts. Coarse-ware forms comprise an early medieval ware cooking-pot rim, sub-form H2, in layer 617, and a medieval coarse-ware cooking-pot rim of sub-form E5A in layer 714 which is comparable to an example from Rivenhall (Drury 1993b, fig.41.77). Post-medieval pottery also occurs in these make-ups; layer 654 produced a small sherd of Metropolitan slipware and layer 714 produced two small undiagnostic sherds of post-medieval red earthenware.

The remaining make-ups 543, 566, 110 and 99 produced only undiagnostic sherds of medieval coarse ware, sandy orange ware and early medieval ware.

Foundations and post-holes related to building 1

Foundation trench 83 for wall 73, which cut the make-ups, contained only a single sherd of medieval coarse ware (from fill 95).

Two post-holes, 595 and 705, at the entrance to Building 1 revealed small quantities of medieval coarse ware including a late 13th to 14th century type cooking pot rim (sub-form H3) from post-hole 705. Post-hole 595 also contained a sherd of Mill Green-type ware, as did post-hole 487.

Ditch 740 and gully 741

The primary silt of ditch 740 (fill 738), contained two sherds of sandy orange ware, including one 13th to 14th-century glazed and slip-painted sherd. The ditch's final fill (737) contained sherds of medieval coarse ware and cannot be shown to be later than the pottery from the primary fill.

Gully 741, which cut ditch 740, also contained pottery. Fill 728 produced only sandy orange ware including a cooking-pot rim (a form more usually found in medieval coarse ware) of sub-form H3, comparable to an example from Rivenhall (Drury 1993b, fig.40.74). A late medieval sandy orange ware slip-painted ?cistern handle was also found in this fill, and as the rim of this cistern was excavated from fill 668, the two fills were probably deposited at the same time. Also from fill 668 is a Cambridgeshire sgraffito ware base sherd which cross-fits with overlying yard surface 660 of period 3A. Fill 729 produced another sandy orange ware cistern rim.

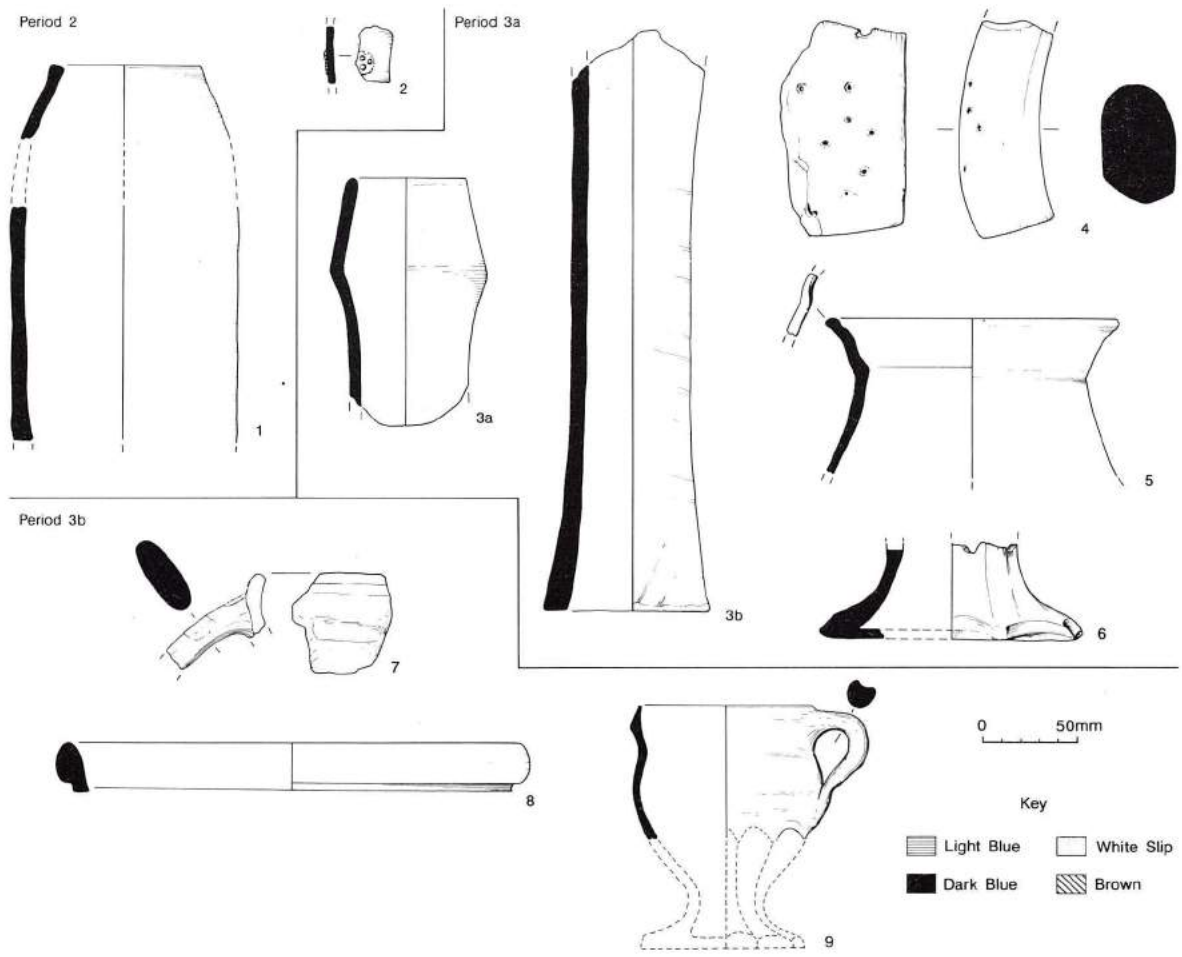

Fig. 26 Maldon Friary. Medieval pottery from MD9, periods 2, 3A and 3B, nos 1-9

Catalogue (Fig. 26)

1 Fragments from a water pipe: medieval coarse ware; hard grey fabric with darker grey surfaces and margins; fine striations and three splashes of glaze on the external surface. Make-up 654, and 618 (period 3A drain 619)

2 Sherd from jug: sandy orange ware; orange fabric with dark internal skin; external surface shows an applied cream slip raspberry stamp, the addition of a plain lead glaze gives a yellow colour to the stamp on a brownish background. Make-up 674

Discussion

The presence of Mill Green ware, the raspberry-stamped sherds of sandy orange ware (see MD10 pottery report for discussion of raspberry-stamped sherds), and cooking pots with H3 and E5A type rims, all indicate a late 13th to 14th-century date. This would be consistent with the founding of the friary around 1292/3. The latest pottery, Mill Green-type ware, is from post-hole fills and was deposited at the end of period 2. The few sherds of post-medieval pottery are from obviously contaminated deposits. The pottery is so fragmented little can be said about function, except that the presence of table wares and coarse wares indicates the pottery is from both living and service areas.

MD9 period 3A (late 14th-late 15th centuries)

A total of 111 sherds weighing 3115g was excavated from 19 contexts, and again most contexts contained less than ten sherds. Pottery was recovered from floors related to Building 1 and Building 1A, its western extension, but much of this pottery is likely to be residual. The largest and best-dated group came from the yard to the north of the buildings. The majority of period 3A deposits were sealed and reliability is generally high, although in some cases there is contamination from later intrusions.

Within building 1

Floor 504/669 produced medieval material similar to period 2, perhaps derived from the earlier phase. Medieval coarse ware the commonest type, and appearing for the first time in the sequence is a Colchester ware jug base and a sherd of Kingston-type ware. A sherd of Mill Green ware from floor 669 is from the same vessel as a sherd from intercutting post-hole 692 in period 3B. Partition wall 450 which cut floor 504/669 produced a mortar-encrusted medieval sandy orange ware jug base, but as there was no pottery from parallel partition wall 490 it is impossible to say whether or not the walls were contemporary. Floor repair 683 contained only undiagnostic sherds of sandy orange ware.

Within building 1A

Building 1A is an extension to the west of building 1, again most of the pottery similar to that from period 2, with sherds of medieval coarse ware, early medieval fabrics, sandy orange ware, and Mill Green ware, although a later Mill Green-type variation is found in this phase. Trench 88 (fill 89) for partition wall 87 produced only an undiagnostic sherd of sandy orange ware. However, the related make-up 82 contained medieval fabrics and a Mill Green-type ware jug base, thumbed in groups of two, which could be late medieval in date. Only the patches of floor resurfacing, 609 and 614, contained intrusive post-medieval pottery, the intrusive sherd in 614 is from green-glazed bowl No.14 found in the adjacent period 5 features, post-hole 533 and pit 435 which are clearly the source of the contamination.

Drain 628 etc. in building 1A

Tile-lined drain 619/628/629/655 of period 2 was retained in the construction of building 1A, and its fills belong to the end of period 3A. Fill 618 produced part of water pipe No.1 (the remainder of which was embedded in period 2 make-up 654). The southern continuation of this drain, 655, contained the top portion of a sandy

Table 5: Quantification of pottery from MD9 period 3A by feature, fabric and sherd count

_= contaminated P = prehistoric pottery present

No.	Feature	Relationship	Fabrics												Wt	
			12A	13	20	21	21A	21C	23D	35	35B	40	45A	46	(g)	
External areas																
520	drain 563	cut period 2	-	-	-	-	-	-	-	-	-	-	-	1	2	P
562																
625	make-up	related to 563	-	-	-	6	1	-	-	-	-	-	-	-	37	
667	occupation	above 660	-	-	1	3	-	-	-	-	-	-	-	-	65	
660	surface	above period 2	1	1	2	4	-	2	-	1	1	2	5	-	701	P
670	stair base?	above period 2	-	-	4	-	-	-	-	-	-	-	-	-	30	
Building 1A																
618	drain 628	disuse fill	-	-	2	-	-	-	-	-	-	-	-	-	92	
109	drain 628	disuse fill	-	-	-	1	-	-	-	-	-	-	-	-	4	
655	drain 655	disuse fill	-	-	-	9	-	-	-	-	-	-	-	-	1288	
682	drain 655	disuse fill	-	-	-	4	-	-	-	-	-	-	-	-	36	
609	floor repair	above 620	-	-	-	-	-	-	-	-	-	1	-	-	4	
614	floor repair	above 620	-	3	7	4	-	-	-	1	-	1	-	-	236	
89	found. 87	f. tr. packing	-	-	-	1	-	-	-	-	-	-	-	-	3	
82	floor	above period 2	-	-	-	1	-	-	-	1	11	-	-	-	412	
608	floor	above period 2	1	-	-	1	-	-	-	-	-	-	-	-	46	
620	floor	above period 2	-	1	3	3	-	-	-	1	-	-	-	-	37	
Building 1																
683	floor repair	above 504	-	-	-	2	-	-	-	-	-	-	-	-	6	
450	foundation	cut 669	-	-	-	2	-	-	-	-	-	-	-	-	30	
669	floor	above period 2	-	-	8	-	-	-	1	2	-	-	-	-	55	P
504	floor	above period 2	-	-	3	-	1	-	-	-	-	-	-	-	31	

orange ware water-pipe and almost all of a second water-pipe minus its top section (Nos 3a and b). These water pipes were most likely deliberately laid within the drain after it had silted up. Similar water-pipes, but in a grey fabric and lacking the bulbous top end, were found in the kitchen area of Chelmsford Dominican Priory and have the probable date-range of c.1340-50 (Drury 1974, fig. 16.63). Another water pipe, at the Chelmsford and Essex Museum, but thought to have originated from the Dominican Priory, shows a bulbous or spigot end very similar to that of No.3a (Drury 1976b, fig.13). This is thought to be a development of the plain tapering form and was current in the 14th to 15th century. Two more drain fills, 109 and 682, both contained undiagnostic sherds of sandy orange ware.

Pottery from the yard north of building 1

Yard surface 660, which sealed period 2 gully 741, contained quite an accumulation of pottery, the earliest being sherds of Mill Green ware, sandy orange ware, medieval coarse ware and early medieval fabrics. The most unusual find is part of a perforated curved tile (No.4), which has been included in this report because it has a sandy orange ware fabric. Also in sandy orange ware is part of a spouted jar with an inflected flanged rim (No.5). It is similar in shape to a jar from King John's Hunting Lodge, Writtle (Rahtz 1969, fig.55.71) found in a period III context datable to c.1425-1521, so it would appear that this vessel is a late medieval form. It cross-fits with sherds from occupation deposit 667 stratified directly above it, accumulation or dump 659 in period 3B, and demolition rubble 607 in period 4. Possibly contemporary with No.5 are two sherds of Cambridgeshire sgraffito ware which cross-fit with a sherd from the fill of period 2 gully 741. In addition there are five sherds from an under-fired Langerwehe stoneware vessel showing a brown iron wash and datable to the second half of the 14th to first half of the 15th century. The latest pottery is post-medieval red earthenware and includes the base of a possible chafing dish with perforations in the sides below the bowl (No.6). Chafing dishes are present at Moulsham Street from the 15th century and peak around 1560-1630 (Cunningham 1985b, 71).

Drain 563 north of building 1A

Only small amounts of pottery were recovered from the construction of drain 562/3, which was built of bricks dated to the 14th century. Make-up 625, which was laid over a period 2 surface beside the drain, produced exclusively medieval pottery, including a sherd from a sandy orange ware water pipe. This is probably from the same vessel as the sherd found in period 2 make-up 654 (see above). The pottery from the filling of the drain construction trench, 562/520 is unhelpful. It consisted of two sherds of residual prehistoric pottery, and a sherd of buff-coloured tin-glazed earthenware which has completely lost its glaze and could date anytime from the late medieval period to the end of the 18th century. The phasing of the construction of the drain in period 3A thus depends entirely on the dating of the bricks. Pottery from the later use and disuse of the drain is discussed under period 3B.

Catalogue (Fig. 26)

3a,b Sections from two water-pipes: sandy orange ware; uniform creamy orange fabric, although 3a has a grey core; fine striations and occasional splashes of glaze on external surface; wheel-thrown and base cut out with a knife; no trace of any joining material. Drain 655

4 Arched tile fragment: sandy orange ware; dull red-brown fabric similar to that of medieval Harlow ware but with more abundant sands; holes made with a skewer-like tool during manufacture, probably as an aid to even firing rather than as decoration. Yard surface 660

5 Jar rim: sandy orange ware; uniform dull orange fabric, appearing redder on the internal surface; smoothed surfaces; partial internal greenish glaze; fire-blackened on the outside; remains of a pouring spout. Yard surface 660, layer 667, and dump 659 (period 3B) and demolition debris 607 (period 4)

6 Base of ?chafing dish: post-medieval red earthenware; uniform red fabric; sparse plain lead glaze on both surfaces; holes poked through from the outside during manufacture. Yard surface 660

Discussion

The yard surface 660 produced the best group of pottery, including a number of late medieval examples dating from the later 14th to 15th centuries; the sgraffito ware, the sandy orange ware inflected flanged rim jar, and sherds of Langerwehe stoneware all indicate activity on site during this time. The water-pipes in drain 619/628 are also consistent with a late medieval date The most recent vessel in 660 is the ?chafing dish, dating from as early as the 15th century, but which was most common in the period following the Dissolution. However, given the late medieval date of the other pottery in 660, a date range for the phase of the late 14th-15th centuries is preferred.

MD9 period 3B (late 15th-mid 16th centuries)

A total of 156 sherds weighing 2119g was excavated from 31 contexts, with a further 21 sherds weighing 395g from trial trenches outside the excavated area. Again most contexts contain less than ten sherds. The only well sealed deposits are those in the yard area to the north of building 1 and floors at the east end of building 1A, which were overlain by period 4 demolition rubble, and the fills of ditch 641. All other deposits lie directly under very mixed post-Dissolution levelling horizons, or have been cut by drain trenches and pits of periods 5 and 6. As a result period 3B deposits have been extensively contaminated.

Floor layers in buildings 1 and 1A

The pottery from floor surfaces at the west end of building 1 and the east end of building 1A is almost completely free of contamination, because period 3B surfaces were sealed by period 4 demolition debris, and there were relatively few later intrusions in this part of site. Surface 455 produced a late medieval Mill Green-type ware slip-painted sherd, and a single tiny undiagnostic sherd of tin-glazed earthenware with an all-over plain tin glaze. Floor 502, within building 1A, revealed a small fragment of residual Mill Green ware rim along with another sherd of green-glazed bowl No.14 in period 5. A sherd from No.14 was also found in adjacent floor 586, in addition to thirteen sherds from the same sandy orange ware vessel, probably a jug, showing slip-painted decoration under a decomposed glaze. The latest material in this floor is an intrusive sherd of 18th-century white salt-glazed stoneware. Above this, context 591, the repair of these two floors produced a sherd of internally glazed post-medieval red earthenware. The equivalent of floor 586 recorded in trial trench 2, floors 79 and 106, contained medieval pottery similar to that found in period 2 and 3A floor layers. Of interest is a sandy orange ware bowl/cooking-pot fragment which has flanged rim similar to those found on medieval Harlow ware (cf. Walker 1991, fig.5.7).

The floor layers to the west were heavily contaminated, however, most likely because they were not sealed in period 4, and were extensively cut into by post-medieval intrusions. Floor 482, contained some of the latest pottery from this phase, comprising sherds of intrusive 18th-century Staffordshire-type slipware and white salt-glazed stoneware. Floor 453 produced mainly post-medieval pottery including an unusual post-medieval red earthenware 'band' (No.8). It resembles a beaded jar rim that has been truncated just below the bead while still on the potter's wheel. Its function, if any, is unknown but it could have served as a stand for a round-bottomed vessel. However as the band is only partially complete and both the ends are broken surfaces, it is impossible to say whether the band was a originally a complete circle or not. Intrusive 17th to 18th-century pottery was also found in floor 453.

Post hole 698, which cut floor 669 in period 3A, produced sherds of post-medieval red earthenware, comprising the remains of a small internally glazed bowl with a curved-over rim, and a sherd of 17th-century black-glazed ware, both presumed intrusive. Post-hole 684 also produced post-medieval red earthenware, including a sherd with an all-over very dark green glaze, a precursor of black-glazed ware and dating perhaps from the late 16th century.

Drain 563 and the yard to the north of building 1

Deposits along the northern edge of the site were mostly sealed by period 4 demolition debris, although there is contamination from a few later intrusions. Several of the levelling layers deposited over the drain-trench contained pottery. Levelling 483 produced only residual medieval pottery including a sherd of medieval coarse ware from a cylindrical vessel, perhaps another water-pipe. A single sherd of late medieval Cheam white ware was found in levelling 528. Resurfacing

Table 6: Quantification of pottery from MD9 period 3B by feature,fabric and sherd count

_ = contaminated

No.	Feature	Relationship	Fabrics																				Wt (g)
			12C	13	20	21	21A	23E	34	35	35B	36	40	40A	40bl	45A	45C	45D	45M	46	46A/C	47	50	
External areas																								
661	p-h 726	cut 659	-	-	2	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	52
659	acc./dump	above 663/664	-	-	1	14	-	1	4	-	2	-	1	-	-	6	-	-	-	-	-	-	-	289
663	acc./dump	above 660/667	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
664	acc./dump	above 660/667	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	27
589	drain 563	disuse fill	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
409	surface	above 449	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	18
449	levelling	above drain 563	-	-	1	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	22
523	surface	near drain 563	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
483	levelling	near drain 563	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
528	levelling	near drain 563	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
701	acc./dump	above 710	-	-	-	2	-	-	-	-	4	-	2	-	-	-	-	1	-	-	-	-	-	246
702	acc./dump	above 710	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	33
710	acc./dump	above unexc.	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
634	ditch 641	period 2	-	-	2	2	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	168
635	ditch 641	period 2	-	-	1	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	112
59	acc./dump	= 585	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	70
585	acc./dump	period 3A	1	-	8	9	-	-	-	-	4	1	4	-	-	-	-	-	-	-	-	-	-	362
Buildings 1/1A - latest features																								
492	reflooring	above 502	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3
513	reflooring	above 580/605	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	32
685	p-h 684	cut period 3A	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	11
693	p-h 692	cut period 3A	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4
99	p-h 698	cut period 3A	-	-	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	27
Building 1A																								
455	floor	above unexc.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	11
453	floor	above 482	-	-	-	1	-	-	-	-	-	-	4	-	-	-	-	-	3	-	-	-	-	119
482	floor	above period 3A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	36
591	floor repair	above 586	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	8
502	floor	above period 3A	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	11
586	floor	above period 3A	-	-	-	14	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	134
Building 1																								
79	reflooring	above 106	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37
106	floor	= 605	-	-	2	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	103
605	floor	above period 3A	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28

523 on the north side of the drain, which overlay a period 3A make-up, produced a slip-painted, sparsely glazed Colchester ware jug rim (No.7). It has a slightly inturned rim, rather in the manner of Mill Green ware. Such imitations are known in Colchester ware (Drury 1993b, fig.44.157), and this would date the jug to the late 13th to 14th century, although slip-painting under a sparse glaze normally indicates a 15th to 16th-century date for Colchester ware (Drury 1993b, 89). Nothing diagnostic was recovered from layers 409, 449 and the disuse fill of drain 563.

Accumulation 659 in the north-east corner of the site, which sealed period 3A yard surface 660, produced a larger quantity of pottery. Much is late medieval, and sherds from the same Langerwehe stoneware vessel and sandy orange ware jar rim (No.5) found in period 3A layers 660 and 667 occur here. A sherd from a second Langerwehe stoneware vessel shows a line of V-shaped rouletting (cf. Jennings 1981, fig.45.739) which indicates a mid 14th to mid 15th century date (Hurst *et al.* 1986, 186). Also present is a sherd of Cheam white ware, with a partial green glaze and a lid-seated jar rim in a reddish-buff earthenware fabric categorised as Fabric 34, unclassified buff ware. The latest material excavated from accumulation 659 is an internally glazed post-medieval red earthenware faceted base, which is interesting because the flared part of the base has been deliberately broken away, indicating some kind of secondary use. The other occupation deposits above yard surface 659 all contain medieval pottery, with the exception of layer 664 which also produced two joining sherds of intrusive Anglo-Netherlands tin-glazed earthenware. Fill 661, in post hole 726, which cut accumulation 559, contained part of a post-medieval red earthenware base, and a white slip-coated jug rim in the same reddish-buff fabric as the jar rim in accumulation 659.

External surfaces at the west end of the site

Surfaces outside the west wall of building 1A, and in particular the fills of ditch 641 to the west of the buildings, appear to be undisturbed and free of contamination. Resurfacing 702 revealed sherds of slip-painted Mill Green-type ware and post-medieval red earthenware, probably dating to the 15th/16th century. Sherds from the same Mill Green-type ware vessel were found in resurfacing 701. Other pottery in 701 comprises late medieval sandy orange ware, post-medieval red earthenware, including cup rim No.9, and a sherd of Frechen stoneware. Vessel No.9 is part of a standing cup with the remains of a fluted base. It is of Cunningham's type E3B and similar vessels were found at Moulsham Street (Cunningham 1985a, fig.9.59), where they were commonest in the 15th century (Cunningham 1985b, 71).

The latest pottery from layer 634, slipped down the side of ditch 641, comprises a late medieval sandy orange ware slip-painted cistern rim and sherds of post-medieval red earthenware, one with an all-over glaze and one internally glazed. Above this, fill 635, marking the disuse of the ditch, produced a late medieval sandy orange ware slip-painted jug rim, part of a possible post-medieval red earthenware dripping dish (too fragmented to parallel or illustrate), and one sherd of Raeren stoneware. Pottery from both these deposits could date to the late 15th/16th century.

External accumulation 585 south of buildings 1 and 1A

This layer was deposited to the south of building 1A and sealed the flight of stairs in the previous period. It produced the largest assemblage of pottery from this period, which is still only a modest 27 sherds weighing 362g. Nearly all the pottery from this deposit is residual medieval material derived from earlier phases and includes a sherd of London-type ware, and the rims of a sandy orange ware water-pipe and a flanged jar rim. The latest pottery from this layer comprises sherds of Mill Green-type ware and internally glazed body sherds of post-medieval red earthenware.

The latest surfaces within buildings 1 and 1A

Floor 492, the latest in Building 1A, produced a single sherd of Anglo/Netherlands tin-glazed earthenware dating to the 17th century. Abutting 492 to the east, floor 513 in building 1 produced a Staffordshire-type slipware hollow ware base which cross-fits with sherds from period 5 pit 581 (fill 582), and its equivalent in trial trench 4, pit 208 (fill 209). This last feature was not recognised as an intrusion during the excavation of period 3B deposits.

Ditches 304, 35 and 9, recorded in trial trenches 1, 3 and 6

Although this group of ditches was probably dug in period 2, at the same time as ditches 740 and 741 in the excavated area, their fills appear to have been deposited over a long period of time, as they were not sealed until period 4. Although recorded in trial trenches, the features are thought to be uncontaminated. The pottery from features in the trial trenches is not included in Table 6.

Pottery in ditch 304 (fill 313) in trench 6, includes the remains of a post-medieval red earthenware cistern rim. Medieval pottery in this context comprises sandy orange ware and Mill Green ware. A similar assemblage to that of ditch 304 was found in fill 34 at the top of ditch 35, including the remains of another post-medieval red earthenware cistern. Also of note here is a ribbed Mill Green ware jug handle; it is slip painted and the surfaces are reduced so that its partial covering of greenish glaze appears olive green, in contrast to the more unusual bright green, when seen over a cream slip coating. The fill of ditch 9 (fill 8), which cut the natural ground surface in trench 1, contained four sherds from the same salt-glazed Raeren stoneware vessel, dating from the late 15th to 16th century. Although pottery contemporary with that from ditch 740 was found in these ditches, later pottery is also present. This may be explained by the fact that they remained open for a long period.

Catalogue (Fig. 26)

7 Jug rim and handle: Colchester ware; coarse hard sandy fabric with inclusions of white quartz clearly visible; grey core, orange margins and grey surfaces; crudely executed cream slip-painting extending on to the inside of the neck; patches of plain lead glaze. External surface 523

8 Band or truncated jar rim: post-medieval red earthenware; uniform red fabric with darker surfaces; occasional splashes of plain lead glaze. Levelling 453

9 Part of standing cup: post-medieval red earthenware; red fabric with darker surfaces; all over internal and partial external plain lead glaze. External surface 701

Discussion

Again with such small amounts of pottery, much of which is residual, few conclusions can be drawn. As most of the pottery predates the Dissolution, all the late 16th, 17th and 18th-century pottery, which occurs only in small quantities, must be intrusive. A lot of late medieval pottery is present, but at least some derives from period 3A. Some of the post-medieval red earthenware is likely to be current and includes the 15th-century type standing cup (No.9). The slip-painted Mill Green-type ware is probably 15th/16th century as are the sherds of Raeren stoneware. Therefore the likely date range for period 3B is the late 15th to earlier 16th century, immediately predating the Dissolution. The pottery is too fragmented to say anything about function.

MD9 period 4 (mid 16th century)

This period relates to the Dissolution and its aftermath, when the buildings were dismantled. On documentary evidence this occurred between 1536-8 and 1563-70/74. A total of 123 sherds weighing 1934g was excavated, principally from a series of demolition layers dumped over most of the site. There is a high risk of contamination from period 5 levelling and intrusions, but the period 4 horizon was quite distinctive and appears to have been cleanly excavated.

Layer 549 inside the building produced a single sherd of Raeren stoneware and sherds from green-glazed No.14 belonging to period 5. Diagnostic sherds in layer 476, to the north of layer 549, comprise a post-medieval red earthenware slip-painted cistern rim, and a Raeren stoneware jug rim showing ladder band decoration, a larger fragment from this vessel was found in period 5, and has been illustrated (No.11). Later material in layer 476 comprises sherds of intrusive English salt-glazed stoneware and creamware.

Table 7: Quantification of pottery from MD9 period 4 by feature, fabric and sherd count

_ = contaminated

No.	Feature	Relationship	Fabrics										Wt (g)
			13	20	21	40	45	45A	45C	45M	48C	50	
416	Finds group	above 594	-	-	1	3	-	-	-	-	-	-	58
594	Gully 590	cut debris	-	1	2	2	-	-	-	-	-	-	78
666	debris	above period 3B	-	-	-	1	-	-	-	-	-	-	10
426	debris	above period 3B	-	-	1	1	-	-	-	-	-	-	77
536	debris	above 559	-	3	-	4	1	-	-	-	-	-	84
559	debris	above period 3B	1	1	1	22	-	-	2	-	-	-	342
607	debris	above 626	-	-	1	2	-	-	-	-	-	-	45
626	debris	above period 3B	-	1	4	29	-	1	6	-	-	1	637
476	debris	above period 3B	-	-	-	3	-	-	1	1	1	-	307
549	debris	above period 3B	-	-	1	10	-	-	1	-	-	-	124

To the south of the building, layer 559 produced residual late medieval sherds, further fragments of bowl No.14, and two sherds of Raeren stoneware, one of which is probably from the same vessel in layer 476. Layer 536 sealed 559, and produced yet more sherds from bowl No.14 and cannot be demonstrated to be later than preceding layer 559.

Layer 666, deposited over the courtyard to the west of the buildings, contained a single sherd of post-medieval red earthenware with an all over plain lead glaze. A much larger group was excavated from layer 626 from the north of the building. Some residual medieval material is present, and the latest sherd is a fragment from a Staffordshire-type slipware dish, however, the bulk of the pottery is 15th or 16th century. Such material comprises sherds of Langerwehe and Raeren stoneware, slip-painted sherds of post-medieval red earthenware and a post-medieval red earthenware thumbed jug base. One post-medieval red earthenware sherd has a fine fabric with a glossy, honey coloured glaze, and could actually be Low Countries red ware, but without a rim form the wares can be difficult to tell apart.

Layer 426, which may have sealed layer 626, produced a sherd of late medieval slip-painted sandy orange ware and a post-medieval red earthenware frilled base which appears to be an imitation of a Raeren stoneware bulbous drinking jug. As the latter were imported during the late 15th to mid 16th century, then this vessel must be of the same date, or perhaps a little later. Therefore, the pottery found here is no later than that from layer 666. Layer 607, which definitely sealed layer 626, produced a sherd belonging to sandy orange ware jar rim No.5, and two unglazed body sherds of post-medieval red earthenware. Again the pottery appears to be no later than that from the preceding layer.

Context 303, the fill of robber-trench 303A, produced some quite late pottery including 17th-century sherds of black-glazed post-medieval red earthenware and much 18th-century material which must be intrusive. The pottery from this context is so mixed that it is not included in Table 7 (a total of 13 sherds weighing 172g was recovered from this feature).

Pottery from curvilinear feature 590, contained similar pottery to that from the rest of period 4, including sherds of sandy orange ware and post-medieval red earthenware.

Discussion

Apart from occasional intrusive 18th-century sherds in layers 476, 626, and robber trench 303A, most of these layers contained late 15th and 16th-century pottery, characterised by German stonewares, slip-painted late medieval sandy orange ware and slip-painted post-medieval red earthenware, and the post-medieval red earthenware Raeren copy. The dating of this assemblage is therefore consistent with the time of the Dissolution, but this hardly constitutes a large Dissolution deposit and indicates the pottery was either dumped elsewhere or that the Dissolution deposits were removed in antiquity during demolition and site clearance. Vertical cross-fits such as those between layer 536 and preceding layer 559, and horizontal cross-fits, such as between 549 and adjacent layer 476 confirm that all the layers were deposited at the same time.

MD9 period 5 (later 16th-18th centuries)

A total of 345 sherds, weighing 6991g was excavated from 27 contexts, and includes two pit groups. A sequence of surfaces was excavated in the north-east of the site, but in general period 5 levelling deposits and surfaces were cleared by machine, and cut features only were investigated.

Culvert 76/411 and levelling layers

The stone fill (100) of the construction trench for culvert 411, built of Tudor bricks, produced a single undiagnostic sherd of post-medieval red earthenware. Pottery from the repair of the culvert, 412, comprises a sherd of Westerwald stoneware and a sherd from a Staffordshire slipware dish. Their presence together suggests a date of the later 17th to earlier 18th centuries. Context 94, the fill of the culvert after its disuse, produced reliably startified 18th-century pottery, comprising single sherds of white salt-glazed stoneware, Nottingham/Derby stoneware and creamware. The creamware is almost white, rather than buttery in colour, indicating a late 18th century date.

Quite a large group of pottery was excavated from levelling 598 to the east of culvert 411, but most of it dates to the 15th/16th centuries and probably derives from the subsided layers below. There is a single sherd of tin-glazed earthenware from a thick-walled hollow ware, perhaps an albarello, possessing a reddish-buff fabric with buff surfaces. Unfortunately, the glaze has decomposed and all that remains are faint traces of an external matte blue-green glaze, which in places has been stained brown. No decoration can be made out. It may be of Mediterranean origin and is either current or residual in this phase. Layers 491 and 544 produced only residual later medieval sherds.

Post holes cutting surface 598 etc.

A sequence of post holes cutting surface 598/544/491 produced small amounts of pottery from single fills. Post hole 554, the earliest in the sequence, produced a single sherd of non-local post-medieval red earthenware, which has a very shiny black-glaze and cross-fits with a sherd from fill 466 in period 6 pit 467, which cut it.

The fill of post hole 556 produced rather more pottery including post-medieval sherds of Raeren stoneware and southern whiteware. The latest pottery however, comprises fragments from two white salt-glazed stoneware plates, one of Queens' shape and one with a bead-and-reel border (cf. Jennings 1981, pl. 1a and b). Such moulded decoration was introduced during the 1740s (Draper 1984, 38).

Post-hole 551, which cut post-hole 556, also produced 18th century pottery. This comprised single sherds of English tin-glazed earthenware and white salt-glazed stoneware. Post hole 515, also produced English tin-glazed earthenware as the latest pottery. The last post hole in this sequence, 506, produced the most recent pottery, the rim of a creamware bowl or saucer. Like that from the fill of culvert 413 it has an almost white glaze and probably dates to the later 18th century. The similarity of the pottery within the post holes is no doubt the result of contamination from the inter-cutting fills. Layer 552, which sealed them, produced a similar assemblage to that of the post holes. Again the latest pottery is white salt-glazed stoneware.

Table 8: Quantification of pottery from MD 9 period 5 by feature, fabric and sherd count

_ = contaminated

No.	Feature	Relationship	Fabrics																										Wt (g)
			20	21	23E	34	35	35B	40	40bl	40D	42	45	45A	45C	45D	45F	45G	45M	46	46A	47	48A	48B	48C	48D	50	51	
Other features																													
59	layer		-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
62	pit 90	above 91	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
91	pit 90		-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88
69	p-h 68		-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
584	p-h 583		-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
582	pit 581	same as 208	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	38
209	pit 208	cut by 583	1	1	-	-	-	2	5	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	109
534	p-h 533		-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	18
538	p-h 537	south of pits	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	19
510	p-h 509	within ruins	-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	76
718	p-h	within ruins	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
501	p-h 500	within ruins	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	7
Pits 435 and 439																													
440	pit 439	within ruins	2	1	-	1	-	1	63	-	-	1	3	-	1	4	-	-	-	-	-	-	-	5	-	1	-	1	2346
436	pit 435	within ruins	6	-	-	-	-	-	108	2	-	4	1	1	3	2	-	-	-	-	-	-	-	-	-	-	-	-	3255
Post-holes cutting surface 598 etc.																													
552	layer	seals p-hs	2	2	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	47
505	p-h 506	cuts p-h 515	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2
514	p-h 515		-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	1	-	22
550	p-h 551	cuts p-h 556	1	3	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	31
555	p-h 556	cuts p-h 554	-	-	-	-	-	-	4	-	-	1	-	-	1	-	-	-	-	1	-	6	-	-	-	-	-	-	93
553	p-h 554	cuts levelling	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Culvert 76/411 and levelling layers																													
491	levelling		-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	17	
598	levelling		-	-	3	-	-	18	12	-	-	-	-	1	6	-	-	-	-	1	-	-	-	-	-	-	-	-	435
544	levelling		-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	167
94	cut 411		-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	1	-	-	-	1	-	-	2	-	-	-	16
412	cut 417		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	15
100	cul 411		-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

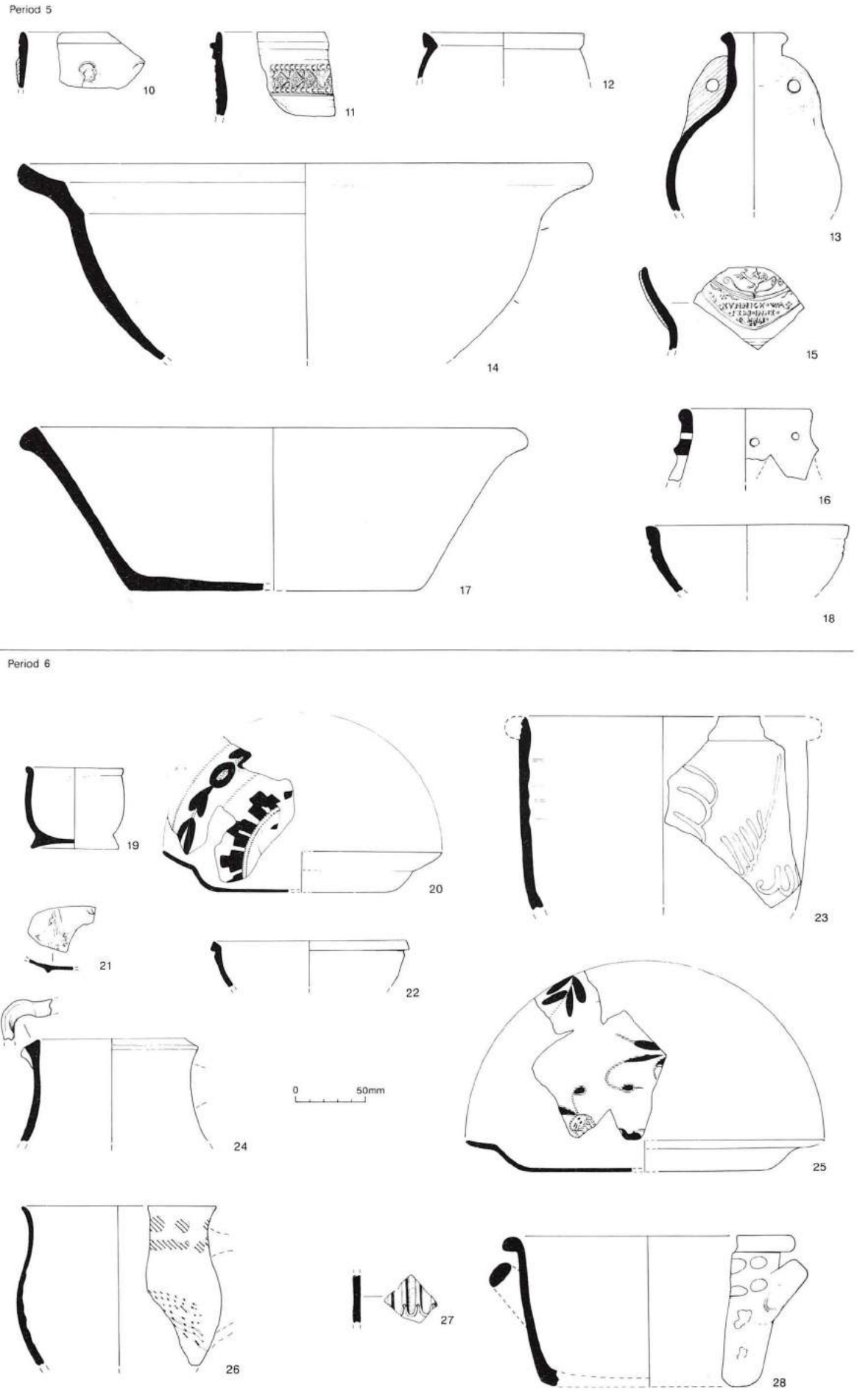

Fig. 27 Maldon Friary. Post-medieval pottery from MD9, periods 5 and 6, nos 10-28

Pits 435 and 439

Two relatively large groups were excavated from pits 435 and 439, situated inside the ruins of the building and cutting through the period 4 demolition debris. Cross-fits between their two fills, 436 and 440 respectively, indicate the features were open at the same time.

Pit 435: This pit contained the larger group, a total of 127 sherds weighing 3255g was excavated, and dates to the 16th-17th centuries. Diagnostic sherds (including cross-fits with sherds from pit 439) have been illustrated and are catalogued below (Fig. 27):

10 Rim of ?jug: Raeren stoneware; brown slightly mottled salt glaze on the outside; iron wash on the inside; decorated with applied male heads; early 16th century (Hurst *et al.* 1986, 194). Fill 436, pit 435

11 Jug rim: ?Raeren stoneware; all over glossy grey salt-glaze, coloured brown over the decoration and on the internal surface; applied panel of moulded decoration around the neck, showing lozenges between two ladder bands and floral decoration in the intervening spaces; the remains of a handle is visible at the point where the applied decoration ends; a join can be seen where the decoration has been applied; possibly from a Raeren panel jug dating from the 1570s and into the 17th century; comparable to a vessel published in Hurst *et al.* (1986, pl.37 left, dated 1598); a sherd from the same vessel was found in context 476 in period 4. Fill 436, pit 435

12 Rim: Southern white ware; internal yellow glaze extending over rim; probably from a small tripod pipkin (comparable to Pearce 1992, fig. 29.163); not complete enough to be closely datable and therefore belongs to any time in the period of Southern whiteware manufacture i.e. the second half of the 16th to 17th centuries. Fill 436, pit 435

13 Bottle-shaped costrel with pierced lugs for suspension: post-medieval red earthenware; Cunningham's form F7A; glossy greenish glaze extending to about half way down the vessel; this form occurs at Moulsham Street, Chelmsford in late 16th-century contexts (Cunningham 1985b, 71); similarly shaped costrels were produced in southern white ware (cf. Pearce 1992, fig.37.296, 300, fig. 38.301) and have the slightly later date of the beginning of the 17th century (Pearce 1992, 31). Fills 436 & 440, pits 435 and 439

14 Bowl: post-medieval red earthenware; coarse sandy fabric, borderline sandy orange ware; reduced core where vessel walls are at their thickest; internal white slip-coating towards the centre of the bowl; an all over internal green glaze gives a bright apple-green glaze over the slip-coated areas and a dark olive green glaze elsewhere; large oval handle scar below the rim; sherds from this vessel occur in several earlier contexts from period 3A onwards. Fills 436 and 440, pits 435 and 439

By far the commonest pottery is post-medieval red earthenware, but other fabrics in this pit include a sherd of under-fired Langerwehe stoneware, and two sherds of Frechen stoneware showing a mottled tiger-ware salt glaze dating from the later 16th century (Hurst et al. 1986, 214). Also present are sherds of residual medieval coarse ware.

Unillustrated post-medieval red earthenware forms of interest comprise: a lid with a rounded knob paralleled at Moulsham Street (Cunningham 1985a, fig.10.78) and probably dating to the 17th or early 18th century; and the lid-seated rim of a dripping dish, also paralleled at Moulsham Street (Cunningham 1985a, fig.2.6) and present there from the late 16th century.

Other post-medieval red earthenware forms comprise: a tripod base from a pipkin; a flanged dish rim; a second bowl rim; jar fragments with flanged everted rims; jugs, including an unglazed jug rim with a bead below the neck comparable to an example from a late 16th-century pit at Moulsham Street (Cunningham 1985b, fig.45.34); and a tyg handle with a very dark green glaze. Black-glazed sherds principally of the 17th century are present, but there is no Metropolitan slipware. All these forms are very fragmented (as is most of the pottery from the pit, with an average sherd size of 20g), and do not merit illustration.

Pit 439: This pit produced a total of 84 sherds weighing 2346g giving an average sherd size of 28g. Although there are cross-fits between the two pits, this feature also contained some very recent intrusive pottery comprising sherds of modern porcelain, ironstone and a brown glazed earthenware teapot lid which could be as late as 20th century. Diagnostic sherds have been illustrated and are catalogued below (Fig. 27):

15 Part of a medallion from a jug or mug: classified as Raeren stoneware; external brown salt glaze with patches of mottling; glossy yellowish-brown interior; base of an armorial shield can be seen within the medallion showing a ?griffin; the nearest parallel found with an armorial shield and bands of writing below is on a Raeren stoneware jug from Norwich dated 1580 (Jennings 1981, fig.47.773); as the Norwich jug is dated 1580, then this sherd with its similarly styled medallion is likely to be of around the same date. Fill 440, pit 439

16 Rim of perforated vessel: post-medieval red earthenware; external glossy greenish glaze; circular and triangular or possibly diamond-shaped holes cut through from the outside of the vessel; part of a horizontal handle belonging to this vessel was found but has not been drawn as its position on the vessel cannot be determined; probably from a fuming pot, a form with holes in the upper part to allow the escape of smoke or fumes from substances such as incense burning on charcoal (Jennings 1981, 235); this is a fairly rare form and no post-medieval red earthenware parallel was found. They were however made in southern whiteware (cf. Pearce 1992, fig.45.432-3) and have been found in late 16th and mid 17th-century contexts (Pearce 1992, 41). Fill 440, pit 439

17 Large bowl or pancheon: post-medieval red earthenware; Cunningham's type B3B; internal plain lead glaze extending up to about 4cm below the rim; this type of bowl first appears at Moulsham Street c.1560-90 (Cunningham 1985b, 69). Fill 440, pit 439

18 Small bowl: post-medieval red earthenware; Cunningham's form B6; all over internal plain lead glaze with splashes of glaze externally; external horizontal incised lines; this form may be later, occurring at Moulsham Street in an early 18th-century context (Cunningham 1985b, 69). Fill 440, pit 439

As with pit 435, the commonest pottery is post-medieval red earthenware with smaller amounts of other post-medieval pottery, comprising sherds of southern whiteware, Frechen stoneware, and an the remains of an unclassified buff ware dish. This latter vessel is unlike the buff ware described in earlier periods, and may be modern, it is very shallow and crudely made and could have been used in the garden.

Post-medieval red earthenware forms that do not merit illustration comprise: part of a spouted bowl or dripping dish with an internal green glaze; the rim of another large bead rim bowl similar to No.17, a jar fragment with a lid-seated rim; and sherds from cups or tygs. In addition there are two sherds of earthenware with a very glossy honey-coloured glaze that might be of Low Countries red ware, but that cannot be distinguished from post-medieval red earthenware with any certainty.

The remaining features

Very little pottery was excavated from the post holes within the former building. Post holes 718 and 500 produced single sherds of post-medieval red earthenware and Frechen stoneware respectively. This makes them possibly contemporary with the pits. Rather more pottery was excavated from post-hole 509, the latest being a white salt-glaze stoneware bowl rim, showing the remains of applied sprigged decoration. Sprigging is technologically earlier than press moulding, the technique used to produce the moulded plates in post-hole 556, and dates the bowl to the 1720s or later. The fill of post hole 537, situated on the alignment of the former south wall, produced post-medieval red earthenware, including black-glazed ware and a tiny rim fragment of blue-painted Chinese porcelain probably from a tea bowl or saucer and dating to the 18th century. Post hole 533 to the south of the building revealed a sherd from green-glazed bowl (No.14), a sherd of ?18th-century English tin-glazed earthenware, and a sherd of non-local post-medieval red earthenware. The latter is from a hollow ware and shows wavy line slip-trailed decoration; it is not Metropolitan slipware and does not resemble Cistercian ware, although a Staffordshire or Yorkshire origin is a possibility. This sherd is most likely to be intrusive.

The north wall of the former building was cut by post pit (581), also recorded in a section in trial trench 4 (208). Post pit 208/581

contained residual medieval and 18th-century pottery, including two small sherds of ?earlier 18th-century Staffordshire-type slipware which cross-fit between the two fills (209/582) and (intrusively) with the underlying 513 of period 3B. Also present in fill 582 is a sherd of post-medieval red earthenware and a fragment of tin-glazed earthenware tile showing blue-painted decoration. Post pit 208/581 was in turn cut by post hole 583, which contained a single sherd of green-glazed southern white ware (fill 584). As this ware dates from the mid-16th to 17th centuries, it is earlier than that from the preceding post pit.

A few sherds of post-medieval red earthenware were excavated from both fills of pit 90 (an equivalent of 435?), including black-glazed sherds from lower fill 91 and from secondary fill 62, a green-glazed sherd from the same vessel as bowl No.14. Possibly contemporary post-hole 68, produced post-medieval red earthenware including a non-local sherd from a strap handle showing a shiny black glaze very similar to the sherd found in post-hole 554. Layer 59, which may have been contemporary with these features, produced a post-medieval red earthenware jar form with a lid-seated rim, probably from a pipkin.

Discussion

Rubbish pits 435 and 439 produced much pottery dating to the later 16th and 17th centuries and post-dating the Dissolution. This material was almost certainly derived from the Harris' mansion, completed by 1570/4, and located a short distance to the north-east of the site. The three decorated sherds of Raeren stoneware (Nos 10, 11 & 15) are quite unusual finds and may reflect Maldon's status as a port or more direct connections between the friary and the Rhineland. Raeren panel jugs often depict biblical scenes (Hurst *et al.* 1986, 195), and it is possible No.11 may have served some religious purpose, as could the fuming pot (No.16), which would mean religious activity was taking place in the vicinity after the Dissolution. The fact that pit 439 also contains later pottery could mean that the feature was open longer.

Pottery evidence from the culvert indicates it was repaired sometime after the second half of the 17th to 18th centuries and had fallen into disuse by the late 18th century. Several other contexts contained 18th-century pottery including the series of post holes cutting the levelling, features within the ruins and the layers to the east of the culvert. The layers to the east of the conduit contained some of the latest pottery. The trial trenches produced earlier pottery, comprising 16th to 17th-century sherds which might be contemporary with the pottery from pits 435 and 439.

MD9 period 6 (19th century)

A total of 989 sherds weighing 14,695g was excavated from period 6. The stratified features were almost all in the north and north-east of the site, and all other evidence had been cleared by machine. However, pottery was collected from the machine-cleared soil horizons.

Layer 479 and subsequent layers

Layer 479 was deposited to the east of the culvert layer and contained an assemblage of pottery dating from the late medieval period to the 18th or 19th centuries. The latest sherds comprise: a blue-painted Chinese porcelain rim from a tea bowl or saucer; a burnt sherd of creamware from the same vessel in the fill of gully 65 (context 66); and a sherd from an English stoneware barrel-shaped vessel, possibly from a barrel-shaped tobacco jar or harvest barrel dating from the late 18th to 19th centuries, sherds of which are also found in layer 408.

Less pottery was found in the layers deposited above, i.e. from layers 5, 423, 480, 481 and most is residual material dating from the late medieval period to the 17th century (Table 9). The latest sherd however, is from a white salt-glazed stoneware plate from layer 481 with bead and reel moulded decoration, and dating from the 1740s.

Pits 443, 571, 656 and post hole 431

Pit 443 contained a group of 18th-century pottery, comprising sherds of Staffordshire-type slipware, rim sherds from a post-medieval red earthenware bowl, dish and jar, and sherds of English tin-glazed earthenware. Illustration No.19 shows a plain tin-glazed earthenware albarello, but as it lacks the characteristic constriction below the neck it may be more correctly termed an ointment pot. Its plainness generally indicates an 18th-century date. A blue-painted tin-glazed earthenware plate was also found (No.20), it cross-fits with a sherd in layer 408. No direct parallel could be found for this plate, but the flanged rim and flat base without a footring corresponds to the shape of Lambeth delft plates manufactured during the period 1690-1780 (Garner and Archer 1972, 81). The decoration is very simple, involving thick brush strokes and probably represents the lower end of the market. A parallel for the group of three squares motif seen on plate No.20 is found on a Lambeth mug dating to the early 18th century, although the same motif also occurs on a Bristol plate dated *c.* 1730 (Garner and Archer 1972, fig.61B). These parallels provide a likely date range of the first half of the 18th century for this plate.

Small quantities of 18th-century pottery were also found in post-hole 431 and pit 571. Pit 656, however, produced a large group of modern flowerpots and part of a post-medieval red earthenware paint-pot. One of the flowerpots is impressed '(S)ANKEY & SL...' The paint-pot is in the form of an internally glazed one-handled, bead-rim jar and shows layers of black, white and green paint. For an illustrated example of a paint-pot see Brears (1971, 69). Also present are sherds from an ironstone plate showing a polychrome floral pattern intertwined with coiled lengths of rope, which could have a nautical significance and could easily be 20th century. Sherds from the same vessel were found in layer 408.

Gullies 65 and 470, and post holes 70 and 80

These features produced little pottery. That from drainage gully 65 would appear to be all residual late medieval to 17th century, and there is a cross-fit with similarly dated layer 479. Drainage gully 470 produced only a post-medieval red earthenware bead rim jar with an all over glaze which could date to almost any time in the post-medieval period. The latest pottery from post hole 70 comprises a fragment of creamware and modern flowerpot, although earlier pottery is also present, while the latest pottery from post hole 80 is a single sherd of white salt-glazed stoneware.

Pits 467 and 465

Quite a large group of pottery was excavated from the primary fill of pit 467 (context 466), but most is fragmentary with an average sherd size of only 7g. Several sherds are residual, belonging to the earlier post-medieval period. A sherd of non-local post-medieval red earthenware with a shiny black glaze cross-fits with context 553 in period 5.

Sherds of English stoneware dating to the 18th century were found, including Nottingham/Derby products. White salt-glazed stoneware is also very much in evidence, and forms include a plate fragment with a seed or barley moulded rim (cf. Jennings 1981, pl.1c) and more unusually a teapot fragment with an upright rim (cf. Jennings 1981, fig.102, 1605-6, 9-10). Very fragmented sherds of English tin-glazed earthenware are present, but more common are sherds of blue-painted Chinese porcelain. One Chinese porcelain footring base from a bowl or saucer has been illustrated (No.21) and shows a Chinese figure apparently trying to fly a kite. The commonest fine ware is creamware, fragments from plates and bowls were found, and one plate has an octagonal rim similar to those produced in white salt-glazed stoneware (cf. Jennings 1981, pl.1e, dating from 1770-5). Occurring for the first time in the sequence are sherds of pearlware; these are very fragmented but appear to be from a tea bowl with blue-painted Chinese-style decoration dating from the late 18th century. One polychrome painted sherd of pearlware is also present. Some sherds from this pit are burnt and therefore unidentifiable, these have been classified as Fabric 48X, miscellaneous post-1750. One fragment of late slipped kitchen ware is present and is probably Victorian. Sherds of the ubiquitous post-medieval red earthenware are present but do not make up a very large component of the group; the only identifiable form is the bead rim of a storage jar.

The upper fill of pit 467 (context 465) contained a much smaller amount of pottery, the only sherd of interest is part of a creamware

Table 9: Quantification of pottery from MD9 Period 6 by feature, fabric and sherd count

No.	Feature	Fabrics Wt																								Wt
		misc med	35B	40	40bl	40A	40D	41/42	45	45B	45C	45D	45F	45G/M	46/A	46A/C	47	48A	48B	48C	48D	48P	48/49	50	51A	51B	(g)
200	soil	-	-	3	-	-	2	-	-	-	-	3	-	2	4	-	7	-	-	5	25	-	3	5	-	3	578
201	dump	1	-	3	-	-	1	1	1	-	1	-	-	-	4	-	2	-	-	-	-	-	-	-	-	-	133
202	= 201	-	2	1	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	59
400	topsoil	2	-	6	-	-	1	-	-	-	1	-	-	10	2	-	-	-	6	2	10	-	2	2	4	1	1107
401	= 400	12	-	23	4	3	3	1	-	-	-	1	3	4	4	-	2	-	-	9	1	5	1	1	3	-	1443
623	layer	3	-	8	-	-	-	1	-	1	4	-	1	2	2	-	1	-	-	2	-	-	-	-	-	-	256
60	layer	5	-	3	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	119
60/1	layer	4	-	2	-	1	-	2	-	-	-	-	-	-	-	-	1	-	2	1	-	-	-	-	-	-	195
402	layer	4	-	10	1	1	-	-	-	-	-	-	-	6	1	-	1	-	-	-	-	1	-	-	-	-	211
403	layer	1	-	15	-	1	-	-	-	-	1	-	1	-	1	-	4	1	-	5	-	2	-	-	1	-	490
404	layer	-	-	6	1	-	-	-	-	-	1	-	-	3	5	1	-	-	1	1	3	3	2	3	-	1	137
408	layer	3	-	88	5	10	2	5	-	-	5	1	12	26	17	3	35	-	-	18	2	7	1	13	1	16	3939
414	layer	11	2	5	-	-	-	-	1	1	-	1	-	-	1	-	1	-	1	6	-	-	-	-	-	-	433
535	layer	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6
622	layer	-	-	15	1	1	-	-	-	-	2	1	-	2	-	-	6	-	-	1	-	-	-	-	-	-	340
546	layer	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
465	pit 467	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	26
466	pit 467	1	-	32	-	1	5	-	-	-	1	-	3	4	2	2	8	8	-	4	-	10	4	2	6	-	902
474	pit 475	1	-	9	-	1	-	-	-	-	-	-	-	3	3	-	5	1	-	6	-	1	-	1	-	-	272
66	soil 65	-	2	-	2	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	69
473	soil 470	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
71	p-h 70	1	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	1	48
81	p-h 80	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	26
444	pit 443	-	-	11	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	2	-	-	327
572	pit 571	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	87
657	pit 656	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	36	3009
432	p-h431	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	70
431	p-h	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	19
5	layer	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88
423	layer	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	15
480	layer	-	-	7	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71
481	layer	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	62
479	layer	3	-	4	-	-	-	1	-	-	4	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	129

bowl with a rolled-over rim and lathe-turned grooves. A creamware teapot at the Victoria and Albert Museum with the same lathe-turned grooves dates to about 1780-1800 and was made at Leeds (Victoria and Albert Museum 1984, pl.25).

Pit 475, which lay adjacent to pit 467, produced a smaller group of similar pottery although no cross-fits between the two pit fills were noted. Forms from this pit comprise; a Staffordshire-type slipware dish rim with pie-crust edges, the base of a large Chinese porcelain footring bowl, showing a blue and red foliage pattern, and the remains of other smaller footring bowls or saucers in white salt-glazed stoneware and creamware. In addition, there is a small fragment from an English tin-glazed earthenware ?bowl with a plain upright rim. The latest datable pottery is a single sherd of pearlware.

Brown loam layers

Quite large amounts of pottery came from within these layers ranging in date from the 13th to 19th/20th centuries, and only pottery of intrinsic interest is discussed. The date of the latest pottery found within each layer is also noted.

Layers 60, 60/61 and 402 all contained residual medieval pottery including fragments from medieval coarse ware and sandy orange ware water pipes. The latest pottery in layer 60 is the rim of an English stoneware cylindrical tavern mug probably belonging to the 18th century, while sherds of English porcelain in layer 60/61 date from the mid-18th century onwards. The latest pottery in layer 402 is blue-painted pearlware dating to c.1800.

Layer 403 produced two sherds of interest, the earlier is a medieval grey ware rim possibly from a Low Countries greyware jug (No.22), and the second is a large fragment of Metropolitan slipware jar (No.23). The latest pottery in layer 403 comprises pearlware and late slipped kitchen ware.

Of interest in layer 404 is a black basalt ware sherd from the edge of a lid, showing engine-turned decoration which was invented in 1763 (Gunsen 1982, 53), and probably dates from the later 18th century to *c.*1800, the only instance of this ware from MD9. The latest pottery from layer 404 comprises a sherd of modern flowerpot and three sherds of transfer-printed willow patterned ironstone, dating from the early 19th to 20th centuries.

The latest pottery from layer 414 comprises sherds from a creamware cup and bowl, but earlier pottery of interest was also recovered consisting of a sandy orange ware jug rim (No.24) and a sherd of green-glazed Siegburg stoneware. Layer 535 produced a single sherd of Westerwald stoneware showing a floral applied stamped pad, current from the earlier 17th century. A single sherd of creamware is the latest pottery from layer 622. Finally layer 546 produced single sherds of sandy orange ware and post-medieval red earthenware dating to any time in the post-medieval period.

Brown loam layer 408 produced a very large assemblage of 270 sherds weighing nearly 4kg and merits its own discussion. There are several cross-fits with other period 6 contexts and a sherd of Roman pottery was found indicating contamination from much lower layers. A number of sherds of intrinsic interest are described below and are listed in chronological and fabric order.

Body sherds from a Westerwald stoneware vessel show an incised and combed floral pattern of 6-petalled flowers with a blue centre and blue background. This type of decoration is current from the late 1680s and continued well into the 18th century (Jennings 1981, 123). A Westerwald stoneware GR medallion denoting King George I, II or possibly III was found and presumably dates from 1714 when the first King George came to the throne. Also of Westerwald stoneware, is part of a chamber pot with a slightly down-turned flanged rim dating from the mid-18th century (cf. Hurst *et al.* 1986, fig.108.340).

English stoneware found in layer 408 includes the remains of two 18th-century cylindrical tavern mugs, one with an obscured excise stamp. In addition, the spout from a Nottingham/Derby stoneware teapot was found, along with part of an English stoneware barrel-shaped vessel, from a tobacco jar or harvest barrel, and is from the same vessel as found in layer 479.

Tin-glazed earthenwares of interest comprise the base of a plain Anglo/Netherlands albarello with a salmon-pink fabric. A second ?Lambeth plate was found (No.25), it is similar to No.20, but has a different design showing a freely painted blue floral pattern executed with little skill.

Staffordshire-type slipware forms include an 18th-century cup with brown slip dots (No.26). For more complete examples see Jennings 1981 (fig.44. 716, 718). Another unusual find is the knob from a glazed red stoneware teapot dating to about 1770 (cf. Gunsen 1982, pl.56.69).

White salt-glazed stoneware is again common, and forms comprise plates with seed or barley moulded rims, and a plate with a plain rim, a footring base from a bowl or saucer and the recessed base from a cylindrical tavern mug. Decorated sherds comprise an example of scratch-blue, popular during the third quarter of the 18th century (No'l Hume 1969, 19) and a small fragment of bowl rim showing polychrome enamelled colours, a technique introduced from c. 1750 (Draper 1984, 39). One unusual form in white salt-glazed stoneware is present, having an oval base, panel decoration and a row of beading on the rim; it may possibly be a gravy boat. A very similar vessel, but in green-glazed creamware, occurs in the Williamsburg archaeological collections in Virginia, dated to *c.* 1770 (No'l Hume 1969, fig.18).

The usual range of creamwares is present, comprising plates with moulded rims of feather-edged, shell-edged and Royal Pattern; sherds from cylindrical tavern mugs and footring bases from bowls or saucers. There is one example of painted creamware, a bowl, showing a red Chinese-style border on the inside and black scrolled painting on the outside. A blue-painted fluted pearlware tea-bowl fragment is also present. The latest from layer 408 comprises sherds of ironstone from the same plate found in pit 656, sherds of modern flowerpot and sherds of late slipped kitchen ware, all dating to the 19th/20th century.

Layer 623

Layer 623, associated with drain 633 produced 18th-century pottery with earlier sherds, including another sherd of green-glazed Siegburg stoneware, possibly from the same vessel as that found in layer 414. Creamware is the latest datable pottery found within the layer.

The garden soils and topsoil

As most of this pottery derives from lower layers, only sherds of intrinsic interest are discussed. The date range for each context is also given.

Garden soil 200 contained much 18th-century pottery similar to that from the rest of period 6, along with 19th or 20th-century pottery current with this phase.

Dump 201 contained pottery ranging in date from the late 13th/14th to 18th century. Of note is a decorated sherd of Raeren stoneware (No.27). Dump 202 revealed a small amount of pottery dating from the late medieval period to the 17th or earlier 18th century.

Topsoil 400 produced a large assemblage dating from the late medieval period onwards, including a number of interesting 18th-century sherds. There is an out-turned bowl rim, perhaps part of a sugar bowl, in colour-glaze or Whieldon ware. Whieldon ware is an almost white earthenware decorated with different coloured glazes obtained by dusting on various metallic oxides; the glazes run during firing, producing an attractive mottled effect (Draper 1984, 45). This particular sherd shows large spots of green glaze and mottles of chocolate-brown glaze. Whieldon ware was in production from the 1740s and was in decline by the 1780s (Draper 1984, 45-6; Hughes, 62-4). A second sherd belongs to an unglazed red stoneware teapot, it shows engine-turned decoration and dates to *c.* 1770 (cf. Gunsen 1982, pl.54.67). A creamware teapot spout showing moulded floral decoration is also present. However, most of the pottery is 19th or 20th century, including a stoneware marmalade jar fragment and a stoneware stopper impressed 'DOULTON & Co. LIMITED LAMBETH' dating from the second half of the 19th century (No'l Hume 1970,79). Sherds of transfer-printed ironstone in green and brown indicate a date after 1828 as transfer-printing in colours other than blue was not perfected until then (Hughes, 129).

Layer 401 produced a proportion of residual medieval and late medieval pottery. Drawing No. 28 shows a Metropolitan slipware bowl with horizontal handles. Eighteenth-century pottery is present, while the base of a lustre ware vessel showing blue and red decoration over-painted with purple and copper lustre belongs to the 19th century. This vessel is too incomplete to attribute to a particular maker, but lustre ware in general was popular during the first half of the 19th century and could be current in period 6. The latest pottery in layer 401 comprises sherds of ironstone and late slipped kitchen ware.

Catalogue (Fig. 27)

19 Albarello or ointment pot: English tin-glazed earthenware; buff fabric with all over very pale grey tin glaze which is pitted on the inside of the base; traces of glaze also on the underside of the base; undecorated. Fill 444, pit 443

20 Plate: English tin-glazed earthenware; probably Lambeth; buff fabric with all over pale blue tin glaze and darker blue painted decoration. Fill 444, pit 443, and layer 408

21 Footring base from bowl or saucer: Chinese porcelain; blue-painted decoration depicting a man ?flying a kite. Fill 466, pit 467

22 Possible jug rim: ?Low Countries greyware; buff-grey fabric; highly fired but not a stoneware; abundant inclusions of fine, grey and colourless quartz sand; unglazed; metallic sheen on internal surface. Layer 403

23 Jar: Metropolitan slipware; all over gingery glaze; abraded slip-trailed decoration; outer rim missing but may well have been beaded (cf. Cunningham 1985b, fig. 40.7); the slip-trailed motif seems to be fairly abstract, but the decoration nearest the base of the vessel may be slip-trailed writing; internal surface just below the rim is very abraded perhaps due to some kind of secondary use. Layer 403

24 Jug rim: sandy orange ware; dull orange fabric with grey core; cream slip-coating extending to inside of neck to a depth of c. 55mms; uneven mottled green glaze which has run in several places and patches of glaze have collected beneath the rim, showing that the vessel was stacked upside down; pulled spout. Layer 414

25 Plate: English tin-glazed earthenware; probably Lambeth; as No.20 but with floral design. Layer 408

26 Cup: Staffordshire-type slipware; buff fabric; all-over very crazed yellow glaze; applied brown slip pellets and brown slip-trailed decoration; brown colour from the pellets has run staining the yellow glaze. Layer 408

27 Decorated sherd: Raeren stoneware; external brown salt glaze; moulded decoration coloured with cobalt-blue, the use of which dates from the second half of the 16th century (Hurst *et al.* 1986, 195). Layer 201

28 Jar: Metropolitan slipware; all over very abraded gingery-brown glaze which has entirely flaked away in places, along with the slip-trailed decoration. Layer 401

Discussion

The large group of flowerpot fragments from pit 656 provides ceramic evidence that the area was a garden at this time. Most of the pottery dates from the later 18th century and much of it, for example, the tin-glazed earthenware and white salt glazed stoneware, was definitely out of production by the end of the 18th century. It therefore immediately predates the demolition of the Harris' mansion, and the construction of the present house, Friary West, in 1805-7. It probably represents rubbish from the Harris' mansion redeposited during construction of Friary West and landscaping of its gardens.

Teawares from this period are prevalent, i.e. teapots, tea bowls and saucers. Cylindrical tavern mugs in stoneware and creamware are present, and seem an unlikely find in a domestic dwelling, but as they are a common find in 18th-century deposits elsewhere they may not necessarily indicate a tavern in the vicinity and may have been used in the home. The presence of the creamware gravy boat may indicate genteel manners, but the vessel is not well made and plain creamwares are commonplace. The absence of fine porcelain indicates this is not a high status site, perhaps the owners of the pottery were middle class, not upper class. The latest pottery from period 6 belongs to the second half of the 19th century or later.

Discussion of pottery from all periods in MD 9

The high degree of disturbance of the stratigraphy means that the pottery dating is problematic. However the dating of the pottery from period 2, with the raspberry-stamped sherds, the sherds of Mill Green ware and the developed cooking-pot rims, fit in well with the founding of the friary *c.* 1300. Nevertheless, this is of more help in confirming the dating of the pottery, than the pottery dating the site. Apart from a few early medieval sherds there is no evidence of activity on the site before the building of the friary.

The pottery evidence, meagre though it is, suggests that the Dissolution is not recognisable from pottery assemblages alone, as no break in activity is apparent from the point of view of pottery being deposited on site. However, the Dissolution is marked by structural evidence, which shows that the friary outbuilding was dismantled in the middle of the 16th century.

There is little evidence from the pottery that this was a high-status site and there are relatively few imported wares but this would not be unexpected as Maldon served mainly as a port for transhipment of local goods (Eddy and Petchey 1983, 66). With the exception of the decorated Raeren stonewares and the green-glazed Siegburg stoneware, all the imports would not have been out of place on an inland site. As suggested earlier, the decorated Raeren stonewares could be evidence of direct links with north-west Europe, and this could be tested by comparison with assemblages from secular sites in Maldon (many of which are unpublished). The presence of Cambridgeshire sgraffito ware may be considered unusual as Maldon is some way from its area of manufacture; however as sgraffito ware is also found at Rivenhall in north-east Essex (Drury 1993b, 92), it must have a fairly wide, if sparse distribution. The finds of Colchester ware are not unexpected, as although this ware normally has a fairly localised distribution, it could have easily reached Maldon via the adjacent rivers Colne and Blackwater, both draining in to the North Sea at either side of Mersea Island.

The presence of water pipes shows a sophisticated drainage system, which seems to be a feature of monasteries and priories (cf. Drury 1976b, 63-9). In this case the water pipes appear to have been laid inside a silted-up conduit, as a replacement drainage system.

Much pottery dating to the 18th century is present and must derive from Harris' mansion, which preceded the construction of Friary West in 1805-7. This may indicate that the economy of Maldon was thriving at this time, however large groups of 18th-century pottery seem to be a common find on urban excavations and much was found during recent excavations at Chelmsford (Walker in prep.). Either there was an increase in the amount of pottery in use at this time, or discarded pottery was dumped very close to home.

Pottery from MD10: the cloister

A small amount of pottery (493 sherds weighing 5706g) was excavated from phased contexts. Some stratified later 12th/13th-century pottery, including Hedingham ware, predates the documented date of 1292 for the founding of the friary. Other, slightly later medieval fine wares dating to the late 13th/mid 14th-century were stratified in make-ups and surfaces related to the earliest friary buildings; these included Mill Green ware, small amounts of Kingston-type ware and decorated sandy orange wares. Little pottery was recovered from later rebuilding phases, and much of this material is clearly residual. Dissolution deposits produced some examples of early/mid 16th-century pottery, including Raeren stoneware and slip-painted post-medieval red earthernware, although again in small quantities due to removal of demolition debris from site. Little post-Dissolution pottery was recovered because the upper levels were cleared by machine. The more unusual imports include a Siegburg ware jug rim and a Netherlands altar vase.

Period 1 (13th century)

A total of 43 sherds weighing 808g belongs to this period. Pottery was excavated from the fills of three pits or tree boles which cut natural. All these features were sealed, and deposit reliability is considered high for pits 972 and 1018A, but pit 941 is clearly contaminated.

Pottery from pit 972 includes the profile of a medieval coarse ware shallow dish or dripping dish, mostly likely dating to the 13th or 14th

century (No.1). Fairly early pottery was excavated from pit 1018a which produced residual Roman pottery, the rim of a Hedingham fine ware jug, and single sherds of early medieval ware and medieval coarse ware. The Hedingham ware jug fragment has a typical thickened flat-topped rim and is paralleled at Rivenhall (Drury 1993b, fig.43.127). The sherd is abraded but shows the remains of a mottled green glaze. This type of rim is often found on Hedingham rounded strip decorated jugs, perhaps dating to the later 12th to earlier 13th century (Drury 1993b, 89).

Pit 941 revealed medieval pottery, including a Fabric 12C cooking-pot rim from fill 1058 (No.2) of sub-form H2, a type datable to the early to mid 13th century, and a sherd of Mill Green fine ware. However, most of the pottery is intrusive and post-medieval comprising mainly post-medieval red earthenware but also including Raeren and Frechen stoneware and part of a Netherlands tin-glazed earthenware altar vase (No.3). A sherd from vessel No.3 was found in context 966 in period 3A. Pit 941 was excavated by machine, which probably accounts for the large quantity of intrusive pottery.

Catalogue (Fig. 28)

1. Profile of shallow dish, probably a dripping dish: medieval coarse ware; borderline Fabric 13; red-brown internal surface; grey-brown core; external surface fire-blackened; patches of blackening internally. Pit 972
2. Cooking-pot rim: Fabric 12C; pale grey with dull orange outer margins and buff external surface. Fill 1058, pit 941
3. Altar vase: Netherlands tin-glazed earthenware; buff fabric, all-over off-white tin glaze with blue and dark blue painted decoration. Pit 941, and 966 (slot 963 period 3A)

Discussion

Most of the pottery belongs to the mid 12th to 13th centuries, predating the documented date of 1292 for the founding of the friary, while the single sherd of later 13th to mid 14th-century Mill Green ware may indicate filling of pits immediately before the friary's foundation. As to function, the only specialised forms are the possible dripping dish and altar vase. Dripping dishes were used for collecting

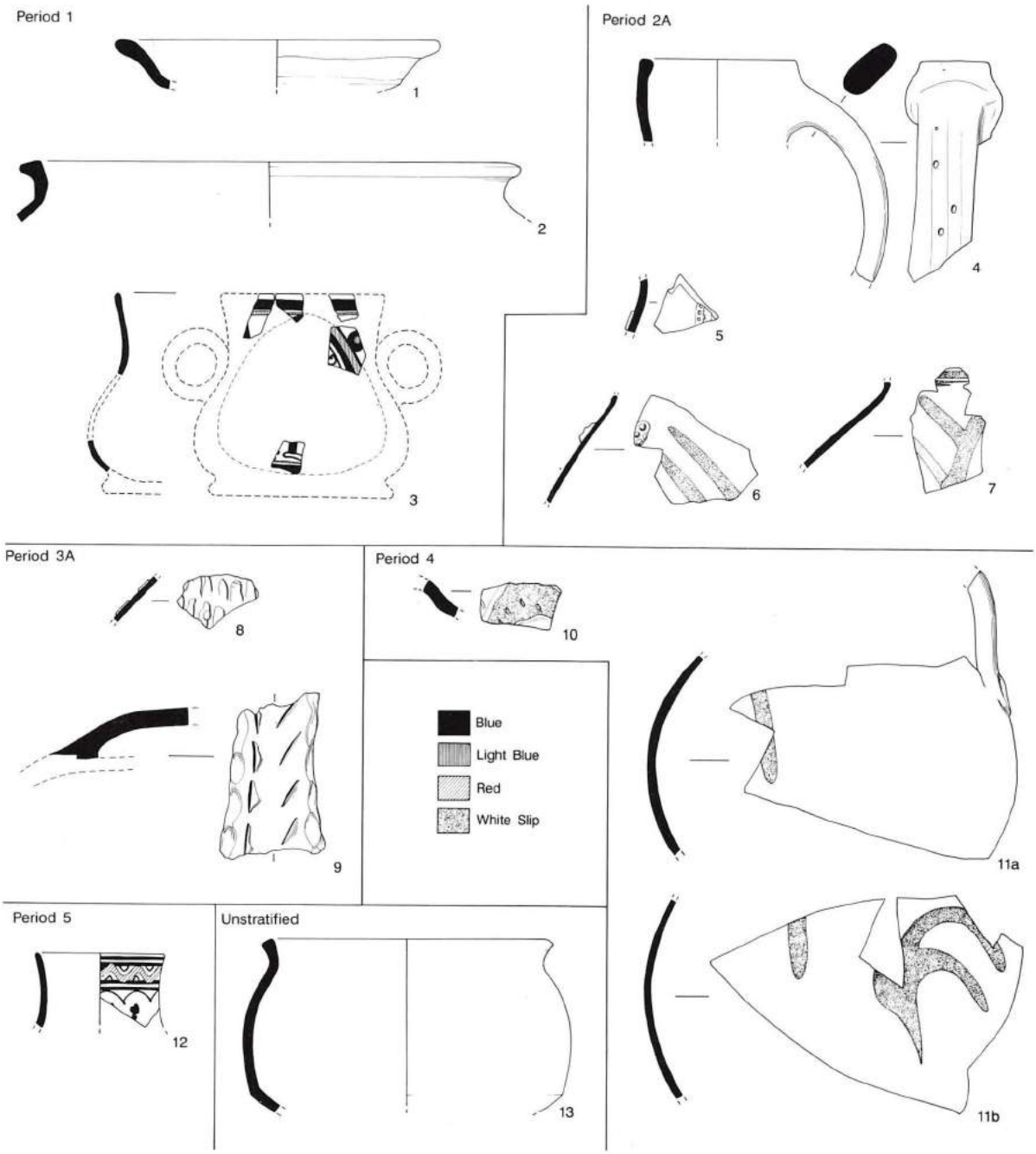

Fig. 28 Maldon Friary. Medieval and post-medieval pottery from MD10, periods 1, 2A, 3A, 4 and 5, nos 1-13

the juices when spit-roasting meat indicating the user could afford to eat joints of meat. Altar vases have been found in secular contexts (Hurst *et al.* 1986, 117) but its presence at a friary would suggest a religious significance.

Period 2A/B/C (late 13th/14th centuries)

A total of 92 sherds weighing 986g came from period 2A contexts, mainly from make-up levels and surfaces sealing pits of the previous period. Pottery was also found in fills of two foundation trenches and two adjacent grave fills cut into the make-up. Looking at the distribution of the pottery, it can be seen that most of the pottery occurred in the east cloister walk and the cloister garth. The reliability of period 2A deposits is considered to be fair in most cases, although surface 923 in the cloister garth remained open in period 3A and possibly beyond, while make-ups within the building ranges were apparently disturbed by robbing, and may have been contaminated by flooding during the excavation. Make-up 935 in particular is definitely contaminated.

The only pottery to be found in periods 2B and 2C, 5 sherds weighing 24g, came from the fills of graves which cut period 2A graves. The earlier graves were disturbed by the later graves, and by reflooring in period 2B.

Make-ups

Fine wares from make-ups 935 and 949 comprise a Mill Green ware jug rim with a ribbed handle showing the typical cream slip coating under a mottled green glaze (No.4), and a tiny sherd of Kingston-type ware showing applied pellet decoration under a green glaze. A second, larger sherd exhibiting such decoration was found in period 3A and has been drawn (No.8). Applied pellet decoration is found on several types of Kingston-type ware jugs (Pearce and Vince 1988, 44) and was made from the first phase of Kingston-type ware production from the mid 13th century. However, this decoration would not have been used beyond the mid 14th century when jugs became much plainer (Pearce and Vince 1988, 82-3). Sherds of sandy orange ware from jugs were also found within these make-ups, including a jug handle and slip-coated sherds.

Coarse wares comprise small amounts of early medieval fabrics (Fabrics 12B and 13) and medieval coarse ware. There are two medieval coarse ware cooking-pot rims with 13th-century type rims from make-up 935 (sub-forms D2 and H1) and are paralleled at Rivenhall (Drury 1993b, figs.39.40, 40.67 respectively). In addition an intrusive post-medieval red earthenware flanged rim was found in context 935.

Single sherds of medieval coarse ware and Raeren stoneware were found in make-ups 915 and 896 respectively.

Foundation trenches

Foundation 1222, within trench 1223b, produced only a single sherd of residual Roman pottery, while foundation 837, within foundation trench 858, produced a small assemblage of early medieval ware and sandy orange ware. Of interest are 13 sherds, all from the same slip-painted, sparsely glazed sandy orange ware jug. It has a very primitive appearance with dull orange-brown surfaces and a thick grey core and could almost be classified as early medieval ware. Sherds from the same vessel occur in contexts 907 and 916 in periods 3A and 4 respectively.

Surface 923

A larger amount of pottery was found in surface 923, consisting of a heterogeneous mixture ranging in date from Late Saxon to post-medieval. Several glazed wares are present including a Hedingham ware sherd decorated with an applied, rouletted strip (No.5) which is probably residual.

A second decorated jug fragment (No.6) shows cream slip painting accompanied by an unusual raspberry stamp. The fabric is a sandy orange ware tempered with red and amber sands so that under the microscope it resembles medieval Harlow ware, but is too thin-walled and too finely potted for Harlow ware. Raspberry stamps are found on Kingston-type ware and on jugs from Rye, in Sussex from the late 13th century (Pearce and Vince 1988, 43,82-3) (Barton 1979, 201-5), and occasionally occur on Mill Green ware jugs (Pearce *et al.* 1982, fig.8). Another sandy orange ware fragment, slip-painted and glazed, is tempered with white quartz and may be a Colchester-type ware product (Drury 1993b, 89-90). A single sherd of green glazed Kingston-type ware is also present. Intrusive post-medieval wares from make-up 923 comprise fragments of post-medieval red earthenware and a sherd of salt-glazed Raeren stoneware.

Period 2A, 2B and 2C graves

Little pottery was found in the fills of the two period 2A graves in the east cloister walk. There are cross-fits between sherds of sandy orange ware in contexts 954 and 988, the fills of grave 953, indicating the fills were deposited at the same time. These also fit with sherds from grave 948 in period 2C and make-up 907 in period 3A, to form the shoulder of a jug, which could date any where from the 13th to 15th century (No.7). Finds from grave fill 976 include a small sherd of Hedingham ware strip jug which is probably residual.

Only one or two sherds were found in the fills of the period 2B and 2C graves and is probably residual material disturbed from the period 2A graves.

Table 10: Quantification of pottery in MD10 period 2 by feature, fabric, and sherd count

_ = contaminated P = Prehistoric pottery present R = Roman pottery present

No.	Feature	Relationship	Fabrics										Wt (g)	
			10	12B	13	20	21	22	23D	35	40	45C		
Period 2C														
947	grave 948	cut grave 1001	-	-	1	-	1	-	-	-	-	-	16	
1007	grave 1006	cut grave 1038	-	-	-	2	-	-	-	-	-	-	5	
Period 2B														
1028	grave 1038	cut 935	-	-	-	-	1	-	-	-	-	-	3	
Period 2A														
988	grave 953	cut 935	-	-	-	1	1	-	-	-	-	-	8	
954	grave 953		-	-	-	-	1	-	-	-	-	-	6	
976	grave 977	cut 935	-	-	1	4	-	1	-	-	-	-	46	R
923	surface	overlay 922	1	-	10	5	11	1	1	-	4	1	293	R
1222	foundation tr. 1223b	cut 1335	-	-	-	-	-	-	-	-	-	-	0	R
837	foundation trench 858	cut 935	-	-	2	-	14	-	-	-	-	-	252	R
915	make-up		-	-	-	1	-	-	-	-	-	-	4	
896	make-up	overlay 935	-	-	-	-	-	-	-	-	-	1	3	R
935	make-up	sealed 949	-	2	2	11	1	-	1	3	1	-	331	R
949	make-up	sealed period 1	-	-	2	5	3	-	-	-	-	-	43	P

Catalogue (Fig. 28)

4 Jug rim and handle: Mill Green ware; grey fabric with thick red-brown margins; fabric slightly sandy for Mill Green ware; cream slip-coating under partial mottled green glaze; slight ribbing of handle which has been pierced several times with a pointed tool producing characteristic bulges on the under side of the handle. Make-up 935

5 Body sherd: Hedingham fine ware; pale creamy orange fabric; self-coloured rouletted applied strip; mottled green glaze. Surface 923

6 Part of jug: sandy orange ware; dull orange fabric with darker internal surface; thick cream slip-painted stripes and the remains of an applied cream slip raspberry stamp; dark green glaze. Surface 923

7 Part of neck and shoulder of jug: sandy orange ware; orange fabric pale grey core; cream slip-painting under a partial plain lead glaze. Fills 954 and 988, grave 953 (also residual in 947, period 2C grave 948, and make-up 907, period 3A)

Discussion

With the possible exception of foundation 837, none of the pottery is from a really well stratified context, and not unexpectedly a lot either precedes or post-dates the founding of the friary. For example, make-ups 935 and 949, and surface 923, which produced the largest assemblages, contained both residual late Saxon/early medieval material and intrusive post-medieval sherds. However, the sandy orange ware raspberry stamped sherd, the sherds of ?Colchester ware, and the Mill Green and Kingston-type wares from these contexts all fit in quite nicely with a *c.*1300 date. The graves and foundation trenches are slightly more reliable contexts and produced only medieval pottery, but this comprises either earlier pottery predating the friary or pottery that is not closely datable. Roman pottery, which is an indicator of residuality, was found in the majority of period 2A contexts.

The pottery from periods 2B and 2C cannot be demonstrated to be any later than that from period 2A. The cross-fits between the grave fills in periods 2A and 2C would indicate that the fill of the period 2A grave was contaminated with the fill of the period 2C grave.

Period 3A/B (late 14th-early 16th centuries)

A total of 105 sherds of pottery weighing 972g was excavated from period 3A. Pottery was concentrated at the west end of the north range and north cloister walk, and, in the east range and east cloister walk, where it overlay pottery from period 2. Much of the pottery is residual from period 2. As with period 2 there is a risk of contamination from robbing.

All the pottery from period 3B, 37 sherds weighing 172g, came from re-floorings in the east range. Again, much of the pottery is residual, while some of the later floor make-ups are definitely contaminated.

From the west end of the north range and north cloister walk (Period 3A)

Rectangular pit 1344, levelling 1036 and wall 1031, produced only one or two sherds of medieval pottery, comprising Fabrics 12A, medieval coarse ware and sandy orange ware. The only form present was found in pit 1344, an early to mid 13th-century type of medieval coarse ware cooking-pot rim (sub-form H2).

From the east cloister walk (Period 3A)

Much pottery came from make-up layer 907 deposited over the cloister walk, along with a smaller amount in make-up 910 further south. As would be expected with make-up layers there is much residuality, with make-up 907 containing pottery from the prehistoric period to the 18th century or later.

Medieval glazed wares from make-up 907 comprise two Mill Green ware jug rims, decorated Kingston-type ware (No.8) and sandy orange ware. A sherd from sandy orange ware jug No.7 occurs here, along with a sherd from another sandy orange ware jug, originally occurring in context 837 in period 2A. Medieval coarse ware forms comprise part of a possible bowl with a flanged rim and a cooking-pot fragment with a blocked, neckless rim (sub-form H3) datable to the late 13th to 14th centuries which would fit in with the dating of the fine wares. The rest of the pottery in make-up 907 is post-medieval, with the extreme date range of mid 16th to 18th-20th centuries. In general, the pottery in this make-up is similar to that found in surface 923 in period 2A, except that here later pottery is present.

The east range (Period 3A)

Foundation packing 806 for the west wall of the range yielded only single residual sherds of shell-tempered ware (Fabric 12A) and Roman pottery. In room E, floor layer 930 produced a small amount of residual medieval pottery including Hedingham ware.

Also in room E, the three aligned slots 963, 964, and 967 produced only single sherds. A medieval coarse-ware cooking pot with a flanged rim (sub-form E5A) datable to the late 13th to 14th century was found in slot 967. A sagging base in the same ware was found in slot 964 and slot 963 produced a sherd from the Netherlands altar vase found in period 1 (No.3). Post holes 926 and 928 both contained small amounts of medieval pottery including part of a medieval coarse ware ?curfew (No.9), and another medieval coarse ware late 13th to 14th-century type cooking-pot rim (sub-form H3) from post hole 926.

Catalogue (Fig. 28)

8 Body sherd: Kingston-type ware; off white slightly pinky fabric; self-coloured applied pellets; under mottled green glaze. Make-up 907

9 ?Curfew handle: medieval coarse ware; pale grey fabric; neatly executed thumbed edges and stab marks. Fill 929, post-hole 928

The east range (Period 3B)

In room D, re-flooring 849 produced a group of medieval pottery with diagnostic sherds. These comprised slip-painted and green-glazed sandy orange ware, Mill Green fine ware, and the only example of Mill Green coarse ware to be found on site, providing a mid 13th to mid 14th-century date for the group. The re-flooring of room E, contexts 868 and 833, produced a comparable group, with the exception of an intrusive sherd of modern transfer-printed ironstone in re-flooring 868.

Discussion

Most of the pottery predates this period and several intrusive sherds post-date it. Only small amounts of pottery were found, mainly because of widespread truncation of later surfaces within the friary building. It is likely that the pottery is almost entirely residual. The best dating for period 3 is provided by a floor tile, dated to the late 14th century, from period 3A make-up 907.

Period 4 (mid 16th century)

A total of 106 sherds of pottery weighing 1618g was excavated from period 4, which relates to the Dissolution, dated by documentary evidence to 1536-8, and its aftermath. Pottery came from a series of patchy rubble spreads overlying the cloister walls, and the fills of hollows 914 and 861. These were the uppermost layers exposed after machining, but there is only one definite case of contamination.

Much of the pottery, almost half (by sherd count), is residual medieval pottery derived from earlier contexts. Two later 14th to 15th-century sherds of intrinsic interest were found, a Siegburg stoneware jug rim and a sherd of Mill Green-type ware with sgraffito decoration (No. 10).

Demolition deposits

Pottery that could date from the time of the Dissolution was excavated from a group of demolition deposits at the west end of the north cloister walk. Rubble spread 959 produced 40 sherds of post-medieval red earthenware from the body of a slip-painted jug (No.11), and the frilled base from a Raeren salt-glazed bulbous drinking jug. These vessels could be contemporary, dating to around the mid-16th century. Rubble spread 885, which overlapped the east cloister wall, produced a sherd of a post-medieval red earthenware frilled base in imitation of Raeren stoneware, dating to the late 15th, or more likely, the 16th century. Other post-medieval red earthenware forms are the base of a possible flowerpot in rubble spread 955 and a sherd from a

Table 11: Quantification of pottery in MD10 period 4 by feature, fabric and sherd count

_ = contaminated R = Roman pottery present

No.	Feature	Fabrics														Wt	
		12B	13	20	21	23D	35	35B	40	42	45	45B	45C	45D	48A	(g)	
959	debris	-	1	-	-	-	-	-	40	-	-	-	1	-	-	428	
852	debris	1	-	4	-	-	-	-	5	-	-	-	-	1	-	39	
997	debris	-	-	-	2	-	-	1	-	-	-	-	-	-	-	61	
955	debris	-	-	4	1	-	-	-	3	2	-	-	-	-	1	545	
1021	debris	-	-	-	-	-	-	-	1	-	-	-	-	-	-	11	
1024	debris	-	-	1	1	-	-	-	1	-	1	-	-	-	-	96	
916	debris	-	-	16	3	1	-	-	-	-	-	1	-	-	-	248	R
904	debris	-	-	-	-	-	-	-	2	-	-	-	-	-	-	8	
865	debris	-	-	1	-	-	-	-	-	-	-	-	-	-	-	70	
885	debris	-	-	1	-	-	-	-	1	-	-	-	-	-	-	77	
913	hollow 914	1	2	-	1	-	1	-	-	-	-	-	-	-	-	17	R
862	hollow 861	-	-	1	-	-	2	-	-	-	-	-	-	-	-	18	

possible chafing dish in rubble spread 1024, a form that could be current with the Dissolution (Cunningham 1985b, 71). The other post-medieval red earthenware sherds present are nearly all undiagnostic and could belong any time in the post-medieval period.

Other contemporary pottery includes a sherd of Frechen stoneware in rubble spread 852, and a sandy orange ware ribbed handle probably from a cistern in rubble spread 955. The Frechen stoneware sherd is salt-glazed but does not show the tiger-ware effect developed in the later 16th century (Hurst *et al.* 1986, 214). There are two sherds of Surrey-Hampshire border ware with a green and brown bichrome glaze in rubble spread 955. This is quite rare (Pearce 1992, 85), as this ware was first exported to London in the second half of the 16th century; it may just be current with the Dissolution but is perhaps more likely to be later. Also from rubble spread 955 is an intrusive fragment of 18th-century Chinese porcelain tea bowl.

Catalogue (Fig. 28)

10 Flatware sherd: Mill Green-type ware; fine red-brown fabric, grey core; cream-slip decoration which has been emphasised by incising grooves around the edges of the slip; the slip also shows stabbed decoration; slip-coating on the underside of sherd; all over internal and external partial plain lead glaze. Demolition rubble 997

11a,b Body of jug: post-medieval red earthenware; red fabric with reduced outer skin; very faint scrolled white slip-painting. Demolition rubble 959

Discussion

Contrary to what might be expected there are no large dumps of pottery relating to the Dissolution, although some of the pottery represents contemporary deposition. However this picture fits the stratigraphic evidence, where Dissolution deposits were removed in antiquity.

Period 5 (mid/late 16th-late 18th centuries)

A total of 74 sherds of pottery weighing 876g was excavated from a series of post holes, two conduits and a pit cut. The fill of conduit cut 847 (context 846) produced sherds of post-medieval red earthenware, some of which appear to come from flowerpots. Above this, the latest pottery from fill 919 (conduit 920) was a sherd of intrusive 19th to 20th-century ironstone.

The only post hole to contain pottery from the series of east-west aligned post holes was 1266; this produced a sherd of modern flowerpot from the middle fill (1264) and sherds of residual slip-coated and green-glazed sandy orange ware from upper fill (1265).

Many of the non-aligned post holes produced pottery, but usually only a few sherds of residual medieval pottery derived from earlier features. Post holes producing such pottery comprise 1295, 1288, 826, 864, 901, 884, 828, 818, and 867.

Post holes containing post-medieval pottery comprise 820, 843, 830, 898 and 873. Post hole 820 produced a tiny unidentifiable sherd of tin-glazed earthenware and two sherds of modern ironstone, one showing transfer-printed decoration. The largest assemblage from period 5 was excavated from post-hole 843 (context 842/843). Residual medieval pottery is present, along with single sherds of Raeren and Frechen stoneware. Of interest is part of an Anglo-Netherlands tin-glazed earthenware vessel (No.12). It most resembles early to mid 17th-century drug jars (cf. Jennings 1981, figs 91-3) but lacks the outward flaring rim; the decorative motifs however, are similar. Post-medieval red earthenware is present, and featured sherds comprise the rim and handle of an jug and a slip-painted body sherd; neither is glazed. In common with features 1266 and 820, the latest pottery is modern ironstone. Post-medieval pottery found in post hole 830 comprises a glazed body sherd of post-medieval red earthenware and a sherd of late kitchen earthenware. Finally, single undiagnostic sherds of post-medieval red earthenware were excavated from post holes 989 and 873.

The lining of N-S drainage ditch 1276 produced a single sherd of creamware dating from the mid 18th century. Pit cut 839 produced the handle from a cylindrical mug (Cunningham's type E12),with a dark green glaze indicating a late 16th-century date.

Catalogue (Fig. 28)

12 Rim of vessel: Anglo/Netherlands tin-glazed earthenware; buff fabric; all-over off-white tin glaze discoloured by patches of grey; blue-painted decoration with single gingery coloured painted wavy line. Context 842/3

Discussion

The pottery assemblage reflects the fact that period 5 is a long-lived phase with little activity. The presence of post-medieval red earthenware flowerpots in the fill of conduit 847 would support the idea that this area was a garden.

Period 6 (early 19th century onwards)

As would be expected in a garden, only a small amount of pottery, a total of 31 sherds weighing 250g was excavated. Pottery was found in several features, but in small quantities and much is residual medieval material of no intrinsic interest.

Post-medieval red earthenware is the most common ware, but by period 6 most will be residual. Occurring for the first time in the sequence are sherds of Staffordshire-type white salt-glazed stoneware dating to the 18th century and a sherd of brown English salt-glazed stoneware dating from the later 17th century onwards. Modern pottery comprises the base of a pearlware footring bowl dating to *c.* 1800, and two sherds from a transfer-printed ironstone plate, which could be as late as 20th century. In addition there are sherds from a modern flowerpot and a roughly made dish in the same ware, which probably also had a garden use.

Discussion

The assemblage is what would be expected from a garden, a small scatter of assorted sherds and the presence of flowerpots. The modern 19th/20th-century pottery would seem to come from the structures, cold frame trench 1213, wall trench 1210 and the lining of incinerator 961.

Unstratified pottery

13 Small cooking pot: Early medieval ware; unstratified but of intrinsic interest as it is partially complete; fire-blackened external surface; red-brown internal surface, grey core; coil-built; patches of blackening internally. U/S context 800

Discussion of pottery from all periods in MD 10

The confused nature of the stratigraphy means that the pottery is of little value in dating the site; however, the following observations can be made.

The St Neots ware, early medieval fabrics, Hedingham ware and some of the medieval coarse ware, predates the founding of the friary *c.* 1300, indicating activity on the site before the friary was built. The presence of Mill Green ware, Kingston-type ware, the raspberry-stamped sandy orange ware, and the cooking pots with late 13th to 14th-century type rims (sub-forms H3 and E5A) could be current with the first occupation of the friary. Less pottery dates to the late medieval period, it comprises the Siegburg stoneware, the Mill Green-type ware dish fragment (No.10), and the sherds of late medieval sandy orange ware. Little pottery belonged to the Dissolution phase (period 4), although intrusive pottery in period 1 (context 941) comprising the altar vase and German stonewares could have been current during the Dissolution.

There is little pottery post-dating the Dissolution, with only small amounts of 17th, 18th-century and modern pottery. Post-medieval red earthenware may account for 33% of the total but this is mainly because large, thick walled vessels were made in this ware, resulting in high sherd weights.

The only evidence of overseas trade is the Netherlands tin-glazed earthenware vessel(s) and the German stonewares, which are a common find on inland sites (except for the Siegburg stoneware).

Comparison of pottery from MD9 and MD10

These excavations are of different areas of the same site, and as would be expected produced similar material; for example both produced the same medieval fine wares, and late medieval pottery predating the Dissolution but little in the way of Dissolution deposits. However, MD10 revealed a much larger proportion of medieval pottery dating from the later 12th and 13th centuries, (although much is residual in later contexts), while MD9 produced a much more post-medieval pottery. This is largely because of more extensive excavation of post-medieval stratigraphy at MD9.

Acknowledgements

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I would also like to thank John Cotter for identifying Colchester ware jug rim MD9 No.7.

MISCELLANEOUS FINDS

by H. Major, with a contribution by D.D. Andrews

Introduction

The reasonably large size of the small finds assemblage enables comparisons of the range of objects present to be made between the outbuilding (MD9) and the cloister (MD10), and also comparison of the pre- and post-Dissolution material. To this end, objects were assigned to a functional category, based on those used for the Colchester small finds reports (Crummy 1988). The categories used were:

1. Objects of personal adornment or dress
2. Toilet, surgical or pharmaceutical instruments
3. Objects used in the manufacture or working of textiles
4. Household utensils and furniture
5. Objects used for recreational purposes
6. Objects employed in weighing and measuring
7. Objects used or associated with written communications
8. Objects associated with transport
9. Buildings and services
10. Tools
11. Fasteners and fittings
12. Objects associated with agriculture, horticulture and animal husbandry
13. Military equipment
14. Objects associated with religious beliefs and practices
15. Objects and waste associated with metal working
18. Objects the function or identification of which is unknown or uncertain.

The only categories (16 and 17), for which there are no objects from the site, are those associated with bone working and pottery manufacture. The clay pipes and vessel glass are described separately after the description of the other finds by categories.

The proportions of material within each category for the pre- and post-Dissolution periods are presented in Figs 29 and 30. Category 5 has been omitted from the pre-Dissolution graph (Fig. 29), as this is entirely intrusive clay pipe. While it would be interesting to look at a further breakdown into periods, it is considered that the number of finds within each period is too small to make the results meaningful (there are, for example, only two objects from each of periods 1 and 2A of MD9).

Some function categories have been excluded from the graphs, namely categories 9, 12, 13, 14 and 18. There are only two items associated with animal husbandry. One is a small bell of a type often associated with animals, but possibly used for other purposes, and possibly with a religious function. The other item is a curry comb. The single item of military equipment is a 20th century gun cartridge, intrusive in a medieval context. The only object definitely associated with religious practices was a fragment from a bone or ivory crucifix, lost immediately after excavation in summer 1991. Category 9 (buildings and services) has also been excluded, but has been given detailed coverage elsewhere (see Building materials, above). The largest category overall is that of unidentified objects (category 18), accounting for 23% of occurrences in MD9 (though closely matched by clay pipe), and 35% at MD10. The bulk of the unidentified objects are of iron, principally scraps of sheet and dubious nail shafts. The clay pipes (category 5) were bulked for analytical purposes, with all the pipes from a single context being treated as one occurrence, as were the nails (category 11).

Certain categories can be seen to have a low occurrence at all periods. These include toilet, surgical and pharmaceutical instruments, objects employed in weighing and measuring, and objects associated with transport (the latter category being entirely horseshoes and horseshoe nails, although some of the buckles may have been used with horse harness).

There are clear differences between the two sites in the occurrence of some categories. Objects of personal adornment are more abundant in the area of the outbuilding (MD9) throughout its life. Category 15, represented principally by waste lead is more abundant in the cloister (MD10) at all periods. This material is probably associated with construction of, or repairs to, the building, and this site also has a higher proportion of other types of building material (not shown on the graphs).

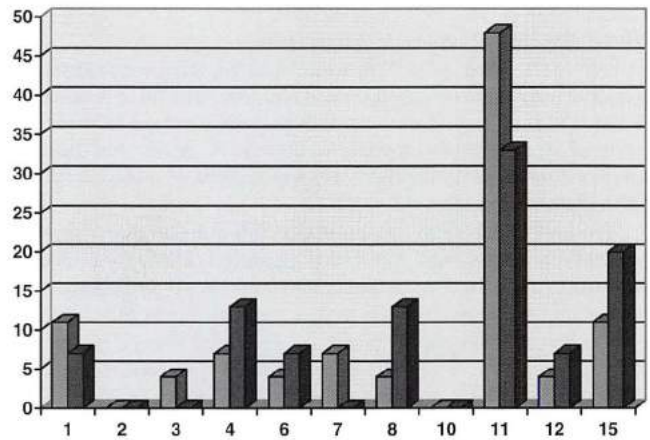


Fig. 29. Finds categories: pre-Dissolution and Dissolution contexts
Horizontal axis - Finds categories
Vertical axis - percentage of finds within each category

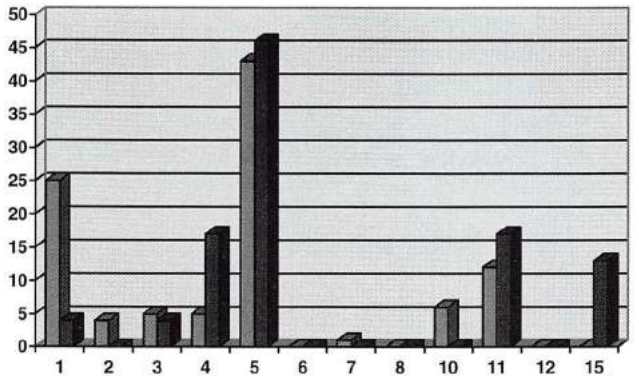


Fig. 30. Finds categories: post-Dissolution contexts
Horizontal axis - Finds categories
Vertical axis - percentage of finds within each category

Pre-Dissolution

The finds relating to the friary are predominantly functional. There is little evidence of religious activities (category 14), although peripheral activities, such as the preparation of manuscripts have left some physical record (category 7), and the gold finger-ring is of a type often worn by ecclesiastics. Such material would usually have been removed as a result of the Dissolution. Item 42, a bell, could be from a sacring bell. (I am grateful to Dr L. A. S. Butler for comment). Apart from finds of unknown function, the most common category of find from pre-Dissolution contexts on both sites was 'fasteners and fittings' (category 11), of types commonly associated with buildings or furniture, including nails, strap fittings and hinges. As noted above, lead was being worked on the site (category 15), but there is little evidence for any other type of metalworking.. There is evidence for the presence of horses within the friary precinct in the form of horseshoes (category 8) and a curry comb (category 12), both of which were found in floor surfaces within the outbuilding (MD9), which is interpreted as a stable.

Two categories are completely absent from the pre-Dissolution assemblage, toilet instruments (category 2) and tools (category 10). The latter category might have been expected to occur, as it includes such normally common artefacts as knives. It probably indicates that any artisan activities, such as carpentry, were occurring away from the excavated areas, although it is possible that some of the tools from later contexts are residual.

Post-Dissolution

MD9 as a whole produced far more post-medieval objects than MD10 because the upper levels of MD10 were not so rigorously excavated. It is more likely, therefore, that small objects from MD10 were not collected, and this may have affected the proportions in some categories, particularly category 1.

The range of post-medieval objects reflects the use of the site as a garden. The most common small find for this period was clay pipe (comprising the whole of category 5, objects used for recreational purposes), with a fairly high occurrence of items of personal adornment, principally 18th and 19th-century buttons, from MD9 (category 1). Both categories can be seen as objects which might be used or easily lost in a garden. Objects associated with metalworking (category 15) are fairly common on MD10, but not MD9, and, as with the pre-Dissolution finds, much of the material in this category is scrap lead and may be associated with building work. The nails found may have been used in the garden for various purposes, such as fixing trellises to walls.

There are no objects for weighing and measuring (category 6), associated with transport apart from a few horseshoe nails (category 8), or associated with animal husbandry (category 12).

The finds

The illustrated material is presented predominantly by category, and not by material. However, the vessel glass and clay pipes, being entirely post-medieval finds, are described separately after the main description by categories. The iron was X-rayed, but not cleaned, so details are unclear in some cases. Objects are copper alloy unless otherwise specified.

1. Objects of personal adornment (Fig. 31)

This category includes both jewellery and more utilitarian objects such as buttons. There was a single item of jewellery, a gold ring (No. 1) recovered from the floor of the outbuilding (MD9), although from a context which was contaminated. Six definite or possible buckle fragments were found, of which only one is definitely from a medieval buckle (No. 2), although another fragment from a medieval context (MD9, 673) may be part of a buckle. Of the remainder, only one is datable, and is an 18th-century type (MD9, 408).

There were two strap ends, one uncertain (No. 5). The other was a plain folded sheet, 31x18mm, with a crudely punched rivet hole, from MD9, 620 (period 3A).

There is a single, and somewhat dubious, medieval button in lead alloy, probably pewter (No. 7). The remainder of the buttons are common types of the later 18th-20th centuries, including four-hole sew-through buttons and a complete two-piece bone and copper alloy button. Most are likely to be contemporary with their contexts, the exception being a 19th/20th century button from MD9, 440, which must be intrusive in this period 5 context.

A single copper-alloy wire loop came from MD9, 440 (period 5). The type is as Caple 1985, fig. 30.82, and was probably sewn onto clothing for attaching 'points' to.

A plain riveted mount came from a period 4 context on MD10, and a collar stud of bone and a heel iron from MD9, period 6. The latter is unlikely to be earlier than the 19th century.

1. Gold finger-ring. The form is stirrup shaped, but with a cupped bezel. The band has rope-effect moulding inside and out and there are two small beads on each shoulder. The bezel encloses a small, clear 'stone', probably crystal, with six facets, rather irregularly cut. Such rings were often worn by ecclesiastics (Hinton 1982, 14), and although this example appears small for a man's ring, experiments show that it would fit the little finger of a small man's hand. There is wear on one side only of the inside of the ring, and corresponding wear on the outside, supporting the theory that it was worn on the little finger. The combination of the stirrup shape, popular during the 13th-15th centuries, with a cupped bezel suggests a fairly late date in the middle ages. MD9, SF20, 654, floor make-up, period 2 (late 13th to 14th-century context).
2. Part of a distorted trapezoidal buckle frame, with zig-zag decoration. It has been cast to appear as if it were made from a strip folded over at the corners. Probably 14th-15th century. MD9, SF10, 549, demolition debris, period 4 (mid 16th-century context).
3. Rectangular double buckle, with triangular ends, and a small projection at either end of the cross-bar. While the general form was in use from the middle ages onwards, the medieval ones tend to be rather more rounded. This very squarely moulded example is probably post-medieval, although it could be a residual medieval piece. MD9, SF17, 623, levelling, period 6 (19th-century context).
4. Small circular iron buckle with pin, cracked. This is probably a residual medieval buckle. MD9, 414, levelling, period 6 (19th-century context).
5. Sheet, folded over, with cabling along the fold, and incised herringbone decoration. This may be part of a folded sheet strap end, and could be contemporary with the postulated date of the context. For a parallel see Hinton 1990, 506, 1096. The latter is 'medieval', but residual in a later context. MD9, 702, external surface, period 3B (late15th to mid 16th-century context).
6. Bone and copper-alloy two-piece button, with convex bone back piece with four holes set on the edge of an incised circle. The front is a flat sheet of copper alloy clipped over the edge of the back. This button is somewhat unusual, in that it is complete. A back piece from a similar button came from a mid to late 18th-century context at Winchester (Biddle and Cook 1990, 576, no. 1722), and there are similar, but also incomplete, examples from Moulsham Street, Chelmsford (Major, in prep.) and Braintree (in Braintree Museum). MD9, 402, levelling, period 6 (19th-century context).
7. Pewter? A disc with damage to the centre, and now folded in half. The top has moulded concentric circles. It has been included in this category as a possible button, although it is possible that it had another function. MD10, SF15, 935, floor make-up, period 2A (late 13th to early 14th-century context).

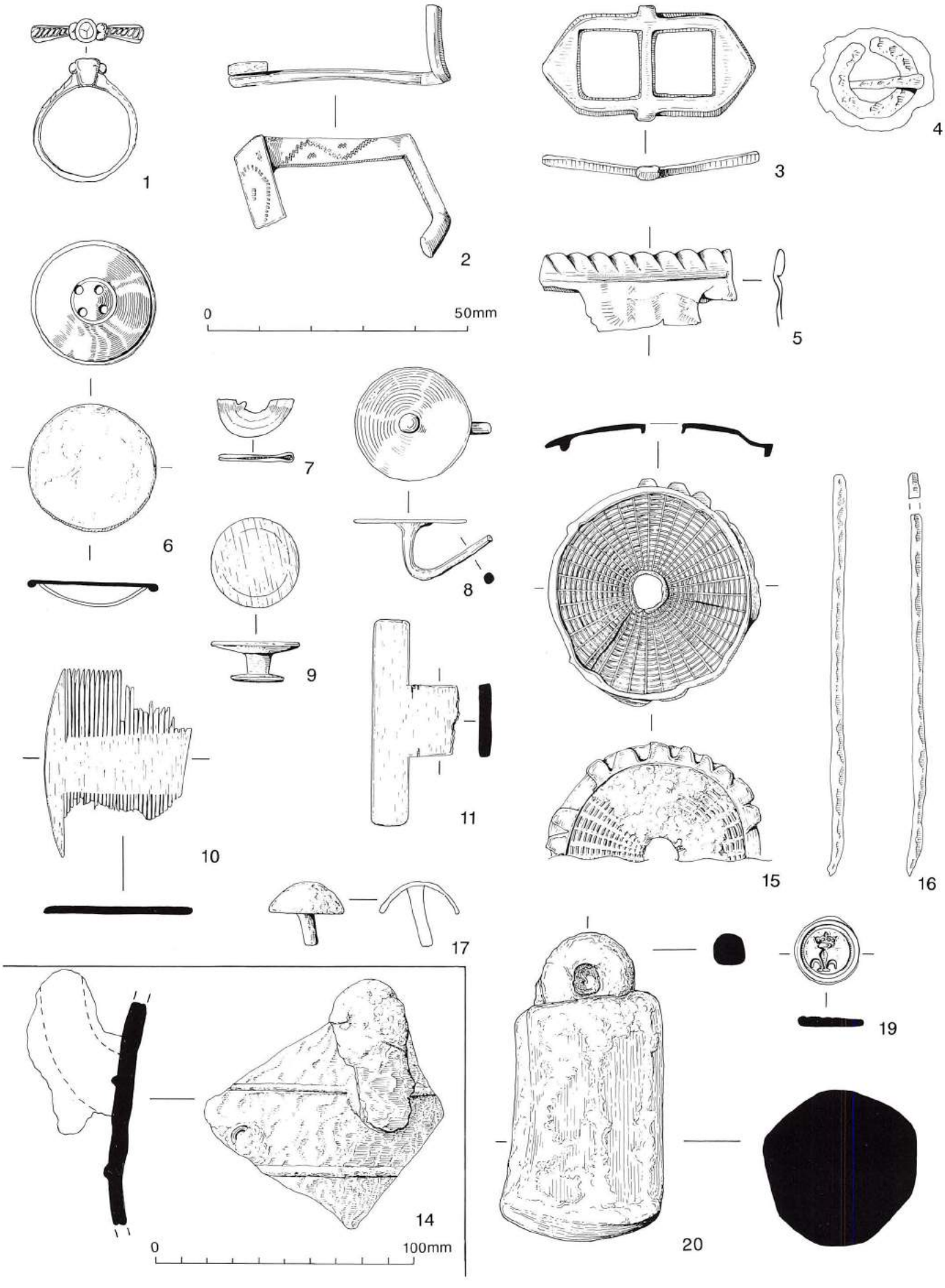


Fig. 31 Maldon Friary. Small finds, nos 1-20

8. Plain disc mount with separate rivet, now bent. Probably from a strap or belt. MD10, SF25, 1021, demolition debris, period 4 (mid 16th-century context).
9. Bone collar stud. The top is stained green from contact with copper alloy, and there are traces of copper alloy still remaining on the edge, probably from a band edging the stud. There is a faint mark on the top of the disc which probably indicates the edge of the band. MD9, 60/61, levelling, period 6 (19th-century context).

2. Toilet Implements (Fig. 31)

Three bone comb fragments came from post-Dissolution contexts in addition to the two illustrated.
10. Double-sided bone comb fragment with fine, short teeth and a convex end. A fragment from a very similar, but slightly larger comb came from MD9 context 466, and both combs are similar to a comb from a 19th-century context at Winchester (Galloway 1990, 677, no. 2185), sharing its unusual characteristic of having fine teeth on both sides. MD9, 69, post-hole 68, period 5 (mid 16th to 18th-century context).
11. Double-sided bone comb fragment. The teeth have been filed down, presumably after being broken, and the cuts are now barely visible. The edge where the teeth were appears uniformly worn with the rest of the object. Presumably only some of the teeth broke, and the owner wished to carry on using the comb. MD9, 408, levelling, period 6 (19th-century context).

3. Objects used in the working of textiles

There were six dressmakers' pins from post-medieval contexts. They included two examples with heads of Caple's type J (Caple 1985), one of Caple's type K, which was later 16th century at Chelmsford, and one with a small globular head, likely to be 16th-17th century.

4. Household utensils and furniture (Fig. 31)

Lava querns (Not illustrated)
12. Two fragments from different querns, both of which are quite thick for a medieval flat quern, and may be from pot querns. One has a grooved grinding surface, probably radial, with some polish through wear. The other surface is rough, and probably damaged. Max. surviving thickness 30mm. Wt. 312g. The second fragment has a grinding surface which is possibly grooved, but very worn, and a fairly rough undersurface. 32mm thick. Wt. 362g. MD9, 626, demolition debris, period 4 (mid 16th-century context).
13. Fragment, probably from a lower stone of a flat quern. The grinding surface has roughly radial grooves, the other surface is rough. The edge of the central hole is present, giving a diameter greater than 500mm. Max. thickness 28mm. Wt. 914g. MD9, 654, floor make-up, period 2 (late 13th to 14th-century context).

Other household items
14. Cast-iron vessel, with part of the handle. The external surface is ribbed. MD9, 466, levelling, period 6 (19th-century context). Another cast-iron fragment, from 436, period 5, is probably also from a vessel.
15. Lid or box top, probably post-medieval and intrusive in its context. It is a sheet disc with embossed basket-weave decoration and a central hole, probably to take a knob. The edge of the disc has been turned under, then snipped and turned out again to form a groove, containing traces of an unidentified white material, c. 1mm thick, and possibly laminated. MD10, SF26, 1021, demolition debris, period 4 (mid 16th-century context).
16. Iron needle, tip bent. MD9, 659, external dump, period 3B (late 15th to mid 16th-century context.
17. Mushroom headed stud, possibly an upholstery stud. MD9, 479, external surface, period 5 (later 16th to 18th-century context).
18. (Not illustrated) Cast ring thimble, ht. 10mm, internal diam. 15-17mm. Holmes (1988) sees ring thimbles as being in use from c 1450. MD9, 91, pit 90, period 5 (later 16th to 18th- century context).

6. Objects associated with weighing and measuring (Fig. 32)
19. Copper-alloy coin weight, with a crown and fleur-de-lys on one side. Diam. 12mm, wt. 1.7g (26.2 grains). A very similar, but larger, weight came from Norwich (Margeson 1993, 210). This example is probably for a quarter-noble of the issues between 1412 and 1464 (weight given as 26 grains in Mitchell & Reeds 1993). MD9, 634, levelling, period 3B (late 15th to mid 16th- century context).
20. Lead weight. Heptagonal section, rounded base, iron loop. 284g (10oz) MD10, SF17, 915, floor make-up, period 2A (late 13th to 14th-century context).

7. Objects associated with books and writing (Fig. 32)
21. Writing lead, flat end missing. It probably belongs to Winchester class 2, which comprises rather crudely formed leads which may have been used by artisans rather than scribes. The majority of the type comes from 13th to 14th-century contexts at Winchester and elsewhere (Biddle & Brown 1990, 736). MD9, 585, levelling, period 3B (late 15th to mid 16th century- context).
22. Parchment pricker of turned bone, with a knob head. The iron point is broken. There is a darker band round the bottom of the shaft, which may be applied colouring. The type is identified and discussed in Biddle & Brown 1990, 733-5, although it is considered by some that these objects may be styli (Margeson 1993, 69-71). MD9, 714, make-up, period 2 (late 13th to 14th century-context).
23. Book clasp in copper alloy, complete with separate back plate fastened by three rivets. The hook is damaged, and the central hole may contain leather traces. The decoration is typical of the type, which is probably entirely 16th century. This object may therefore date from the last years of the use of the friary, although a post-Dissolution date is also possible. MD9, SF5, 440, pit 439, period 5 (later 16th to early 18th-century context).

10. Tools (Fig. 32)

The few objects in this category all came from post-Dissolution contexts on MD9, although any of them could be residual. The objects which could be classified as tools comprised three knives (one not illustrated), a fragment which might be from a tanged trowel (context 444), and two whetstone fragments. It is, perhaps, surprising that there were no finds of tools from earlier contexts.

24. Iron knife, with whittle tang, point probably missing. MD9, SF3, 466, period 6 pit 467 (19th-century context).
25. (Not illustrated) Iron knife with perforated scale tang, fragmentary. Original L. *c* 135mm. MD9, 550, post-hole 551, period 5 (later 16th to 18th-century context).
26. Sandstone whetstone fragment, rectangular section. Wt. 72g. MD9, 466, pit 467, period 6 (19th-century context).
27. Sandstone whetstone fragment, probably burnt greensand, square sectioned with a bevelled end. Wt. 54g MD9, 466, pit 467, period 6 (19th-century context).

11. Fasteners and Fittings (Figs 32, 33)
Nos 28 to 36 are all iron.

Locks and keys
28. Barrel padlock with cylindrical case, apparently plain, and U-shaped shackle. Winchester type D (Goodall 1990, 1011-12). MD9, SF24, 504, floor make-up, period 3A (late 14th to late 15th-century context).
29. (Not illustrated) Key, bit damaged, with oval loop. L 185mm. MD9, SF11, 558, demolition debris, period 4 (mid 16th-century context).
30. (Not illustrated) Key with damaged oval loop, solid stem and incomplete bit, probably with four teeth. The type is post-medieval. L 132mm. MD9, 440, pit 439, period 5 (later 16th to early 18th-century context).
31. (Not illustrated) Bit from a large key with a solid stem whose tip projects beyond the bit. The type is as Winchester type 8 (Goodall 1990, 1032-33), in use from the 12th century. However, similar bits can occur on post-medieval keys, such as a group from Norwich (Margeson 1993, 161, nos. 1294-6), so this object is possibly intrusive. The bit is too mineralised to discern the pattern, or to ascertain whether the stem is stepped. MD9, 668, gully 741, period 2 (late 13th to 14th-century context).

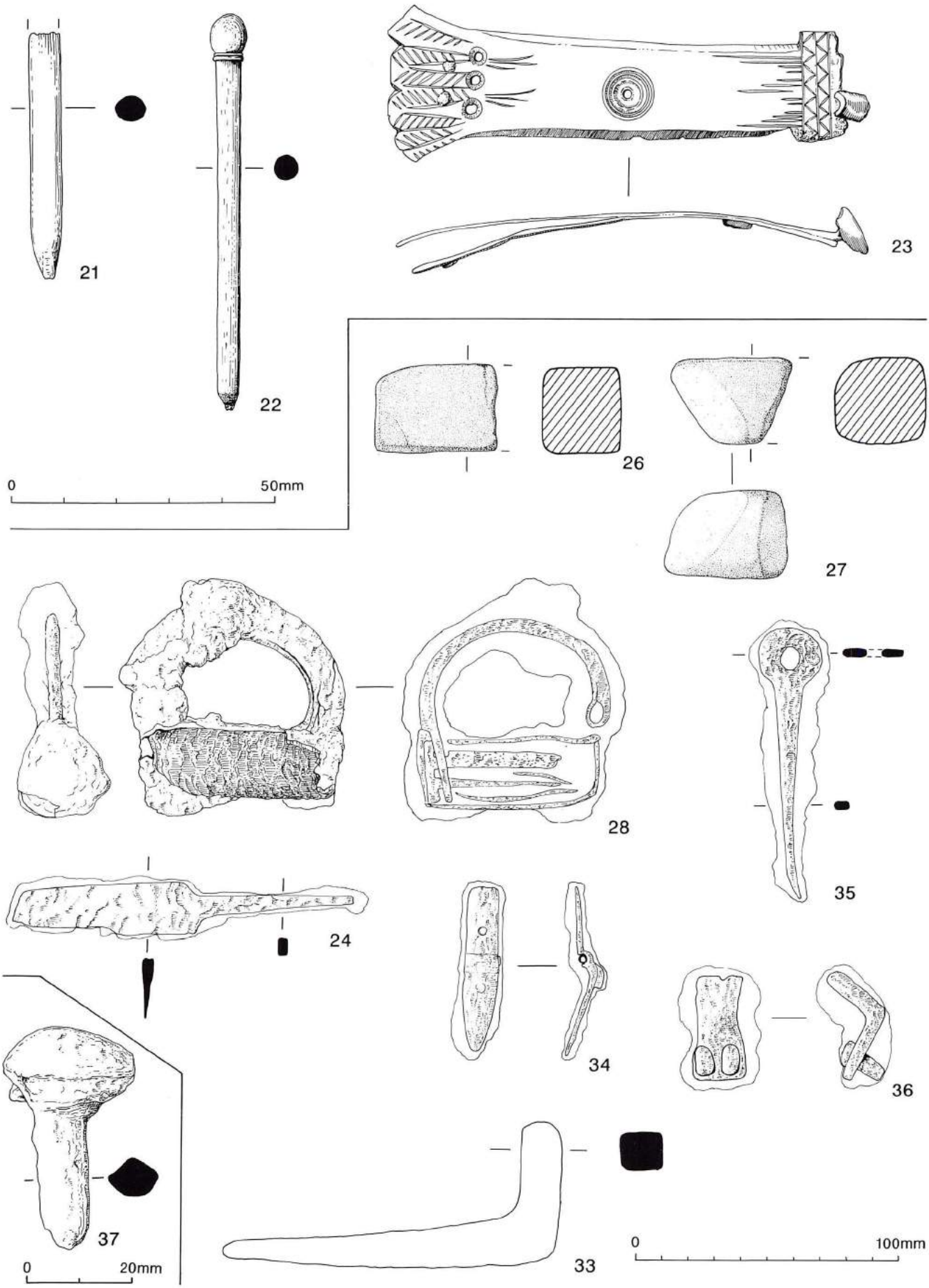


Fig. 32 Maldon Friary. Small finds, nos 21-37

Hinges

In addition to the objects listed below, there was a possible hinge pin from MD9, 480, surface, period 5 (later 16th to 18th-century context).

32. (Not illustrated) Hinge pivot, L-shaped. Square sectioned shank with point, L 110mm, round sectioned pin, L 60mm. This is the normal medieval form, and is not closely datable. For parallels, see, for example, Goodall 1993, 148. MD9, 710, period 3B (late 15th to mid 16th- century context).

33. Hinge pin. MD9, 585, levelling, period 3B (late 15th to mid 16th-century context). Small pinned hinge, now distorted, possibly broken at both ends. Part of one small nail is present. There may be other perforations, but the X-ray is not very clear. MD9, 585, levelling, period 3B (late 15th to mid 16th-century context).

Miscellaneous fittings

There were a number of miscellaneous fittings from both MD9 and MD10, in poor condition, and mostly not warranting illustration. U-shaped staples, mostly incomplete, came from MD10 periods 3A, 3B and 6, and a double spiked loop from period 3B. The material from MD9 included a possible washer from context 453, period 3B levelling. All other miscellaneous fittings from MD9 were from post-Dissolution contexts.

35. Looped spike. Cf. Margeson 1993, 146. MD9, 436, pit, period 5 (later 16th to 17th- century context).

36. Angle binding, with two perforations at one end, both with incomplete nails through. MD10, 837, foundation, period 2 (late 13th/early 14th-century context).

Iron nails

A total of 257 nails and nail fragments came from MD9 and MD10, the majority (214) coming from MD9. They were classified using the standard Essex County Council (ECC) type series. Of the nails whose type could be identified, the majority were ECC type A, with a round head and square shaft; 61% on MD9 and 85% on MD10. Type A nails are intrinsically undatable, as they were produced from Roman times onwards. They are normally the most common type of nail on any site. Type A, together with ECC types B, J and R may be loosely termed 'general purpose'. They all have square shafts, and are differentiated only by the shape of the head - round, square, rectangular or oval. Together they account for 86% of the nails on MD9 and 89% on MD10.

Some nails from the site had a recognisable function. There are a few examples of horseshoe nails, from both pre- and post-Dissolution contexts, all T-shaped. It might have been expected that there would be some examples of fiddle-key horseshoe nails, which are common during the earlier middle ages, but there were none. Of the remainder of the nails, there were five examples with mushroom-shaped heads, a type which is often used for decorative effect on furniture, and a large nail with a truncated pyramidal head (MD10, 805, period 3A wall), a type often used as studding on doors or chests. There was also a nail from a medieval context (illustrated) with an iron shaft and a lenticular head either made from or sheathed in lead. This presumably had a specialised function. Hobnails were completely absent.

There are a small number of complete nails. The largest group of these, and the only group for which any analysis is meaningful, is type A, with 32 examples. The range of lengths is 23-112mm, but 38% of the nails lie in the 55-64mm range, and the average length is 56mm.

37. Nail, with an iron shaft and lead, or lead sheathed, head, with a lenticular section. MD10, 923, cloister garth surface, period 2A/3A (late 13th to 14th-century context).

Miscellaneous objects (Fig. 33)

Copper alloy

Besides the illustrated objects, the remainder of the miscellaneous copper alloy from pre-Dissolution contexts consisted of small strip or plate fragments of indeterminate use.

38. Sheet tube, closed at one end by four tabs folded over. It is decorated with oblique moulded grooves, separated by bands of transverse lines, and possibly contains organic material or iron. This is probably part of a needle case. It is constructed in a similar fashion to a needle case from Winchester (Biddle & Elmhirst 1990, 817, no. 2534), although the latter has a square section. MD9, SF23, 663, period 3A external surface (late 14th to late 15th-century context).

39. Three joining pieces of a tube made from sheet, with the edges butted together. MD10, SF4, 822, foundation, period 3B (late 15th to early 16th-century context).

40. Rod fragment with an irregular polygonal head. The rod is well finished, but the head is very crude. It is in a heavy alloy with a dark brown patina. MD10, SF41, 822, foundation, period 3B (late 15th to early 16th century).

41. Slightly tapering collar made from a strip with the ends butted together. The narrower end has a perforated triangular tab, and there is another perforation in line with it, half way down the collar. MD10, SF6, 833, floor surface, period 3B (late 15th to early 16th century).

42. Open-mouthed bell fragment, with three moulded circumferential ribs. Original ht. *c* 50mm. MD10, SF9, 849, floor make-up, period 3B (late 15th to early 16th century).

Iron

Two fragments of horseshoes came from medieval contexts, but they are too incomplete to provide any useful information. The remainder of the iron not listed below consisted mostly of scraps, strips and fragments, which are catalogued in the archive.

43. Curry comb, now in three pieces. The comb is made from a sheet bent into an angular shape. The edges were probably serrated, but the iron is too mineralised for this to show on the X-ray. It has a tanged, bifurcated shaft, which terminates in two strips extending along the whole length of the top of the comb, and tucked under at each end, over the end rivets. Each strip is fastened to the comb with two rivets. The tang retains the mineralised remains of the wooden handle. MD9, SF12, 608, floor surface, period 3A (late 14th to late15th-century context).

The angular shape of this curry comb fits into London type A (Clark (ed.) 1995, 163) which occurs in contexts of c. 1270 onwards. The tucking under of the ends of the handle straps is not ubiquitous within the type, but is paralleled on one of the London examples (Clark (ed.) 1995, 165, no. 400).

44. Plate, with damaged edges, probably originally circular, with a reinforced edge. It has a number of small perforations round the edge, diam. 3mm. There are at least six, but may be others, as the quality of the X-ray is poor. MD9, 466, pit 467, period 6 (19th-century context).

45. Tube, with a knobbed head. The whole object may be hollow, or just the head end, but the X-ray is unclear on this point. MD9, 444, pit 443, period 6 (19th century context).

46. A piece of thick wire, formed into a flat spiral, with the end of the wire protruding from the centre. MD10, SF31, 1030, demolition debris, period 4 (mid 16th-century context).

47. Chain fragment, with ten oval links, both ends broken. MD9, 436, pit 435, period 5 (later 16th to 17th-century context).

48. (Not illustrated) Disc with a large central perforation. Ext. diam. 56mm, int. diam. 23mm. It is very similar to another disc from a period 4 context (MD10, 852, demolition debris, period 4). MD10, SF12, 896, make-up, period 2A (late 13th/early 14th-century context).

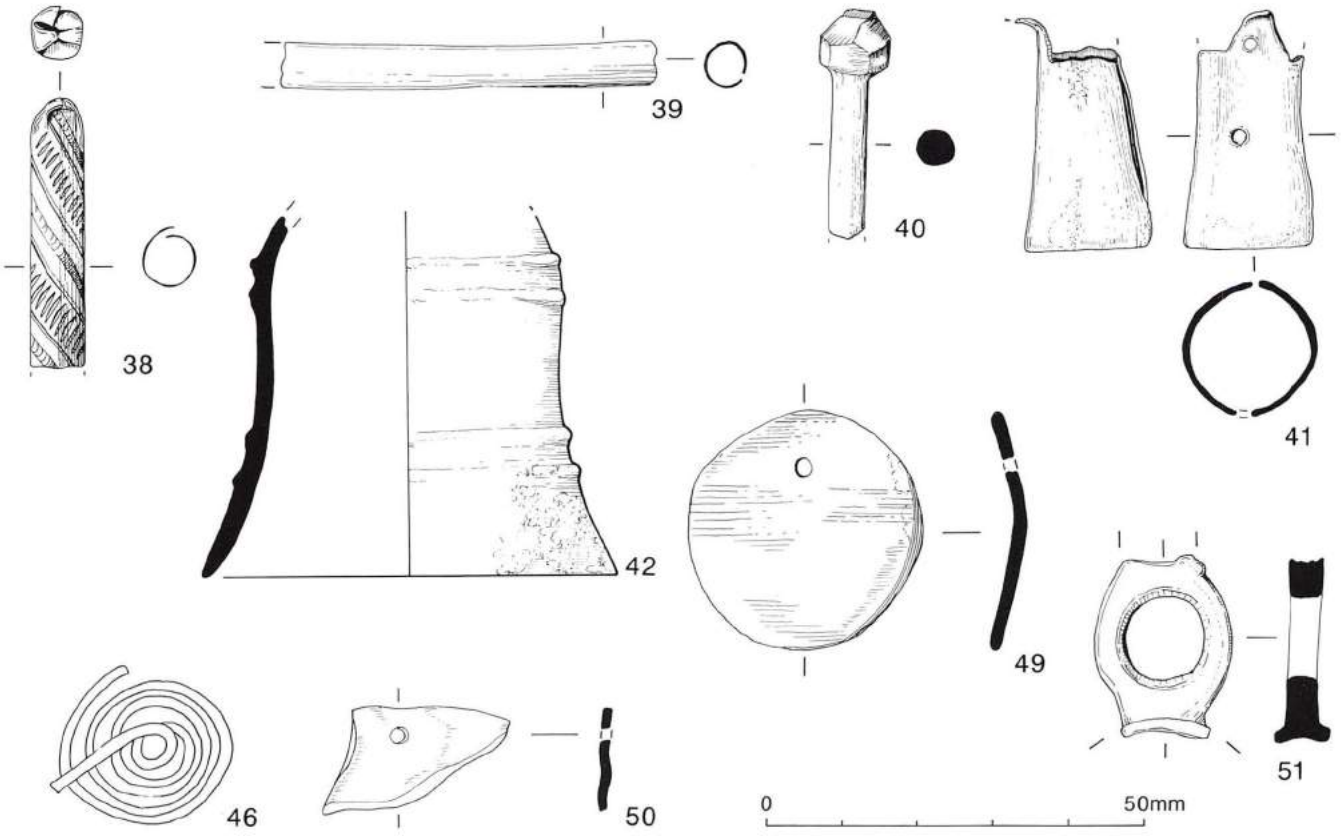
Lead

A number of fragments of scrap and solidified puddles come from medieval contexts, and were probably lost during the building of, or repairs to, the friary.

49. Perforated disc. MD9, SF19, 585, levelling, period 3B (late 15th to mid 16th-century context).

50. Roughly triangular sheet fragment with all edges cut, and a small punched hole. This is probably a scrap offcut. Wt 3g. MD10, 849, SF19, floor make-up, period 3B (late 15th to early 16th century).

51. Ring attachment, probably pewter, broken on two opposed sides. Possibly a pendent loop from a strap mount (cf. Egan & Pritchard 1991, 219, no. 1192). MD10, SF10, 899, post hole 898, period 5 (mid 16th to 18th century).



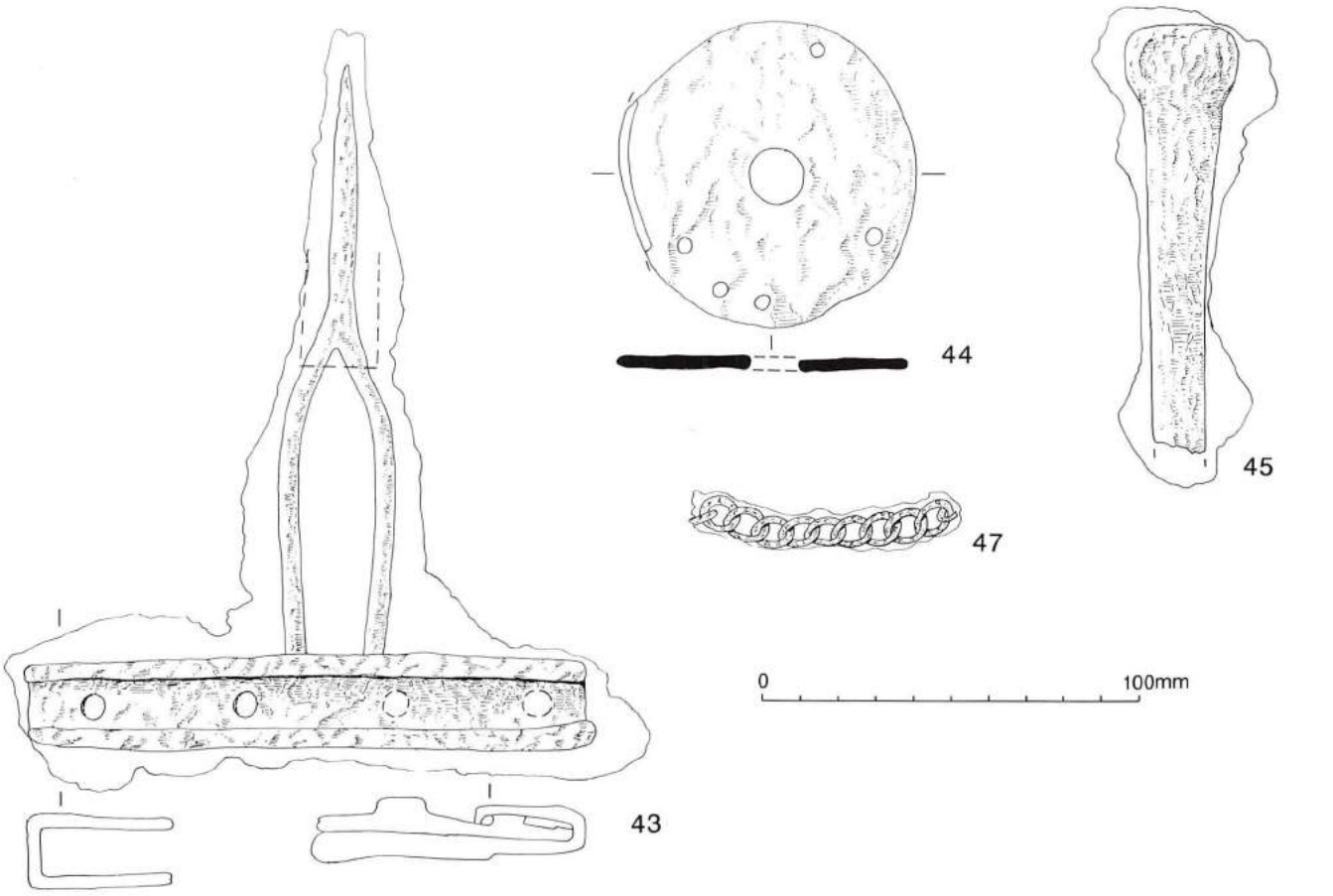


Fig. 33 Maldon Friary. Small finds, nos 38-51

Coins and tokens

Six Nuremberg tokens and two post-medieval coins were recovered from MD9, and a single medieval coin was recovered from MD10. This small assemblage is unremarkable and few of the coins/tokens were in sufficiently good condition to allow close dating. A detailed catalogue is included in the archive.

The late medieval coin from MD10 was a silver long-cross penny, in fairly poor condition, of a type current in the late 13th to 15th centuries. It was stratified in a floor make-up laid during the construction of the friary soon after 1292/3 (period 2) and retained (possibly disturbed) in subsequent rebuilding (period 3A). The date range of the coin is appropriate for either phase.

The Nuremberg tokens and coins from MD9 come mainly from contexts related to the demolition of the friary outbuildings (period 4) and the gardens of the Harries mansion, completed in 1570 or 1574 and demolished by 1805-7 (period 5). Two Nuremberg tokens and a coin of ?Charles I were recovered from medieval contexts, but in each case there were problems in excavation, and it is assumed that they were intrusive from overlying demolition or garden deposits. Neither of the two coins were definitely identified, but two of the Nuremberg tokens (one from a period 5 garden context, one unstratified) are well preserved and carry the name HANNS KRAVWINKEL. This type is well known in England and dates from 1580-1610.

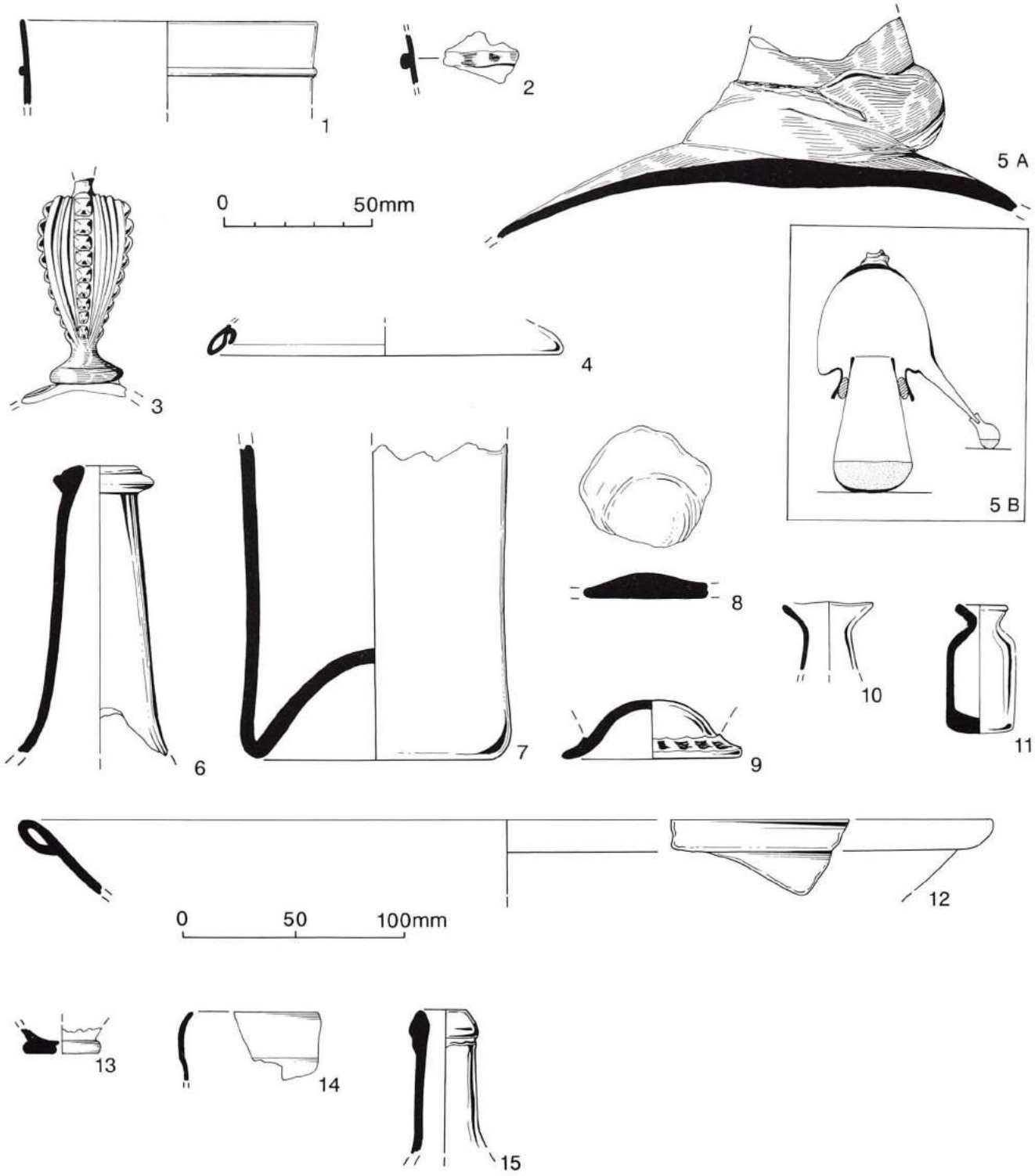


Fig. 34 Maldon Friary. Vessel glass, nos 1-15

The vessel glass (Fig. 34)

by D.D. Andrews

A handful of sherds, to judge by their appearance and condition, might date from the 15th to 16th centuries, although none is large enough to be of individual interest. As is usually the case, glass only became common from the 17th century with appearance of the characteristic dark green onion- or similar-shaped wine bottles made from the middle of that century to the beginning of the 19th. A total of 143 wine bottle sherds was found, as opposed to 119 other vessel glass fragments.

Facon de Venise glass

Facon de Venise, or Venetian-type glass is a not uncommon find at late- and post-medieval high-status sites (cf. Andrews 1988). The friary is no exception, but it is unusual that vessels made entirely of *lattimo*, or opaque white glass, were present. Five sherds of Venetian-type glass were recovered at MD9, representing two or three vessels. The *lattimo* glass (Nos 1 and 2) represents vessels used in the friary. This glass came from the disuse fill of drain 628/107, constructed in period 2, but which continued in use in period 3A and was not finally sealed until period 3B, dated to the late 15th to mid 16th century. The other Venetian-type glass (Nos 3 and 4) was recovered from pit 439 of period 5, a post-Dissolution context, and must represent rubbish from the Harries mansion.

The technique of making white glass had long been known, but vessels made entirely of white glass generally date from the 16th century, or indeed more recent centuries. A two-handled vessel associated with Henry VII in the British Museum would seem to be an early piece and as such an exceptionally early import (Charleston 1984, plate 9b). Charleston (1984, 46) mentions excavated lattimo only from Southampton, though opaque white glass has also been found at Norwich (Haslam 1993, 109, no. 709). It seems therefore that the friary pieces are a rare instance of its occurrence on English excavations, and at a very early date as well. *Lattimo* vessels are to be distinguished from a *filigrana* or filigree glass made from twisted *lattimo* canes, which seems to be a more common find. *Lattimo* is not very common on Italian excavations: the five sherds from the friary may be compared with seven from the Dominican convent of S. Silvestro at Genova (Andrews 1977, 165, 180). It is interesting to note that the Genoese material was slightly different in quality, being bluish and slightly bubbly.

1. Two joining sherds in *lattimo* with an applied thread run a little below it, Slight iridescence. MD9, 109, drain 107, disuse fill, period 3A/B (late 15th to mid 16th-century context).
2. Fragment of *lattimo* with an applied crimped coil. Slightly iridescent. MD9, 109, drain 107, disuse fill, period 3A/B (late 15th to mid 16th-century context).
3. Hollow goblet stem with mould-blown decoration. Colourless, slightly greyish hue, iridescent. Hollow goblet stems with mould-blown decoration, most characteristically in the form of a lion mask, are a typical feature of Venetian-type glass and, being fairly robust, survive well on excavations. A single example of 'ladder stem', decorated with alternating vertical ribs and tiers of square bosses forming a ladder-like motif, was found at the friary. This is a motif associated with English-made glasses, including pieces identified as the products of the glasshouse set up by Giacomo Verzelini, who had a monopoly from 1574-92 (Charleston 1984, plate 14a, 58, 690). MD9, 440, pit, period 5 (mid 16th to early 18th-century context).
4. Hollow folded edge, probably from a separately made base. Colourless, iridescent lamination. Technically unusual in that the glass has been folded back on itself a second time. MD9, 440, pit, period 5 (mid 16th to early 18th-century context).

Distilling apparatus

5. Very large fragment of glass from an approximately hemispherical vessel with a diameter in excess of 200mm, with an applied amorphous twist of glass on the top. Dark green glass with brown and opalescent flaking (resembling 17th and 18th-century wine bottles in appearance and quality). At least 16 fragments were found from the same vessel. This unusual find is a large alembic, a hemispherical vessel placed over a curcubit to trap condensed vapour and transfer the liquid via a tube (of which no fragments have been recognised) to another container. Glass and pottery distilling apparatus has been discussed authoritatively by Moorhouse (1972). Distilling apparatus might be associated with alchemy and acid production for assaying and working with precious metals as well as distilling alchoholic spirits. It seems that there were no other finds from the site which shed light on the purpose for which this alembic was used. Excavated glass distilling apparatus normally has a date range of the 15th to 17th centuries, and it would be reasonable to propose a 16th to 17th-century date for this example. MD9, 309, levelling, period 5 (mid 16th to 18th-century context).

Wine bottles

Although numerous, the remains of wine bottles were fragmentary and no example could be fully reconstructed. The few recognisable features amongst the material present include single string rims with the string set only a little below the rim, high kick bases, cylindrical bodies, and at least one convex profile neck. These point to an 18th-century date, for the most part in the second half of that century. It seems therefore that the wine bottle material was mostly associated with the later phases of use of the Harris' mansion, and that it was deposited when the mansion was demolished and the site landscaped.

6. Single string rim and bottle neck. MD9, 400 (modern topsoil).
7. Bottom half of a cylindrical wine bottle. MD9, 465, pit 467, period 6 (19th-century context).

Miscellaneous vessel glass

8. Disc of glass, completely devitrified, reduced to a series of laminae, golden surfaces. Pontil scar. Either crown glass, or the convex base of a vessel such as a bottle, an alembic or a lamp. The condition of the piece indicates a 15th-century date. MD9, 626, demolition debris, period 4 (mid 16th-century context). A similar fragment was found in context 106.
9. Base made from a hollow fold. Brown alteration, probably pale green. Mould-blown ribbing. Probably from a cylindrical drinking glass. The quality of the metal suggests it is English , and the from may be dated to the late 16th or 17th century. MD9, 436, pit 435, period 5 (later 16th to 17th-century context).
10. Expanded bottle rim. Bad condition, golden flaking, opaque, ?colourless. From a bottle with a longish neck and roughly spherical body, datable, to judge from its condition, to the 15th or 16th century (cf. Charlesworth 1969). MD9, 444, levelling, period 6 (19th-century context).
11. Phial, intact, good condition, iridescent, pale green. Pontil scar on base. MD9, 444, levelling, period 6 (19th-century context).
12. Folded rim fragment. Devitrified, brownish, but probably pale green or green. probably from a dish, not uncommon 17th-century form though this example is unusually large (cf. Haslam 1993, fig. 4; Huggins 1976, fig. 31). MD9, 401 (modern topsoil).
13. Applied disc of glass, possibly a pad base from a phial. Milky, iridescent, originally colourless. MD9, 466, pit 467, period 6 (19th-century context).
14. Fragment with a slightly curved border and rounded edge which is straight. This piece is untypical, and it is uncertain what it comes from. Blue-greenish glass with opalescent flaking. MD9, 466, pit 467 period 6 (19th-century context).
15. Bottle neck, small, pale green, good condition, but with pronounced strain marks. Mould made. 18th to 19th century. MD9, 200 (modern topsoil).

The clay pipes (Fig. 35)

The general type series developed by Oswald (1975, 37-40) has been used.

Clay pipes are one of the intrinsically more datable classes of post-medieval small find. At this site, some must be intrusive in their contexts, being from periods 3 and 4, but this is not particularly unusual, as small fragments of pipe stem can easily drop into cracks in the ground. The material from the later contexts frequently covered a wide date range (e.g. context 402, with pipes from the early 17th to the late 18th century), and the site cannot be considered useful for refining the dating of any particular pipe type.

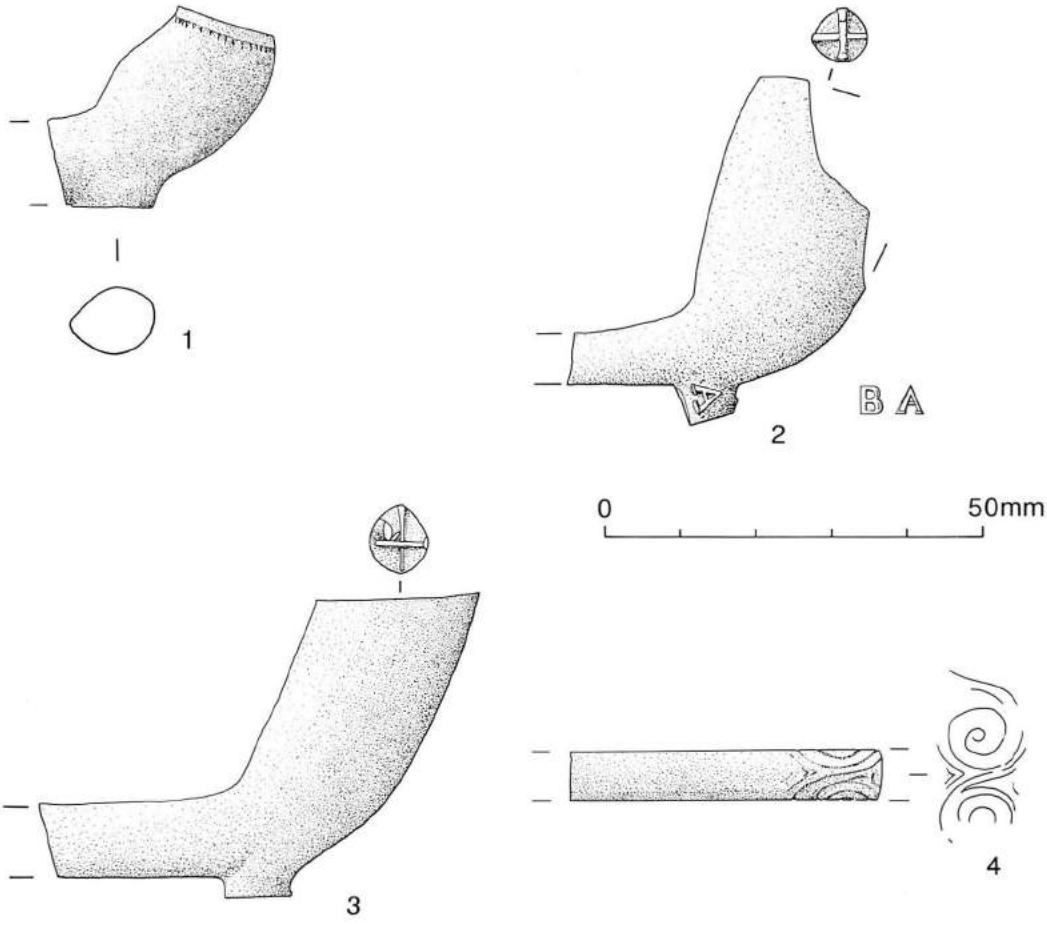


Fig. 35 Maldon Friary. Clay pipes, nos 1-4

There were no particularly large groups present, the largest being 31 pieces (context 408). Unless otherwise noted, all the pipes discussed are from MD9: there were very few clay pipe fragments from MD10, and they included only two bowl fragments.

The earliest bowl from the site was a Type 4 from 402 (period 6 levelling), dated c. 1600-40 (Fig. 35.1). Later 17th-century pipes included two examples of Type 17 (c. 1640-70) from 408 and 479, the latter with a rather misshapen spur, and one example each of types 6 and 7 (both c. 1660-80). None of the 17th-century bowls were marked, bar the usual rouletted rims. In all, ten bowls or fragments were 17th or very early 18th-century in date.

The majority of the bowls were 18th century, and included eight definite or probable examples of Type 12 and three of Type 22. Both are dated c. 1730-80. Two fragments with moulded royal coats of arms may be later 18th century, although the poor quality of the moulding suggests that they may be 19th century. There was also a pipe made by Stephen Chamberlain of Colchester, marked SC on the foot. This prolific pipe maker, who lived from 1728 to 1808, is documented by Crummy (1988, 64).

Of particular interest among the 18th-century bowls is the presence of four bowls with relief crosses inside the bowl, on the flat base, impressed by the stopper used to hollow out the bowl. A number of other examples from Essex have been noted by the writer. Crosses were most common motif, although stars and cross-hatching also occur. The initials show that there were at least four makers producing stopper-impressed pipes, and there are probably two sets of initials in this group - BA (Fig. 35.2), B ? (probably BA), and I ?E. The latter bowl is similar to one, possibly with the same initials, from excavations in Moulsham Street, Chelmsford (Major, archive report). The fourth bowl was unmarked (Fig. 35.3).

The maker BA may be tentatively identified as Batley Adams of Maldon (Simpson 1982, 8), who was working at some time between 1760 and 1820. These Type 12 pipes are likely to be early within this period, as the stoppers used for later 18th-century pipes seem to have been uniformly sub-conical in shape, and not flat bottomed. A stopper-impressed bowl marked BA from Holly Cottage, Rayleigh (Bedwin 1986, finds reports in archive), presumably made by the same person, had relief cross-hatching rather than a cross.

Since there is more than one pipe maker involved, it is postulated that the marks were put on the stoppers by a specialist mould maker who supplied moulds to a number of makers. The writer is not aware of any examples of stopper-marked bowls from outside Essex, although they are widely distributed within the county, from Saffron Walden to Rayleigh.

The 19th century is poorly represented in this group. There are four pieces with fluting (including one from MD10), one of which has leaves and acorns on the seams, and, as noted above, two fragments with the royal coat of arms on them may be 19th rather than 18th century. A stem fragment bearing moulded spirals (Fig. 35, No. 4) is very similar to another found in Maldon, the latter bearing the name 'DENTON' (Simpson 1982, 22, no. 168). Oswald (1975, 78, no. 39) illustrates a similar stem, and suggests that the maker could be Joshua Denton of Bradford, recorded in 1822-23. It is perhaps surprising that there are no pipes by 'Pepper' or 'Colman', two local makers whose pipes have been found elsewhere in Essex. The relatively small number of 19th-century pipes from this site may be due to their not having been collected from the top layers, which were removed by machine, rather than to their absence from the archaeological record.

The following have been illustrated (Fig. 35):

1. Small bowl with rouletted rim. Oswald type 4 c. 1600-40. MD10, 402, period 6 (19th- century context).
2. Incomplete bowl, with a very pronounced relief cross in the bottom, marked BA on the foot. Oswald type 12. MD10, 408, levelling, period 6 (19th-century context).
3. Bowl with a relief cross in the bottom. Oswald type 12. MD10, 401 (modern topsoil).
4. Decorated stem, with moulded spirals. MD10, 449, intrusive in period 3B levelling.

OSTEOLOGICAL AND ENVIRONMENTAL EVIDENCE

by Sarah E. King, Charlotte Roberts, Alec Wade, and Katherine Reidy

The human skeletal remains

by Sarah E. King and Charlotte Roberts

This report presents the abridged results of analysis of the ages, sexes and statures of nine individuals from the east cloister walk of MD10 (periods 2 A, B and C). A fuller text (detailing methods used to determine these matters, and descriptions of the skeletons) is available in the archive.

Preservation varied from poor (eroded and fragmented) to good. Seven skeletons were in poor to fair condition; two were well preserved. Two were 80%+ complete; four were 50-80% complete; and three were less than 50% complete. Nine burials contained a partial or complete skeleton representing one individual; an extra patella in grave fill 976 (period 2A) may be as a result of the burials being layered. Ten groups of disarticulated bones were analysed, mostly occurring in makeup deposits. If each group of disarticulated bones represents a separate context, then 10 adult (male?) individuals and one young individual are represented.

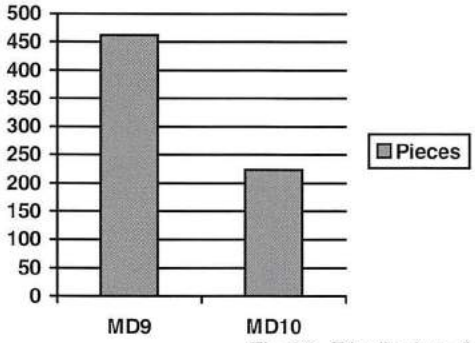
Five of the individuals were middle adults (26-45 years); three are mature adults (46 years+) and one individual could only be classifies as an adult. Disarticulated remains are mostly from adult individuals although one was a young adult (935). All of the individuals were male. Only three statures could be estimated: skeleton 989 (middle adult; period 2A) was 1.765m ± 4.05cm; skeleton 987 (mature adult, period 2A) was 1.699m ± 3.27cm; and skeleton 969 (mature adult, period 2C) was 1.75m ± 3.27cm. No statures could be obtained from the disarticulated remains. These findings are perhaps consistent with what might be expected from burials excavated within the cloister of a friary. The age distribution of the individuals suggests that they were living relatively long lives.

The animal bone

by Alec Wade

This text presents the abridged results of analysis of the animal bones from the outbuilding (MD9) and the cloister (MD10). A fuller text, which details criteria used in the examination of all animal bones, is available in the archive, together with details of incidence by context for each site. There are several publications which can be consulted for background information on the archaeological study of animal bone (Schmidt 1972; Davis 1987; Luff 1994; Rackham 1994).

A total of 1258 fragments of animal bone was hand-collected from a variety of contexts. For the purposes of this summary report only bone from securely dated contexts was examined: 686 pieces of bone weighing 15.927kg. Distribution between the two sites is shown by the following graphs:



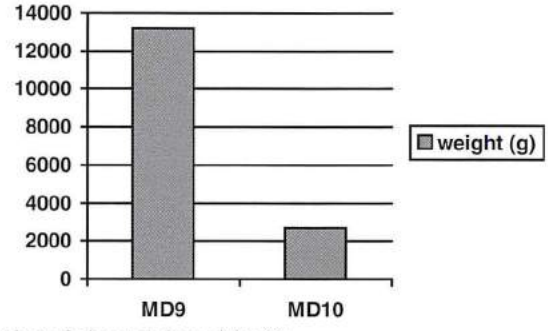


Fig. 36. Distribution of animal bone: 1. by number of pieces; 2. by weight (g)

The majority of the bone (by number of pieces and by weight) was recovered from MD9. The results are presented below by site.

MD9

A total of 462 pieces weighing 13.2kg was recovered from securely dated contexts associated with an agricultural building. Of these, 212 pieces weighing 10.3kg could be identified to species level. The following graph shows distribution by period and number of pieces:

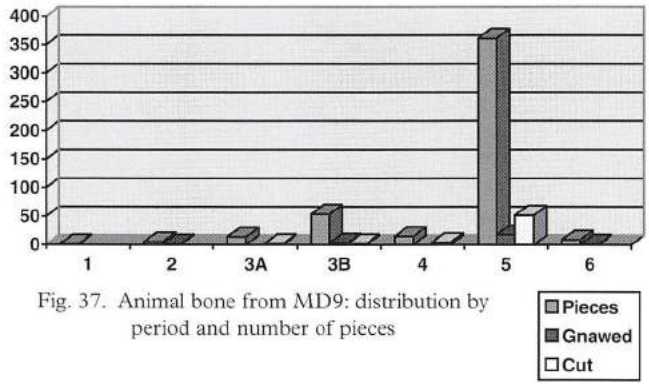


Fig. 37. Animal bone from MD9: distribution by period and number of pieces

The quantity of dog-gnawed or cut (i.e. butchered) bone is also shown by period (the presence of dog-gnawed bone in a sample is often a good indicator of residuality). The overwhelming majority of the bone (including cut and gnawed pieces) is from period 5 which dates to after the Dissolution, when the outbuilding had been dismantled and rubbish pits dug nearby (mid 16th century onwards). The most common species in this period were large mammal followed by sheep or goat. The next largest quantity of animal bone is from period 3B when the outbuilding was altered and rubbish either accumulated or was dumped over external areas (14th century). It is interesting to note that this period contained the largest variety of identified species (excluding a dubious roe deer bone in period 5) including goose, cow, dog, horse, hare, sheep/goat, and pig. Bird and large fish bones were also found.

MD10

A total of 224 pieces weighing 2.7kg was recovered from securely dated contexts associated with the cloister. Of these, 83 pieces weighing 1.9kg could be identified to species level. The following graph shows distribution by period and number of pieces:

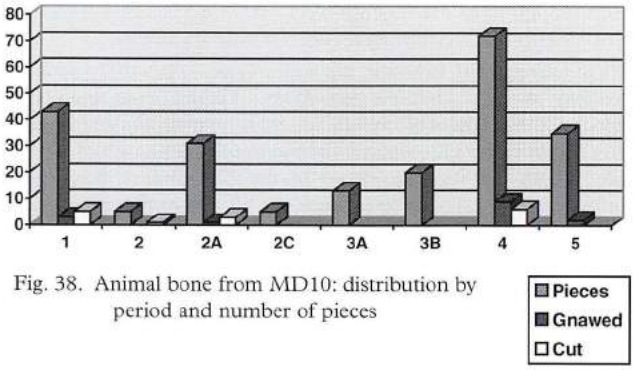


Fig. 38. Animal bone from MD10: distribution by period and number of pieces

The majority of the material is from period 4 which dates to the Dissolution, and the demolition of the cloister. Most of the gnawed and cut (i.e. butchered) bone is also from this phase. The next largest quantity of bone was recovered from period 1 and is of 13th century (and pre-monastic) date. During this period the land was open and presumably used for the disposal of domestic waste from the town, and includes dog-gnawed and cut bone. Period 2A, the monastic foundation, yielded more bone than the other periods of use (2C, 3A, 3B). This may be a result of the levelling or clearing of the period 1 wasteland during the establishment of the friary precinct. The cleaning of floor levels (and the subsequent robbing of any tile surfaces) was probably responsible for the small quantity and high fragmentation of bone. Period 3B (the rebuilding of the eastern range in the 15th century) contained the most variety of species of all the monastic phases. The bone in this phase was of bird, fish, hare, sheep/goat and pig. Some large mammal bone (cattle or horse) was also found.

Conclusions

The contexts which provided the animal bone studied for this report were chosen because they were all securely dated. The small nature of the sample makes statistical analysis regarding the local diet or economy unreliable. It should also be noted that the bone was hand collected, thus undoubtedly causing the smaller species in the sample to be under-represented.

During period 1 (pre-friary, 13th century) both excavation areas are considered to have been open land. Nearly all of the bone recovered from this period was from MD10, perhaps an indication that this area of the site was more extensively excavated than MD9. The inclusion of cut or dog-gnawed bone (a good indicator of residuality) in these deposits strengthens this view of an area of unmanaged wasteland. The amounts of bone recovered from the monastic phases are quite small from both sites but it is interesting to note that there is a greater degree of fragmentation at MD10, with the average weight of bone fragments being less than half that of MD9. Bones of geese, hare, sheep/goat, pig, cow and of fish were found on both sites from the 14th/15th-century phases (MD9, period 3B; MD10, period 3B). The Dissolution is marked by the dumping of large amounts of bone waste, most probably from clearance of the friary buildings and subsequently the documented urban butchery industries (MD10, period 4; MD9, period 5). The return of the land to careful management with the laying out of private gardens is detectable by a marked decrease in the amount of bone waste (MD10, period 6; MD9, period 6).

The marine molluscs

by K. Reidy

This text presents the abridged results of analysis of the marine mollusc remains from MD9 and MD10. Medieval evidence only is discussed as this can be related to structures represented on site; but post-medieval remains are also present, in garden-soil contexts. A fuller text (which details criteria used in the examination of all molluscs) is available in the archive, together with details of incidence by context for each site and a discussion of post-medieval remains. In total 356 individuals were examined from MD9 and 140 from MD10 and identified to species, and expressed in terms of minimum number of individuals (MNI).

MD9

Ten contexts produced marine mollusc shells. Species recovered were: oyster (*Ostrea edulis*); common whelk (*Buccinum undatum*); common cockle (*Cerastoderma edule*); common mussel (*Mytilus edulis*); dog whelk (*Nucella lapillus*).

Oyster predominated at 96.9% of the MNI. Pit 90 (period 5, later 16th to 18th century) produced 48.7% of the oysters which suggests it was probably a rubbish pit. Occupation layers 524 and 529 (period 3A, late 14th to late 15th century) produced 23% each of the oyster MNI. The shells were in good condition and did not appear to have been damaged by being out in the open or trodden underfoot, suggesting that they were part of a deliberate dump of rubbish, not just carelessly discarded on an occupation level. The remaining 5% of oysters came almost equally from periods 1, 3A, 5 and 6 (medieval and post-medieval). The other species were present in very small numbers in eight of ten marine mollusc-bearing contexts.

MD10

Twenty seven contexts produced a small number of marine molluscs: 87% were oyster (*Ostrea edulis*). Other species recovered were common whelk (*Buccinum undatum*) 5.7%; common cockle (*Cerastoderma edule*) 5.0%; common mussel (*Mytilus edulis*) 1.4%; netted dog whelk (Hinia reticulata) 0.7%.

The oyster shells were thinly dispersed throughout the 27 contexts; 50% were from period 6 (19th century), 25% from period 5 (mid 16th-18th century), 14% from period 4 (mid 16th century) and the remainder from periods 1, 2A, 2C, 3A and 3B (late 13th to early 16th century). The shells do not seem to have been disposed of in any one area of the site. One netted dog whelk was found (period 6). This is a scavenger which feeds on dead or decaying animals and it not is known if they were eaten.

Conclusions

A variety of edible marine molluscs was recovered from both sites, although in small numbers. There is a notable difference in distribution of shell between the sites. MD9 produced a larger number of shells but from fewer contexts, suggesting specific zones of discard of kitchen waste. MD9 is also away from the main cloister area and so a more suitable area for deposition of waste. Oyster shells are also more prevalent in the later phases of the site (notably periods 5 and 6, post-Dissolution). This may indicate an increase in consumption in these phases or a more careless deposition as a result of post-Dissolution activity.

Given the proximity of the friary to the sea, and the fact that the Essex coast is well known for its oyster beds, it is likely that oysters and shellfish in general played a far greater part in the diet of the inhabitants than the archaeological evidence would suggest. Therefore it is probable that the main area of rubbish-disposal and/or food-preparation was not excavated.

Documentary evidence has shown that shellfish, and oysters in particular, were appearing on the domestic accounts of ecclesiastical communities in the 14th and 15th centuries, for example at the Augustinian priory of Bicester. Evidence from Winchester shows that consumption of oysters was fairly common, that of whelks rarer - and cockles and whelks were eaten only on certain days of the year (Bond 1988). Practices such as these may account for the surprisingly poor representation of mussels, cockles and whelks at this estuarine site and show that oyster consumption even on inland ecclesiastical sites was common in the medieval period.

OVERALL DISCUSSION

Introduction

At long last, the 1990-1 excavations have located a major part of the Carmelite friary of Maldon. Two sets of buildings were uncovered. One consisted of buildings and a covered walkway ranged around a courtyard, and is interpreted as the cloister and its related buildings (MD10). The other structure, to its south-west, was an outbuilding, interpreted as a stable (MD9). It is likely that there were some changes in the use of both sets of buildings, and Table 1 presents the protracted sequence of alterations they underwent before their demolition after the Dissolution.

Selected topographical aspects of the results of the excavations are discussed below: the layout of the site, the functions of the buildings, and what happened to them after the Dissolution. Archaeological evidence is supplemented by the use of maps and documents to broaden the picture. This will help us to understand the

range of functions associated with the buildings, and the various processes which affected them.

Though the structure uncovered on MD9 is relatively easy to elucidate, the same cannot be said of the buildings on MD10. Certainly, building ranges were set around the north and east sides of a cloister, which was probably square. However, limitations in both the excavated and documentary evidence make it difficult to reconstruct the monastic layout. The evidence can be taken at face value and interpreted as if the buildings conformed to the usual monastic plan. This view suggests that the northern range was a church in the customary position on the north side of the cloister, with a chapter house in the centre of the eastern range. This arrangement is possible for Maldon, although there are some problems in interpretation. In the light of this, an alternative view is discussed, in which it is argued that the church lay on the south side of the cloister, outside the excavated area at MD10, with a possible second cloister further south. These alternative views are summarised in Figs 39-42.

Setting out the friary precinct (Figs 39-40)

The process of building would have started with the site being surveyed and cleared. Trees would have been felled and grubbed out, and the resulting tree boles were

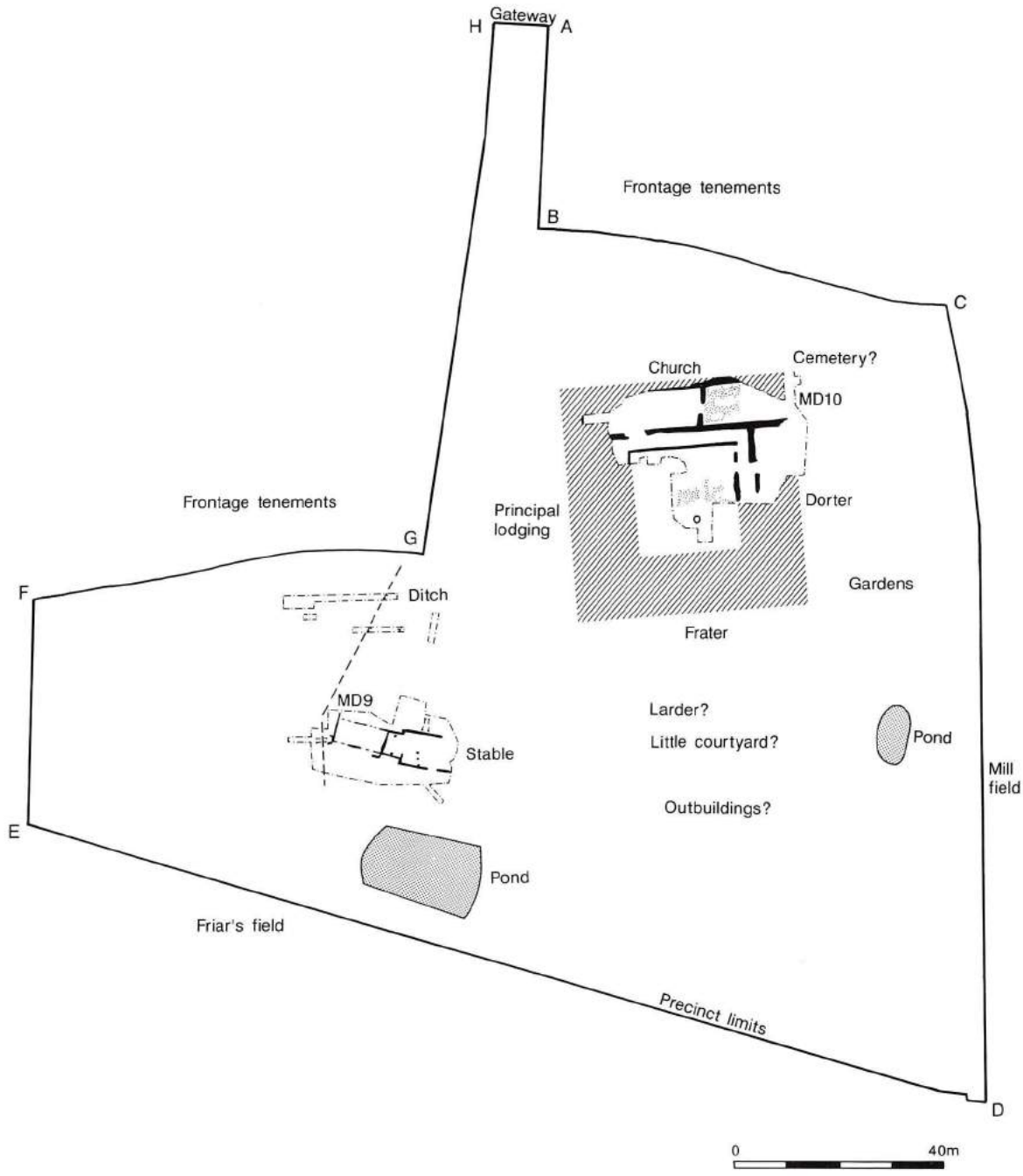


Fig. 39 Maldon Friary. The friary precinct as laid out for a single cloister foundation

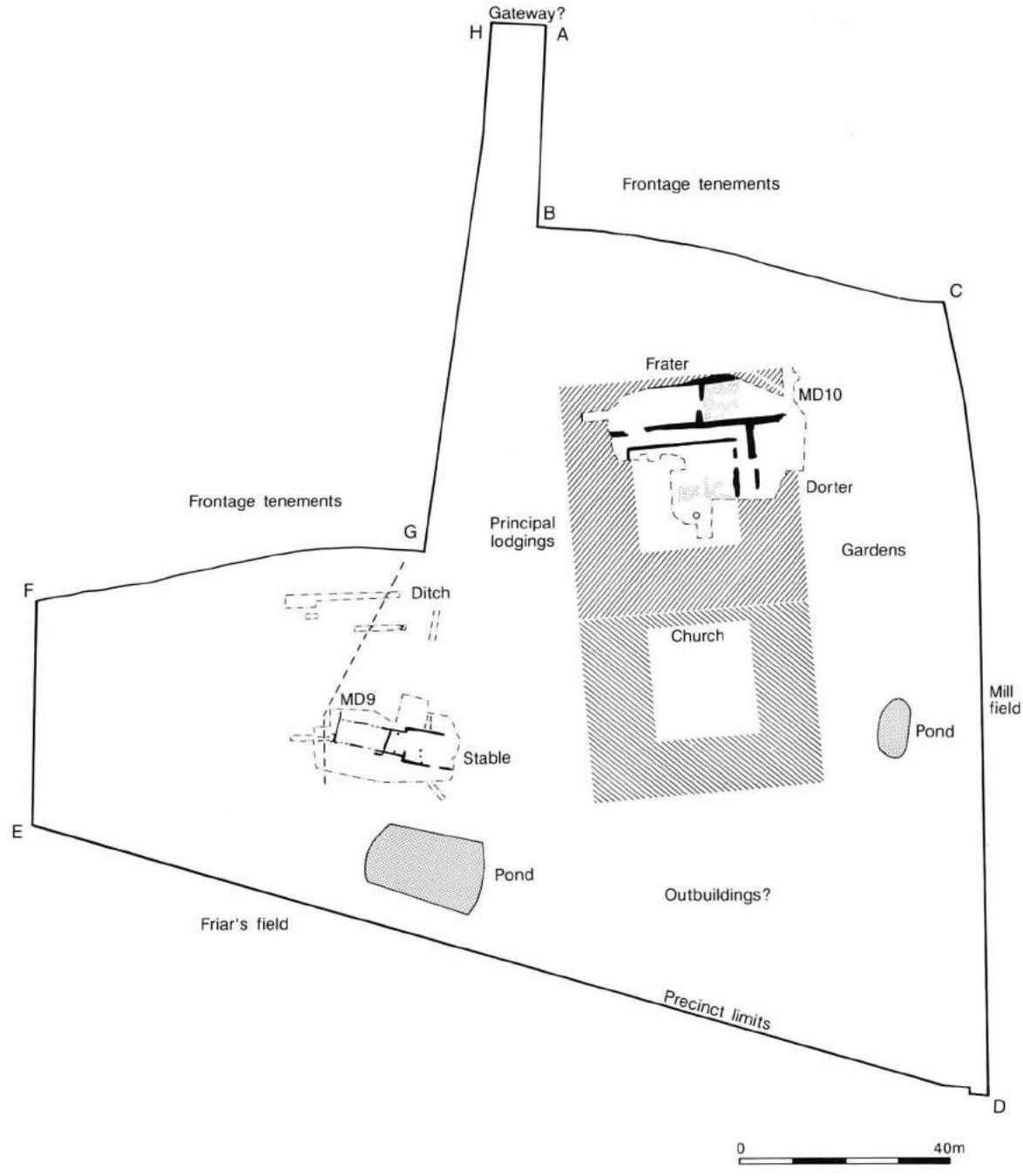


Fig. 40 Maldon Friary. The friary precinct as laid out for a double cloister foundation

infilled (MD9, period 1; MD10, period 1), following which boundaries and buildings could then be set out. The square (as a basic unit to which the excavated cloister probably conformed) and parallel off-sets may have been employed to establish the precinct limits from the original 5 acre plot of land granted in 1292/3 and to relate the buildings to the new limits. It was certainly not beyond the medieval Essex surveyor to use the square or right-angled triangle (Coldstream 1991, 34-9), and the process has been demonstrated for Walden Abbey, Saffron Walden (Drury 1982, 95ff).

The precinct boundaries can be recognised from relict landscape features recorded in maps and documents. The boundary lines plotted on Figs 39-40 and 43-44 are based on the O.S. 1st edn 1873. Both northern and southern boundaries are accepted by Simpson (1986) and Petchey (1991, fig. 1). The surveyors would have needed to respect and work around earlier land holdings, so uniform planning on a grand scale is not apparent. However, it is possible to suggest the use of standard modules in setting out the precinct boundaries, allowing for a little variation in measurements caused by encroachment and other minor changes in boundary lines through time. A reconstruction of the basic survey modules used in setting out the cloister and buildings (MD10, period 2A; Fig. 7) suggests the use of the rod

(16½ feet or 5½ yards) and the chain (22 yards or 4 rods) as the units of measurement. Modules of 1½, 3 and 4½ rods, and the use of simple ratios such as 1:2 and 1:3, are recognisable in room layouts, while overall measurements across the cloister garth and the north range conform to modules of 1 and 2 chains. This use of survey modules was not unusual; in the Cressing Temple barns modules of 2½ and 3 rods were used, together with (3 (Gibson 1994, 111-2). It seems possible to understand the laying-out of the grounds of Maldon friary in terms of modules measured in rods and chains.

The alignments of the buildings on MD10 and MD9 are at variance, as a consequence of the local topography. Two base lines seem to have been employed to lay out the buildings and grounds. The High Street influenced the alignment of the northern boundary and the buildings ranged around the cloister on MD10. Excavated portions of structure lie roughly parallel to the street frontage (presumably any southern cloister would have had to conform to such a scheme). The southern boundary influenced the layout of other buildings such as the one found at MD9.

The northern boundary was common with the rear (southern) portions of tenements fronting onto the High Street, marked on the O.S. 1st ed. Its sinuousness suggests an old field or enclosure boundary. The precinct was set back from the High Street, and access would have been by a gate. Portions of flint and rubble stonework 10m (2 rods) behind the frontage of 40 High Street may be footings of such a gatehouse (Petchey *et al.* 1985, 11). The driveway (Fig. 39, A-B) is *c.*40m (8 rods or 2 chains) long. Measured as a straight line, the putative northern boundary or backs of the houses (Fig. 39, B-C) is *c.*80m (16 rods or 4 chains) long.

The eastern boundary is also slightly curved at its north end, but is for the most part straight. Its overall length (Fig. 39, C-D) is *c.*150m (30 rods or 7½ chains). The north-east part of this boundary survives as a garden wall, running parallel with the excavated eastern walls of the friary building. This length of wall has been examined in detail (Petchey *et al.* 1985, 6-8). The upper courses consist of hand-made post-medieval brickwork, incorporating some medieval masonry, and the lower courses almost entirely of stonework. There is no immediate indication that the stones in the base of the walls were reused (a graffito in 18th-century hand on the exterior of the eastern face of this wall dates a repair to 1731). However, this could be because it is mainly Kentish Rag, which is not usually treated as ashlar or moulded. The lower portions may be part of the original medieval precinct wall. A deed of sale of 1544, after the Dissolution, mentions surviving stone walls, even though demolition of the buildings was underway.

The southern boundary, also marked on the O.S. 1st ed., appears to have remained unchanged since it was laid out (Fig. 39, D-E). It is *c.*190m (38 rods or 9½ chains) long. It lies parallel with the outbuilding excavated on MD9 and also a pond. It was presumably selected as a base line from which to lay out other buildings also. It is thought that a leat ran along the southern boundary (Appendix 1).

The western boundary is the most uncertain. It is probable that much of it was occupied by the plots of frontage properties (but see Simpson 1986, fig. 4). However, three alignments may correspond to precinct boundaries (Fig. 39, E-F, F-G and G-H). The westernmost boundary E-F is 40m long (8 rods or 2 chains). The eastern return F-G at its north end is slightly curved, but is *c.*75m (15 rods or 3¾ chains) long overall. The northern return, running northwards to the gateway, is 100m (20 rods or 5 chains) long. Returning to the point of origin (Fig. 39, H-A), the entrance is 10m (2 rods or ½ chain) wide.

Despite problems in interpreting cartographic and documentary evidence, the evidence suggests the use of whole units and a degree of care in setting out the precinct. As well as divisions between the friary and the surrounding tenements of the town, one might reasonably expect the complex to have been sub-divided into specific areas, creating divisions between friars and lay brethren, monastic from service buildings. A major ditch alignment in the west of the site (Figs 39-40), recorded by excavation and trial trenching (site MD9, period 2), may relate to this process, forming a boundary as well as a drainage channel. It suggests that several land-units were created from the single unit mentioned in the original land grant. The ditch immediately to the north of the outbuilding recorded on site MD9 may also have represented a sub-division, possibly separating the ecclesiastical from the working areas of the precinct. The taking-in of further land licensed to the friary in 1314 (see Historical background) probably relates to a small area of land (60 x 17ft) north of the site, and south of the High Street tenements.

The friary buildings

by L.A.S. Butler

There has been a steady accumulation of evidence about the plan and appearance of friars' houses as a result of excavation in advance of urban redevelopment (Butler 1984, 1993, additional to Gilyard-Beer 1976). This advance has extended to the Carmelites just as to the other mendicant orders and greatly assists in the interpretation of Maldon's buildings (Stones 1989; Klein & Roe 1987, in addition to Rigold 1966 and Egan 1969). At Maldon the combination of excavated and documentary evidence, particularly the survey of 1544, enables a clearer idea to be obtained of the disposition of the friary buildings.

The normal order of survey listing would proceed from the gatehouse (not mentioned) moving through the nearest buildings until the most distant and least important structures had been reached. The buildings, courtyards and gardens, either singly or in groups, are listed in the following order :

church, bell-tower and cemetery;

frater (refectory) with the little courtyard on its south side;

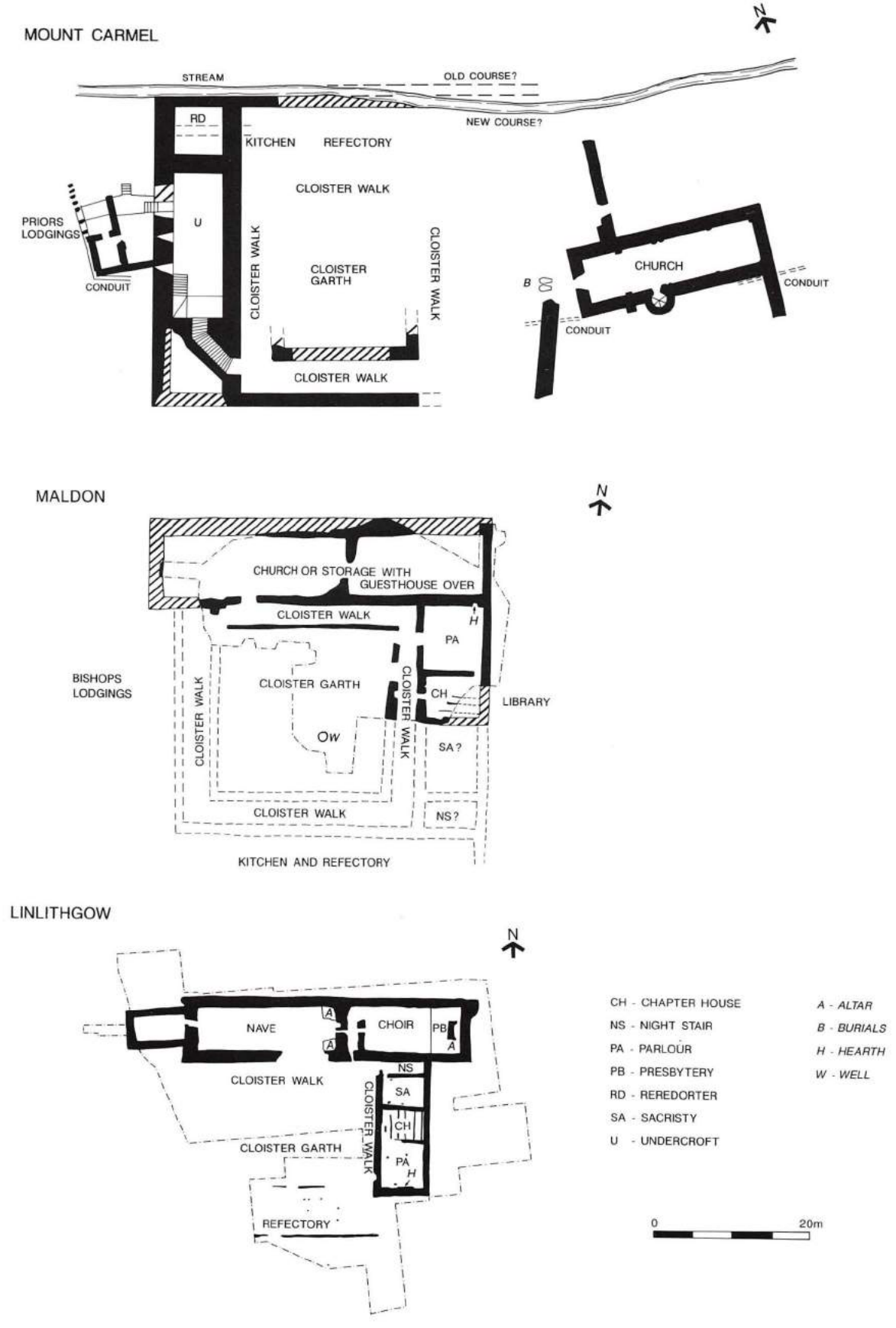


Fig. 41 Comparative plans of the cloister areas at Mount Carmel (after Pringle 1984), Maldon and Linlithgow, Lothian (after Stones 1989)

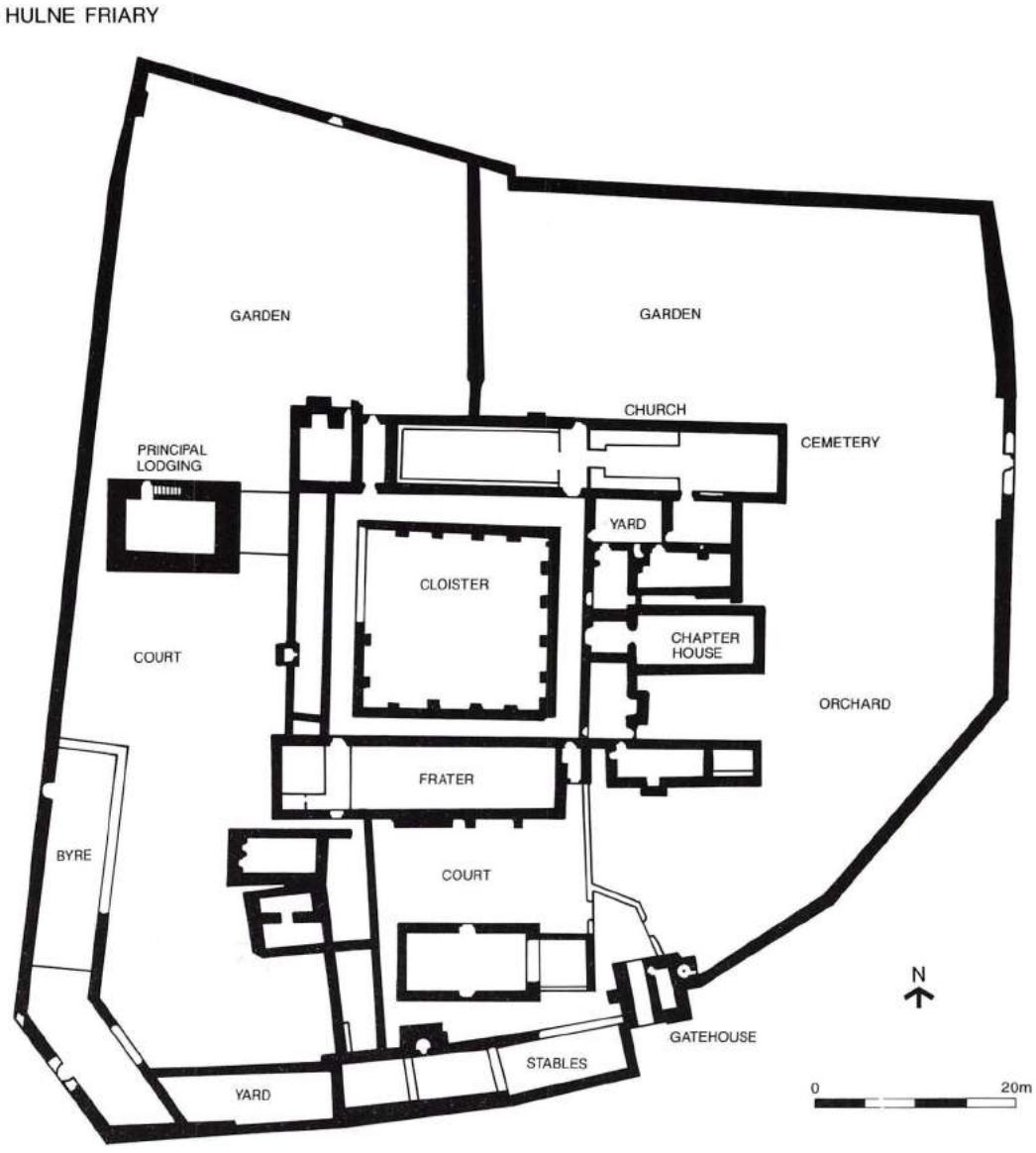


Fig. 42 A typical Carmelite plan: Hulne, Northumberland (after Gilyard-Beer 1976)

larder with cheese-house or loft over;
Bishop's or principal lodgings to the north of the larder;
courts and outer courtyards;
dorter (dormitory);
granary, or garner with storehouse below;
bake-house;
stable with hayhouse over;

The deed of sale also refers to outer courtyards, gardens and fishponds surrounding the main complex, including adjoining fields beyond the precinct boundary. The 'Mylleffelde' to the east of the friary precinct suggests that the mill, presumably a water-mill, lay in that direction, while the 'Fryers felde' bordered the precinct on its south side. The location of the gatehouse can be deduced from references in documents related to tenements fronting onto the High Street.

The list of buildings does not mention individually all the buildings that might be expected in a fully developed friary. The compass directions of the cloister-ranges are not given or are only referred to indirectly. There must have been a kitchen but it is not specifically mentioned. The deed defined the precinct boundaries and incidentally indicated structures if they lay near a boundary or if they could help to locate it.

There is no specific mention of a cloister (implying a courtyard sur-rounded by four pentice walks) but there is 'le litle courtyard' and also 'courtyards... called lez Courtes and utter Courte yardes'. This reference to a little courtyard implies the presence of a greater courtyard, which one expects to be the cloister. However, a document of 1543[10] mentions only one courtyard, suggesting that there was only one cloister. The little courtyard and the other courtyards mentioned in the deed of 1544 may have been omitted from the 1543 document because they were service yards or farmyards and lay outside the area of the cloister and the principal communal buildings.

Some building relationships can be deduced. The little courtyard lay *'on the south side of...the frater'*, with other buildings on its *'west, south and east sides'*. These may have included the principal monastic buildings, but the next reference is to outhouses, in particular *'le cheese house or le loft . . .built on the same house called le larder'*. There is thus a strong possibility that the little courtyard was a service yard to the south of the frater, with the cloister to the north, although the deed is too vague to be confident of this interpretation. The larder is also described as *'abutting on...le Bysshopps lodgynges towards the north'*. The Bishop's lodging, as the principal lodging was known, was clearly adjacent to the complex of buildings in the area of the frater and little courtyard.

The description of the dorter or Prior's garden suggests the location of the dorter range. In the deed the *'garden caled le Dorter Garden'* is described as *'lying...on the east side of the dorter'*. If the area to the east was a garden, then the cloister and principal monastic buildings must have lain to the west of the dorter, which would have occupied its usual position on the east side of the layout. The garden appears to have extended up to the eastern and northern limits of the precinct, and it also ran up to *'le Pryncipall lodging on the west side of the wall'*. Which wall this was is unclear, but it is likely that the principal lodging lay on the west side of the monastic layout. The juxta-position of the dorter garden and principal lodging is difficult to understand, but the abuttal may refer to a boundary wall between the garden and a wider court within which the principal lodging lay.

The last buildings described in the deed, the garner and storehouse, the bakehouse and the stable, are inserted between the description of the garden and a general reference to peripheral features such as fish ponds, and would have lain in the outer courtyards.

The church, cloister and related buildings

In order to understand the purpose and relationships of the excavated buildings, comparisons will be made with other Carmelite complexes known from excavation. Three possible interpretations of the church and cloister will be offered.

The church is mentioned in the 1544 survey but its relationship to the other buildings is not stated. The identification of building MD10 as the church rests upon its alignment, its proportions as a narrow rectangle, its location on the highest ground and its position nearest to the main entrance gate and the town. The lack of aisles or side chapels is similar to evidence from York and Linlithgow. Its dimensions (length 42m, breadth 7m) are similar to York, Linlithgow, Hulne and Denbigh[11]; A cloister lies to its south and there is evidence of cloister walks on north, west and east. Therefore all the prerequisites for a church seem to be in its favour. There is a probable west range, defined by the north-west angle of the cloister walk and, in period 3A, a wall angle or a buttress for a west range.

There is certain evidence for an east range with two or three rooms: a sacristy would be sited nearest the choir; a central room would be the chapter-house with burials in the cloister walk outside its doorway; a parlour would be the room furthest to the south. This accords very closely with the excavated plan of Linlithgow (Lindsay 1989, 80-4 and fig. 36); the only doubtful point is the space identified as the 'night stairs', which is, in view of Carmelite practices, better identified as the library. At Maldon (MD10, period 2A), the two northern rooms in the east range (rooms D and E) formed a single chamber (room C) This may be interpreted as the chapter-house, which, although rather large, would have occupied the liturgically correct position adjacent to the east end of the church. It might have initially served as a sacristy. The presence of successive burials in the east cloister walk (MD10, period 2A-2C) which were deliberately aligned on its doorway (See The Burials) serves to strengthen this identification.

The chapter-house was later subdivided to form new rooms (MD10, periods 3A-3B). By comparison with Linlithgow, the southern room (room E) would represent a smaller chapter-house, situated in the centre of the range, and as at Linlithgow, it had a suspended wooded floor. At Linlithgow the room north of the chapter-house was identified as a sacristy, at Maldon the presence of a hearth suggests a warming-room, a parlour or a library. Assuming a square cloister, at least one further room must lie in the unexcavated area south of the chapter-house; if the cloister had a longer north-south axis then the southern room is more spacious.

The south range has not been excavated but if the (later) well was centrally placed on the north-south axis then the cloister dimensions might be 21m east-west; 26m north-south.

However there are some inconvenient features about this identification of the northern building at MD10 as a church. The church seems rather narrow for a nave and choir serving a prosperous town (though originally the Carmelites were more of an ascetic hermit order, and between 1240 and 1247 chose remote sites). This hermit ideal may have continued in a friary founded in 1292, but the churches at Ludlow and Ipswich are larger than this range at Maldon, and London and Coventry are very much larger. The 'church' at Maldon has no burials within it, no tiled floors, no evidence of altar bases, no screen footings, no 'walking place' and no central tower, though there might have been one at the west end as at Linlithgow. The most significant omission is the absence of a central passage with a north doorway giving access to the cemetery and a south doorway leading directly to the east walk of the cloister. The single north-south wall is not convincing as the east wall of the nave. There is the unusual placing of the east wall in line with the east wall of the east range; all other Carmelite houses have the eastern arm of the choir extending some distance beyond the east range. A further factor against the identification of this structure as a church is the absence of any link between the choir, and the sacristy in the east range. It could be argued that the northernmost room in the east range was a muniment room or library, so no contact was desirable; it could be suggested that since only the

footings were seen the sill of a connecting door would be at a higher level. The presence of a hearth in Period 3 also argues against its use as a sacristy.

In view of these difficulties a second interpretation may be offered which would be to place the cloister on the north of the church, as happens at Ludlow and Luffness (and occasionally at houses of other mendicant orders). The excavated east-west range at MD10 would become the refectory with an internal sub-division, providing to the east the. smaller- room for the prior and his friars, and to the west the buttery and the servants' refectory. The west range would house the pantry and kitchen with lodgings over. No access would be necessary between the north range and the east range. The three divisions of the east range might be identified as parlour (north), chapter-house (centre) and sacristy (south). The surviving excavated evidence does not show whether there was any communication between the sacristy and the church choir but this might be expected. However the space identified as the parlour does contain a fireplace, so it may have acted as a warming room as well. The south range would be the position of the church, which might have burials in it and have a separate cemetery to its east. Some priors and benefactors could be buried in the cloister walk, especially in front of the chapter-house doorway. The church would stand in a pivotal position with the great cloister to its north and the little cloister to its south. The passage through the church between the two cloisters would be the 'walking-place'. However this would link the seclusion of the great cloister with the more mundane tasks performed in the little cloister; it could also bring worshippers past the west range, though this could be the guest house. This solution, therefore, has a further group of caveats; no Carmelite house had a lesser cloister immediately south of the church.

A third interpretation which seems more in accord with the archaeological evidence and which would better suit the 1544 description makes a different set of assumptions. In keeping true to their hermit origins the Carmelites placed emphasis on the oratory for private worship; only after their move to towns and their deliberate search for a mendicant urban role did they begin to build churches to which the laity were admitted. The friaries at Hulne and London contain chapels which can be identified as the early oratories; both lie east of the cloister. By making the assumption that Maldon friary had a fully detached church situated north of the north range at MD10, this explains the absence of church-like features in the north range. The detached church would have burials, paving altar bases, a bell tower and a walking-place with two screens separating it from the laity's nave to the west and the friars' choir to the east. To its north and east would be the cemetery, that to the north nearest the town for the laity that to the east nearest the cloister for the friars. The creation of a new church is the reason for the expansion of the cemetery in 1314, taking in a strip of land similar in width to the church (17 ft) and similar in length (60 ft) to the choir. The old church was not previously used for burial, suiting its description as an oratory in 1300, and the decision to build a new church was taken in 1314. Both London and Aylesford have churches detached from the cloister, and this is later the case at Coventry and Ludlow, though at three of them there is a free-standing north cloister walk (at Ludlow it is the south walk that is free-standing). In such a reconstruction of events the absence of burials in the excavated area is explained. The north range, at the former oratory, now became storage below (no fireplaces were found) and had a lodging or guesthouse above; there are possible traces of a staircase on the west wall. The original contemplative purpose could have been served by siting an oratory at the east end, overlooking the prior's garden. In the mother house at Mount Carmel the church was a detached structure a short distance east of the cloister (Pringle 1984, 94), Here at Maldon there is no room for a church to the east, besides which access from the town was necessary at Maldon whereas Mount Carmel was almost exclusively eremitical in character.

The east range contains a parlour with fireplace (north), chapter-house (centre) and a library (south) with the dormitory over the entire range. At the south-east angle of the range would be the staircase, close to the refectory for the afternoon rest period. The Prior's garden lay east of the dormitory. When the range was repaired in Period 3C the east wall of both ranges was treated as a unity with a continuous wall and similar buttresses. 1f the north range had still been a church there would have been clasping buttresses at the north-east or angle buttresses at both eastern corners to distinguish it architecturally as a church.

The other structures can only be surmised from the Dissolution survey. The south range would have contained the refectory with the kitchen to its west end to serve both the south and the west ranges. South of the refectory would be the little cloister with ranges on all three sides, as at Leicester Austin Friars and some Bristol friaries. At the south end of the main cloister's west range would be the larder 'with cheese-house or loft over'; this might protrude west of the main cloister and explain why it was singled out for separate notice. North of this structure was the west range, identified as the Bishop's or Principal Lodging. This refers to the head of the Carmelite Province based in London, who had the duty to visit all the houses in East Anglia; the bishop is likely to have been William Bachelor who died in 1515.[12] There is a hint that in Period 3A that the west range was rebuilt with either a buttress adjoining the north range or the north jamb of an arch belonging to a west range which oversailed the cloister walk, a common feature in mendicant rebuilding. This claustral complex was surrounded by courts and outer courtyards. The isolated building MD9 is best identified as the 'stable with hay-house over'. It is likely that two isolated buildings mentioned in the survey, namely the bakehouse and the granary with storehouse below, would be in general alignment with the stable on the southern side of the precinct and be placed parallel to the precinct wall. Adjacent were fish ponds which would also act as a static water tank if fire broke out in the bakehouse.

Although these various possibilities are partly hypothetical, the third interpretation with the church

detached to the north is the one which fits all the observed excavated phenomena and is not in conflict with the documentary evidence. On the basis of probabilities the second interpretation with the church occupying the south range is the least satisfactory and should be discounted. The first reconstruction with the church occupying the north range has the greatest number of parallels elsewhere (e.g. Hulne: Fig. 42; Linlithgow: Fig. 36) and might suit the modest history of the house set on a restricted urban plot, but it does have more problems in reconciling the plan with the archaeological evidence.

Service buildings

Documents also refer to ancillary buildings. One such building was excavated at site MD9, some 30m to the south-west of the main friary buildings. Initially, it was a small structure of simple plan, but in a major transformation in the later 14th century (period 3A) it was extended, with new entrances, a possible yard surface to the north, and a series of internal partitions. It was probably also heightened, as there is evidence of re-roofing and of a flight of steps being installed outside the building. The internal partitions could have divided the building into a series of bins and stalls, while a curry comb for grooming horses (period 3A) and a horseshoe (period 3B) were recovered from internal floor surfaces. The building is interpreted as a stable, and must correspond with the '*stable*' and '*heyhouse above the same stable*' referred to in the deed of 1544. Although there were no internal drains to aid mucking out, a ditch lay to the north of the building in period 2, and a culvert in periods 3A and 3B.

The stable was bounded to the west by a major north-south drainage/boundary ditch in period 2, and a wall was built alongside the ditch when the stable was rebuilt in period 3A. The stable block may well have formed the corner of a separate yard, probably one of the '*utter Courte yardes*' mentioned in the deed of sale, along with other service or farm buildings. Significantly, the stable block was situated in direct line with the gatehouse and entrance way, and probably next to the principal lodging.

Other buildings, mostly to do with food storage or preparation, are referred to in the deed, but lay outside the excavated areas. The description of the cheese-house and larder in the deed suggests that these were ranged around the little courtyard to the south of the frater, probably with a kitchen (not mentioned in the deed). This is interpreted as a service yard, situated to the south of the central cloister. The larder is also described in the deed in juxtaposition with the principal lodging, and it is likely that it served this as well as the main kitchen and refectory. The cheese-house was two-storied as it had a loft.

Other outbuildings, the storehouse, granary and bakehouse are not described in the same group as the buildings ranged around the service yard. They are described together with the stable, and although logically they should have been quite close to the service yard, they were probably located in the outer court to the west of the cloister, because of fire risk. This is supported by their relationship with the stable, whose location in this area is known from excavation (MD9). Again, there is evidence of buildings with one or more storeys, as the granary was situated over the storehouse, although it is possible that the storehouse may in fact have been a cellar or undercroft.

Status, society and religion

by R. M. J. Isserlin

Several male burials were recovered from MD10 (periods 2A-C); all had lived relatively long lives. They lay within an extremely restricted portion of the east cloister walk, where there is circumstantial evidence for memorial slabs. The first interment lay between the doorways leading to the eastern range and the cloister walk (MD10, period 2A), and subsequent burials clustered around it (periods 2B/C). The liturgical practice is known elsewhere in Essex: at Cistercian Coggeshall, an abbot was buried at the entrance to the chapter house (Gardner 1955, 24). At the mother house in Mount Carmel, two high-status burials also occupied a significant position in the eastern part of the cloister (Fig. 41). The burials at Maldon were carefully spaced one yard apart, sometimes in graves no more than a foot or so deep. They yielded no positive evidence in the form of nails for the use of coffins, implying simplicity. Their positioning may also provide support for the suggestion that the chapter house occupied the centre of the east range.

It is important to understand quite how self-limiting this group is; it is not solely the result of sampling opportunity. More burials (friar or lay, confraternity or guild) might be expected in a cloister walk (none were encountered in the cloister garth) though most would be in the graveyard. Graveyards are attested in 1300 (Simpson 1986, 46) and the deed of sale of 1544. One memorial-slab mentions a '*field of death*' i.e., a cemetery (Weevers 1631, 611; Simpson 1986, 21, 31).

The assemblage is thus a small fraction of the total skeletal population - over 200 burials are known from Linlithgow, and the handful from Maldon implies a very select group. Documents suggest that there were 22 friars living in 1335, an average-sized community (Simpson 1986, 13), though this excludes the laity. Absence of juvenile remains means that there is no archaeological evidence for confraternities or oblates, known on at least one Carmelite site (Stones 1989, 114). These did exist, however, and were drawn from local communities. A fee for the '*caryinge of a ladd to the friers of Maldon*' from Heybridge in 1515 (Pressey 1938, 13) implies oblates.

The range of faunal remains suggests produce from such areas could be rents from grange estates, or fees for ecclesiastical services. Fish are evident, including pike (from the fishponds?) and shellfish. From the 15th century, pork, lamb and beef were consumed too, and

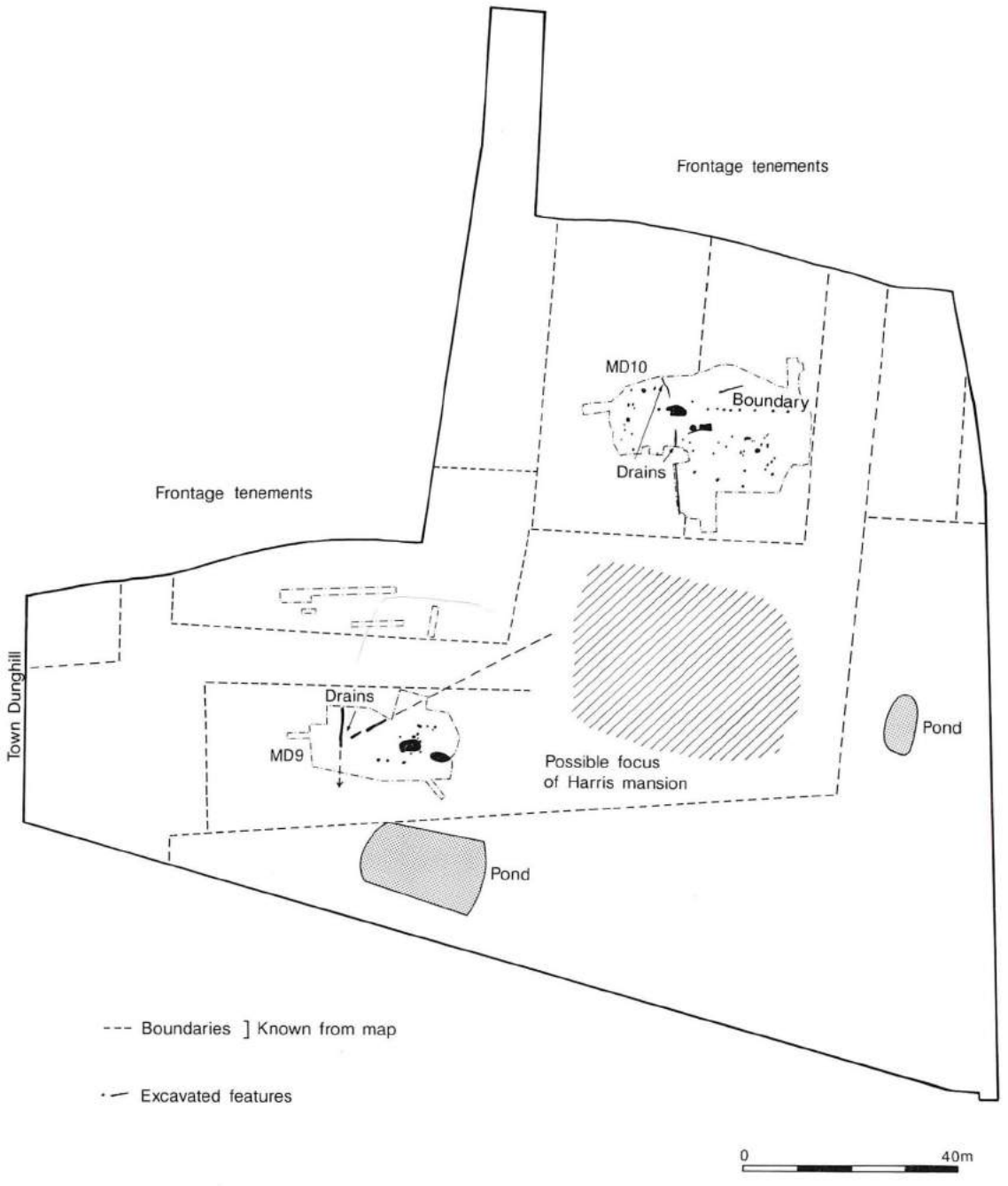


Fig. 43 Maldon Friary. The area of the friary in 1777 (after Chapman and Andre). The location of the Harris' mansion cannot be indicated with certainty

rabbit/hare is present (in surprisingly high quantities for an urban site), as are goose and chicken. When Innocent IV relaxed the regime of gastronomic austerity, the formerly ascetic monks complied. Proteins would certainly contribute to the monks' relative longevity, but we lack comparative evidence for fruit or vegetables and cannot judge if the diet was a healthy one.

However, a select class of religious artefact suggests links with the other side of the North Sea. The stamped leather binding of John Bale's *Collectanea* comes from the Netherlands, *c.*1500 and portions of the text contain various small offices written in the Netherlands[9]. A book clasp perhaps dated to the period immediately before the Dissolution was recovered from the site (Small finds, No. 23). Similarly, portions of early to mid 16th-century altar vase in Netherlands tin-glazed earthenware have been recovered from MD10. Such specifically ritual links with the Low Countries make a Dutch element in certain ecclesiastical sectors of the community very likely indeed.

Finally in this connection two highly portable artefacts pertain to religious identity and personal status. A gold ring was recovered from the floor of the stable (site MD9), although from a contaminated context (Small finds, No. 1). It is a type which may have been worn by the clergy. It may have belonged to a bishop, and derived

from a robbed tomb. An ivory crucifix was recovered from excavations in 1991, but subsequently lost.

The impact of the Reformation (Fig. 43)

The friary was in decline before the Reformation, and its site changed hands several times from 1536 onwards (Simpson 1986). The poverty which documents stress (Page and Round 1907, 36) may be reflected in the fabric of the buildings. Though it is not easy archaeologically to distinguish neglect from destruction, the mass of roof-tile spall around the outbuilding at MD9 (period 4) is symptomatic. The robbing of some of the friary buildings, and the neglect of others had begun.

Clearance probably began shortly after the Dissolution by emptying the house of furnishing and fixtures. There is evidence in the form of weights, tokens and a book-clasp that a counting house and a *scriptorium* were cleared. The former at least is likely to have been a first-floor room, since it is not mentioned in any deed of sale, and debris from these dumped in other parts of the site. Many of these finds were found redeposited in post-Dissolution rubbish deposits or garden soil (MD 9, period 5).

Usually the lead was stripped from the roof, melted down on site into ingots (or 'sows') and transported to a Royal foundry. At Maldon the scrap was appropriated by the townsfolk so quickly that furnaces were

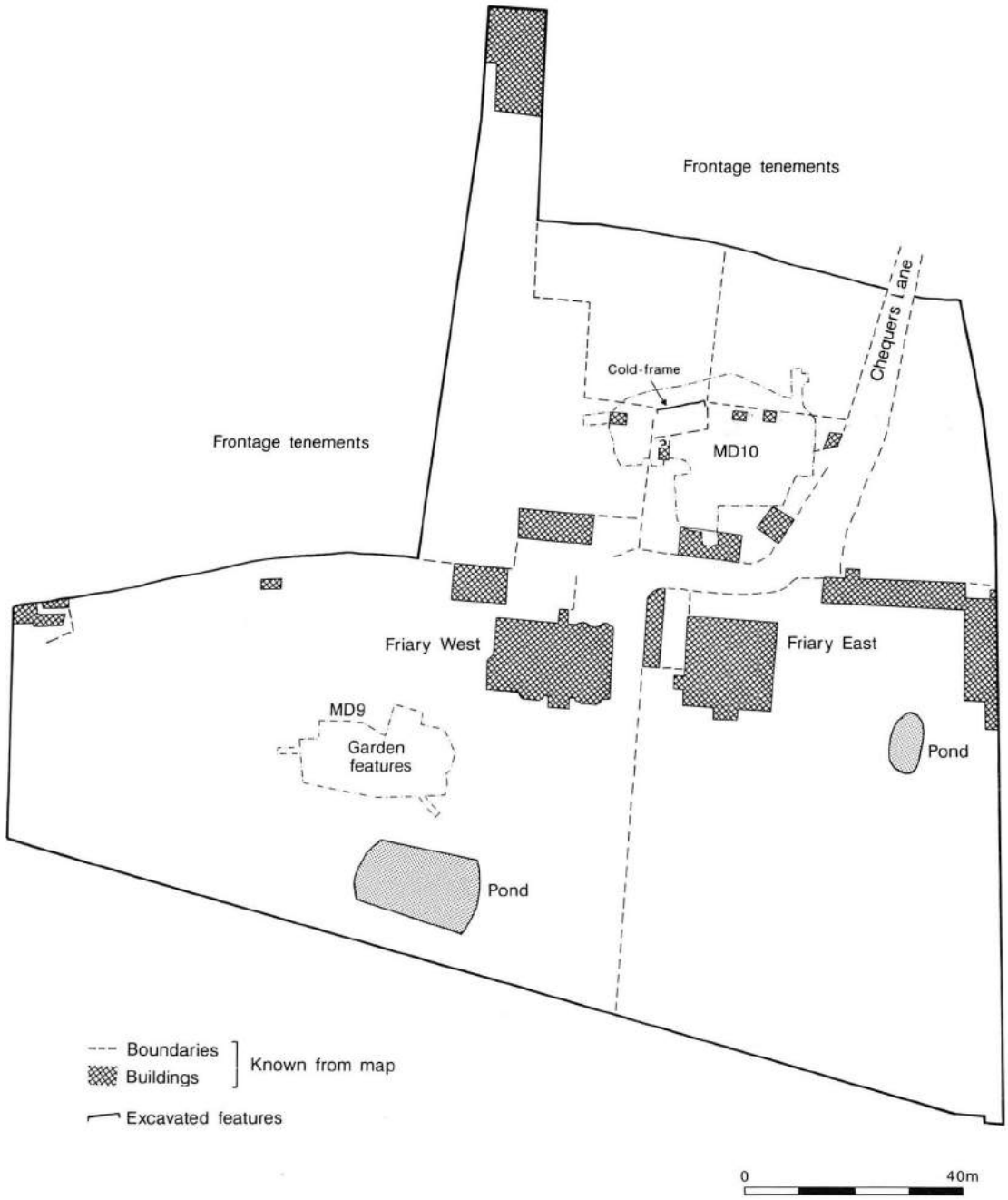


Fig. 44 Maldon Friary. The area of the friary in 1873 (based on 1st edition OS)

unnecessary, but some lead was apparently retrieved (Simpson 1986, 36). At ground-floor level, grave memorial-brasses and tile flooring were removed, leaving only floor make-ups to confront the archaeologist (site MD10, east cloister-walk; cf. Knowles 1976, 266-72 & Weever 1631, 50ff.). Weever's (1631, 611) observation on Thomas of Maldon ('*interred in the church of his Convent... as I have it in a Manuscript*') raises more questions than it answers.

One mode of demolition deserves particular mention, for it accounts for much of the fabric of the building. Documents depict a brief, unusual - and highly significant - phase of land-use. From 1537 to 1543, and perhaps as late as 1563, plays were performed at the Friary, thus maintaining for it a didactic religious function in a rapidly changing urban and political landscape. Proper staging was erected: transport of '*the stage tymbre from the Friers to Robard*' is recorded in 1541 (Mepham 1946, 171). Portions of staging may have been recovered in the form of postholes, but these do not form a coherent plan: MD10, period 5. One play, composed by John Bale, former inmate of Maldon Friary[10] denounced his colleagues as '*Hypocrytes*' (Stephen and Lee 1908, 961). The genre stressed that mere masonry buildings were no substitute for faith. Such theology is likely to have been driven home to the disadvantage of the buildings by the 6½ lb. of gunpowder employed for one performance in July 1540 (Simpson 1986, 37-8; Petchey 1991, 189-90). The choice of performance-date, Relic Sunday, can have been no accident and implies someone with a keen knowledge of matters ecclesiastical.

The lack of brick and masonry demolition rubble may well be due to such an harmonious use of traditional and new technologies. Explosives were also used in demolishing establishments at Lewes and St. Albans (Knowles 1976, 267; Scarisbrook, no date, 1). Though the fabric of few nearby buildings contains stone, local boundary walls use ragstone, chalk, septaria blocks, and tile - the same building-materials as were used in the excavated buildings. Some material was buried in pits dug within the confines of a demolished out-building (MD9, period 5). Other material is likely to have ended up on the Town Dunghill, which had appeared at the western edge of the friary precinct by 1600 (Petchey 1991, 86-7).

The friary buildings vanished ever more quickly. Not all of the friary buildings are mentioned in the deed of sale of 1544. Labour employed in its demolition must have formed a major component of the project costs of a new mansion for the Harris family, £927 6s 8d (Petchey 1991, 95). By 1570 or at the latest 1574, when the new mansion house was built (MD10, period 5), documents speak of the friary in the past tense. At this time too, the amount of gnawed animal bone increased sharply (animal bone report), implying that the area was urban waste ground where scavenging dogs gnawed rubbish.

Boundaries were realigned to conform with the building of the mansion house of Vincent Harris; chronologically they are post-Dissolution (MD10, period 5). Their alignment is precisely parallel to that of the present Friary West building built in 1805-7, and, it seems of the mansion before it, recorded (though not with great precision) in 1777 by Chapman and André (the brick walls of Friary West probably reuse those of the Harris' mansion for footings). The mansion remains unexcavated, but *Façon de Venise* wine-glasses suggest gracious living, while an alembic indicates the distillation of alcoholic beverages or an interest in alchemy (see Vessel glass report).

Stubs of walling, too small to deserve mapping, may have stood until gardens were laid out in the Victorian period, if the coincidence between them and features on the 1st edition of the Ordnance Survey is relevant. Their walls are aligned on, or intersect with, corners of walls of the former Friary in several instances. They would have formed topographically significant marker-points of value to any surveyor (Figs 43-44). Access to the new buildings required the creation of a road, which would have been laid over the remains of the buildings, as an extension of Chequers Lane. Most crucially, the Chapman and André map shows the Harris' mansion to the south of the plot, at approximately the location of Friary East and Friary West (Simpson 1986, 38).

A soil horizon above the demolished friary buildings represents the gardens of the Harris' mansion and its successors, Friary East and West. It was recorded in detail at site MD9, where in places more than one stage of deposition was recognised (periods 5 and 6). The latest pottery in the soil is dated to the late 18th and 19th centuries, but this probably represents the latest landscaping and/or disturbance of the gardens. The garden soil not only contained much residual pottery of the 14th-17th centuries, but also directly overlay wall stubs and demolition rubble of friary buildings, and must initially have been deposited or formed in the period following the Dissolution. The initial deposition of the soil probably represents landscaping of the gardens of the Harris' mansion, although it is impossible to tell how soon this occurred after demolition of the friary buildings and the reversion of the site to wasteland.

A large brick-lined culvert recorded at site MD9 served the Harris' mansion; a second, smaller culvert fed into it. Further drains to the north lay at right angles to the boundary mentioned above, and may also have been related to this building. Others may have carried water away from the ponds towards Chequers Lane. Some were lined with horn-cores (MD9, period 6). Their presence indicates horning as an addition to the hide and tallow industries documented nearby: by-products of the slaughterhouse industry which kept 30 butchers busy supplying London with meat (Petchey 1991, 85-7, 118-9). Unsurprisingly, the common practice of lining pits and drains (Rackham 1994, 56) occurs in post-medieval London. In the 19th century, the property was split up and the excavated area became gardens

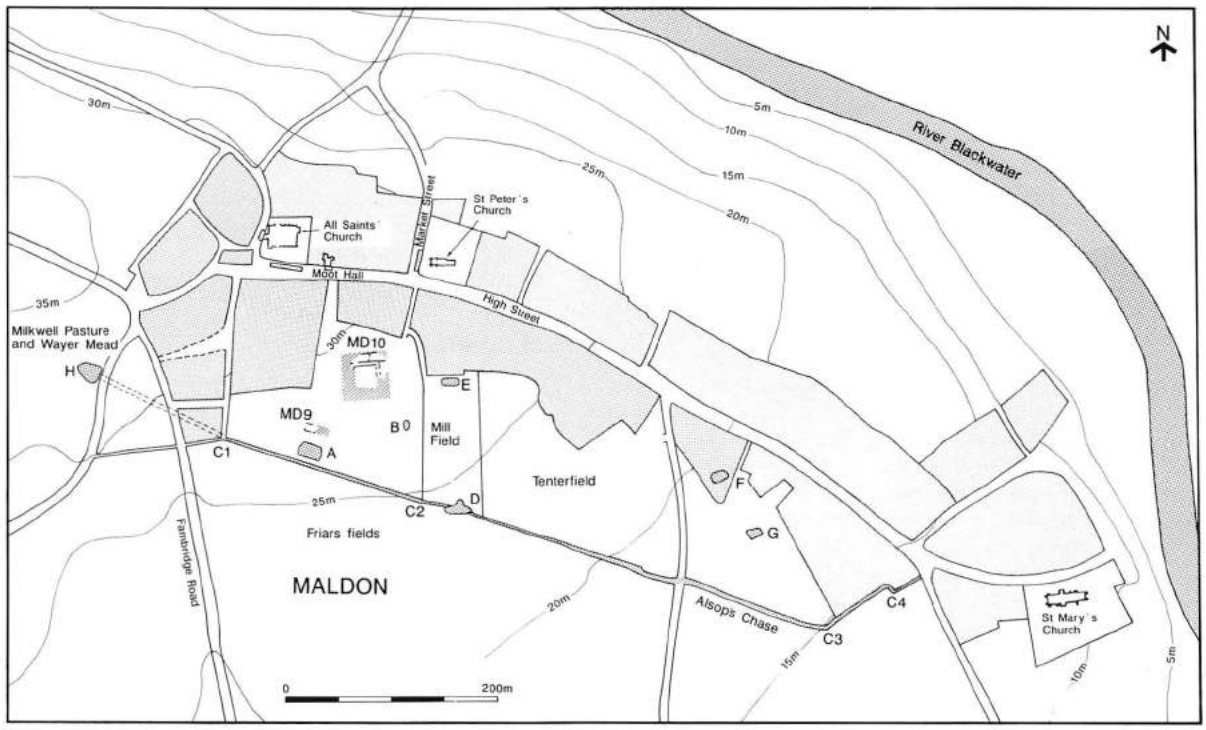


Fig. 45 Maldon Friary. Water courses around the Friary. Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494

(Simpson 1986, 40-3). Horticultural features appropriate to the grounds of a house of some standing - a cold frame, incinerator, and base for a compost-heap - were recovered from near the boundary of the westernmost property, in the 18th/19th century.

Conclusions

The excavations and subsequent analysis have provided new information about the friary buildings, the layout of the precinct in which they stood, and the transformation of the complex into the grounds of a private house after the Dissolution. The sequence of development is summarised in Table 1.

Although several boundary walls lie parallel to the walls of the friary defined by excavation, they are made of re-used stone and are post-medieval. It may, however, be argued that these represent the line of original precinct boundaries, on grounds of their alignment. Further excavation, and systematic recording and analysis of the standing fabric, is required to define their chronology. Further information on the pre-monastic land-use of the site would also be valuable, the better to understand the nature of the transformation of the landscape when construction took place. There is some artefactual evidence in the form of (residual) Late Saxon and Norman pottery, and animal bone to suggest that the area had been wasteland - presumably behind unexcavated High Street frontage tenements.

A cloister has been excavated in detail, although it was only possible to investigate the buildings ranged on its north and east sides (MD10). The incomplete ground plan from the excavations and limitations in the documentary evidence create problems in interpreting the monastic layout. The buildings could be part of a straightforward monastic plan, with a church in the customary place on the north side of the cloister and a chapter house in the centre of the east range. Alternatively, but far less likely, the layout may have been reversed, with the refectory in the north and the church to the south, in some respects imitating the plan of the mother-house at Mount Carmel. In this alternative view, the mansion built after the Dissolution would have been constructed on the site of the church, and the south of the site would always have acted as the main focus. Above all, archaeological proof is needed to identify the location of the church and the principal monastic buildings, so that it will be possible to decide which interpretation of the overall plan is valid.

The outbuilding excavated to the south-west of the cloister (MD9) can be interpreted more confidently. The plan of the building and artefacts recovered from within it identify it as the stable described in the deed of 1544. It appears to have lain within one of the outer courts mentioned in the deed. Others structures described in the deed remain unexcavated, and a survey using dowsing has not been particularly informative (Petchey et al. 1985, 12-3).

Features such as fish ponds and parts of mill-race, perhaps part of a battery of such works, may survive as ornamental garden ponds to the south and east, and portions of leat have been reconstructed from maps (Appendix 1). Further archaeological investigation around the fringes of the friary precinct and outside it might identify further drainage features, and structures, such as the mill.

Appendix 1 WATER SUPPLY AND DRAINAGE (Fig. 45)

One well was uncovered (but not excavated) in the centre of the cloister area of site MD10. This would supply inadequate water for the requirements of the monastery. Most such communities were justly renowned for their excellence in hydraulic arrangements (Bond 1988; 1989 for general surveys). The Carmelites in particular would have been inspired to great achievements by the canalization of the Wadi 'Ain as-Siyah at their mother house. The vaulted drain and the clay water pipes at site MD9 imply extensive arrangements for the collection, conveyance and disposal of fluids (Fig. 47).

A reference to '*. . .ponds . . . abutting on the field called Fryers felde to the south, and on the field of land called Myllefelde towards the east . . .*' in the 1544 survey places these in context. A pond south of the Harries mansion is recorded by Chapman and André in 1777 (A). It, and another one (B) is recorded east of it, in a map of 1807 (Simpson 1986, 40). Aligned with the southern and eastern boundaries, they may have originated as monastic fish ponds (cf. Simpson 1986, 22). Both A and B are recorded in the Ordnance Survey map of 1873, and there is space for a battery of up to another four ponds east of pond A. The ponds would require an adequate supply of fresh water, fed by some sort of channel or leat.

Like the friary buildings, this has vanished from sight. But its course formed the southern boundary of the friary and can be reconstructed from documents. The southern boundary of the precinct is marked on the 1st edition O.S. Map by a hedge, immediately south of which lies a trackway (presumably trackway and hedge were separated by a ditch). This linear feature runs for almost exactly 600 m from the south-western corner of the precinct boundary, continuing beyond the precinct as Alsops Close before deviating north-east (C1-C2-C3-C4). Immediately east of the precinct, the Tithe Map of 1838 (ERO D/CT 228) shows an inverted T-shaped water-filled hollow (D). The long arm of this lies exactly on the course of the leat; its northern extension juts north towards Tenterfield Terrace. Presumably the leat joined to feed a subsiduary waterwork here. A '*Myllefelde*' is mentioned east of the friary in the deed of 1544. This implies that a (water-powered) mill existed, perhaps powered by recycled waste-water from the fishponds. Indeed, a portion of pond (at right-angles to the boundary-wall) is also depicted on the Tithe Map (E) and the O.S. Map. It lies 100 m north of the T-junction. Ponds D and E may be vestiges of a mill-race. Possibly leat C1 - C2, and any tributary along the course D-E acted as a moat on the outside of any precinct walling. A '*gate, bridge and waye leading from the Friary into Friars Fields*' are mentioned in a dispute over rights of way in 1570 (Fitch 1898, 45) - from the context, the bridge spanned the leat in the area of C1-C2. Two other ponds (F, G) shown on the O.S. Map in properties further east may be related to the system in a manner not immediately apparent, though they may also be private ponds.

Water would also be required to flush the drains. Portions of ditch and drains recovered on site MD9 in periods 2 and 3 were probably fed by the leat C1-C2, for they are at approximate right-angles to it; but their course and discharge remain unknown. A conduit laid after the Dissolution on site MD9 (period 5) may have acted as the main drain for the Harris' mansion, but that at site MD10 (period 5) implies drainage of other, uncharted, ponds or buildings. A silt-filled feature, thought to be a fish pond, excavated in 1971-2 at the rear of 62-4 High Street (interim report) is pretty certainly part of this complex. In 1482, the Prior was required to amend his '*suspyrall*' (underground source of water leading to a conduit) so that it would not damage the wall of Richard Wood's property (Fowler 1909; Simpson 1986, 32). This hints at another portion of the supply (though Wood's property cannot now be identified).

The source of the leat may lie 130m west of the alignment of C1-C2. The Ware Pond (H) or 'Milk Pond' (Petchey, 1991, fig. 1) depicted on the O.S. map of 1873 is likely to have been the source (Ware = Weir?). The leat terminal is not obvious. The course and fall of the leat is best understood in relation to the lie of the land. As ever, the favourite device of the surveyor was used to lay much of it out - the straight line. Fifteenth-century documents hint at the location of a well near Fambridge Road (Simpson 1986, 29-30). As a monastic waterwork, it is unremarkable; the only thing about it that is remarkable is that, being on the fringes of an historic town, it has escaped recognition or comment for so long.

Archived Material

A text detailing the likely contents of the library exists in archive form. It is hoped that a brief note on the subject will appear in due course in *Essex Archaeology and History.*

A text listing the worked stone exists in the site archive.

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Footnotes

1. B.M. Harleian MS 539, f.144; P.R.O., C 143/19/5; *Calendar of the Patent Rolls preserved in the Public Record Office, Edward I. A.D. 1292-1301* (HMSO, London 1895), p. 25.
2. B.L. Cotton Ch. v. 33
3. *Calendar of the Patent Rolls preserved in the Public Record Office, Edward II. A.D. 1313-1317* (HMSO, London 1898), p. 203
4. B.L. Cotton Ch. v. 33
5. *Calendar of the Papal Registers: Papal Letters*, IV, (HMSO, London 1902), p. 399
6. P.R.O., C 66/479, m. 10-11
7. Bodleian Library, Bodley MS. 73, ff. 80-2
8. W. Oldys, ed., *The Harleian Miscellany: a collection of scarce, curious and entertaining pamphlets and tracts, as well in manuscript as in print: selected from the library of Edward Harley*, (London 1808-13 edition), vol. vi, pp. 437-64
9. Bodleian Library, Oxford, Bodley MS. 73, ff. 80-2
10. W. Oldys, ed., *The Harleian Miscellany: a collection of scarce, curious and entertaining pamphlets and tracts, as well in manuscript as in print: selected from the library of Edward Harley*, (London 1808-13 edition), vol. vi, pp. 437-64
11. Linlithgow 39m. x 6m.; Hulne 37m. x 6m.; York 30+m. x 6m.; Luffness 30m. x 6m.; Denbigh 18+m. x 7m. (all internally).
12. William Bachelor was originally admitted to Burnham Norton (Norfolk) and rose to be prior there before transferring to be Prior at London. His title of bishop was of 'Carvahagonensis' in Greece. No bishop of London is known to have been a Carmelite, nor were John Young, bishop of Gallipoli, suffragan in London diocese 1513-1520 or Thomas Bale, bishop of Lydda, suffragan 1521-1528, known to be Carmelites. Thomas Bale, a member of this house, only became bishop at Ossory in 1152. The use of Carmelite houses as bishops' lodgings has been recorded at Perth, used by the bishops of Dunkeld, and Denbigh, used by the bishops of St. Asaph.

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What use are 'Manorial Descents'? The case of Stebbing, 1066-1545.

by W.R. Powell

Introduction[1]

The full-scale county histories written before the present century, like that of Philip Morant in Essex, consisted mainly of parochial sections, each taking as its principal theme the descent of manors from owner to owner, as far as possible from the Conquest to the time of writing. During the Middle Ages the word manor (*manerium*), though not at first a technical term, had gradually come into use to describe a landed estate owned by a lord (*dominus*) who through his court controlled the lives of his tenants, subject to custom, but with little interference from outside authorities. The manor was a unit for purposes of tenure, agricultural management, and local government. By the 18th century it was obsolescent for most purposes, and in some cases the remaining manorial rights had become detached from land ownership. But the lordship of a manor continued to survive as a title of dignity, and even today is sometimes bought and sold.

The early county historians concentrated on manorial descents for commercial reasons. Until the present century the market for topographical books consisted, in any county, of no more than a few hundred gentry, interested mainly in their own families and in their predecessors as landowners.

The topographical volumes of the *Victoria County Histories*, the first of which appeared in 1900, also concentrated on manorial descents, aiming to produce them to higher standards than those of the older county historians, to bring them up to date, and to fill in the gaps on the map where no detailed county history had previously appeared. The *V.C.H.* descents were based on a few classes of public records, accessed mainly through printed texts or calendars like those of the Charter, Patent, Close and Pipe Rolls, or through the manuscript indexes to the Feet of Fines and the Inquisitions *Post Mortem*. While drawing upon the old county histories, they made hardly any use of original family and estate records. This narrow framework was geared to rapid production, and did achieve that end. But the descents contained too much legal detail unrelated to local history or topography. Its faults were pointed out as early as 1907 by John Horace Round, a scholar who could not be accused of underestimating the value of manorial descents. Writing to the General Editor of the *V.C.H.*, William Page, in October of that year, after reading some of the parish histories recently written for Hertfordshire and Bedfordshire, he urged that there should be less detail in the manorial descents: 'It can be of use to no one but an occasional lawyer ... I should write parish history in a *very* different form, and make it, I think, much more interesting. I greatly hope I shall be able to tackle Essex topography, for I am very keen on this.' A month later he sent Page a long critique of the current *V.C.H.* parish histories. In the first place, he said, they lacked a sense of proportion.

> You may have, in the 17th century or later, a tobacconist buying a little manor and selling it to a linen draper, who sells it to an attorney, just as these people might buy and sell investments and stocks. They might not reside or have any connexion with the parish, but because the transactions are recorded in the Fine Rolls ... [you] give them in detail, while a medieval family of resident squires would be cut down to very little.

Secondly, said Round, the parish histories lacked 'grip and co-ordination.' Many landowning families have held manors in a number of parishes, sometimes in more than one county. 'The facts should be brought together, and handled as a whole.' He went on to point out that in the past century or two the substantial interest had shifted from manors to residence and *ownership* of land (often dissociated from manors.)

At that time the *V.C.H.*, already in financial difficulties, could do little to improve the topographical volumes, which continued to be produced on the original plan until about 1950, when they came under attack for class bias and neglect of social and economic history. The revisionists, led by W.G. Hoskins and H.P.R. Finberg, had a good case, though they did not allow for the fact that the *V.C.H.* parish histories are designed to supplement the comprehensive articles in the 'general' volumes, and not to stand alone. In the following years the *V.C.H.* met the criticisms by adding several new topics, as standard features, to the parish histories. In doing this they were able to draw upon many sources newly available in county record offices. The *Essex V.C.H.*, revived in 1951, was a pioneer in the use, for the series, of records preserved in the county. It was most fortunate in finding that the extensive collections in Essex Record Office were already well indexed. Besides widening the scope of the parish histories, the *V.C.H.* has retained the manorial descents as standard features, now based on a wide range of sources, and written with a

firmer grasp of the distinction between manorial jurisdiction and land tenure.

Outside the *V.C.H.*, the systematic writing of manorial descents is not much practised today. This poses two questions. First, could this work now be left entirely to the *V.C.H.*? This is easily answered. Up to date the *V.C.H.* has published histories of some 2,500 of the 10,000 ancient parishes of England. It will be many years before the whole country is covered by the series, so that there is plenty of room for other writers. But this answer is contingent on the second question: What use are manorial descents in modern historiography? The following

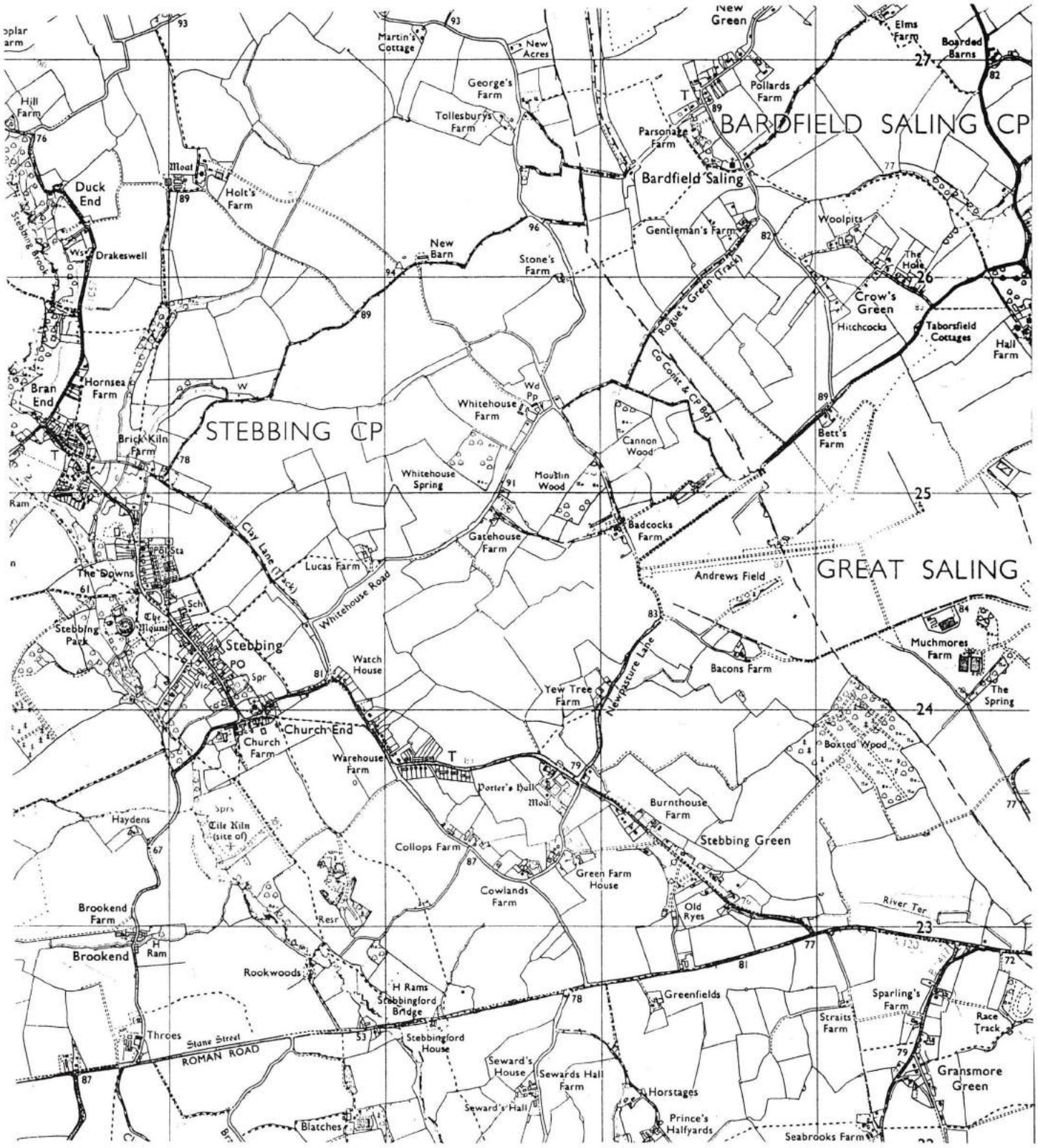

Fig. 1 Stebbing 1985 (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

account of the medieval manors of Stebbing, a parish in north Essex near Braintree, is offered as a test case in considering this question. It is arranged as follows:

Synopsis (p.146) - the Domesday Manors (146) - Ranulf Peverel's Manor after 1086: the Coulonces Fee (147); the Hawk Serjeanty (147); the Stebbing Fee (147); the Parmenter Fee (148) - Henry de Ferrers' Manor after 1086: Stebbing Hall (148); Porter's Hall (149) - Priors or Friars Hall (150) - Analysis (151) .

Synopsis

In 1086 Stebbing comprised two manors, geographically intermingled, and each held in demesne by a powerful baron. The larger, part of the Essex-based honour of Peverel, belonged to Ranulf Peverel, who may have built a castle at Stebbing. The honour escheated to the Crown by 1130, and in the following years its Stebbing manor was subinfeuded. Parts of it were granted to the Coulonces family, prominent Norman barons, but they were forfeited after the fall of Normandy in 1204, and were merged in the Ferrers manor of Stebbing Hall. Other parts of Peverel's manor passed to the Stebbing family, named after the parish. They included a small property held in serjeanty by tending a hawk for the king.

The smaller Domesday manor, Stebbing Hall, belonged to Henry de Ferrers, whose vast estates lay mainly in the Midlands. His son became the first earl of Derby. The 5th earl subinfeuded the manor in 1251 to his younger son, Sir William Ferrers, whose descendents, the Lords Ferrers de Groby, later marquises of Dorset, held it until 1544. By the mid-14th century they had made their home there, in a great house with a park. In the 15th century the Lords Ferrers were prominently involved in the Wars of the Roses.

Porters Hall manor, in the south-east of the parish, was built up in the 13th and 14th centuries by the Porter family, who held it until 1415. It passed *c.* 1437 to Sir Lewis John, a Welshman and London merchant. His son, John FitzLewis, was killed in 1471, fighting against the Yorkists at Barnet, and his estates were forfeited. John's son, Sir Richard FitzLewis, bought some of them back from Edward IV, but to raise money for this he sold Porters to Sir William Capell, another London merchant. Capell's son Sir Giles bought Stebbing Hall in 1545, thus extending his estate to include most of the parish.

Priors, or Friars Hall was the Rectory manor. In 1181 William de Ferrers, 3rd earl of Derby, gave it to the Knights Hospitallers, possibly as an act of contrition for sacking the borough of Nottingham during his rebellion in 1174. The Hospitallers retained the manor until their dissolution in 1540.

The Domesday Manors

Domesday Book lists two manors at Stebbing. Before the Conquest both had belonged to Siward of Maldon, a thegn prominent in Essex and Suffolk, but by 1086 they had passed separately to two Norman barons, Henry de Ferrers and Ranulf Peverel, each holding in demesne.[2] Henry de Ferrers, himself a Domesday commissioner, held a vast barony, based at Tutbury (Staffs.), but including five Essex manors.[3] His Stebbing manor, of 2 hides and 30 acres, with a recorded population of 42, was valued at £12. Ranulf Peverel's barony, lying mainly in Essex and Hertfordshire, was called the honour of Hatfield Peverel, from its chief manor in Essex.[4] His Stebbing manor, of 3 hides 30 acres, with a population of 61, was valued at £16.

The two manors seem to have been intermingled. Ferrers's manor must have included the church, since it had a priest, and later owned the advowson. Peverel, with 16 ploughteams, had more arable than Ferrers, with 9½. He also had more meadow than Ferrers (24a. to 9a.), and woodland pastures for a larger number of swine (200 to 150). Peverel also had two (water) mills, while Ferrers had none. One of Peverel's mills had previously been shared with another manor, probably that of Ferrers, who in 1086 was said to have had half a mill previously, but to have lost it. That suggests an act of aggression by Ranulf Peverel. If so it was in character, for Domesday book accuses him of violent encroachments on several other Essex manors.[5] In this county he had far greater resources than Ferrers. There is evidence, also, that Peverel may sometimes have lived at Stebbing, for his manor contained 2½ arpents of vineyard. J.H. Round pointed out that Domesday vineyards were 'normally found on manors held in the lord's hand, and probably containing a lord's residence. By "lord" I mean a baron or tenant-in-chief."[6] Peverel had a second, and larger vineyard on his great demesne manor of Debden, eight miles north-east of Stebbing.[7] That might suggest that Debden was his main residence, but for the existence of Stebbing Mount, the moated mound in the village which seems like the site of a Norman castle.[8] If there was indeed a castle there it is likely to have been built by Ranulf Peverel, and its early disappearance would have been due to the fact that his Stebbing manor, with the rest of his barony, escheated to the Crown early in the 12th century, and was subinfeuded to various tenants, none of whom can have been sufficiently rich and powerful to maintain a castle.[9] It is most unlikely that the Ferrers family ever had a castle at Stebbing in the 12th century, and there is no evidence that they lived there at that period. They had a castle at Tutbury, and founded a priory there. They also founded an abbey at Merivale (Warws.). Some members of their family were buried at Tutbury, others at Merivale or at Stafford.[10]

Ranulf Peverel's manor after 1086

Ranulf Peverel, who was still living in 1091, was succeeded by his son William, who died without heirs between 1107 and 1130.[11] The honour of Hatfield Peverel then escheated to the Crown. By the late 12th century its Stebbing manor seems to have been split up between several different tenants, each holding under the Crown. That process, which had certainly begun by 1135, may well have been initiated by Ranulf or William Peverel.

The Coulonces Fee. In 1173 and 1174 the lands of Thomas de Coulonces in Stebbing were in the king's hands.[12] He was a Norman baron with English manors in Hampshire as well as Essex.[13] His family took their name from Coulonces (Calvados), near Vire. Thomas had witnessed charters of Henry II *c.* 1170 and 1172. He had probably joined the baronial rebellion in 1173, and suffered temporary sequestration in consequence. That evidently happened again during the rebellion of 1183-4.[14] By 1185 Thomas had once more recovered his Stebbing lands, but he had incurred a fine which he was still paying by instalments in 1187, when he was succeeded by his son Hugh de Coulonces.[15] Part of the fine was remitted by the king in 1188, and the remainder in 1189.[16] In 1189 the sheriff of Essex accounted for £8 10s. for scutage from Hugh de Coulonces, 'knight of the honour of Peverel, of the old and the new feoffment.'[17] This must refer to Stebbing, which was Hugh's only Essex property. The 'old feoffment' refers to knights enfeoffed before the death of Henry I. It thus appears that part of his estate in Stebbing had been subinfeuded by 1135.

In 1189 Liulf, 'man of the duke of Saxony,' owed the king 60 marks (£40), 'to have his exchange with Hugh de Coulonces of the land of Stebbing.'[18] Since Liulf had not paid this debt by 1199, and there is no later reference to it, the transaction was presumably abortive.[19]

Hugh de Coulonces witnessed a charter of Richard I in 1190, and in 1197 was a guarantor of Richard's treaty with the count of Flanders.[20] But he was one of the Norman barons who adhered to Philip of France in 1204, and consequently forfeited his English lands.[21] His Stebbing estate, comprising one knight's fee, worth £20 a year, was granted by King John to Robert de Ferrers, brother of William de Ferrers, 4th earl of Derby, who in 1219 was holding it of the honour of Peverel.[22] Henry III gave it in 1227 to the earl himself.[23] In 1235 the earl was excused from attending the king's court at Hatfield Peverel, 'by reason of his court of Stebbing, which is of the land of the Normans, until the right heirs [regain] it either by peace or the king's will.'[24] That formula, often used in the years following the loss of Normandy, anticipated the recovery of the duchy, while hinting that Normans who adhered to the king of England might recover their lands here. Some of the Normans did, indeed, regain English lands, or were compensated for their loss.[25] But there is no evidence of this at Stebbing, and there is little doubt that the Coulonces lands were permanently merged in those of the Ferrers family.

The Hawk Serjeanty. A small estate in Stebbing was held in serjeanty by the service of tending a hawk for the king's use. The service is first mentioned in 1193 and 1194, when Ernulf FitzSimon was owing the king 20s. for an inquisition as to whether he should receive an annual rent of 10*s.* in Stebbing for one hawk (*nisum*).[26] The rent was presumably the sum payable by the tenant in serjeanty in lieu of service. Why Ernulf should be entitled to it is unclear, and there are no later references to his claim. This serjeanty was part of a curious arrangement linking Stebbing with the manor of Langley in Acton Burnell (Salop). In 1212 William Burnell owed the service of taking a hawk to Stebbing for the king's use.[27] The 'serjeanty of William Burnell in Langley' was more fully described in 1250.[28] He was required to take a hawk (*austurcum*) from the gate of Shrewsbury castle to Stebbing. The estate held in return for this service consisted in 1250 of two virgates, 7 bovates and 36½ acres of land and a mill. By then it had been alienated to fifteen tenants, who together paid 20*s.* rent. William Burnell himself now owed the service of one third of a knight's fee.

The Stebbing Hawk serjeanty was in 1219 owed by a man who took his name from the place, John de Stebbing; he held ¼ hide valued at 10*s.*[29] He still held it in 1227, when it was said to have been given by Henry III to 'the Earl Ferrers' (the earl of Derby).[30] In the same year the earl, William de Ferrers, obtained by royal grant 'the land of Stebbing with the service of John de Stebbing.'[31] The charter states that the land had previously been granted by King John to the earl's brother Robert; and that it had belonged to Hugh de Coulonces. The 'service of John de Stebbing' probably refers to his serjeanty. There is no other evidence connecting it with the Coulonces fee, and in that respect the charter was probably in error. But since the serjeanty must have been created by Henry I or one of his successors after the Peverel manor escheated to the Crown, it is probable that the lands attached to it, held by John de Stebbing, had originally belonged to that manor. John still held the serjeanty in 1235, when its lands were valued at 40*s.*[32] No later references to it have been found.

The Stebbing Fee. The Stebbing family held other lands in the parish besides those of the Hawk serjeanty. The family is first mentioned in 1185, when Avice, widow of Nicholas de Stebbing and daughter of John de Marney (*Mariny*), was a ward of the king; her estate was valued at two marks.[33] The wardship of her elder son, with lands worth 4 marks, had been entrusted by the king to Peter Picot. The location of Avice's lands, and those of her son, is not stated, but later evidence points to Stebbing. In 1190 John, son of Nicholas, owed the king 20 marks 'for the land of Stebbing.'[34] He was probably identical with John de Stebbing (*Stubbinges*) who in 1203 owed one mark for scutage of the honour of Peverel,[35] and who, also under King John, held half a knight's fee of the honour.[36] In 1235 Ernulf de Stebbing granted to John de Stebbing a life-interest in 30 acres of land and 12s. rent in Stebbing.[37] Later in the same year William FitzJohn conveyed 40 acres of land and 4 acres of meadow in Stebbing to Nicholas FitzJohn.[38] Nicholas FitzJohn may be identical with Sir Nicholas de Stebbing (*Stubbyng*), who at some date between 1251 and 1281, conveyed a carucate of land in Stebbing to William de Ferrers.[39] Even after that the Stebbing family had a sizeable estate in the parish. In 1317 a house, 100 a. land, 7 a. meadow, 5 a. of pasture, and 10*s.* rent in Stebbing were settled on Nicholas, son of John de Stebbing, with remainder to his son, John.[40] The same

property was in 1343 settled on John son of Nicholas de Stebbing and his wife Joan.[41]

The Parmenter Fee. In 1235 Felicia Parmenter, widow, held one virgate of land in Stebbing of the honour of Peverel by service of 10*s*.[42] This small tenement can be traced back to 1186, when Richard Parmenter (*Parmentarius*) owed the king 10*s*. 'for the farm of Stebbing, of that part which had belonged to William de Plasseiz.'[43] Richard still accounted for the property up to 1189, but in 1190 the custodian was William Puintel, constable of the Tower of London.[44] In *c*. 1212 the land of William Parmenter, listed as a serjeanty, was rated at 10*s*.[45]

Henry de Ferrers's Manor after 1086: Stebbing Hall

Henry de Ferrers's manor, considerably enlarged during the following centuries, became known as Stebbing Hall and later as Stebbing Park. Henry died between 1093 and 1101. He was succeeded by his son Robert, who was created earl of Derby in 1138 and died in the following year.[46] In 1139 Robert, or his son and namesake the second earl, granted to Maurice FitzGeoffrey all his land of Stebbing (*totam terram meam de Stebingis*) to hold for £10 a year and service of ½ knight's fee.[47] The grant was confirmed in 1139 or 1140 by King Stephen.[48] Between 1139 and 1159 Robert de Ferrers, the second earl, made two further grants to Maurice FitzGeoffrey which seem to have given him possession of the same land on somewhat better terms.[49] One grant stipulated that Maurice was to hold of the earl, for one knight's fee, land in Stebbing worth £10 a year, in exchange for all the land of Robert de Livet, Maurice's uncle, excepting that held by Wulfard (*Wolvordi*) the knight in Woodham [Ferrers], which Maurice was to retain. If Maurice should lose the land in Stebbing by default of the earl, his wife Countess Margaret, or the earl's heirs, then he should be entitled to one-third of the earl's manor of Woodham. The grant added that the earl, in his baronial court, (*coram baronibus meis*), had previously recognized Maurice's right to his uncle's land.

In his other grant the second earl of Derby stated that he had invested Maurice FitzGeoffrey with the land previously devised by Robert de Livet to his brother Geoffrey FitzRichard and Geoffrey's heirs. The earl explained that Livet's land adjoined his own, and that he had acquired it from Maurice FitzGeoffrey in exchange for Stebbing, which Maurice was to hold of him for one knight's fee. If Stebbing should fall into the hands of Countess Margaret, whose dower it was, then Maurice was to receive in compensation land in Woodham of equal value, to hold until he or his heirs should gain possession of Stebbing after the countess's death (*post comitissam*). The grant also gave Maurice permission to erect a mill in the marsh which was common between the earl's manor of Woodham and the Abbess of Barking's manor of Hockley.

The above grants to Maurice FitzGeoffrey are valuable both for the study of diplomatic and for the history of the barony of Tutbury. Maurice FitzGeoffrey and Earl Robert were the joint founders, *c*. 1153, of the Cistercian abbey of Tilty, near Stebbing.[50] The links between the manor of Stebbing and that of Woodham Ferrers, which lay 17 miles apart, are also interesting. But there is no evidence that the grants to Maurice FitzGeoffrey had a permanent effect on the descent of Stebbing. Although the grant of 1139 purported to enfeoff Maurice with all the earl's land of Stebbing, the manor was held in demesne by later earls of Derby until 1251, when the 5th earl, William de Ferrers, subinfeuded it, with two other Essex manors, to his younger son (Sir) William, then a minor.[51] Some years later, after coming of age, Sir William gave a life interest in Stebbing to his mother, Margaret, countess of Derby.[52] In 1281 the manor was seized by the sheriff of Essex as having belonged to the countess, but Sir William vindicated his title at an inquisition, at which it was stated that the manor, including a carucate of land in Stebbing bought by Sir William from Sir Nicholas de Stebbing, was worth £52.[53]

Sir William de Ferrers died in 1287. Stebbing manor, then held of the king in chief, was included in the dower of his widow Eleanor.[54] She was holding a knight's fee in Stebbing in 1303,[55] and was still living in 1326,[56] but by 1331 Stebbing Hall had passed to her grandson Henry de Ferrers, Lord Ferrers de Groby, who in that year exchanged some land with William Porter of Porters Hall, no doubt to consolidate their respective demesnes.[57] In 1338 Henry was licensed to hold a weekly market and an annual fair at Stebbing.[58] He died, holding Stebbing, in 1343, leaving a son and heir William, Lord Ferrers.[59]

William, Lord Ferrers, probably made Stebbing his family home. He himself was sometimes away fighting in France, but it was at Stebbing that he died in 1371.[60] The manor, including a 100-acre park, was then said to be held of the duke of Lancaster for one knight's fee. William left a son and heir, Henry, who had been born at Tilty Abbey in 1356, and a widow, Margaret, to whom a third of the manor was assigned in dower. The remaining two-thirds was assigned, in custody, to Sir Ralph de Ferrers, knight.[61]

The dower of Margaret, Lady Ferrers, was described as follows:[62]

> One third of the manor of Stebbing, namely: of the houses, one great chamber at the end of the hall on the west side; and one closet and chapel with a green grass plot at the end of the chapel; two small chambers with a wardrobe at the end of the said chapel; four chambers opposite the said great chamber, namely from the gatehouse of the lodging towards the park; one tiled house called the 'gerner' and the 'hennecoote'; one house called the 'laderhous'; one grange called the 'oteberne'; one house extending from the 'osthous' to the 'Scottes shepene'; one sheepcote house called 'eldeschepecote'; one third of two watermills with the 'millepond'; one third of the river (*ripar*'); a garden called 'shepengardyn' by the sheepcote house; 1 acre 1 rood of the 'Aldeker' within

the close by the 'Parkmede'; one third of the garden within the manor close extending from the 'Alderker' to 'Carteresmor'; one third of the dovecote; one third of the profits of Stebbing market and fair; in 'Peselond' and 'Kechenfeld' six score acres as enclosed by hays and ditches; in 'Lymekelnfeld' 20 acres arable as enclosed; in Little 'Bruggefeld' 30 acres as enclosed; in Stangate 30 acres as enclosed; in 'Holemede' 9 acres 3 roods meadow as enclosed; in 'Langemede' by 'Turpet' 2 acres meadow on the west side; in 'Russhet' 2 acres 1 rood pasture by the park; and the one third of the park in the 'Rowenhey'; 14 acres in the 'Launde' there; abutting on the wood 31 acres 3 roods as divided by metes and bounds; in 'Stistedgrove' 2½ acres wood as enclosed; one third of the Court with the view of frankpledge.

The assignment of dower went on to list the rents due from each of the free and neif tenants of the manor. Lady Ferrers was also to receive a third of the manor of Woodham Ferrers, similarly itemized.

Lady Ferrers's dower is of particular interest in relation to the manor house, where she received, as her one-third share, eight rooms and the chapel, with five out-buildings and gardens.[63] It is thus evident that in 1371 this was a great house, fit for a noble family. There is little doubt that it stood on the site of the present Stebbing Park, which was formerly marked on maps as Stebbing Hall. The precise detail of the accommodation allocated to Margaret suggests that she had made a personal choice and that she intended to go on living there. When she died, however, it was at Buttsbury, another Ferrers' manor in south Essex, and her will directed that she should be buried in the Dominican friary at Chelmsford.

It will be seen from the above inventory that Lady Ferrers' dower comprised some 263 acres of farm as well as some of the park; a one-third share of the income from two watermills, the market and fair, and of the manor court with view of frankpledge. The mills would have been on Stebbing brook. The reference to 'Lymekelnfeld' is notable, for the modern map shows the site of an ancient tile kiln next to the brook, south of the village, and Brick Kiln Farm north of the village.[64]

Lady Ferrers died in 1375.[65] In 1377 Henry, Lord Ferrers, on coming of age, had livery of her lands and those of his father.[66] The manor of Stebbing Hall subsequently descended in the Ferrers family, Lords Ferrers, until the death in 1445 of William de Ferrers, 5th lord.[67] His heir was his granddaughter, Elizabeth (Ferrers), wife of Sir Edward Grey. Sir Edward, who was summoned to Parliament as Lord Ferrers de Groby, and later as Lord de Groby, died in 1457. Elizabeth married, secondly, Sir John Bourgchier, a son of the earl of Essex.[68] She died in 1483. Sir John later married Elizabeth, widow of Sir Ralph Assheton. He died in 1495, and was buried in Stebbing church.[69] Elizabeth died in 1499, leaving instructions that her husband's remains should be removed from Stebbing and reinterred, along with her own, in the Lady Chapel of Beeleigh Abbey, beside his father's tomb.[70]

Edward Grey, Lord Ferrers (d. 1457) left as heir his son Sir John Grey. Sir John, who was not himself summoned to Parliament as a peer, married Elizabeth Woodville, daughter of the first Earl Rivers. He was killed on the Lancastrian side at the second battle of St. Albans in 1461, leaving Thomas Grey, his son and heir. In 1464 Sir John's widow Elizabeth married King Edward IV. Thomas Grey fought for Edward IV at Tewkesbury in 1471, and later in that year was created earl of Huntingdon.[71] In 1475, having surrendered the earldom, he was created marquis of Dorset, and in 1483, on the death of his grandmother Elizabeth, Lady Bourgchier, he became also Lord Ferrers de Groby, and owner of Stebbing Hall. Under Richard III he joined the duke of Buckingham's revolt and was attainted for high treason. But he escaped to join Henry Tudor, and under Henry VII he regained his honours and estates. He died in 1501.

In 1508-9 the manor court of Stebbing was held, for the first time, by Sir Edward Howard in right of his wife Alice Lovell, Lady de Morley.[72] Their title to the manor is not clear. Alice, who was heir to the Morley barony, held the manor of Great Hallingbury, about 9 miles south-west of Stebbing.[73] As a niece of Edward IV she was related by marriage to the marquises of Dorset. Her interest in Stebbing was brief, for in 1515 a family settlement of the manor was made by Cecily, widow of the first marquis, along with her second husband, Henry Stafford, earl of Wiltshire; and from 1515 to 1529 courts were held there by Cecily's son Thomas Grey, the second marquis.[74] Cecily and Thomas both died in 1530.[75] Thomas's son Henry, the third marquis of Dorset, in 1544 conveyed the manor of Stebbing to Sir Thomas Pope.[76] It next passed to Sir Thomas Southwell, who held a court there in the same year.[77] In 1545 Southwell sold the manor to the king,[78] who then conveyed it to Sir Giles Capell of Rayne, in exchange for other properties.[79] Capell, the ancestor of the earls of Essex, held his first court at Stebbing in 1546-7.[80] He already held Porters Hall (see below), so that his purchase of Stebbing Hall brought most of the parish, once again, under a single owner. The Stebbing estate remained in the Capell family, later barons Hadham and earls of Essex, until the early 20th century.[81]

Porters Hall

This manor lay in the south-east of the parish, near the Great Saling boundary. It was built up in the late 13th and early 14th century by the Porters, a local family. In 1284 Walter le Jeuene of Dunmow conveyed to Henry Porter (*le Portir*) and his wife Ismenia a messuage, one carucate of land, 30 acres of wood and 10s. rent in Stebbing.[82] In 1308 Henry Porter conveyed to John Porter a messuage, a mill, 60 a. land and 10 a. meadow in Stebbing.[83] This seems like a family settlement, for John Porter's brothers William, Richard, James and Robert were associated with him; Henry Porter was probably their father. In 1321 Sir Ingram de Umfraville released to John Porter all his right in 'the manor of

Stebbing.'[84] Sir Ingram was the son and heir of William de Umfraville, who had died in 1296 leaving a messuage, 116 a. arable, 6 a. meadow, 6 a. pasture, 12 a. wood, one-eighth of a watermill, and 47*s.* 8*d.* rent in Stebbing, said to be held of Robert de Ferrers, earl of Derby, with small pieces of land held of William Giffard, Henry Porter, John Hawker, and Henry Botulf.[85] The statement that William de Umfraville, at the time of his death, was a feudal tenant of Robert, earl of Derby, was based on out-of-date information, for Robert de Ferrers, the last earl of Derby of his family, had forfeited his lands as a rebel in 1266, and died in 1279.[86] But it can be assumed that the earl, or one of his predecessors, had subinfeuded this part of Stebbing to William de Umfraville or a predecessor.

In 1327 John Porter was the largest taxpayer in Stebbing, with an assessment more than double that of any one else except Eleanor, Lady Ferrers.[87] In the 14th century John and his family evidently lived in the parish, since they were described as 'of Stebbing.' He was an important man in Essex, for in 1322 and 1323 he was employed by the king as custodian of the lands in the county forfeited by rebels.[88] He was succeeded by William Porter, who held courts at Stebbing in and after 1329.[89] In 1331 William Porter and his wife Florence acquired from Henry de Ferrers, Lord Ferrers, 97½ acres and 4 dayworks of land and 1½ acres of meadow in Stebbing, in exchange for a like quantity of land there.[90] In 1338 William was exempted, for life, from serving on assizes, juries, or recognizances, and as mayor, sheriff, escheator, coroner or other minister of the king, against his will.[91] This shows his standing in the county, and suggests that he had previously been a royal official. In 1356 he was commissioned as a justice to enforce the Statute of Labourers in the lands of the duke of Lancaster in Kent, Essex, Sussex and Middlesex.[92] Meanwhile, in 1348, William Porter had settled his estate in Stebbing and Great Saling on himself for life, with remainder to his son John and Maud, John's wife.[93] It comprised no less than 25 messuages, 2 mills, 846 acres land, 46 a. meadow, 80 a. pasture, 48 a. wood, with rents in cash and in kind. The conveyance mentions, as William's tenants, James and Richard Porter, presumably his brothers, as in the deed of 1308.

John Porter, son of William, was dead by 1376, when manor courts were being held by Sir William Wautone, in right of his wife Ismenia, John's daughter.[94] Wautone was dead by 1395, when Ismenia alone held the court.[95] She still held it as a widow in 1405, but in 1406 held it jointly with her second husband, Nicholas Talbot.[96] In 1412 Nicholas was assessed for Feudal Aids as holding lands in Stebbing called Talbots.[97] That manorial name, which has not been noted elsewhere, is almost certainly synonymous with Porters. In 1415 Nicholas and Ismenia Talbot conveyed the estate to Clement Spyce.[98] It was then about the same size as in 1348.

Porters thus passed out of the family from which it took its name. Clement Spyce, the purchaser, was probably acting as an attorney or trustee, as he did on other occasions.[99] The manor passed to Prince John, duke of Bedford, who held the court in 1428-9.[100] He died in 1435, and by 1437 Porters had been acquired by Sir Lewis John, an old friend of Prince John.[101] Sir Lewis, a London Welshman who had prospered as a merchant and servant of the Crown, had over the past twenty years built up a large estate in Essex, based at West Horndon, near Brentwood.[102] He had served as sheriff of Essex and as an M.P. for the county. He died in 1442.

In his will Sir Lewis John directed that Porters should go to his eldest son, John FitzLewis, on his marriage.[103] John FitzLewis, known also as Lewis John or Lewis FitzLewis, was holding the manor from 1443, and probably lived there.[104] He was sheriff of Essex in 1458,[105] and M.P. for the county in 1460.[106] But in 1471 he was killed on the Lancastrian side at Barnet.[107] Later in that year his Essex estates, including Porters, were granted to Edward IV's brother, Richard duke of Gloucester.[108] (Sir) Richard FitzLewis, son and heir of John FitzLewis, bought some of them back during the following years. To raise money for this he sold his Stebbing estate, comprising the 'manors of Porters, Crekers and Umfrevilles,' to (Sir) William Capell in 1482.[109] This is the only known reference to Crekers and Umfrevilles, neither of which can be identified on the modern map. Umfrevilles was, no doubt, the tenement acquired by John Porter in 1321 from Sir Ingram de Umfreville. The purchase price for the estate was 1000 marks (£666 13 *s.* 4 *d.*), of which 200 marks was payable immediately.

Sir William Capell, the son of a Suffolk squire, had, like Sir Lewis John, made a fortune as a London merchant, and bought estates in several counties. His country seat was Rayne Hall, about three miles east of Porters. In 1512, three years before his death, he conveyed his Stebbing estate to his son (Sir) Giles as part of a marriage settlement.[110] In 1522 Giles's mother, Margaret, bequeathed to him, with other valuables, 'his father's chain, which was young King Edward the Fifth's.'[111] How Sir William had come by this grim relic of the princes in the Tower is not known. Sir Giles Capell, who distinguished himself as a soldier under Henry VIII, consolidated his Stebbing estate in 1545 by acquiring Stebbing Hall (see above). He died in 1556.

Priors or Friars Hall (the Rectory)

The church of Stebbing descended with Stebbing Hall manor until 1181, when William de Ferrers, 3rd earl of Derby, gave it to the Knights Hospitallers.[112] In 1174, as an adherent of the young King Henry, Ferrers had sacked and burnt the royal borough of Nottingham. For this he was imprisoned by Henry II, and as an act of contrition gave the church of Woodham Ferrers to Lenton Priory (Notts).[113] Whether his gift of Stebbing to the Hospitallers had a similar motive is not known. His gift to Lenton had no permanent effect, for the advowson of Woodham Ferrers continued to descend with that manor. At Stebbing the Hospitallers did succeed in vindicating their control over the church, though not without opposition. Until the later 13th

century they presented to the rectory, and by 1245 or earlier the rector, with the Hospitallers' consent, was presenting a vicar to serve the cure.[114] In 1285 the advowson of the rectory was claimed by William de Ferrers, lord of Stebbing Hall, who during Henry III's reign had presented a rival rector.[115] But the Hospitallers were supported by the bishop of London, who in 1276 had appropriated the rectory to them and ordained the vicarage.[116] The rectory, with the advowson of the vicarage, remained with the Hospitallers until the dissolution of their order in 1540.[117] The last individual rector of Stebbing was Richard Giffard, who was holding the office in 1220 and 1266.[118]

The rectory manor, for which courts baron were held,[119] lay in the centre of the parish, on both sides of Stebbing brook.[120] In 1575 it included four houses, 200 acres arable, 30 a. pasture, 10 acres wood and 20*s*. rent as well as the tithes of grain and hay.[121] According to Morant it 'formerly was of the yearly value of £260.'[122] Priors Hall house stands south of the church.[123]

Analysis

The information in Stebbing's manorial descents could be analysed in many different ways, according to the particular interests of the reader. For the present purposes, however, the following headings are used: 1. The Local History of Stebbing. 2. Other Essex Places. 3. Places outside Essex. 4. National Institutions and Politics. 5. Family History.

1. Local History of Stebbing. The age of the lord of a manor, and the circumstances of his life, inevitably affected his conduct of affairs. His control was likely to be most complete if he resided locally. The lordship might be vested in the guardian of an heir or a widow, in the husband of an heiress, or in several coheirs. It was often subinfeuded or leased-out; and it was quite likely to be acquired by a monastery or a university college. The manorial descent should aim to supply such information, which is fundamental to local history.[124]

At Stebbing crucial factors in the manorial story were the early failure of the Peverels and the fragmentation of their lands; the survival of the Ferrers family; and the emergence of the Porters, whose eponymous manor was eventually merged with Stebbing Hall, dominating the parish. At all periods the lords of Stebbing's manors seem to have had substantial demesne lands. How many of them resided in Stebbing is uncertain. In the 11th century Ranulf Peverel probably did so. The Porters lived in the parish in the 14th century, and probably earlier. The Ferrerses seem to have been resident in the mid and later 14th century. John FitzLewis, lord of Porters Hall 1442-71, probably lived there. Sir William Capell, who bought Porters in 1482, lived in a neighbouring parish. Such facts may throw light on problems of architectural history, like those discussed by David Andrews in his recent article on Stebbing Church. (*E.A.H.* 28, 117).

Friars Hall, which belonged to the Knights Hospitallers from the 13th century onwards, is of special interest because Essex rectories did not usually have manorial status. References to wardship, marriage, or women's dower, can be found under the Stebbing Fee of the honour of Peverel (1185), Stebbing Hall (1287, 1371, 1445-83, 1508-9, 1515) and Porters Hall (1376-1406).

Subinfeudation appears in the 12th century in Peverel's manor, and in that of Ferrers. The successive grants by the earl of Derby to Maurice FitzGeoffrey shed light on a dark corner of feudal history: the operation of a baronial court. In the 13th century another earl of Derby subinfeuded Stebbing Hall to his younger son William, who later leased it for life to his mother the countess. It was this interesting family settlement which eventually established William's descendants as resident lords of the manor.

Manorial descents are not required to deal specifically with economic matters, but such information can sometimes be found there. The Stebbing descents mention the size and value of the manors in 1086 and several later dates. The Domesday entries refer also to population, land use, mills and Ranulf Peverel's vineyard. The weekly market and annual fair granted to Lord Ferrers in 1338 are notable. They are mentioned in the inventory of Lady Ferrers's dower, which also contains details of the farm buildings of Stebbing Hall, the fields (including Lime Kiln Field), a dovecote, and two watermills, as well as the manor house and the park.

2. Other Essex Places. Ranulf Peverel's Domesday manor, and most of the fees later formed from it, were part of the Essex-based honour of Hatfield Peverel. This involved attendance at the honorial court, and payment of feudal scutages. The grants by the earl of Derby to his tenant Maurice FitzGeoffrey (1139x 1159) reveal a connexion between Stebbing Hall and the manor of Woodham Ferrers in south Essex, which also belonged to the earl. The earl and FitzGeoffrey were the joint founders of Tilty Abbey, near Stebbing; and it was there that the earl's descendant, Henry de Ferrers, was born in 1356. Henry's mother, Margaret, died at Buttsbury, another Ferrers' manor in south Essex, directing that she should be buried in the Dominican friary at Chelmsford. Elizabeth, Lady Assheton (d. 1499), the Stebbing Hall heiress, instructed her executors to remove her husband's remains from Stebbing church and bury them, along with her own, beside his father's tomb in Beeleigh Abbey, at Maldon. Sir Lewis John, lord of Porters Hall 1437-42, was the owner of a large Essex estate based at West Horndon. Sir William Capell, who bought Porters in 1482, lived close by, at Rayne.

3. Places outside Essex. Henry de Ferrers's Domesday manor was an outlier of a great Midland barony based at Tutbury (Staffs.) The Ferrers family later founded a priory at Tutbury, and an abbey at Merivale (Warws.). Ranulf Peverel's Domesday manor was part of a barony which included parts of Hertfordshire. The Coulonces family, who later acquired some of Peverel's manor, were Norman barons with English lands in Hampshire as well as Essex. They forfeited their Stebbing estate after the fall of Normandy. Another estate carved from

the Peverel manor became the endowment of the Hawk serjeanty, which linked Stebbing with the manor of Langley in Acton Burnell (Salop.). Porters Hall was held in the 15th and 16th century by two successive families of London merchants. Priors Hall (the Rectory) originated in the 12th century as a gift by William de Ferrers, earl of Derby, to the London-based order of Knights Hospitallers, possibly as an act of contrition for burning the royal borough of Nottingham.

4. National Institutions and Politics. The student of feudalism will note, in the 12th century, the subinfeudation of Peverel's manor, and the creation of the Hawk serjeanty; and at Stebbing Hall, the grants made to Maurice FitzGeoffrey in the earl of Derby's baronial court. References to the feudal rights of women at Stebbing Hall include the life interest of the countess of Derby in the 13th century, the dower of Margaret, Lady Ferrers in the 14th, and the succession, as heiress, of Elizabeth (Ferrers), Lady Grey, in the 15th.

The effects of civil war on land tenure can be seen in the history of the Coulonces fee in the 12th-century, at Porters Hall during the 13th-century Barons' War, and at both Stifford Hall and Porters during the Wars of the Roses. The Coulonces Fee was also affected, and permanently, by the loss of Normandy in 1204, in a war that was both civil and international.

Several of Stebbing's manors had links with royalty. Henry II employed Thomas de Coulonces to witness two charters, but later punished him as as rebel. Thomas de Ferrers, earl of Derby, who also rebelled against that king, suffered imprisonment. John, duke of Bedford, brother of Henry V, was lord of Porters Hall (*c.* 1428 to 1435). Edward IV married Elizabeth (Woodville) widow of Sir John Grey of Stebbing Hall. Sir John had died in battle against Edward, but his son Thomas later fought for that king, who made him a marquis. Sir William Capell of Porters Hall owned a valuable chain which had once belonged to the boy king Edward V.

Six religious houses figure in the Stebbing descents: Tilty, Chelmsford and Beeleigh in Essex, Tutbury (Staffs.), Merivale (Warws.), and the Knights Hospitallers in London. Tilty, Tutbury and Merivale were all founded by members of the Ferrers family.

5. Family History. At Stebbing, as elsewhere, the manorial descents are useful for family history at various levels. Henry de Ferrers, lord of Stebbing Hall in 1086, was a Norman baron whose descendants became earls of Derby, and, through a cadet branch, lords Ferrers de Groby. The Coulonces family were Anglo-Norman barons of the later 12th century. The Stebbings and the Porters were local families who built up modest estates in the 12th and 13th centuries respectively. Sir Lewis John, a Welshman, and Sir William Capell, who came from Suffolk, were both London merchants who invested their wealth in Essex manors.

Manorial descents are essentially reference tools. Some of the information in them may be new, helping to solve historical problems or suggest new lines of enquiry. But much of it will already be in print, and the value of such work rests, above all, on comprehensive treatment and systematic arrangement, virtues which can too easily be taken for granted by those extending the frontiers of knowledge or propounding new ideas.

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1 This paper is not concerned with the systematic feudal genealogy pioneered by William Farrer in his *Early Yorkshire Charters* (1914-16), *Feudal Cambridgeshire* (1920) *and Hounor and Knights' Fees* (1923-5), and developed by Sir Charles Clay in his continuation of *Early Yorkshire Charters* (1935-65) and I.J. Sanders in *English Baronies* (1960). For a local example of this approach see W.R. Powell, 'The Essex Fees of the Honors of Richmond,' *E.A.H.* i (1968), 179. The introduction is based on the following sources: W.R Powell, 'Local History in Theory and Practice,' *Bulletin of the Institute of Historical Research*, xxi (1958), 41-8; H.R.P. Finberg, 'Local History,' in *Approaches to History* (1962), 111; R.B Pugh, 'The Victoria History: its Origin and Progress', in *The Victoria History of the Counties of England: General Introduction* (1970), 1-27; Institute of Historical Research, V.C.H. Records, J.H. Round Files, 18 Oct., 22 Nov. 1907; *English County Histories: a Guide*, ed. C.R.J. Currie and C.P. Lewis (1994).
2 *V.C.H. Essex*, i. 346; 503 b; 529 b.
3 *Complete Peerage*, iv. 190; I.J. Sanders, *English Baronies*, 148.
4 Sanders, op. cit. 120.
5 *V.C.H. Essex*, i. 567; cf. 529, 531. For encroachments relating to mills by other tenants see ibid. 379.
6 Ibid. 382. In 1086 Aubrey de Vere had four vineyards, including two in Essex, at Castle Hedingham and Belchamp Walter: ibid. 383.
7 Ibid. 529.
8 Ibid. i. 302; R.C.H.M:, *Essex*, i. 283.
9 Sanders, *Eng. Baronies*, 120; and see below.
10 *Complete Peerage*, iv. 191-202; Sanders, *Eng. Baronies*, 148.
11 Sanders, op. cit. 120.
12 *Pipe R. 1173* (P.R.S. xix), 20; ibid. *1174* (P.R.S. xxi), 73, 74.
13 L. Loyd, *Origins of Anglo-Norman families*, 30; *Pipe R. 1173*, 20, 50; *Sir Christopher Hatton's Book of Seals*, ed. L. Loyd and D.M. Stenton, no. 474 note.
14 *Pipe R. 1183* (P.R.S. xxxii), 24; ibid. *1184* (P.R.S. xxxiii), 133.
15 Ibid. *1185* (P.R.S. xxxiv), 17; ibid. *1186* (P.R.S. xxxvi), 15; ibid. *1187* (P.R.S. xxxvii), 124.
16 Ibid. *1188* (P.R.S. xxxviii), 33; ibid. *1189* (Rec. Com), 23.
17 Ibid. *1189* 24.
18 Ibid. 28.
19 Ibid. *1190* (P.R.S. **n.s.** i), 108; later rolls to *1199* (P.R.S. **n.s.** x), 268.
20 L. Landon, *Itinerary of Richard I*, 35, 118.
21 L. Loyd, *Origins of Anglo-Norman families*, 30.
22 *Book of Fees*, 615, cf. 274, 1348, 1360, 1410, 1464; *Cal. Chart.* i. 55. For Robert de Ferrers cf. *Book of Fees*, 122.
23 *Cal. Chart.* i. 55.
24 *Cal. Pat.* 1232-47, 131. In 1231 the earl had been granted custody of all the lands of the Normans in England which were of his fee: *Complete Peerage*, iv. 195.
25 *Cf.* The Counts of St. Pol: *E.A.H.* 27 (1996), 193.
26 *Pipe R. 1193* (P.R.S. **n.s.** iii), 8; ibid. *1194* (P.R.S. **n.s.** v), 35: *'ut inquiratur si debet tenere x* s. *redditus in Stebbing per j nisum [accipitrem*-deleted*] per annum.'* There seems to be some doubt as to the kind of hawk involved, for in 1250 (see below) the word *austurcus* was used.
27 *Bk. of Fees*, 145.
28 Ibid. 1115.
29 Ibid. 275.
30 Ibid. 1348. It was then described, presumably in error, as ¼ knight's fee.
31 *Cal. Chart.* i. 55.
32 *Bk. of Fees.* 1360.
33 *Rot. De Dominabus* (P.R.S. xxxv), 72.
34 *Pipe R. 1190* (P.R.S. **n .s.** i), 111.

35 Ibid. *1203* (P.R.S. **n.s.** xvi), 134. According to this record it was scutage of the honour of Dover, but that is clearly an error for the honour of Hatfield Peverel.
36 *Rot de Dom.* 72, quoting *Red Book of Exchequer.*
37 *Feet of F. Essex.* i. 105.
38 Ibid. 113.
39 *Cal. Inq. p.m.* ii, no. 413.
40 *Feet of F. Essex,* ii. 182
41 Ibid. iii. 66.
42 *Bk. of Fees,* 1360.
43 *Pipe R. 1186,* 18; cf. Ibid. *1187,* 122, which gives the correct form of Richard Parmenter's name.
44 Ibid. *1188,* 32; *1189,* 22; *1190,* 2.
45 *Bk. of Fees,* 345.
46 Sanders, *Eng. Baronies,* 148; *Complete Peerage,* iv. 190-1.
47 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 310.
48 *Reg. Regum Anglo-Normannorum,* iii, no. 308.
49 Hist. MSS. Com. 55, *Var. Coll..VII, Essex,* 310-1. The second earl of Derby died before 1160: *Complete Peerage,* iv. 192.
50 *V.C.H. Essex,*; ii. 134.
51 *Complete Peerage,* iv. 196-7; v. 340; *Cal. Chart.* i. 231; *Cal. Inq. p.m.* ii, no. 413.
52 *Cal. Inq. p.m.* ii, no. 413; *Complete Peerage,* iv. 198. In 1274-5 Sir William was said to have trebuchet, warren, assize of bread and ale and view of frankpledge in Stebbing: *Rot. Hund.* (Rec. Com.), i. 158.
53 *Cal. Inq. p.m.* ii, no. 413; *Cal. Close* 1279-88, 83.
54 *Cal. Inq. p.m.* ii, no. 680; *Complete Peerage,* v. 341-3; *Cal. Close,* 1278-88, 498, 503.
55 *Feud. Aids,* ii. 142.
56 The following descent of the Ferrers family, unless otherwise stated, is based on *Complete Peerage,* v. 340 sq.
57 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 315.
58 *Cal. Chart.* iv. 443.
59 *Cal. Close* 1343-6, 192.
60 *Cal. Inq. p.m.* xiii, no. 87, p. 66.
61 Ibid. xiv, no. 329, p. 324.
62 *Cal. Close* 1369-74, 348-9; *Cal. Inq. p.m.* xiv, no. 134, p. 127.
63 No other reference to the chapel has been noted.
64 O.S. 1/25000, 1075.
65 *Cal. Inq. p.m.* xiv, no. 134, p. 127; ibid. no. 330, p. 325.
66 Ibid. xiv, no. 329, p. 324; xiv, no. 347, p. 345.
67 *Feud. Aids,* vi. 435, 607; *Complete Peerage,* v. 354-61; *Cal. Close* 1441-7, 313. In 1433-4 the manor court was held by Thomas de Ferrers, younger son of Lord Ferrers: Hist. MSS. 55, *Var. Coll.VII, Essex,* 309.
68 *Feet of F. Essex,* iv. 58; *Cal. Close* 1468-76, 382. For the records of manor courts held by Sir John and Eliz. Bourgchier, 1479-83: Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 309.
69 *Complete Peerage,* v. 360.
70 Ibid. 361 note.
71 For Thomas Grey, Lord Ferrers de Groby and marquis of Dorset see: *Complete Peerage,* iv. 418; v. 362; *D.N.B.*
72 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 309.
73 *V.C.H. Essex,* iv. 117; *Complete Peerage,* ix. 220.
74 *Feet of F. Essex,* iv. 134; Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 309.
75 *Complete Peeerage,* iv. 419-20.
76 *Feet of F. Essex,* iv. 269. Henry Grey, marquis of Dorset and later duke of Suffolk, was father of Lady Jane Grey. He was executed in 1554. Sir Thomas Pope (1507?-59) was the founder of Trinity College, Oxford: *D.N.B.*
77 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 309.
78 *Feet of F. Essex,* iv. 281.
79 Morant, *Essex,* ii. 415.
80 Hist. MSS. Com. 55, *Var. Coll.VII,* Essex, 309.
81 For the Capell pedigree see: *Complete Peerage,* iii. 5; *V.C.H. Hertfordshire Families,* 77; *E.A.T.* **n.s.** ix, f.p. 272. *Burke's Peerage* (1967 edn.), 900.
82 *Feet of F. Essex,* ii. 39.
83 Ibid. ii. 121.
84 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 313.
85 *Cal. Inq. p.m.* iii, no. 377.
86 *Complete Peerage,* iv. 200-202.
87 *Essex Lay Subsidy, 1327,* ed. J. Ward, 68.
88 *Cal. Close* 1318-23, 475, 598, 610; ibid. 1323-7, 140.
89 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 312, 313.
90 Ibid. 315.
91 *Cal. Pat.* 1338-40, 7.
92 *Cal. Pat.* 1354-8, 493. The duke of Lancaster was then serving in France: *Complete Peerage,* vii. 408.
93 *Feet of F. Essex,* iii. 89.
94 Hist. MSS. Com. *Var. Coll.VII, Essex,* 312. It is interesting to see the uncommon name Ismenia recurring in the Porter family.
95 Ibid.
96 Ibid.
97 *Feud. Aids,* vi. 443.
98 *Feet of F. Essex,* iii. 266.
99 Ibid. 220, 227, 236, 238, 248. He was, no doubt, related to Clement Spyce who occurs as an attorney in 1352, 1358, and 1363: ibid. 103, 124, 138.
100 Hist. MSS. Com. 55, *Var. Coll.VII, Essex,* 312.
101 Ibid. 313. For Prince John see *Complete Peerage,* ii. 70.
102 A.D. Carr, 'Sir Lewis John, a medieval London Welshman,' *Bull. Board of Celtic Studies,* xxii (1967), 260; J.L. Fisher, 'The Petre documents,' *E.A.T.* **n.s.** xxiii. 69 sq.
103 H.L. Elliot, 'FitzLewes of West Horndon and the brasses at Ingrave.' *E.A.T.* **n.s.** vi. 28-55. This article, though wrongly suggesting that the family originated in Hertfordshire, is useful for their 15th century genealogy and heraldry. For comments on it see J.H. Round, 'Porters Hall, Stebbing' (unpubl. note, *c.* 1920) in E.S.A.H. Library, Colchester. Round seems to have been the first writer to show that Sir Lewis John was a Welshman. I am grateful to his note for drawing my attention to the Stebbing records formerly in the archives of the earl of Essex.
104 Hist. MSS. Com. 55, *Var. Coll.VII, Essex.* 313 (Rentals 22-32 Hen. VI); *Cal. Fine R.* 1445-52, 28:'Lewis FitzLewis of Porters in Stebbing.'
105 Morant, *Essex,* I, p. viii.
106 Ibid. p. xiii.
107 *Paston Letters and Papers,* ed. Davis, i. 438.
108 *Cal. Pat.* 1467-77, 297; Morant, *Essex,* i. 213; cf. *V.C.H. Essex,* vii. 104.
109 *Cal. Close* 1476-85, 295; *Feet of F. Essex,* iv. 81.
110 *E.A.T.* **n.s.** ix. 262.
111 Ibid. 243.
112 K. Nicholls Palmer, *Knights of St. John in Essex,* 25, quoting the Hospitaller Cartulary, B.L., Cott. MS. Nero E VI; Morant, *Essex,* ii. 415.
113 *Complete Peerage,* iv. 193 and note.
114 P.H. Reaney, *Early Essex Clergy,* 151; K.N. Palmer, *Knights of St. John in Essex,* 25; *E.A.T.* **n.s.** xviii. 128.
115 Reaney, op. cit. 151.
116 K.N. Palmer, op. cit. 25.
117 Newcourt, *Repertorium,* ii. 557.
118 Reaney, op. cit. 151.
119 Morant, *Essex,* ii. 416.
120 K.N. Palmer, op. cit. 26.
121 Morant, *Essex,* ii. 415.
122 Ibid.
123 K.N. Palmer, op. cit. 26.
124 For examples *see* W.R. Powell, 'Local History in Theory and Practice,' *Bulletin of I.H.R.* xxi. 41-8.

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Medieval timber buildings in Chipping Ongar: excavation at the south side of the Pleasance car park, 1995

by R. Clarke
with contributions by D. D. Andrews, P. Murphy, P. Ryan, R. Tyrrell, A. Wade and H. Walker

Archaeological investigation in advance of a new library in the centre of Chipping Ongar, within the outer bailey of the medieval castle, revealed evidence of both medieval and post-medieval occupation. There was some indication of Roman and late Saxon activity in the vicinity from residual pottery. Because of later truncation, archaeolgical deposits consisted of features cut into the natural subsoil, although it was still possible to reconstruct a sequence of activity extending from the 12th to 19th centuries.

The remains of two phases of medieval earth-fast timber buildings (12th-14th centuries) were uncovered extending back from the High Street frontage, with a group of contemporary rubbish pits to the rear. Evidence of activity in the late medieval period (15th-16th century) was limited to the south-west corner of the development area where the foundations of part of a timber structure, possibly a stairway, and a probable fence line were located. In the 17th-18th century, one or more timber structures were erected on the site of the earlier medieval buildings. By the 19th century these had been replaced by a more substantial brick building 'The Pleasance' from which the present car park derives its name.

Introduction

In January 1995 an evaluation was conducted in the Pleasance Car Park, to the east of the High Street, Chipping Ongar (Fig. 1; TL. 5527 0315) by Essex County Council Field Archaeology Group in response to a planning application by Essex County Council Property Services Department for a new library building. The evaluation identified evidence of medieval and post-medieval occupation which led to an area excavation being undertaken in November 1995. The results of both stages of work are presented and discussed below. All field and post-excavation work was funded by Essex County Council Property Services Department. The site archive and finds will be deposited at Epping Forest District Museum under the site codes C05 95 and C07 95.

Geology and topography

Chipping Ongar lies between the River Roding and one of its major tributaries, the Cripsey Brook. The Roding valley formed part of a north-south routeway from London into Suffolk which was one of the chief droveways of East Anglia (Medlycott 1997). The site lies towards the top of a natural slope, at a height of *c.* 53m. The surface geology of the site comprises yellowish-orange sandy clay and gravel.

The development affects an area of *c.* 34m by 15m at the southern end of the Pleasance car park, on the eastern side of the High Street in Chipping Ongar (Fig. 1). A large building, The Pleasance, is known to have stood on the site until the 1970s, when it was demolished to make way for the existing car park.

Historical and archaeological background

Ongar is recorded in the Domesday survey (Rumble 1983) and was clearly an important centre as both the hundred and hundredal market were held there. Chipping Ongar motte-and-bailey-castle was built in the decades following the conquest and became the main manor of the Boulogne Estates. The church is also thought to date from the 11th century and is now a Grade I listed building. The town appears to have been deliberately laid out in the mid-12th century within an enclosure to the west of the castle. The market is first mentioned in 1287, but was probably a direct successor to the hundredal market (Medlycott 1997).

There is little documentary and cartographic source material for the town. Archaeological evidence for the town's development is limited, consisting of a few small-scale excavations, evaluations and watching briefs. During an extension to the Pleasance Car Park in 1987 (Flook 1988), two trial trenches were excavated revealing evidence of terracing and levelling, and several possible horticultural buildings, perhaps dating from the 19th century. A pit dating from the 17th or 18th century was excavated, but no medieval features were encountered, although some sherds of residual medieval pottery were recovered.

The evaluation

A T-shaped trench was excavated across the development area at right angles to the High Street (Clarke 1995). Nineteen archaeological features were identified, 14 of which were post-holes dating from the Saxon, medieval and post-medieval periods. The remaining features included a gully and several features of uncertain function. A larger area was subsequently excavated around the evaluation trench, and the results of both stages of work are discussed together below. Due to duplication of numbers, features recorded in the evaluation trench have been assigned the prefix 'E'.

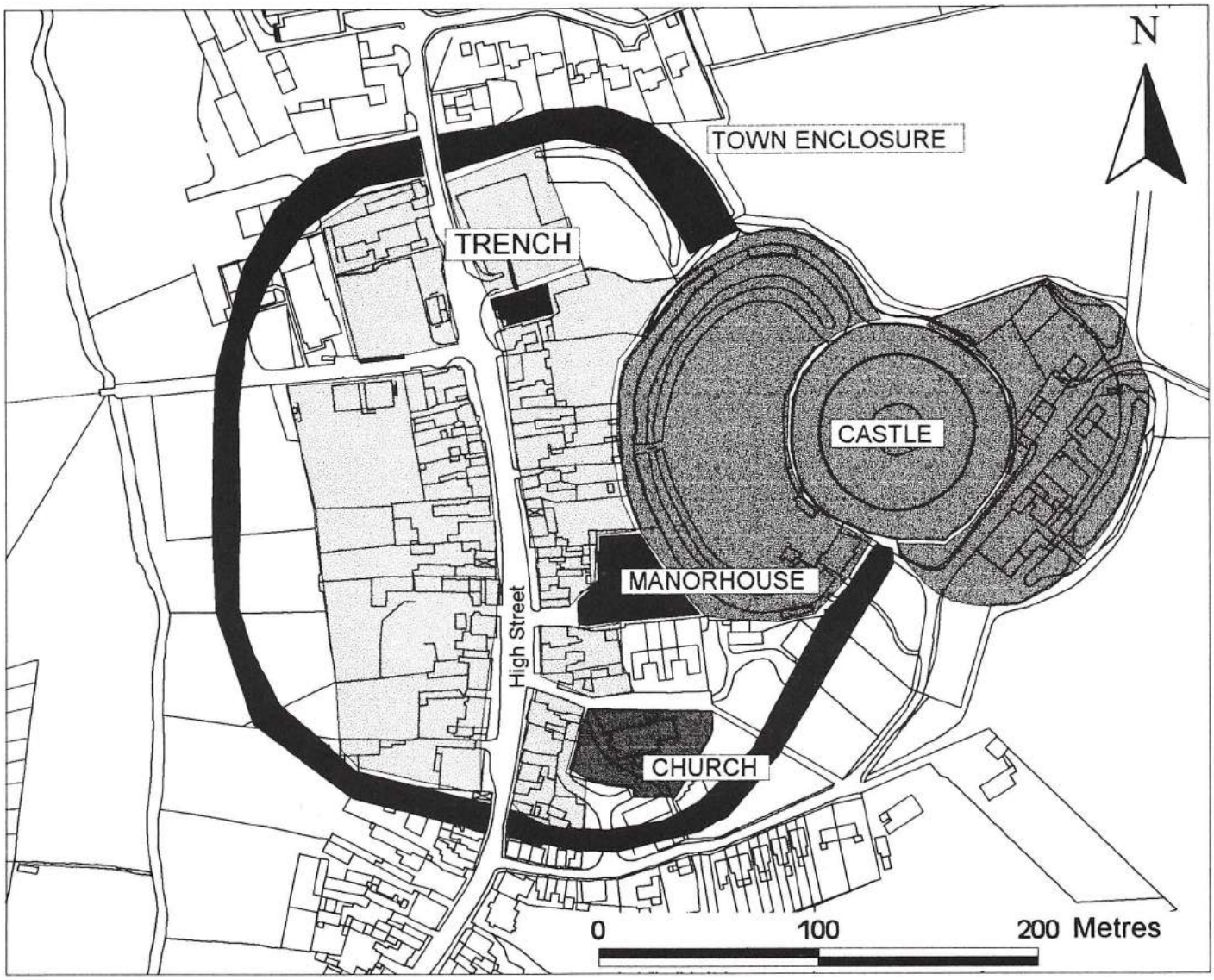

Fig. 1 Chipping Ongar, The Pleasance. Site location (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

The excavation

Although the area affected by the development measured 34m by 15m, only *c.*21m by 12.5m was actually opened for excavation. The easternmost 11m of the development area was to remain in use as parking bays for the library, and a 2m strip was left on the western side to avoid modern services and allow access to a ticket machine. Health and Safety precautions required that a strip with a minimum width of 1m be left around the remaining edges of the excavation. The tarmac, hard-core and levelling layers were removed by mechanical excavator using both a toothed and toothless bucket.

Evidence for surviving stratigraphy consisted solely of inter-cutting features. A build-up of medieval deposits might have been expected given the proximity of the site to the High Street, but any such evidence would have been removed by modern truncation. Post-holes, pits and ditches dating from the Saxon, medieval and post-medieval periods were present, the majority of which were shallow and cut natural subsoils. Modern debris from the hard core (principally the demolished remains of The Pleasance) laid over the site was evident in the upper fills of some features and is taken to be intrusive.

Although the pottery assemblage from the site was relatively small, several phases can be identified. Possible building plans have been suggested for the post-holes in most of the phases, based upon dating evidence, common characteristics and spatial arrangement. Many of the post-holes contained very small amounts of pottery, and the possibility of residuality is accepted. Post-holes without dating evidence have been assigned to phases on a subjective basis, with the majority being included on the post-medieval phase plan in the absence of obvious spatial associations with features on earlier phase plans.

Saxon (5th to 9th century) (Fig. 2)

A sherd of Saxon pottery was found in the fill of post-hole E05 during the evaluation, and two sherds of

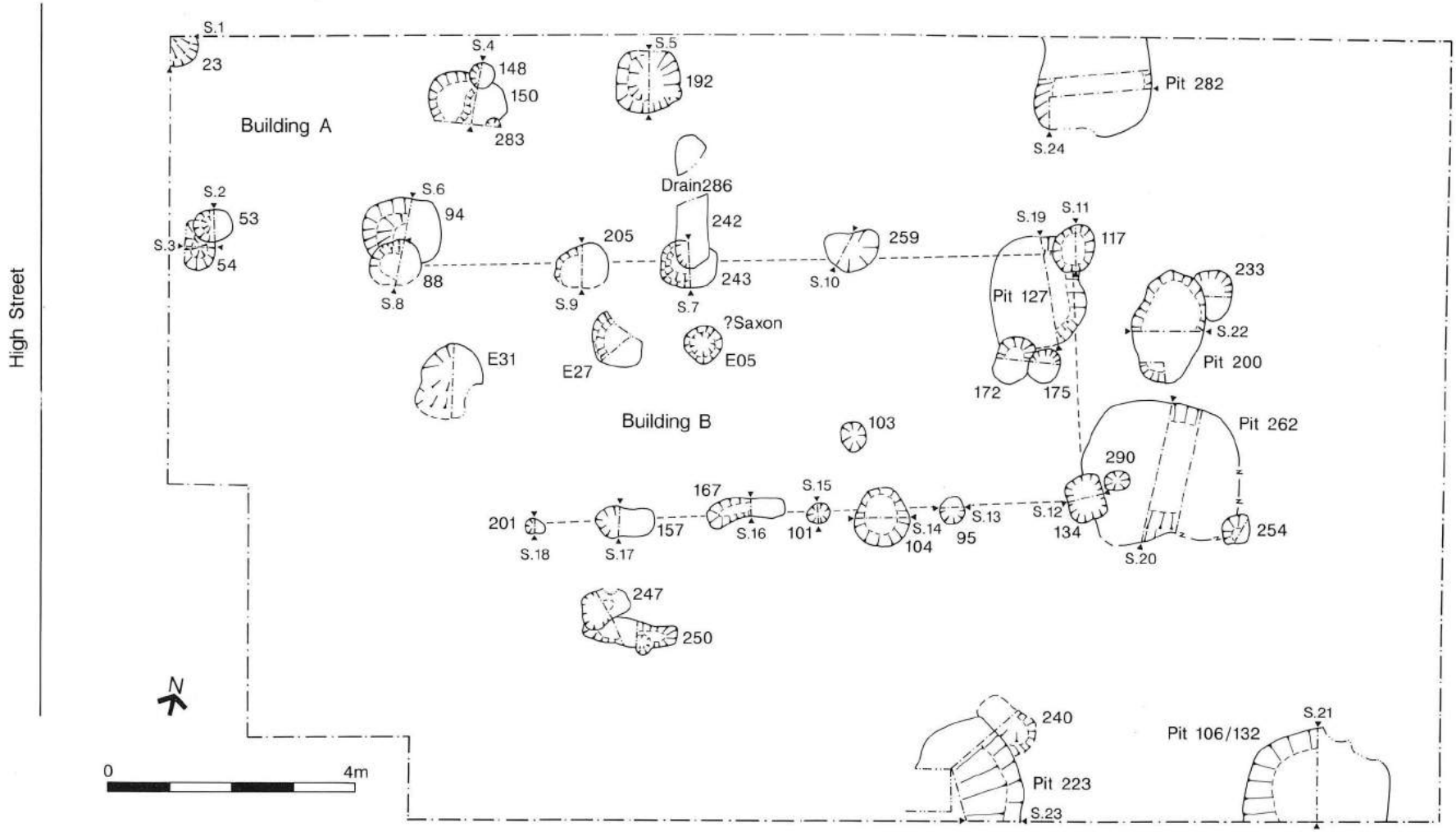

Fig. 2 Chipping Ongar, The Pleasance. Medieval (12th-14th century) phase plan

vegetable-tempered Saxon pottery were recovered from features during the subsequent excavation (Fig. 2). One of the latter sherds was from the primary fill of pit 132 which also contained a sherd of pottery dating from the 12th-13th century, indicating that it is residual. The fill of a very shallow pit, 262, produced the second sherd of Saxon pottery. This feature contained a small intrusive fragment of brick and no other datable finds and was cut by three later post-holes which produced pottery from the 13th century. It is possible that pit 262 is Saxon, although the single sherd of pottery recovered does not provide a reliable date.

Medieval (12th-14th century) (Figs 2, 3 and 4)

Three main elements have been identified for the medieval phase based upon stratigraphic, ceramic and spatial evidence. At the eastern end of the site a group of pits, notably pits 132/106 and 223 (Figs 2 and 4), produced the largest and most informative pottery assemblages, which established a basic chronology for the remaining features in this phase. The earliest structural evidence, in the form of post-holes containing late 12th-century pottery, was located in the north-west corner of the site (Building A; Figs 2 and 3). To the south and east of Building A, the remains of a second timber building, dated to the 13th-14th century, were identified (Building B; Figs 2 and 3).

Building A (Figs 2 and 3)

Post-holes 23 and 53 were located at the western edge of the excavation area and are probably the remains of an early street-frontage building, of which too little was exposed to discern a building plan (Fig. 2). Although the post-holes were quite small (Figs 2 and 3), both produced high average sherd weights as well as examples of pottery types and fabrics which did not occur elsewhere on the site. The pottery is unlikely to be residual and suggests that these post-holes date from the second half of the 12th century. A third post-hole, 54, produced no finds but its stratigraphic relationship with 53 indicates that it is of comparable or earlier date.

To the rear of these were four post-holes 94, 150, 192 and 243 (Fig. 2), which could be part of the same building, or a slightly later element, dating perhaps from the late 12th to early 13th century. The post-holes are fairly large and may have supported quite substantial timbers. Parts from the same vessel were found in post-holes 150 and 94, implying that they were filled at the same time. The presence of early medieval ware in three of the four post-holes (94, 192 and 243) is also significant as this fabric occurs in only one other medieval context (pit 132/106) on the site, further suggesting an early date. The position of post-holes 94 and 243 suggests that they may have been incorporated into the north wall of Building B at a later date.

Two contemporary pits were located to the east of Building A. Pit 262 produced a single sherd of Saxon pottery, and pit 127 contained sherds of shell-tempered ware as well as residual Roman pottery. Stratigraphically both pits were cut by post-holes forming the eastern end of Building B (see below) and so could belong an earlier phase contemporary with Building A.

Post-holes 233 and 240 in the eastern half of the site were both cut by later pits and may also relate to this early building phase.

Building B (Figs 2 and 3)

Building B was located to the immediate south of Building A and comprises a group of four dated and seven undated post-holes forming the main structure, with several possibly contemporary internal and external post-holes (Figs 2 and 3). The dated post-holes (259, 117, 134, 104) are located towards the centre of the excavation and form a square at the eastern end of the building. Post-holes 88, 205, 157 and 167 and two small post-holes (95 and 101) form the northern and southern walls, most of which are undated but are on the same alignment.

The building is on an east-west axis and measures approximately 11m by 5m. No remains of a western wall were identified, which could be a result of later disturbance or a failure to recognise the relevant features during the excavation. Although the post-holes forming Building B are individually quite irregular in plan, the majority of the more substantial ones are of similar proportions, with average widths of between 0.7 and 0.8m. The depths vary between 0.13m and 0.40m, although this discrepancy could in part be due to differential levelling or terracing across the site in subsequent periods.

The pottery from the fills of the post-holes includes small amounts of shell-tempered ware (possibly residual), Harlow ware and Mill Green ware, the date-ranges for which suggest that Building B was built in the 13th century and may have survived into the 14th century or later. The building is likely to be contemporary with the 13th-century pit group to the rear of the site.

The location and date of Building B suggests that it was a replacement of, or an extension onto, Building A as the line of the southern wall of Building A appears to have been retained in the northern wall of Building B. The two buildings may have chronologically overlapped, although the stratigraphic and pottery evidence implies that the earlier building was dismantled at the time of, or soon after, the construction of the later one. Stratigraphically post-hole 88 replaced post-hole 94 of Building A, and deposit/feature 243, which may be contemporary with Building B, overlay infilled post-hole 243 also of Building A. Two small post-holes (148 and 283) cut the fill of post-hole 150 of Building A and contained pottery of a similar date to that from Building B and pit 132/106 (see below). Ceramically the evidence for the later building, and the pit group to the rear, is largely characterised by the presence of later fine wares in some of the features.

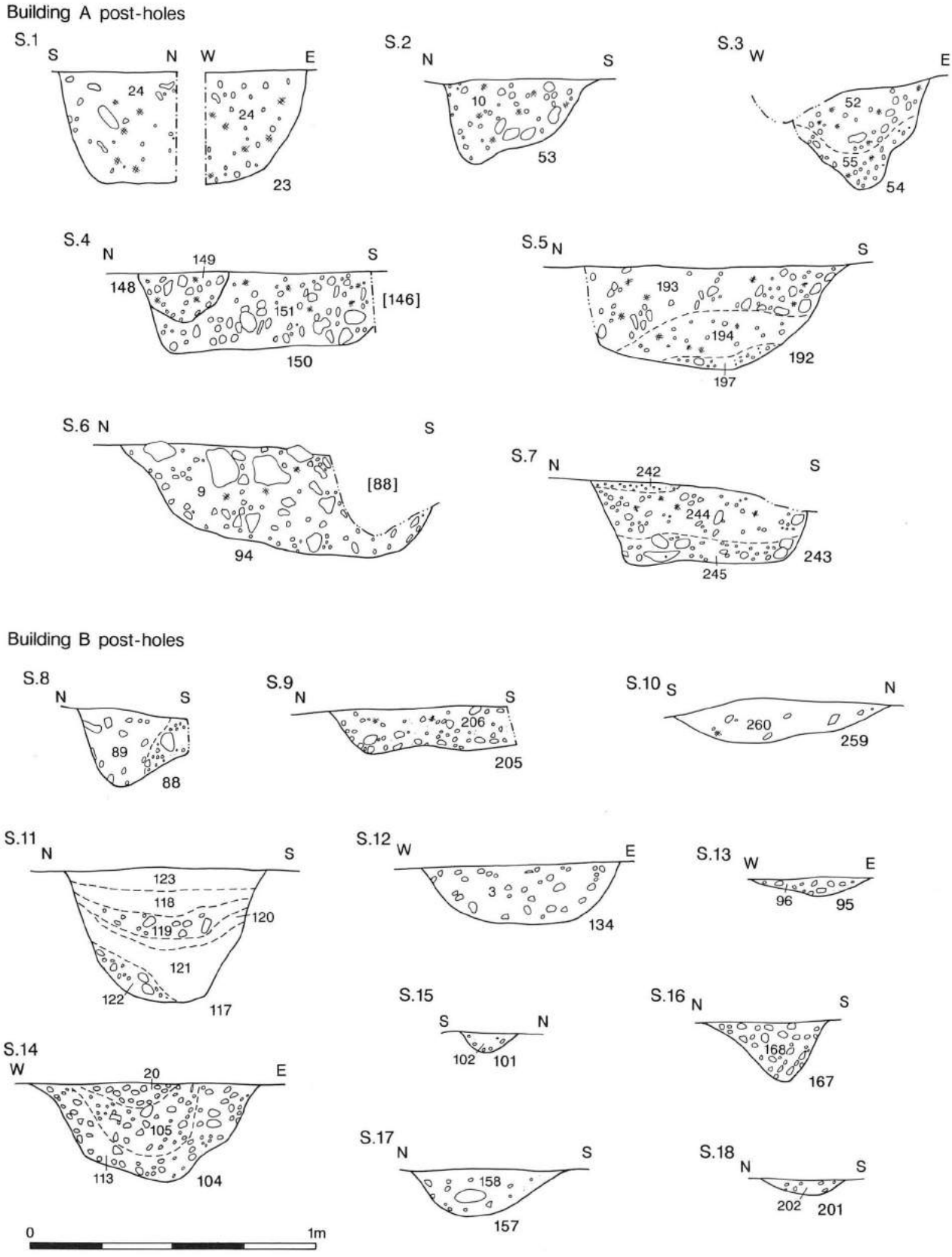

Fig. 3 Chipping Ongar, The Pleasance. Medieval phase; buildings A and B sections

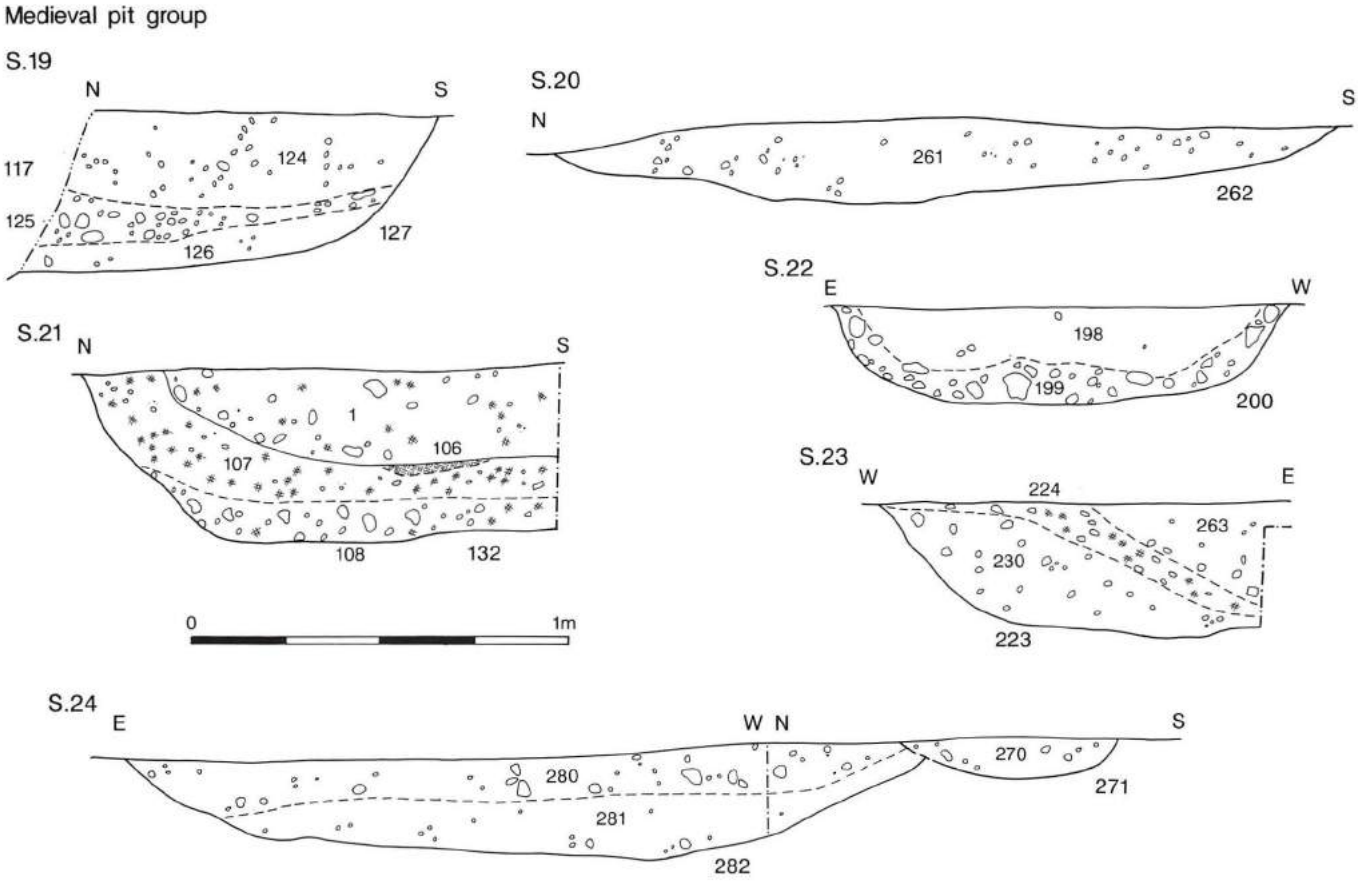

Fig. 4 Chipping Ongar, The Pleasance. Medieval phase, pit-group sections

These fabrics did not appear in the post-holes associated with Building A, suggesting that this building, or elements of it, were no longer in use during the Building B phase. It is possible that Building A was replaced in the later phase, although the evidence for this is inconclusive. Pits 127 and 262, which probably belonged to the same phase as Building A, had clearly been infilled by the time Building B was constructed as the two post-holes forming the eastern end of the building cut the earlier pits.

Some of the post-holes which originally would have been part of the building plan are no longer evident and were probably obscured or destroyed by later features.

Five internal post-holes (E31, E27, 103, 172 and 175) and two small external post-holes (290 and 254) produced pottery with a similar date-range to that from Building B and could be associated, although their function is uncertain. Post-pipe 252 in post-hole 247 to the south of Building B produced a sherd of 13th to 16th-century pottery and so could either belong to this phase or to the late medieval phase discussed below. Post-hole 250 was cut by post-hole 247 and could potentially be medieval. This feature and post-holes 157 and 167 are very elongated in shape and may in fact be small slots rather than post-holes, or possibly demolition cuts to remove the original posts for replacement or rebuilding.

Pit group to the rear of Building B (Figs 2 and 4)

A group of four pits (132/106, 223, 282 and 200) were located in the eastern half of the excavation, to the rear of Building B (Figs 2 and 4).

Pit 132 (recut 106) contained the largest pottery and faunal assemblage on the site, as well charred plant remains from a sampled burnt deposit. The pottery group is fairly closely datable to the mid-13th century, although sherds of Roman and Saxon pottery were present suggesting a degree of residuality. The presence of cross-fitting pottery sherds was noted in the different pit assemblages, implying that they were all deposited in the 13th century. The pottery group from pit 132 was comparable to that from post-hole 134 which formed the south-east corner of Building B, suggesting that the building and the pit group are likely to be contemporary. Fragments of a possible chimney pot as well as three pieces of wall daub with a grey surface were found in pit 132/106, which may originate from one of the buildings at the street frontage.

Samples were taken from two burnt deposits in pits 132 and 200. The range of crops identified in pit 132 include bread wheat, rivet-type wheat, oats, barley and rye, whilst the sample from pit 200 included a high proportion of fruits and seeds of weed and grassland plants. The two pit fills did not appear to have been burnt *in situ*, indicating that they could be the discarded remains of domestic activities such as cooking.

The pits may initially have been excavated for the purpose of gravel or clay extraction, with a secondary use being disposal of domestic refuse.

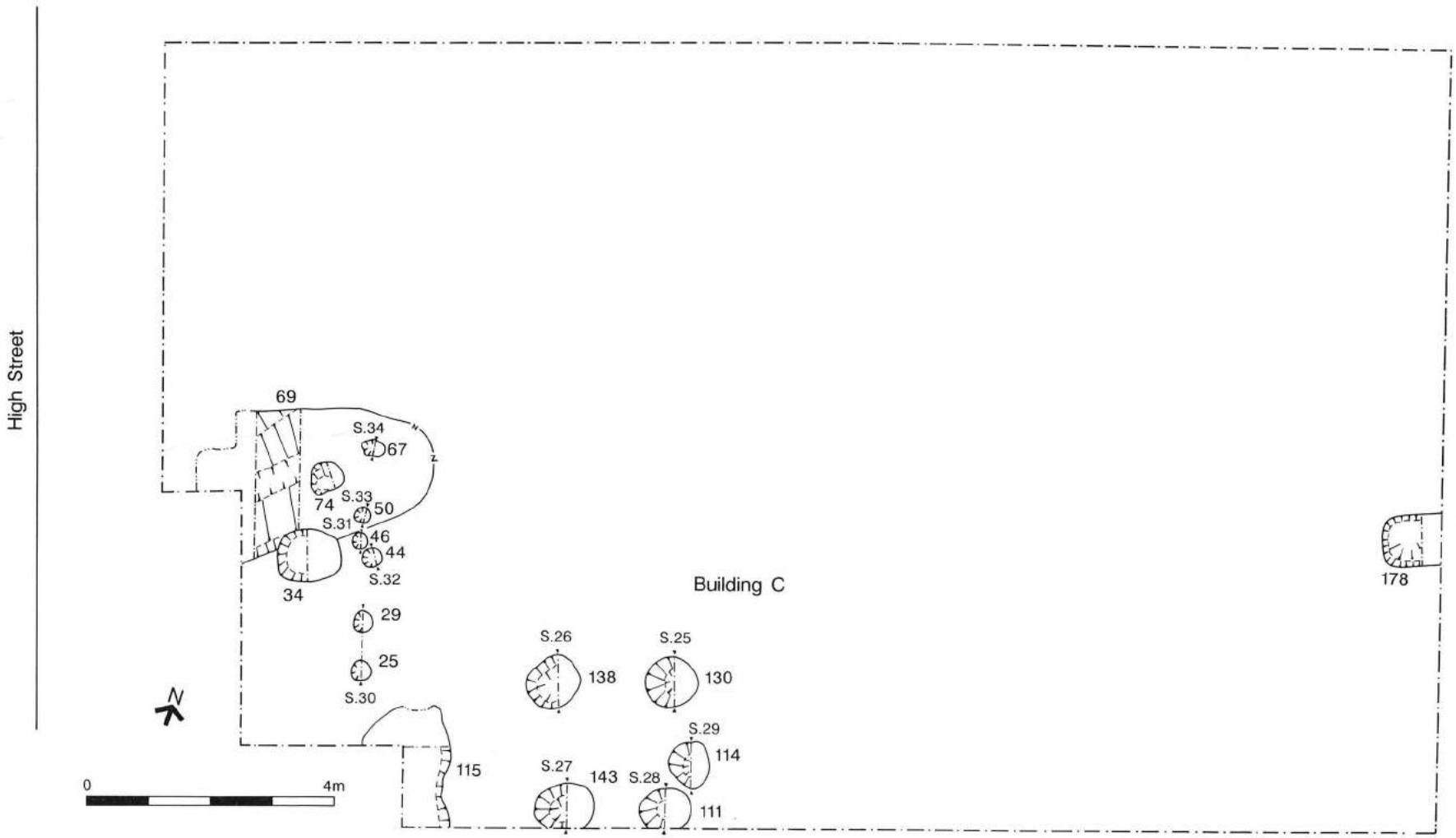

Fig. 5 Chipping Ongar, The Pleasance. Late medieval - early post-medieval (15th - 16th century) phase plan

Late medieval-early post-medieval (15th-16th century) (Figs 5 and 6)

Features in this phase were concentrated in the south-west corner of the site and comprise the remains of part of a timber structure and associated fence line (Figs 5 and 6). A large post-hole or ditch-terminal (178) which contained pottery of a similar date was also located at the eastern edge of the excavation.

Building C (Figs 5 and 6)

Four post-holes forming a square, with a fifth located to the immediate east, comprise the foundations of Building C. Post-holes 111, 143, 138 and 130 were similar in size with diameters of between 0.6m and 0.8m. All four had the remains of central post-pipes which were generally truncated, surrounded by a gravelly silt clay packing. The size of the post-pipes indicates that the bases of the timber posts were probably between 0.35 and 0.5m wide. Pottery from the post-pipe fills is of a slightly later date to that from the packing and suggests that the structure dates from the late 15th-16th century and was probably dismantled in the second half of the 16th century. An interesting fragment of daub was found in post-hole 111 which had the impression of a circular stamp quartered by a cross on one side. No parallels for this have been found although it is likely to be a maker's mark.

The very small internal space (*c.*1m²) provided by the post-holes indicates that it may have been the foundations for a raised structure such as a stairway. Its location suggests that it is more likely to have been associated with a building to the south of the excavation area, perhaps where the Cock Inn public house now stands.

Post-hole 114 to the immediate east contained similar pottery to that from the building, and is probably associated with it, although no evidence of a post-pipe remained and the cut was relatively shallow.

North-south fenceline (Figs 5 and 6)

A line of six small north-south orientated post-holes (25, 29, 44, 46, 50, and 67) were located to the west of Building C and are probably the remains of a street-frontage fence line. Two of the post-holes (25 and 29) produced single sherds of pottery, one of which is characteristic of late 15th to 16th-century material and the other is not closely datable but is of a fabric which was produced from the 13th to 16th centuries. A copper-alloy sewing pin very similar to two pins from Building C post-holes was also retrieved from fence-line post-hole 25, perhaps further suggesting an association.

Several of the fence-line post-holes cut the upper fill of east-west aligned ditch 69. A single sherd of late 15th to 16th-century pottery was retrieved from the upper

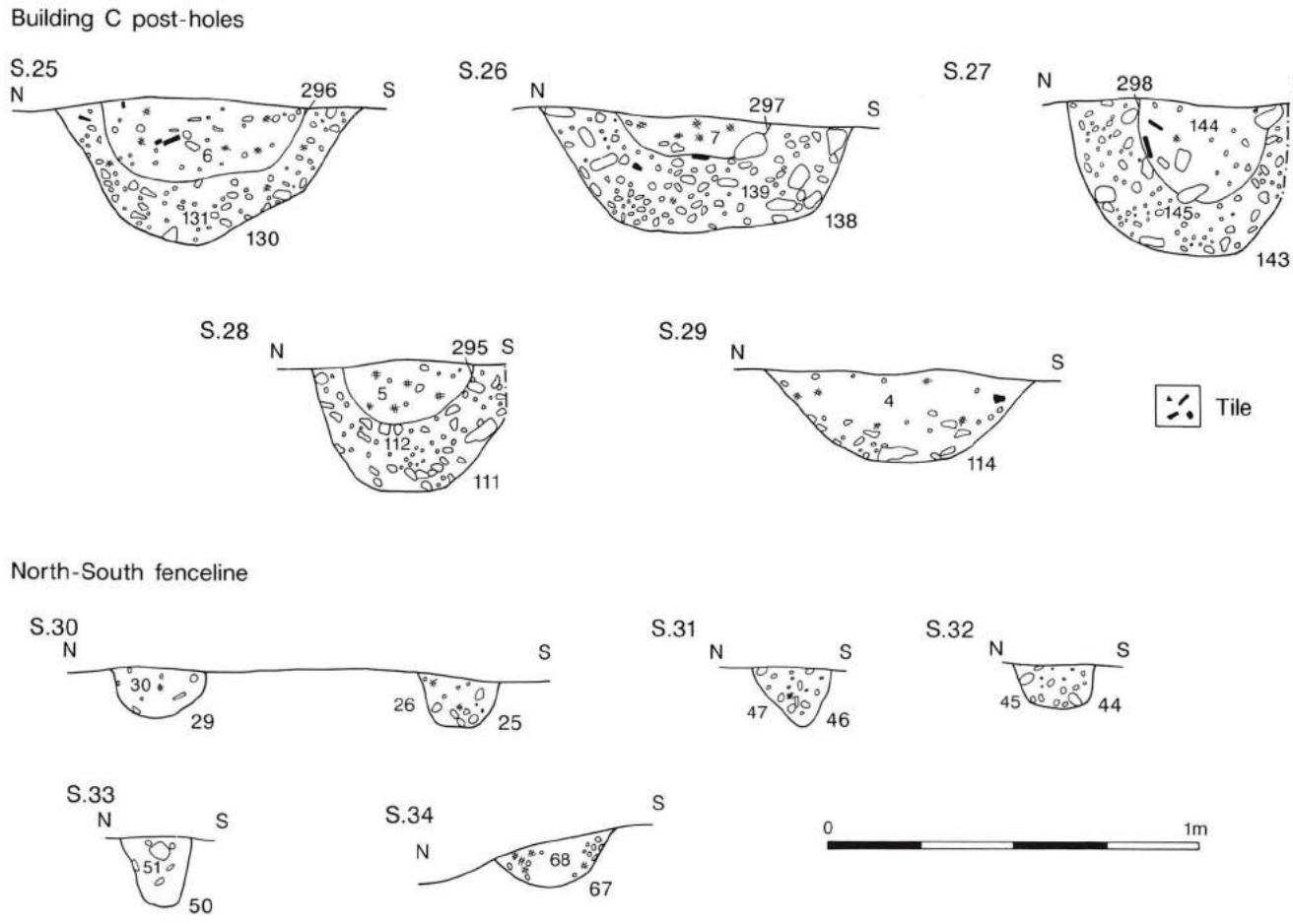

Fig. 6 Chipping Ongar, The Pleasance. Late medieval - early post-medieval (15th - 16th century) sections

ditch fill which suggests that ditch 69 may belong to the same phase as the building. However it is possible that the ditch is from an earlier phase and the pottery sherd is intrusive as the ditch was clearly in filled before the fence line was constructed.

Other features which produced 15th to 16th-century pottery but appear to have no obvious association comprise two post-holes (34 and 74), which cut ditch 69, pit 115 to the west of Building C and feature 178 which was located at the eastern end of the site.

Post-medieval (17th and 18th century) (Figs 7 and 8).
Features from this phase were more widely spread across the site and comprise several post-holes, gullies and a ditch. Many of the features contained sherds of post-medieval red earthenware, which first appeared in the 16th century and was current throughout the post-medieval period. Pottery with such a broad date-range makes close phasing difficult, although sherds with different surface treatments and forms can be assigned more specific dates. Other types of post-medieval pottery from the site, however (such as the imported stonewares) are more precisely datable.

17th-century features (Figs 7 and 8)
A group of features comprising gully 66 and post-holes 57, 79, 142 and 154 at the eastern end of the excavation area produced pottery dating to the 17th century. The north-south gully, which was cut by three of the post-holes, produced the largest assemblage of 17th- century pottery and may have been a drain or boundary feature. The southern extent of gully 66 was truncated by modern drain 87, beyond which the gully did not continue. A clay-pipe bowl dating from the 18th century was found in the top-fill of gully 66 which may be intrusive, although fragments of clay pipe were also present in the fills of some of the post-holes containing 17th-century pottery, including two which cut the gully. This suggests that some of these features may have been infilled in the 18th rather than the 17th century. The post-holes, including those which cut gully 66, do not appear to share any obvious alignment, although their location suggests that they are the remains of out-buildings or fences to the rear of buildings at the High Street frontage. Post-holes 210, 190, 196, 162, 187, 185, 73, 81 and 93 in this area are undated and may either belong to this phase, or equally likely an earlier one.

Other features containing 17th-century pottery include two large central post-holes E14 and E37, post-hole 163 which cut 15th to 16th-century pit 115, and post-holes 165 and 225 located towards the centre of the excavation.

18th-century features (Figs 7 and 8)
A group of post-holes (267, 273, 276 and 278) located towards the centre of the site produced pottery dating from the 18th century. No cross-fits were present but the similarity of the pottery and the close proximity of the post-holes suggests that they are related, although no building plan is evident.

Building D (Figs 7 and 8)
The remaining post-holes in this phase are generally scattered over the western half of the excavation area, although some building patterns are discernible. The majority of Building D post-holes are only broadly datable to the post-medieval period or produced no datable material and probably represent the foundations of at least one timber building perhaps belonging to more than one phase.

A roughly linear group of post-holes (15, 17, E09, E17, E45, E37, E29, E41, E43, E07, E19, E21) of various sizes, was located across the centre of the excavation. These features are probably the remains of an east-west aligned wall. It is feasible that post-holes 31, 203, 207, 219, 213, 221, 169, 217 and 181 to the south of the possible wall-line form part of the foundations for a parallel wall, although they are generally smaller in size and the scant dating evidence suggests that these post-holes are slightly later. It is more likely that the northern wall is actually the southern wall of a structure whose other wall was located beyond the excavation area and was partially destroyed by later features such as brick drain 286. Two post-holes, 155 and 159, were located between the post alignments, neither of which produced closely datable material.

An intermittent line of small post-holes (97, 99, 136, 256, 258 and 232) running from the south-east corner of the building towards post-hole 79 at the rear of the site could be the remains of a boundary fence, although dating (18th-century pottery) evidence was only retrieved from post-hole 97 which is closest to Building D.

Miscellaneous features (Fig. 7)
To the north and east of Building D were gully 271, ditch 162, and large post-hole or pit 41 which contained few datable finds but are likely to belong to this phase. Gully 271 is orientated east-west with another small, shallow gully extending southwards from about halfway along its length; its western end is obscured by brick drain 286. The only dating evidence retrieved fom this feature was a piece of clay-pipe stem which is not closely datable. Although ditch 62, to the east of gully 271 contained 15th to 16th-century pottery, the presence of post-medieval pottery and a clay-pipe stem suggests it is later. The fills of both the gully and the ditch were malodorous, indicating that they were probably originally drainage features. Sherds of post-medieval red earthenware were retrieved from an irregularly shaped shallow pit 11 and post-hole 80 to the south and north of Building D respectively, none of which is closely datable.

19th and 20th century (Fig. 9)
This phase is characterised by the appearance of brick features mostly located in the western half of the site. Little excavation was undertaken of these features although brick samples were taken for dating purposes. Where datable, the majority of features were probably

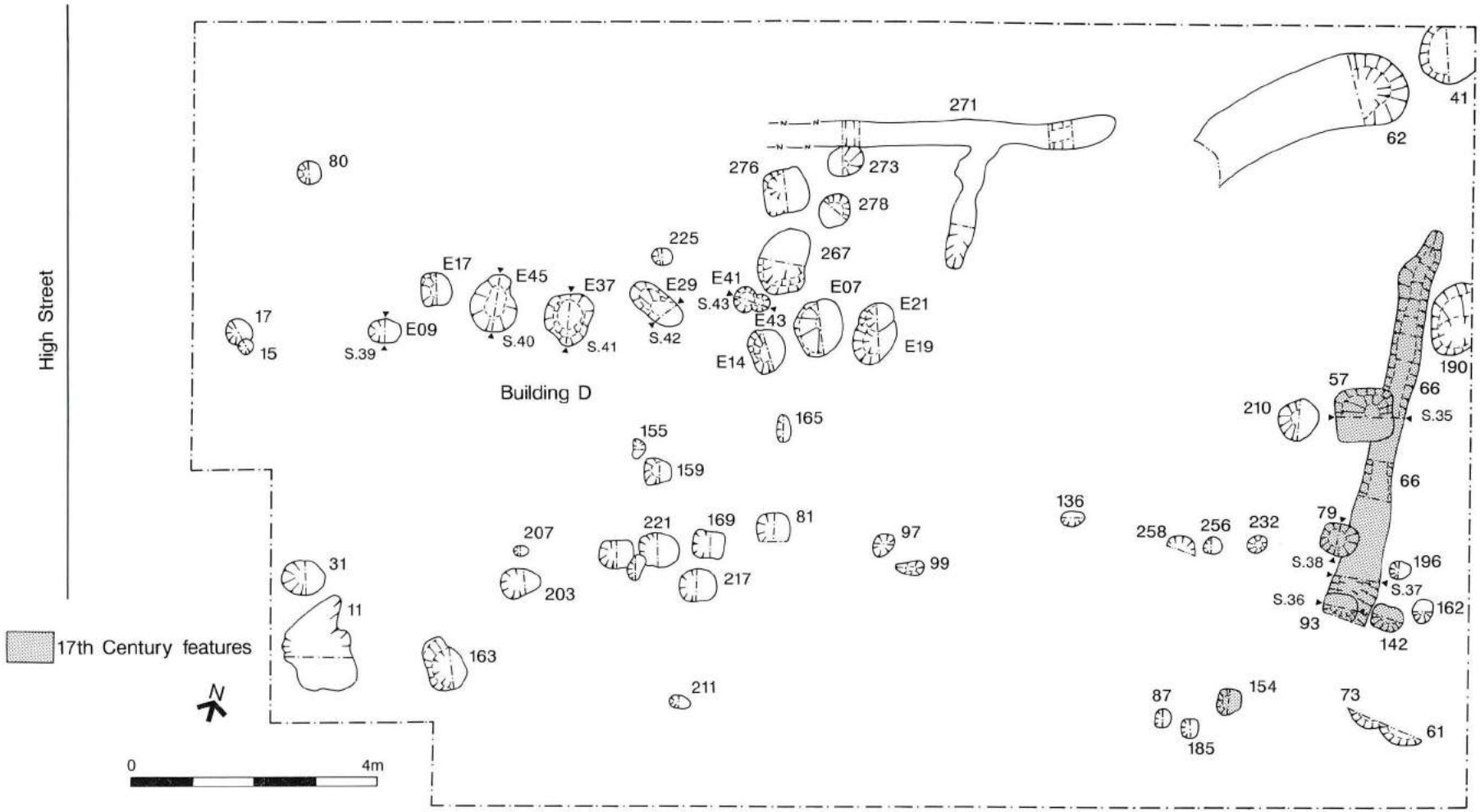

Fig. 7 Chipping Ongar, The Pleasance. Post-medieval (17th and 18th century) phase plan

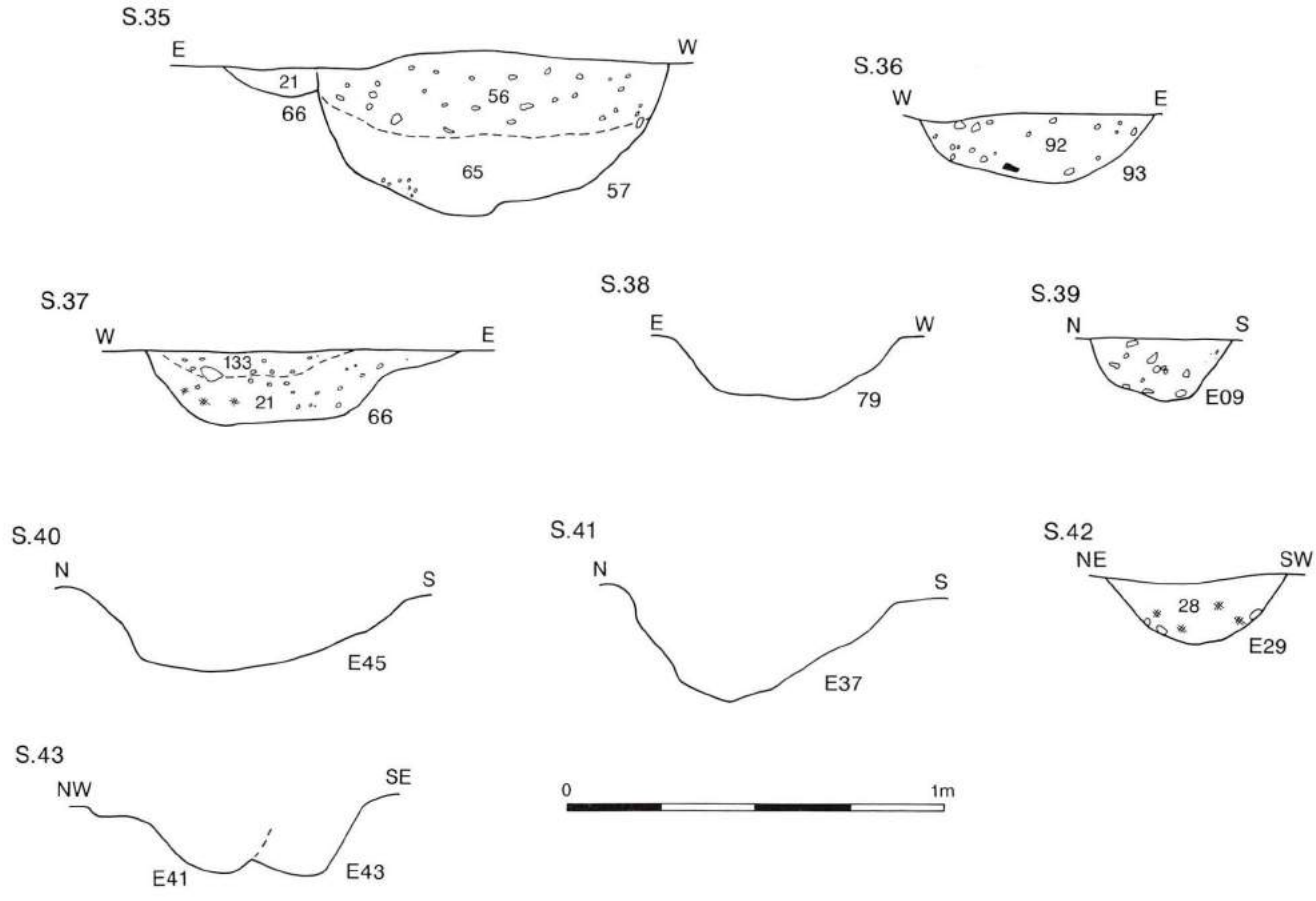

Fig. 8 Chipping Ongar, The Pleasance. Post-medieval (17th and 18th century); selected sections

19th or early 20th century, and consist of a curving drain 286, a foundation 292, a circular soakaway or well 291 and several sub-rectangular features of uncertain function.

The brick-built covered drain, 286, located near the northern edge of excavation, may have originally joined a main north-south street-side drain, although only the base of the drain, and a lead pipe, survived at the western extent. This part of the drain was probably destroyed during the construction of the car park. The slightly domed cover was damaged along the east-west section of the drain, revealing a thin deposit of black silt which was partially excavated to retrieve dating evidence. Three sherds of pottery were recovered, of which one appears to be medieval and the remaining two were from the same post-medieval vessel, dated to *c.*1685. This date is however misleading as the bricks from 286 date from the 18th or 19th century, and therefore the pottery is residual. The remaining brick features all date from the 18th and 19th century and are likely to be associated.

The foundation trenches for two ceramic drains 59 and 87 were partially excavated at the eastern end of the site to remove any risk of contamination with stratigraphically earlier features such as gully 66. The latest pottery from the drains dates to *c.* 1800, although most of the pottery is earlier. It is likely the majority of the pottery was redeposited, deriving from earlier features such as post-hole 93 and gully 66 which were disturbed when the drains were constructed, probably in the early 19th century.

Several apparently robbed-out features which may belong to this phase were also identified near to the High Street and to the east of wall foundation 292. Two quite deep rubble and mortar-filled cuts (13 and 27) were excavated against the western limit of the site. Feature 27 contained pottery, glass and clay pipe which date from the 17th to 18th century, although 19th or 20th-century pottery was also present. This suggests that 27 may originally have been a structurally-related feature, such as a foundation trench, dating from the 17th-18th century, the foundation which it contained being subsequently robbed out in the 19th or 20th century.

The finds

Saxon pottery

S. Tyler

Post-hole E05, pit 262 and pit 132 all produced single sherds of vegetable-tempered Saxon pottery. The post-hole contained no other finds and no stratigraphic relationships survived. Pit 262 was cut by post-holes 290 and 134, both of which contained medieval pottery and so it is possible that this is a Saxon feature, although a single sherd does not constitute reliable evidence. The sherd of Saxon pottery (vegetable-tempered Fabric 1A, dating from the second half of the 6th to *c.*800), from pit 132 was found with medieval material and is therefore residual.

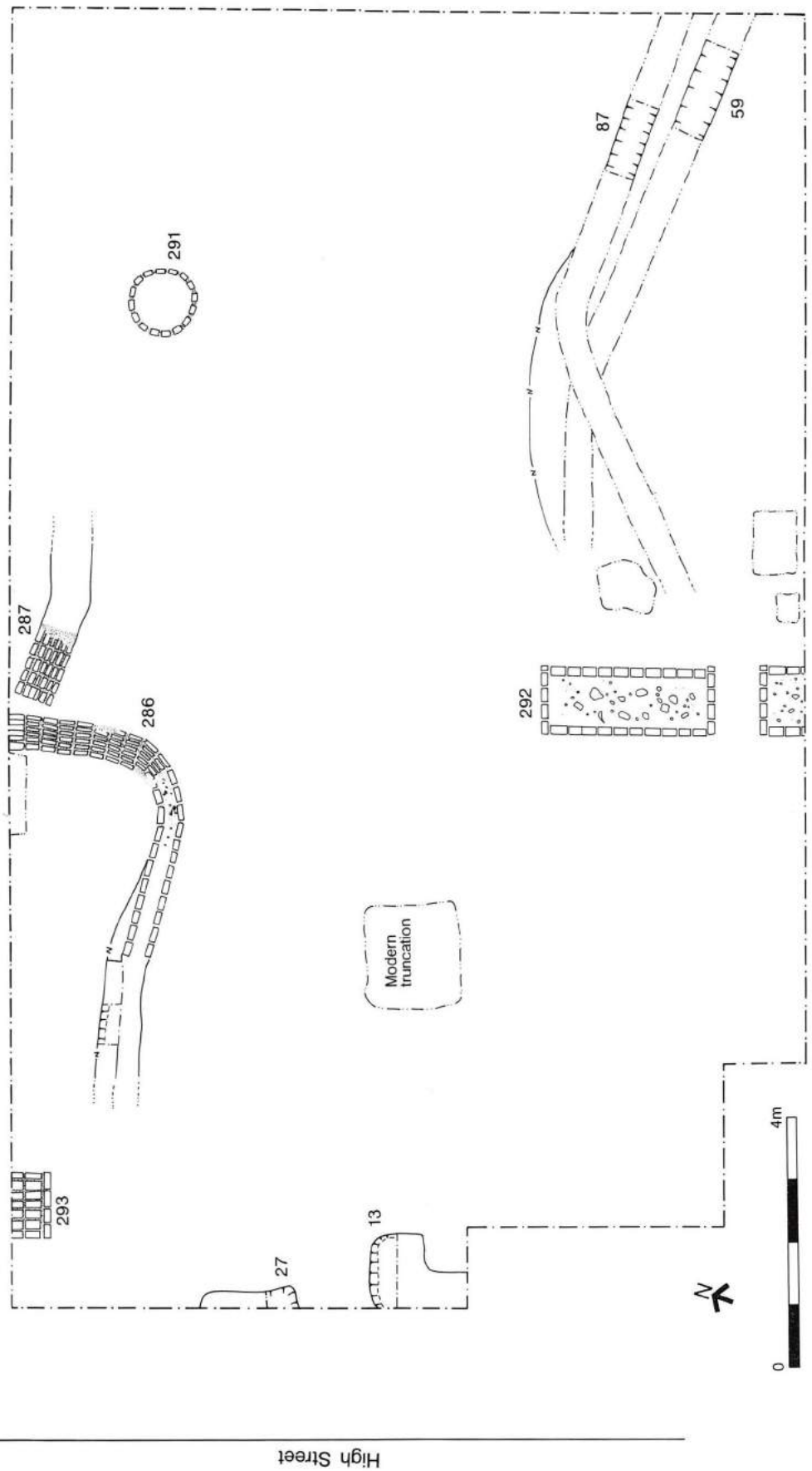

Fig. 9 Chipping Ongar, The Pleasance. Post-medieval (19th and 20th century) phase plan

Medieval and post-medieval pottery

H. Walker

A modest amount of pottery totalling 679 sherds weighing 5.3kg was excavated (Tables 1-3). The majority belongs to the medieval period, and shell-tempered ware is by far the commonest, occurring in nearly all medieval contexts. Only small amounts of other coarse wares are present. Medieval fine wares comprise London-type ware, Hedingham ware, Mill Green ware, and sandy orange ware, including medieval Harlow ware. The earliest pottery, belonging to the 12th century came from two Building A features in the northwest corner. Medieval pottery was also found in association with other Building A features and in Building B. However, the greatest concentration of pottery is from mid-13th century rubbish pit 132/106 at the rear of the site. Small amounts of post-medieval pottery dating from the late 15th/16th century were associated with Building C in the southwest corner, while 17th to 18th-century pottery was found in association with Building D and in features at the rear of the site. As usual, post-medieval red earthenware is by far the commonest post-medieval fabric and includes finds of black-glazed ware and Metropolitan slipware.

Method

The pottery has been recorded using Cunningham's typology (Cunningham 1985a, 1-16) and her fabric numbers and rim codes are quoted in this report. The more developed cooking-pot rims 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 building or group of features is summarised by means of tables, giving sherd count and total weight of pottery within each context (Tables 1-3). The presence of Roman and Saxon pottery is also noted on the tables for the Medieval phase as a check for residually, as it follows that if pottery from earlier periods has found its way into a context, then the medieval pottery present may also be residual (Vince 1991, 265). The term cross-fit is used for joining sherds between different fills and different features. Sherds belonging to the same vessel but not actually joining are also called cross-fits.

The fabrics

Fabric 12A **Early medieval shell-tempered ware:** An early medieval fabric described by Drury (1993, 78) and tempered with crushed shell, usually oyster, which is suitable because of its soft, flaky texture and would have been readily available on inland sites as oysters were regularly eaten. Occasional gastropod and other bivalve shell fragments are sometimes also present. At Rivenhall, Drury dates this ware from the ?early 11th century to the second half of the 12th century (Drury 1993, 80). However in other areas, shelly wares continue well into the 13th century, for example at Hadleigh Castle and North Shoebury, both near Southend (Drewett 1975, and Walker 1995, nos 30-8). Inland, 13th-century shelly wares also occur at King John's Hunting Lodge, Writtle, near Chelmsford, where they were current in the earlier 13th century (Rahtz 1969, 106). Therefore, the extreme date range for this ware is likely to be ?early 11th to 13th century. One vessel, bowl No.9, was tempered with clay pellets as well as shell and is further described in the text; it is the only instance of this fabric.

Fabric 12Af **Fine shell-tempered ware:** This is a variant of Fabric 12A with slightly finer and less densely packed crushed shell.

Fabric 12B **Early medieval shell-with-sand-tempered ware:** An early medieval fabric described by Drury (1993, 78). Dating as for Fabric 12A.

Fabric 13 **Early medieval ware:** This is described by Drury (1993, 80); the main tempering agent for this ware is abundant coarse sands, it is low-fired and tends to have red-brown surfaces with a grey core. At Rivenhall, Drury dates it to the ?early 11th century to *c.*1200. But similar early medieval wares from Saffron Walden are dated to the first half of the 13th century (Cunningham 1982a, 83), and excavations at Stansted show early medieval ware in association with fine wares dating to the early to mid-13th century (Walker forthcoming), so perhaps date of ?early 11th to earlier 13th century is more likely.

Fabric 20 **Medieval coarse ware:** 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 the county.

Fabric 20C **Mill Green coarse ware:** An oxidised coarse ware described by Pearce (*et al.* 1982, 289-93). Only one sherd was identified (see under 'Fabric 35' for origins and dating).

Fabric 21 **Sandy orange wares:** Described by Cunningham (1982b, 359), sandy orange ware includes any locally made quartz sand-tempered oxidised ware with a date range of 13th to 16th centuries. Jugs are often made in this ware. For a discussion of late medieval sandy orange ware, see Cunningham (1985a, 1).

Fabric 21D **Medieval Harlow ware:** This is a type of sandy orange ware made at, or near Harlow. It is micaceous with abundant inclusions of well-sorted sub-rounded sands with a size range of 0.25-0.5mm. Sands can be colourless or grey but grains with a red or amber sheen predominate. Other inclusions comprise sparse red oxides and occasional chalk flecks. It has a pimply texture, and colour is typically dull orange brown, sometimes with a pale creamy orange core or margins. No definite production site has been found, but a possible kiln dump was discovered at Canes Lane just outside the town of Harlow (Meddens and Redknap, 1992), and there is documentary evidence of potters there from the mid-13th century (Newton *et al.* 1960). Other find spots include Eastwick near Harlow (W. Davey pers. comm.), Market Street, Old Harlow (Walker 1991) and Stansted (Walker forthcoming). At Market Street it was associated with London-type wares of the late-12th to mid-13th century and at Stansted it was associated with fine wares dating to the mid-13th century. It therefore seems likely that production was underway by the 13th century, and may have continued throughout the Middle Ages, into the late medieval period, and eventually evolving into the better known post-medieval industry.

Fabric 21f **Fine sandy orange ware:** A variant of sandy orange ware was found at this site which is dull orange-brown in colour with no obvious added sand tempering, but inclusions of fine, often reddish, sub-angular sands about 0.1mm across. It resembles a fine version of medieval Harlow ware.

Fabric 22 **Hedingham fine ware:** This is described by Drury (1993, 86-89), it has a fine micaceous fabric, usually creamy orange or buff in colour and normally without a reduced core. The main vessel produced is the jug, usually highly decorated, and with a mottled green glaze. It was made at several production sites centred around Sible Hedingham in north Essex and has a wide distribution throughout north Essex, East Anglia and down the Essex coast. In Essex, it seems to be commonest from the late 12th to earlier 13th centuries although its extreme date range is second half of the 12th to second half of the 14th century (Coppack 1980).

Fabric 35 **Mill Green fine ware:** This is a fine red-firing, micaceous fabric, fully described by Pearce (*et al.* 1982) and by Meddens and Redknap (1992). It was made at kilns near Ingatestone in central Essex and has been dated by its occurrence in London waterfront deposits to the late-13th to mid-14th century. However, at some excavations in Essex, for example at King Johns Hunting Lodge, Writtle (Rahtz 1969), it seems to be present by the mid-13th century. Likewise at North Shoebury, Mill Green ware was found in association with London-type ware sherds of the early to mid-13th century (Walker 1995). Mill Green ware has therefore been given the expanded date range of mid-13th to mid-14th century. It occurs mainly in south and central area of the county.

Fabric 35B **Mill Green-type ware:** The fabric is visually identical to Mill Green ware but forms and surface treatment are untypical. Sherds are also classified as Mill Green-type ware if they are too small or abraded to be positively identified as Mill Green ware. Some Late medieval material has a Mill Green-like fabric and this is also classified as Mill Green type.

Fabric 36 **London-type ware:** Described by Pearce *et al.* (1985), this was of major importance from the mid-12th to mid-13th century and was traded along the Thames and North Sea coast (Vince 1985). Its fabric is fine, sandy, usually firing to a dull red-brown colour sometimes with a grey core, and tends to be quite thick-walled in comparison to Mill Green ware.

Fabric 40 **Post-medieval red earthenware:** Described by Cunningham (1985a, 1-2). It first appears in the late 15th century and was current throughout the post-medieval period. The fabric changes little throughout the centuries, but examples can sometimes

be dated from surface-treatment and form. Post-medieval red earthenware can be plain and unglazed but increasingly from the later 16th and 17th centuries many vessels have an internal or an all-over glaze (Cunningham 1985a, 2). Production centres in Essex include Loughton (Ashdown 1970), Harlow, (Newton *et al.* 1960) and Stock, to the south of Chelmsford (Cunningham 1985c, 83-8).

Fabric 40bl **Black-glazed ware:** This is a type of post-medieval red earthenware covered with a black iron-reduced or manganese glaze. Known local production is the same as that for Fabric 40. Black wares date from the beginning of the 17th century (or possibly the end of the 16th) and were current into the 18th century (Cunningham 1985b, 71), but seem to be principally a 17th-century type.

Fabric 40A **Metropolitan slipware:** 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. It is thought to have its origins in Low Countries slipwares. Known local production are the same as that for Fabric 40 and 40bl. Evidence from finds of Metropolitan slipware in London and America indicate it reached its peak around the mid-17th century (Jacqui Pearce pers. comm.; Orton 1988, 298, Noël Hume 1970, 102). However, it was made for local consumption over a much longer period, as at Moulsham Street in Chelmsford it first appears in the last decades of the 16th century and is still present into the 18th (Cunningham 1985b, 64).

Fabric 42 **Surrey-Hampshire white ware:** Only one sherd of this post-medieval ware was found and is described in the text.

Fabric 45C **Raeren stoneware:** A German stoneware described by Hurst *et al.* (1986, 194-208), and imported from the later 15th to 17th centuries.

Fabric 45D **Frechen stoneware:** A German stoneware, described by Hurst *et al.* (1986, 214-21) and imported from the mid-16th to late 17th century.

Fabric 45 **Unattributed stoneware**

Fabric 45F **Westerwald stoneware:** Another German stoneware usually decorated with a cobalt-blue background, described by Hurst *et al.* (1986, 221-5) and imported from the early 17th to 18th centuries.

Fabric 45M **English Stoneware:** Described by Draper (1984, 33-5), this was manufactured from the late 17th century onwards

Fabric 46A **English tin-glazed earthenware:** This is described by Noël Hume (1969, 12-13) and Draper (1984, 25-32). It usually has a buff-coloured fabric and an off-white tin glaze (i.e. a lead glaze opacified with tin oxide) and dates principally from the 17th to later 18th centuries. The nearest major source of tin-glazed earthenware to Essex is London, with production centres at Southwark and Lambeth.

Fabric 47 **White salt-glazed stoneware:** Described by Draper (1984, 36-39) and Noël Hume (1969, 14-19). This was produced from the 1720s-1770s and can be distinguished from other post-medieval white wares by its orange peel texture produced by the salt glaze.

Fabric 48A **Chinese porcelain:** This was imported in quantity from the late 17th century until the end of the 18th

Fabric 48B **English porcelain:** Described by Draper (1984, 53, 55) and produced from *c.* 1745.

Fabric 48C **Creamware:** A fine, smooth, pale earthenware covered in a liquid lead glaze giving a pale yellow body. It was first produced in the 1750s. As time went on creamware was improved and made whiter. It can be distinguished from pearlware by the greenish yellow colour of surplus glaze around foot rims and handles (Noël Hume 1969, 25).

Table 1: Quantification of pottery from the medieval phase by fabric feature and sherd count

S = Saxon pottery present R = Roman pottery present

Group/	Feature	Context	Relationship/					Fabrics								Wt	
Area			position	12A	12Af	12B	13	20	21	21f	21D	22	35	35B	36	(g)	
rubbish	pit 132	primary fill 108		2	1											23	S
pits to	pit 132	top fill 107		36	13			4	1	8					2	503	
rear of	pit 106	single fill 1	recut of F132	109	23		1	1	17	2	1				14	1478	R
building	pit 200	primary fill 199		1												6	
A	pit 200	top fill 198		3								1				2	
	post-hole 233	single fill 235	cut by pit 200	1												6	
	pit 223	primary fill 224		12	3				3			1				212	
	pit 127	primary fill 126	cut by post-	3												19	R
	pit 127	middle fill 125	hole 117	2												7	
	pit 282	primary fill 281		3												2	
	pit 282	top fill 280		1												14	
Building	post-hole 23	single fill 24	small bld A	5				1								62	
A	post-hole 53	single fill 10	post-holes	8								1				228	
	post-hole 150	single fill 151	large	13				2								81	
	post-hole 192	2nd fill 194	building A	2	1		1									40	
	post-hole 94	single fill 9	post-	15				1								98	
	post-hole 243	top fill 244	holes	1		1	1	1								12	
	post-hole 148	single fill 149	cuts P-H 150	2												12	
	post-hole 283	single fill 284	cuts P-H 150								1					10	
	layer/spread 242	-	above P-H 243						1							9	
Building B	post-hole 134	single fill 3	S.E. corner	9		4		3	7		1				1	164	
(?exten-	post-hole 117	2nd fill 121	N.E. corner								1					1	
sion to	post-hole 104	primary fill 113	southern wall	1										1		16	
Building	post-hole 104	middle fill 105	southern wall	1												2	
A)	post-hole 104	top fill 20	southern wall	6												7	
	post-hole 259	single fill 260	northern wall	3												18	
Internal	post-hole 103	single fill 19		2												5	
features	post-hole 175	top fill 173		2							3			1		20	
	post-hole E 31	fill E01	western half	24									2			124	
	post-hole E 27	fill E26	western half											1		3	
external	post-hole 254	single fill 253	cut pit 262						1							3	
features	post-hole 290	single fill 289	cut pit 262	1												32	
	post-hole 136	single fill 137									1					3	
	post-pipe 252	primary fill 249							1							6	
				268	41	5	4	12	31	10	8	3	2	3	17	3228	

Fabric 48D **Staffordshire type ironstone:** This is a robust chunky fabric first manufactured in 1805 and is still in production.

Fabric 48P **Pearlware:** 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 1779 and remained popular until about 1830.

Fabric 51B **Modern flowerpot fabric**

The medieval phase (12th-14th century)

Most of the excavated pottery belongs to the medieval phase, and a total of 404 sherds weighing 3.2kg came from 34 contexts (Table 1).

Rubbish pits to the rear of Buildings A and B

Rubbish pit 132 (recut 106): This feature is considered first as it produced the largest group of pottery. It was situated in the southeast corner of the site, away from the High Street, and is one of several rubbish pits concentrated at the back of the site. It had two fills and a recut, little pottery was found in primary fill 108, comprising three sherds of shell-tempered ware with cross-fits between top fill 107 and recut fill 01. There is also a residual sherd of Saxon pottery. Much larger amounts of pottery were found in top fill 107 and recut fill 01 where both fine and coarse wares were present. There are at least four cross-fits between these two fills and the preponderance of cross-fits shows the fills had become mixed.

The finewares from rubbish pit 132/106: London-type ware is present, comprising the shoulder of a white slip-decorated jug (No.1), a flared base from a baluster jug showing a partial greenish glaze, and a small slip-coated and green-glazed body sherd showing straight combed decoration. White slip decoration is found on London-type ware jugs of squat, rounded and flared baluster form (Pearce *et al.* 1985, 31). The closest published parallel appears on squat/rounded jugs (Pearce *et al.* 1985, fig. 48, 164-5), with horizontal lines of slip around the neck and vertical slip stripes on the body ending at the neck. White slip decoration does not appear to be a closely datable type. Likewise, the flared base from the baluster shaped jug is not closely datable, as the baluster jug is present more or less throughout the life of the industry (Pearce *et al.* 1985, fig. 9). Only the combed sherd may be datable, as such decoration is sometimes found on highly decorated style London-type ware jugs found in London waterfront deposits dating to *c.* 1250 (Pearce *et al.* 1985, 19, 30).

One sherd of medieval Harlow ware from recut 106 was identified, showing splashes of glaze internally and a reduced or fire-blackened surface. Medieval Harlow-ware sherds with similar surfaces were found in post-holes 134, 175 and 283, but it is not possible to say whether they came from the same vessel.

The remaining glazed sherds comprise sandy orange ware and fine sandy orange ware. Several body sherds show slip-painted decoration under a plain lead glaze, a very common surface treatment for sandy orange ware. The slip-painting is always in the form of straight lines as opposed to curvilinear, scrolling lines. A fragment of fine sandy orange ware jug shows the remains of a slip-painted lattice design (No.2). Another sherd of fine sandy orange ware shows vertical combed decoration through a slip-coating and green glaze. This is similar to the combed London-type ware sherd but may also be copying Mill Green ware of the mid-13th to mid-14th century, an industry that typically employed this type of surface treatment. However, Mill Green ware itself is absent from this feature. Some of the sherds classified as sandy orange ware could be Harlow products but are not typical enough for identification to be positive.

The coarse wares from rubbish pit 132/106: One shell-tempered beaded rim bowl was found of around 340mm in diameter (No. 3), which may originate from primary fill 108. Cooking pots are the most common form and the remains of at least nine individual cooking pots were found, all in shell-tempered fabrics. There are several small fragments with beaded rims (sub-forms C1 and C3), datable from the 12th century (Cunningham 1982a, 362). However, there are more complete examples of developed, typologically later cooking-pot rims dated using Drury's typology. These comprise; thickened, flat-topped, slightly everted rims (sub-form B2) (No.4), datable to *c.*1200; everted rims usually with a rounded external bead (sub-form D1) (No.5) dating mainly to the first half of the 13th century; and one example, in fine shell-tempered ware, of a squared flat-topped rim above a short upright neck (sub-form H1) (No.6) thought to be current throughout the 13th century. No coarse-ware jugs are present but other coarse-ware forms comprise a possible chimney pot (No. 7), again in a shell-tempered ware. It is very fragmented but is similar in form and fabric to more complete ?chimney pots found at Boreham Interchange (Walker 1999, nos 13-14). Examples of other coarse wares, comprising early medieval ware and medieval coarse ware are present but the only featured sherd is an early medieval ware bevelled rim, too fragmented to identify vessel type.

The best dating evidence from this pit is the London-type ware. The combed sherd may belong to the mid-13th century, and as the industry went into decline in the second half of the 13th century, a mid-13th century date seems most likely. The rest of the fine wares would fit in with this date as would developed cooking-pot rims Nos 5 and 6.

Pit 200: This produced a sherd of shell-tempered ware, from primary fill 199, which is sufficiently distinctive to be identified as belonging to the same vessel as found in pit 132 (from top fill 107), indicating that both features were open at the same time. Small crumbs of shell-tempered ware and Hedingham ware were found in soil samples from the top fill of pit 200 (fill 198). The Hedingham-ware sherd shows a barely discernible applied strip under a mottled green glaze, and may be part of a stamped strip jug which, at Colchester, are present throughout the 13th century (Cotter forthcoming). Cut by pit 200, post-hole 233 produced a single sherd of shell-tempered ware.

Pit 223: This contained a relatively large group, a total of 212g, excavated from primary fill 224, although this is far less than was excavated from pit 132/106. Finds comprise slip-painted sandy orange ware sherds, a sandy orange ware thumbed jug base, a sherd of Hedingham ware and examples of shell-tempered wares including a beaded cooking-pot rim and a fine shell-tempered ware base from the same vessel found in pit recut 106. The Hedingham ware sherd, like that from pit 200, shows applied vertical strips under a mottled green glaze, and may be from a 13th-century stamped strip jug. This particular sherd shows throwing lines and must be wheel-thrown rather than coil-built, a change in technology that did not take place until well into the 13th century.

Pits 127 and 282: These features, both in the northern half of the site, produced only small amounts of shell-tempered ware from all fills. Featured sherds comprise a beaded cooking-pot rim from the primary fill of pit 127, which was cut by post-hole 117 (part of Building B).

Building A: Small post-holes

These comprise post-holes 23 and 53 which lay close to the High Street frontage. Found in post-hole 23 (from single fill 24) was a small shell-tempered ware cooking-pot rim (No. 8). This differs from other cooking pots because of its small size, 100mm as opposed to 190mm, the smallest cooking pot found on site. It also has a thickened everted rim (sub-form B1) a typologically early form which did not occur elsewhere. However, the presence of a sherd of medieval coarse ware in this context precludes a date before the 12th century. Cooking pot No. 8 also has an unusual sooting pattern with a band of fire-blackening around the inside of the rim. It is difficult to see how it would acquire such a deposit; perhaps something was heated inside the vessel, or it may have been inverted over a fire. A shell-tempered ware base was also found.

Neighbouring post-hole 53, which is similar in size and shape, produced a semi-complete bowl (No. 9), and a sherd of Hedingham ware (from single fill 10). The bowl is unlike other shell-tempered wares from this site, as the fabric also contains moderate orange-brown, soft, sub-rounded or lens-shaped, earthy, non-magnetic inclusions, identified as clay pellets. The accompanying sherd of Hedingham ware has a buff fabric rather than the more typical creamy orange colour, and a thin pale green glaze. This buff variant is most commonly found on early rounded jugs of the mid to late-12th century (Cotter forthcoming). A third post-hole, 54, belongs to this group but did not contain pottery; however, as it was cut by post-hole 53 it must be 12th century or earlier.

Building A: Large post-holes

Four large post-holes 150, 192, 94 and 243 in the north of the excavation may also be part of Building A, although 243 could form part of the northern wall of Building B. None produced large quantities of pottery, and finds comprise shell-tempered wares accompanied by sherds of early medieval ware (in three of the features) and medieval coarse ware (in two of the features) (Table 1). The only diagnostic sherds are a shell-tempered ware beaded cooking-pot rim and a shell-tempered ware beaded bowl rim of about 400mm in diameter (not from the same vessel as No.3), both from post-hole 150. Part of the rim from the latter was also found in post-hole 94 indicating that these two features at least were filled at the same time. No other cross-fits were found, although the presence of early medieval ware in three out of four features may be significant, as this fabric is rare at this site, only occurring in one other medieval context, pit recut 106. The pottery evidence therefore suggests that post-hole 243 is indeed part of Building A.

Two features cut post-hole 150; post-hole 148 which contained two sherds of shell-tempered ware, and post-hole 283 which produced a sherd of medieval Harlow ware with a reduced or fire-blackened external surface as found in pit recut 106. In addition, layer/spread 242 which overlay the fill of post-hole 243 produced a sherd of sandy orange ware showing Mill Green style cream slip-coating under a mottled green glaze.

Building B (?extension to Building A)

The largest assemblage from this group of features was excavated from post-hole 134, forming the southeast corner of Building A. A modest total of 164g was excavated from single fill 03, and the assemblage is comparable to that of pit 132/106, in that examples of the same fine ware fabrics are present. Finds include a sandy orange ware thumbed jug base, a slipped and glazed sherd of London-type ware and a sherd of medieval Harlow ware with a reduced or fire-blackened external surface. Coarse wares comprise shelly ware sherds and examples of medieval coarse ware. Post-hole 117, forming the north-east corner of the extension of Building B (and cut medieval pit 127) contained only a tiny sherd of medieval Harlow ware.

Post-hole 259 in the northern wall and post-hole 104 in the southern wall produced unfeatured sherds of shell-tempered ware from all fills. However, the primary fill of post-hole 104 (fill 113) also contained a sherd of Mill Green-type ware, it is oxidised throughout, hard, and slip-painted without an accompanying glaze, and may be medieval or late medieval.

Internal features Post-hole 103 produced small two plain body sherds of shell-tempered ware. Slightly more was recovered from post-hole 175 comprising small sherds (all from top fill 173) of shell-tempered ware, medieval Harlow ware, and a sherd of plain, unglazed Mill Green-type ware, which is hard with a reduced external 'skin' and, like that from Building B post-hole 104, may be medieval or late medieval. Of the medieval Harlow-ware sherds, one has an external plain lead glaze, one has splashes of glaze internally, and the third has splashes of glaze internally with a reduced or fire-blackened external surface. The latter is therefore similar to sherds found in rubbish-pit recut 106. Two large post-holes E31 and E27, in the western half of the building and originally identified during the evaluation, both contained medieval pottery. Post-hole E31 produced several sherds of shell shell-tempered ware, including a beaded cooking-pot rim and a 13th-century type H1 cooking-pot rim, along with two sherds of Mill Green fine ware, providing a date of second half of the 13th century. A single sherd of Mill Green-type ware was excavated from E27.

External features Post-holes 136, 254 and 290 were all situated outside the south-east corner of Building B. Again little pottery was recovered. Post-hole 290 produced only a shell-tempered ware beaded cooking-pot rim (from single fill 289), and post-hole 136 produced an unfeatured sherd of medieval Harlow ware. Slightly later pottery was recovered from post-hole 254, which cut ?Saxon feature 262, comprising a sherd of late medieval sandy orange ware (from single fill 253) dating to the 14th to 16th centuries. Post-pipe 252 in post-hole 247 to the south of Building B produced a slip-painted sherd of sandy orange ware showing splashes of plain lead glaze.

Discussion of the medieval phase

The earliest occupation is quite clearly the Building A small post-holes 23 and 53, dated by the early type Hedingham ware to the second half of the 12th century. The four large post-holes also belonging to Building A, contained no 13th-century fine wares or developed cooking-pot rims as found elsewhere on site, but neither is there any evidence to suggest that they are contemporary with small post-holes 23 and 53. In fact they have more similarities with the earlier pottery in rubbish pit 132/106, both producing beaded cooking pot rims and sherds of early medieval ware. Post-hole 148 and layer 242, which were stratigraphically above the large Building A post-holes, produced pottery which was contemporary with the latest pottery from rubbish pit 132/106.

Major rubbish pit 132/106 has been dated to the mid-13th century, but there was much less pottery in the other rubbish pits and consequently they are more difficult to date. Horizontal cross-fits between rubbish pits 132/106, 200 and 223 show all three were open at the same time, but the wheel-thrown Hedingham ware in pit 233 could date to later in the 13th century. Pits 127 and 282 produced only shell-tempered wares and must be earlier than, or contemporary with pit 132/106, or contemporary with the primary fill of pit 132. As pit 127 was cut by a Building B post-hole, it must be earlier than Building B.

The evidence from the post-holes that make up Building B is inconclusive, and the pottery does not determine whether or not the post-holes were contemporary. However, as the pottery from post-hole 134 is similar to that from rubbish pit 132/106, then assuming the pottery is a disuse deposit, pit 132/106 was still open when Building B went out of use. This also means that rubbish pit 127, is definitely earlier, or went out of use earlier, than rubbish pit 132/106. The latest pottery from Building B however is the sherd of Mill Green-type ware from post-hole 104 which could date anywhere from the mid-13th century to the late medieval period, although the presence of shell-tempered ware in the same fill makes a mid to late 13th-century date more likely. All the internal features inside Building B that produced pottery, except perhaps for post-hole 103, appear to be contemporary with Building B, as evidenced by the presence of Mill Green ware, Mill Green-type ware and medieval Harlow ware. The external features are of varying dates.

There appear to be three medieval pottery horizons, although they are difficult to define as they all contain shell-tempered ware. The earliest horizon comprises the two 12th-century post-holes 23 and 53 which produced pottery that is clearly different from anything else on site. The second medieval horizon is characterised by assemblages that contain shell-tempered ware only, sometimes with beaded cooking-pot rims. These comprise rubbish pits 127, 282; post-hole 233; the bottom of rubbish pit 132, and possibly the large post-holes of Building A, although this latter group contained coarse wares other than shell-tempered ware. The third horizon is characterised by 13th century fine wares, shell-tempered ware and developed cooking-pot rims. They comprise rubbish pit recut 106; the top fill of rubbish pit 200 and possibly the primary fill; Building B; the internal features belonging to Building B, with the possible exception of post-hole 103, and external Building B features 136 and 252. External feature 290 could belong to the second phase.

Looking at the medieval assemblage as a whole, it seems typical of any medieval group comprising mainly coarse wares with a few fragments of fine-ware jugs. Also typical is the preponderance of cooking pots over other coarse-ware forms. Despite their name they were general purpose vessels also used for storage and preparation of food stuffs (McCarthy and Brooks 1988, 104). However sooting or fire-blackening up the sides and under the rim of several of the cooking pots show that many were used for cooking, (or another domestic process requiring heating). The remains of three coarse-ware bowls were also found. Again these served a variety of functions, but here all the bowls show traces of fire-blackening or sooting (especially No.9), and may also have been used in cooking or in dairying, as bowls were often used for heating milk to separate the cream (McCarthy and Brooks 1988, 110). Fine-ware jugs were used

Table 2: Quantification of pottery from the post-medieval phase by fabric feature and sherd count

Date	group/ building	Feature/ position	Context	Relationship	Fabrics																			Wt
					12A	13	20	20C	21	21D	35	35B	40	40b1	40A	42	45	45C	45D	45M	46A	47	48A	48C	(g)
late med/	-	ditch 69	top fill 76	?cut by F34									1											4
early post	-	post-hole 74	adj. ditch 69		1								3											27
med	-	P-H/P pit 34	top fill 35														1							14
15th to	-	feature 178	top fill 176	eastern edge									2											7
16th C	Building C	post-hole 111	primary fill 112							2														5
	Building C	post-hole 111	top fill 5						2			1	3			1								58
	Building C	post-hole 114	single fill 4						3		1		5											40
	Building C	post-hole 138	top fill 7						3	2			2											44
	Building C	post-hole 130	primary fill 131						5	3	1	1	2											55
	Building C	post-hole 130	top fill 6						1	3		1	11											113
	Building C	post-hole 143	primary fill 145							2			2											47
	Building C	post-hole 143	top fill 144						1	3			9											106
	N-S fence	post-hole 25	single fill 26						1															3
	line	post-hole 29	single fill 30										1											7
	pit	?pit 115	single fill 116	cut by F163	1				3	2		3	5											189
17th C	-	post-hole 163	primary fill 164	S.W. corner									14	1					1					59
and 18th		gully 66	primary fill 133	rear of site									3											17
century		gully 66	top fill 21	cut by F87	1		1		1	1			22	2	2				2		2			353
		post-hole 142	fill 2 cut by F66						1				1	1										14
		post-hole 57	primary fill 65	cut F66							1													3
		post-hole 57	top fill 56							1			2											24
		post-hole 79	single fill 78	cut F66					2	1			7	1	2									86
		post-hole 93	-	cut F66									3	1	2									48
		post-hole 154	single fill 153	S.E. corner									4	1	1									9
		post-hole 165	single fill 166	near centre										1										1
		post-hole 225	single fill 226	near centre										1										3
		brick drain 286	single fill 22	N.W. corner					1					2										47
	Building D	post-hole E09	fill 8	linear group									1											4
	Building D	post-hole E14	fill 13	of post-											2									40
	Building D	post-hole E45	fill 44	holes from									1											6
	Building D	post-hole E37	fill 36	evaluation											1									5
	Building D	post-hole E29	fill 28	?from									1											9
	Building D	post-hole E41	fill 40	north	2								5											25
	Building D	post-hole E19	fill 18	wall									1											7
	Building D	post-hole 213	single fill 214	south																		1		1
	Building D	post-hole 221	single fill 222	wall									1											1
	Building D	post-hole 169	single fill 170					1			1									1				14
	Building D	post-hole 97	single fill 98																	1				5
	18th C	post-hole 267	top fill 264										1	2										29
	post-holes	post-hole 273	single fill 272										1										1	13
	north of	post-hole 276	top fill 274										4	1	2								1	51
	building D	post-hole 278	single fill 277										2									1		24
features		F11	single fill 12	near frontage									1											7
not		post-hole 31	top fill 32	near frontage									2											8
closely		post-hole 159	primary fill 160	inside bld. C		1							1											30
datable1		post-hole 159	top fill 81	inside bld. C									1											9
		?ditch 190	primary fill 189	E.end of site					1	1			2											63
		?ditch 190	top fill 180	E.end of site									1											1
		ditch 62	top fill 63	N.E. corner									3					1						64
		post-hole 80	top fill 81	N.W. corner	1							1	6											28
					6	1	1	1	25	21	4	7	137	14	12	1	1	1	3	1	2	2	2	1	1827

for serving at the table. The presence of the possible chimney pot is also interesting as it may indicate the presence of a fairly substantial building.

As discussed above, features showing horizontal cross-fits must have been open at the same time. How sherds from the same vessel got into different rubbish pits can be explained if there was an interval between breakage and final discard, as the sherds may have been moved around the site, perhaps enjoying some kind of secondary use before finally being dumped in a rubbish pit. Alternatively, the site may have been levelled after it went out of use, which would have spread material around the site.

Post-medieval phase

A total of 243 sherds weighing 2kg was excavated from 50 contexts (Table 2), or just over half that found in the medieval phase. However, post-medieval pottery is more widely distributed around the site and more contexts date to the post-medieval period than they do to the medieval.

Late medieval/early post-medieval (15th-16th century)

Pottery belonging to this period was found mainly in the southwest sector of the site, although feature 178 at the eastern edge produced a sherd of early type slip-painted post-medieval red-earthenware perhaps dating to the late 15th to 16th century. Ditch 69, near to the street frontage produced a single sherd of post-medieval red earthenware showing reduced surfaces and splashes of glaze, also characteristic of late15th to 16th-century material. Adjacent post-hole 74 produced similar pottery. Post-hole/post-pit 34 cut ditch 69 and produced a German stoneware strap handle, probably from a small drinking jug. It could be a Raeren, Cologne or Frechen product, but whatever its origin, such drinking jugs were popular during the late 15th and 16th centuries. It could therefore be of the same date as the sherd in ditch 69.

Building C

Five post-holes (111, 114, 130, 138, and 143) at the southern edge of the site appear to form a sub-rectangular structure. The assemblage from each is similar, although no cross-fits were noted, comprising small amounts of sandy orange ware, medieval Harlow ware, Mill Green ware, Mill Green-type ware, and post-medieval red earthenware. Of interest is an example of a late medieval Harlow ware slip-painted lid-seated jar rim (No.10). Much of the post-medieval red earthenware is unglazed and slip-painted, again indicating a late-15th/16th century date. However, a couple of post-medieval red earthenware sherds have an internal or all-over glaze, and may be later. The dating is also complicated by the presence of a Surrey-Hampshire white ware foot from a tripod pipkin from the top fill of post-hole 111 (post-pipe fill 5). This form was made throughout the life time of the Surrey-Hampshire industry which lasted from the second half of the 16th to the end of the 17th century (Pearce 1992). Therefore, assuming the post-holes are contemporary, they could not have been infilled until at least the second half of the 16th century. Although the presence of early type post-medieval red earthenware indicates that a 16th-century date is more likely than a 17th-century one.

Of these building post-holes, 111, 130, and 143 produced pottery from their primary fills, i.e. their packing fills. The primary fill of post-hole 111 (fill 112) produced two sherds of medieval Harlow which could be medieval or late medieval, while the latest pottery from the primary fills of 130 and 143 (fills 131 and 145) comprises slip-painted post-medieval red earthenware. Therefore these primary fills at least are late 15th/16th century and contemporary with other features in the southwest sector as discussed above, but may have been backfilled at a later date. Worth noting, but residual in primary fill 131, is a Mill Green-ware jug rim which is paralleled by material from a group of kiln waste from Hardings Farm, Mill Green, and classified as plain necked jug (Meddens and Redknap 1992, fig. 13).

North-south fenceline

Two post-holes in a possible north-south fence line produced pottery. That from post-hole 25 (from single fill 26) has been identified as sandy orange ware but, as both surfaces are missing, no date can be given. Post-hole 29 produced another sherd of ?early-type post-medieval red earthenware (from single fill 30) showing internal splashes of glaze.

Pit 115

A relatively large group was excavated from ?pit 115 (from single fill 116) at the southern edge of the site. Residual medieval sherds occurred here, along with several sherds of post-medieval red earthenware. There is however, the possibility of contamination from intercutting post-hole 163. Except for a jug handle, most of the post-medieval red earthenware is unglazed and one sherd shows slip-painted decoration indicating an early date. There are also a few large sherds of Mill Green-type ware which are plain and unglazed, and may be from large 15th to 16th-century jugs or cisterns used in the making and storage of beer (*cf.* Cunningham 1985a, fig.6, fig.8, 4-14). One sherd of late medieval sandy orange ware, possibly a Harlow product shows slip-painted lines and dots under a glossy lead glaze and may be a precursor of Metropolitan slipware.

17th century and 18th century

Features containing post-medieval pottery are more widely scattered than the late medieval/early post-medieval material, although only one feature in the southwest of the site produced pottery of this date (Table 2). This was post-hole 163, which cut 15th to 16th-century pit 115 and yielded sherds of Frechen stoneware, black-glazed ware, and a post-medieval red earthenware flanged dish rim.

The largest 17th-century group was excavated from gully 66, situated at the back of the site away from the street frontage. Its primary fill, 133, produced only glazed sherds of post-medieval red earthenware, but finds from top fill 21, include the following:

Black-glazed sherds and sherds of Metropolitan slipware from a hollow ware.

Part of Frechen stoneware bellarmine with a stylised face mask, a type present from the early 17th century (Hurst *et al.*1986, 220).

Two body sherds from a tin-glazed earthenware ?bowl, it is undecorated but has an all over dark blue glaze with paler blue (?accidental) splashes, and may be a Lambeth copy of Nevers Blue dating from *c.*1670 to *c.*1710 (John Cotter pers. comm.).

The ?Nevers Blue copy is therefore the latest datable pottery from this feature However, the latest artefact is a clay pipe datable to the mid to late-18th century (clay-pipe report). Post-hole 142 was cut by gully 66 and produced a sherd of black-glazed wares. The gully was in turn cut by post-holes 57 and 79 containing little pottery, of which none was later than that from the gully. Of interest from post-hole 57 (from top fill 56) is another medieval Harlow-ware hollowed, everted flanged jar rim, similar to, but not from the same vessel as No.10. Post-hole 93 cut gully 66 and was cut by modern drain 87; it produced a black-glazed ware sherd and Metropolitan slipware dish rim which could easily be contemporary with the fill of gully 66.

A number of other features scattered around the site contained 17th-century pottery, characterised by the presence of black-glazed and Metropolitan slipware. These comprise post-holes 154 and 142 in the south-east of the development area, post-holes 165 and 225 towards the centre and a brick lined drain 286 in the northwest. The only featured material is a black-glazed sherd in brick drain 286 (fill 22) showing dimpled decoration (No.11), similar to that found on the Braintree ringers jar and perhaps dating to the late 17th century (see catalogue entry). However, the presence of 19th-century brick in this context indicates the pottery is residual.

Building D

Of the roughly linear group of post-holes (E09, E14, E17, E45, E37, E29, E41, E43, E07, E19, E21) originally identified in the evaluation and perhaps forming a northern wall, only seven produced pottery, most of which is undatable post-medieval red earthenware, although sherds of Metropolitan slipware principally dating to the 17th century were recovered from E14 and E37.

Post-holes 203, 207, 219, 213, 221, 169, 217 and 181 to the south of these appear to form part of the foundations for a parallel wall. The majority of these post-holes are only broadly datable to the post-

medieval period, or contained no datable material, except for post-hole 213 which produced a tiny sherd of white salt-glazed stoneware datable to the 1720s to 1770s, and post-hole 169 which produced a sherd from a creamware plate rim dating from the mid-18th to early-19th century (along with earlier material). This is somewhat later than the datable pottery from the northern wall. Post-hole 97 to the southeast of Building D may be part of an associated fence-line and produced the base of an English stoneware cylindrical tavern mug dating from the beginning of the 18th century (from single fill 98) (Table 2).

Group of post-holes to the north of Building D A cluster of post-holes (267, 273, 276 and 278) in the northern half of the site may be associated. Only small amounts of pottery were found, and although some of the pottery is similar, for example black-glazed ware occurred in post-holes 267 and 276, no cross-fits were noted (Table 2). Post-hole 276 also produced a sherd of Metropolitan slipware (from a hollow ware) and part of a blue-painted Chinese porcelain footring base from a ?tea-bowl dating to the 17th or, more likely, 18th centuries. A second sherd of Chinese porcelain was also found in post-hole 273. Definitely belonging to the 18th century, is a white salt-glazed stoneware recessed base from a tankard found in post-hole 278, dating from the 1720s to 1770s. Therefore, if these features were associated, then the most likely date for their infilling is the earlier 18th century but not before 1720.

Miscellaneous post-medieval features that are not closely datable
In the southwest sector of the site, these comprise amorphous shaped feature 11, and post-hole 31 near to the street frontage and post-hole 159 inside Building D, all three produced glazed sherds of post-medieval red earthenware including part of a small, thin-walled jar shaped vessel with a slightly cavetto rim and internal glaze from post-hole 159, which could not be paralleled or dated. ?Ditch 190 at the eastern end of the site produced sherds of unglazed sandy orange ware and post-medieval red earthenware, along with a fragment of medieval Harlow ware from an unidentified vessel, it is curved, very thick-walled but tapers and shows a single patch of glaze. Ditch 62 in the northeast corner produced a sherd of Raeren stoneware drinking jug dating from the late-15th to mid-16th century, although internally glazed sherds of post-medieval red earthenware in the same context may indicate a later date. Sherds of glazed post-medieval red earthenware were also excavated from the top fill of post-hole 80 in the northwest corner.

Discussion of the post-medieval pottery
Post-medieval sites usually produce large amounts of pottery, and the small quantity found here suggests that post-medieval activity was limited. On the pottery evidence, activity was concentrated in the south-west sector of the development area in the early post-medieval period, shifting to the middle and rear in the 17th century. Little can be said about the function and status of the site, and apart from the ?Nevers Blue copy, the pottery is typical of any post-medieval inland site.

19th-20th century

A small amount of pottery, 32 sherds weighing 441g, came from four contexts (Table 3). Construction cut 27 at the front of the site produced a sherd of Westerwald stoneware and an ironstone plate rim. The latter shows a dark blue transfer print in a band around the rim, overpainted in red and gold, and could easily be as late as 20th century. Modern pottery was also excavated from inside brick foundation 183 (context 140), comprising sherds of English porcelain and willow-pattern ironstone dating from the early 19th to 20th centuries. Parallel drains 59 and 87, in the southeast corner also belong to this phase. The latest pottery in drain 59 (from single fill 58) was a pearlware footring base showing Chinese-style painting and datable to *c.*1800, and the latest pottery from drain 87 (from single fill 86) is a sherd of flowerpot which could easily be modern. However both features also contained 17th to 18th-century pottery.

The catalogue (all phases) Fig. 10

1 Shoulder of jug: London-type ware; pale grey fabric with buff surfaces; thick white slip strips; pitted plain lead glaze giving pale yellow stripes and an olive-green background. *Fill 01 (pit 106) and fill 107 (pit 132)*

2 Body of jug: fine sandy orange ware; slip-painted lattice design under a partial pitted plain lead glaze; abraded; internal patches of fire-blackening and patch of fire-blackening on break, may have been burnt after use. *Fill 01(pit 106) and fill 107 (pit 132)*

3 Bowl rim: shell-tempered ware; red-brown internal surface, thick grey-brown core; fire-blackened external surface up to edge of rim; very fine horizontal striations on the inside may be from potter's finger print. *Fill 01 (pit 106) and fill 108 (pit 132)*

4 Cooking-pot rim: shell-tempered ware; orange brown fabric; with grey core only where vessel walls are at their thickest; sooting on shoulder and beneath rim. *Fill 01 (pit 106)*

5 Cooking-pot rim: shell-tempered ware; grey core, oxidised red-brown surfaces; thumbed applied cordon and beginnings of vertical thumbed applied strip; no evidence of use. *Fill 01 (pit 106)*

6 Cooking-pot rim: fine shell-tempered ware; red-brown surfaces, orange-brown margins and narrow grey core; slight lamination of surfaces; some fire-blackening on both surfaces. *Fill 01 (pit 106) and fills 107, 108 (pit 132)*

7 Possible chimney-pot fragment; shell-tempered ware; very friable fabric with coarsely crushed shell including sparse gastropod and cockle shell as well as oyster; very sparse sub-rounded sands; internal surface fire-blackened. *Fill 01(pit 106)*

8 Rim of small cooking pot; shell-tempered ware; thin red-brown surfaces, grey cores; most of shell-tempering leached out; patches of sooting and fire-blackening around inside of rim. *Fill 24 (post-hole 23)*

9 Bowl: shell-tempered ware with clay pellets; buff-brown surfaces and core; red-brown margins; sooted from just above the basal angle to underneath the rim; no sooting on underside of the base; slight thumbing on inside edge of rim. *Fill 10 (post-hole 53)*

10 Jar rim: medieval Harlow ware; typical Harlow fabric, dull orange with slightly darker surfaces and grey core only where vessel cores are at their thickest; band of slip-painting beneath rim; unglazed apart from accidental splashes of plain lead glaze on rim edge. *Fill 06 (post-hole 130)*

11 Sherd from ?jug; black-glazed ware; black-glaze all over external surface with partial glaze cover internally; applied pad showing dimpled decoration; similar but not identical to that on the Braintree ringers jar which shows the inscription 'made in Stock 1685' (Cunningham 1985c, fig. 51). *Fill 22 (brick-lined drain 286)*

Table 3: Quantification of pottery from the 19th to 20th-century phase by fabric feature and sherd count

Location	Feature	Context	Relationship					Fabrics							Wt
				21	40	40bl	45F	45M	46A	48B	48C	48D	48P	51B	(g)
frontage	construction cut 27	single fill 28					1					1			51
southwest	brick foundation 183	finds no. 140								1		2			53
southeast	drain 59	single fill 58	cut pit 132/106		9	2		1	2		1		2		177
southeast	drain 87	single fill 86	cut gully 66	2	3	4								1	160
				2	12	6	1	1	2	1	1	3	2	1	441

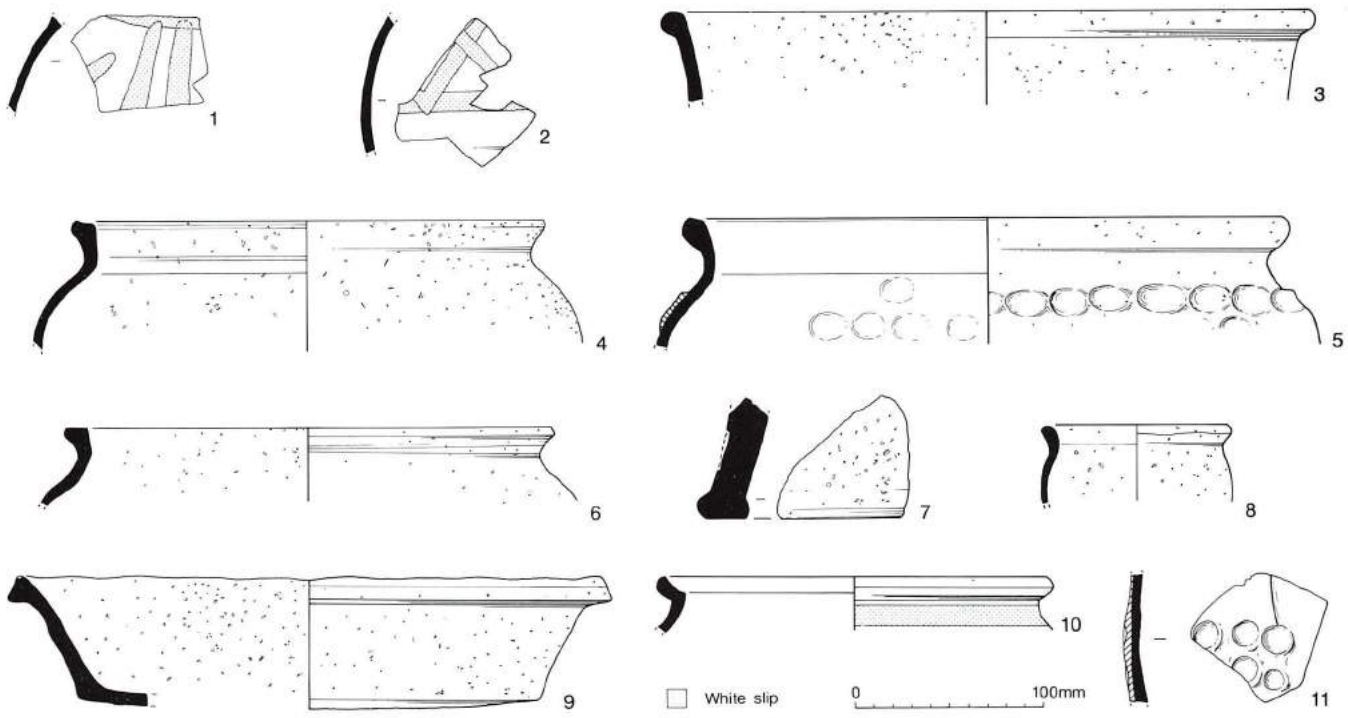

Fig. 10 Chipping Ongar, The Pleasance. Pottery

Conclusions and discussion of pottery supply

There appears to have been occupation, or at least activity on this site from the second half of the 12th century to the modern period, although it seems to have been most intense during the medieval period. Unfortunately, apart from the Saxon pottery, there is no evidence of pre-Conquest activity, and in spite of the presence of shell-tempered wares, the medieval pottery almost certainly post-dates the building of the castle, assumed to be in the late 11th or early 12th century (Eddy and Petchey 1983, 39).

The relative variety of fine-ware types is probably due to the geographical location of Chipping Ongar. It is in the Roding valley which formed a north-south route-way from London to North Essex and Suffolk (Eddy and Petchey 1983, 39). London-type ware and Hedingham-type ware could therefore have arrived by this route (coming of course from opposite directions). Chipping Ongar also lies between Potter Street, Harlow to the west and the kilns at Mill Green to the east, although Harlow is slightly nearer.

The dominance of shell-tempered ware over any other type of coarse ware is interesting, and contrasts with a recently published site at Stebbingford in north central Essex, where, although present, shell-tempered wares are far less common than the early medieval wares or the medieval coarse wares (Walker 1996). The monopoly of shell-tempered ware could be due to a number of factors but must depend on the sources of pottery supply, which as demonstrated by the fine wares could come from almost any direction. Further work will need to be done on the distribution of shelly wares in the county before any patterns can emerge.

Little can be said about the supply of the post-medieval pottery, although the nearest manufacturing sites for post-medieval red earthenware, black-glazed ware and Metropolitan slipware are Harlow, or Loughton which is situated further down the Roding valley.

Miscellaneous finds

R. Tyrrell

Metalwork

The copper-alloy and iron objects were badly encrusted so any surface detail was obscured by corrosion products. The excavation produced several copper-alloy objects, including four 28-29mm sewing pins, one with traces of white metal coating, a thin circular plaque and seven small fragments of copper-alloy sheet. The copper-alloy button from 222 is similar to 18th to 19th- century examples found in Winchester (Biddle 1990, 575-6).

Two pieces of a curved iron knife or tool blade were also recovered. Of the 26 nails, two were type A, (Standard ECC nail typology), seven were type J and three were type N. The rest had either lost their heads or were a headless type e.g. sprigs. The condition of the nails made it difficult to be certain which was correct.

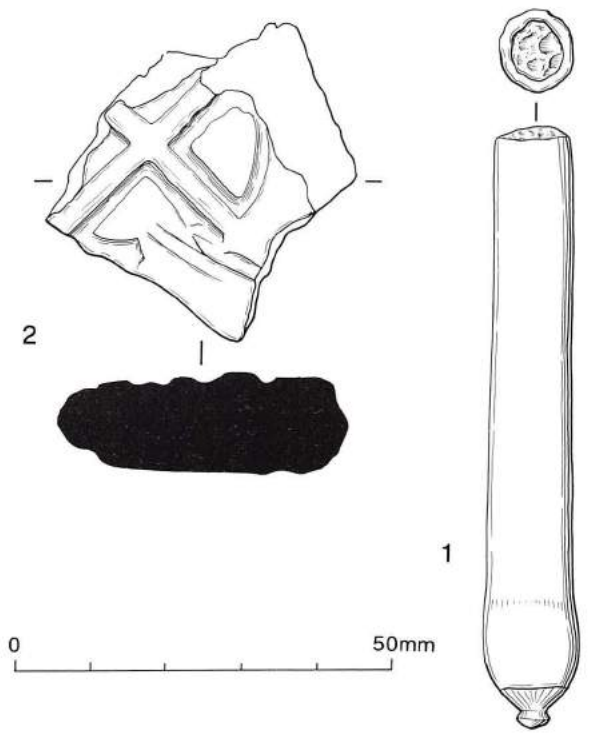

Fig. 11 Chipping Ongar. The Pleasance. Small finds

Bone Objects (Fig. 11)

A slightly bulbous whittle-tang knife handle which still retains the iron tang. The end cap has a small decorative knop. A similar plain handled knife was found at Trichay Street, Exeter, in a context dating *c.* 1660 (Allen 1984). L 81mm B 14mm. Post-hole 57, 17th-18th century.

Clay Pipes (not illustrated)

Eleven post-medieval/modern features produced 19 stems and one bowl fragment. This bowl, from context 21, is a type 12 (Oswald 1975, 350), which dates from *c.*1730-80 and is stamped by the maker with a W on either side of the spur. Other pipes, from Essex with WW stamps have been found at Harwich, Bathside Battery, Saffron Walden (also a type 12), Chelmsford (Major pers. comm.) and Maldon (Simpson 1982, 19).

Shell (not illustrated)

Twenty seven fragments and one complete oyster, four fragments of snails and two of mussels were found mostly in post-medieval contexts.

Daub (Fig. 11)

The 490g (92 sherds) of daub from the site divided into two fabrics. Fabric A was light to dark orange, well fired matrix with chalky flecks, some vegetable temper, and sparse sand. There were 323g of this. Fabric B was a lighter orange with a soft powdery texture. There were 167g of this. Five fragments had a finished surface coloured grey; these were from a medieval pit, 132.

No. 2. (Fig. 11) A fragment of daub (Fabric A) stamped with a raised St Andrews cross bracketed by two semi circles. No parallel has yet been found although it looks a little like a masons mark. L 35mm B 28mm D 13mm. Post-hole 111, 15th-16th century.

Other Finds (not illustrated)

The site also produced a fragment (9g) of lava quern, two slivers of slate, 68g of mortar and 30g of coal.

Brick and tile

P. Ryan

All the identifiable brick and flooring pammets are of 19th or early 20th century date. Fragments from contexts 287 and 288 are post *c.* 1870 and were made at Frederick Noble's brickworks at Hallsford Bridge, High Ongar. Advertising for this firm can be found in the Essex trade directories from 1860 to 1937.

The tile was on the whole too fragmentary to be identified, although examples of very flat pieces may date from *c.* 1250-1500.

Glass

D.D.Andrews

There were 25 fragments of post-medieval glass, principally from wine bottles. The only closely datable piece was a wine-bottle base from context 226, dated to *c.* 1675-1750.

Animal Bone

Alec Wade

The excavation produced 282 pieces of animal bone weighing 1.683 kg. The bone was highly fragmented resulting in only 43 pieces being identified to species level (Davis 1987; Luff 1994; Macgregor 1985) weighing 0.910 kg (15% of the sample by number of pieces and 54% by weight). This report concentrates on the material recovered from the medieval and early post medieval features (181 pieces of bone weighing 0.547 kg). Details of the other bone recovered appears in the site archive.

Table 4: Quantification of animal bone assemblage.

Category	Bone pieces	Bone Weight (kg)
Medieval	157	0.637
Late Medieval and Early		
Post Medieval	26	0.267
Other	99	0.779
Total	**282**	**1.683**

A breakdown of the assemblage by period, number of pieces and weight is given in Table 4. The surface condition of the bone was poorest in the medieval material and best in the late medieval and early post-medieval period, implying greater residuality in the earlier period. The overall condition of the bone was however fair to poor. No data regarding sexing of the bone was found.

A complete catalogue of the animal bone (identified to anatomical part) can be found in the archive.

The medieval features

The medieval features from which bone was recovered consisted of five pits (106, 132, 127, 200 and 223) and a post hole (134). These features produced 157 pieces of animal bone weighing 0.637 kg. Seventeen pieces of animal bone were identified to species level (11% of the group total) representing sheep or goat (7 pieces), cattle (6), pig (2), chicken and pheasant (1 each). The unidentifiable material consisted mostly of fragments from medium and large mammals.

Of the bone in pit 106 (recut 132) four pieces had cut marks from butchering (cattle and sheep or goat), 6 pieces had been gnawed by dogs (mostly medium sized mammal with some cattle) and 5 pieces had been burnt (all medium mammal).

The bone from pit 200 included a single piece of dog gnawed bone (medium mammal) and two pieces of burnt bird bone. Seven pieces of the bone from pit 132 had been burnt (sheep or goat and small mammal).

The late medieval and early post-medieval features

Seven features in this category produced animal bone. These were three post-pipes (296-298), three post-holes (130, 138 and 143) and an otherwise unidentified cut feature (178). Between them they produced 26 pieces of bone weighing 0.267 kg. Seven pieces were identified to species level (27% of the group total), representing sheep or goat (4) and cattle (3). The remaining material included large and medium sized mammal, bird, fish and amphibian (probably frog) bone.

The material from post pipe 297 included a butchered cattle and a dog gnawed sheep or goat bone. A piece from F298 had also been gnawed. The large mammal bone from F178 had been cut.

Conclusion

The small amount of animal bone which could be identified to species level (43 pieces out of 282) reflects the fragmented and eroded nature of the assemblage, which consisted mainly of domestic waste, including butchered, burnt and gnawed pieces.

Charred plant macrofossils

P. Murphy

Bulk samples were collected from two contemporary upper pit fills with a high content of charred plant material: 107 (Pit 132, Sample 1) and 198 (Pit 200, Sample 2). Despite the minimal level of sampling, analysis was thought worthwhile, for there are very few data on medieval crop production and processing from Essex generally, and from smaller towns in particular.

Methods

The samples were processed by ECC staff, using a flotation/bulk sieving tank with 0.5mm collecting mesh for the flot. The dried flots were received for examination. They were sorted under a binocular microscope at low power, and macrofossils extracted were identified by comparison with modern reference material. Macrofossils from the samples are listed in Table 5.

Charred plant remains

The predominant cereal remains in both samples were short, rounded wheat grains of hexaploid type (*Triticum* sp), though the only wheat chaff recovered comprised two tetraploid-type glume bases, probably of rivet-type wheat (*Triticum turgidum*). Other cereals - oats (*Avena* sp), barley (*Hordeum* sp) and rye (Secale cereale) - were represented only by grains. Sample 1 included some large leguminous seeds and cotyledons, too poorly preserved for close identification, but probably of peas or vetches (*Pisum/vicia*). A single fruit stone of sloe (*Prunus spinosa*) came from Sample 2.

Fruits and seeds of weeds of grassland and weed plants were uncommon in Sample 1, but abundant in Sample 2.

Other material

The flot from Sample 2 in particular included modern intrusive roots with uncharred fruits and seeds of *Aethusa cynapium, Chelidonium majus, Rubus* section *Glandulosus, Sambucus nigra* and *Solanum nigrum*, which are considered to be modern contaminants. In sample 1 there were some siliceous globules, apparently representing fused silical of plant origin. A single burnt shell of *Discus rotundatus* probably reached the site with firewood.

Discussion

The range of crops represented in these samples (bread wheat, rivet-type wheat, oats, barley, rye) is quite typical of medieval urban sites in Eastern England, though the record of tetraploid rivet-type glume bases makes a useful addition to the rather sparse evidence for cultivation in the region. Rivet is generally considered to have been introduced to Britain about the 11th century (Moffett 1989).

Despite their proximity and apparent contemporaneity, the two samples were very different in composition. The flot from Sample 1 included relatively abundant charcoal, with many cereal grains, but no chaff and few weed seeds. None of the grains showed signs of germination before charring, so the assemblage did not appear to relate to malting. It is most likely to represent charred debris from domestic food preparation.

Sample 2 included a high proportion of fruits and seeds of weed and grassland plants, with relatively few cereal grains, some straw nodes and cereal chaff and a fruitstone of sloe. It is unlikely to represent material from a single process, but evidently included sievings from grain cleaning. This need not necessarily have been on more than a domestic scale.

In ecological terms, the herb plants represented included weeds characteristic of heavy clay soils (*Anthemis cotula*) and some indicating sandy, acidic soils (*Rumex acetosella, Scleranthus annus*). This points to cereals from more than source having been imported to the town.

Table 5. Charred plant macrofossils

Sample no.	**1**	**2**
Context no.	**107**	**198**
Cereals		
Avena sp (ca)	23	1
Hordeum sp (ca)	1	1
Secale cereale L. (ca)	4	2
Triticum sp (ca)	145	20
Triticum sp (gb)		2
Indeterminate cereal (ca)	60	2
Cereal/large grass (cn)	1	3
Cereal/large grass (cb)		1
Pulses		
Pisum-type	1	
Vicia/Pisum	3 & 2co	
Fruit		
Prunus spinosa L.		1
Weeds/grassland plants		
Agrostemma githago L.		1
Anthemis cotula L.		25
Atriplex sp		99
Bromus mollis/secalinus	3	
Chenopodiaceae indet		11
Cyperaceae indet	1	
Euphrasia/Odontites		20
Fumaria officinalis L.	1	
Medicago/Trifolium/Lotus-type		4
Poaceae indet (large)	1	8
Poaceae indet (small)		2
Polygonum aviculare L.	1	9
Ranunculus acris/repens/bulbosus		4
Rumex acetosella L.		4
Rumex sp	2	32
Scleranthus annus L.		1
Tripleurospermum inodorum (L) Schultz-Bip		18
Vicia sp	1 & 2co	1 & 2co
Indeterminate seeds etc	4	14
Other materials		
Discus rotundatus	1	
Siliceous globules	X	
Charcoal	xxx	x
Sample volume (litres)	**30**	**15**
Flot volume (ml)	**300**	**<50**

Abbreviations. ca - caryopses; cb - culm base ; cn - culm node; co cotyledon; gb - glume base

Discussion

Despite modern disturbance, a sequence of medieval and post-medieval buildings extending back from the High Street frontage was identified. The pottery, bone and other assemblages from the site were relatively small, which must in part be due to the small size of the majority of the features and the lack of associated occupation levels which would normally be expected on an urban site. The absence of significant stratified deposits and the shallowness of many of the features indicates that the ground-level of the site had been considerably reduced, probably during the construction of the car park.

The earliest evidence of activity on the site comprises occasional sherds of residual Roman and Saxon pottery in later features. The main period of occupation on the site appears to have been during the medieval phase. Post-holes dating to the second half of the 12th century (Building A) comprise the earliest structural elements identified on the site. These are probably the partially exposed remains of a street-frontage building, to the rear of which two contemporary pits were located. The date of this building is of significance as it may relate to the period of the town's foundation.

Subsequently, probably during the 13th century, Building B was erected to the immediate south of Building A, possibly initially as an extension to the existing building. Although the two buildings may have chronologically overlapped, the stratigraphic and ceramic evidence suggests that Building A was at least in part dismantled whilst Building B was standing. The easternmost foundations of the new building encroached into the area of pitting identified for the earlier phase. A group of four pits were dug to the rear of the new building which were probably in filled during the 13th century, and which produced the most informative assemblages for the site.

The coarse-ware assemblage from the medieval features contained an abundance of shell-tempered wares, which combined with the relative variety of fine wares from the site provides evidence about distribution and trade links during this period. The Roding valley, in which Chipping Ongar lies, was a north-south routeway joining London with north Essex and Suffolk, which may explain the presence of London-type ware in the assemblage. Chipping Ongar is also located between Harlow to the west and Mill Green, near Ingatestone, to the east and pottery from both these places was present.

The faunal assemblage from this period was small, fragmentary and rather poorly preserved, although certain species were identifiable including sheep/goat, cattle, pig, chicken and pheasant, some of which were burnt or displayed butchery marks. The charred plant remains retrieved from samples from two of the pits adds rather better evidence of the medieval diet and economy. The two pits produced quite different samples: one containing relatively abundant charcoal, with many cereal grains, but no chaff and few weed seeds; and the other containing predominantly fruits and seeds of weed and grassland plants. The former probably represents charred debris from domestic food preparation, whilst the latter may represent several processes, including sieving for grain cleaning. Although a fairly typical range of crops for a medieval urban site in Eastern England was represented, the presence of tetraploid rivet-type glume bases constitutes a useful addition to the rather sparse evidence for cultivation in the region. In ecological terms the herb plants represented included weeds characteristic of heavy clay soils and some indicating sandy, acidic soils, suggesting that cereals of more than one origin were being imported into the town during this period.

In the late 15th-16th century a four-poster structure (Building C), possibly the base of a stairway, was constructed to the south of the medieval buildings, with an associated north-south fenceline. The location of Building C suggests that it may be an addition to the adjacent property, on the site of what is now the Cock Inn public house, to the south of the excavation area. This structure was probably dismantled in the second half of the 16th century, although very little associated activity of this date was identified on the remainder of the site.

During the 17th or 18th century, medieval Building B was replaced by at least one subsequent timber building (Building D) on almost the same site and orientation, although an overall plan was not discernible from the available evidence. A possible east-west fence line and several drainage features were identified to the rear of Building D which, together with the absence of rubbish-pits, may suggest a more organised system of waste-disposal than indicated for earlier phases.

In this period Chipping Ongar appears to have become a significant staging-point for travellers; by 1686 there was accommodation within the town for 71 people and 104 horses and by 1801 taxation records note that the population of the town was 595 (Medlycott 1997). As there are very few early maps of Chipping Ongar, it is not possible to relate the archaeological evidence from this period to specific cartographic evidence. The 1777 Chapman and Andre map shows buildings and plots on the site, with a relatively open space to the north, on the approach to the main town gate, but no individual building details are discernable.

In the 19th or 20th century, several brick-built features including wall-foundations, a covered drain, and a circular soakaway were constructed on the site. An 1841 Tithe map of Chipping Ongar shows a group of buildings around a courtyard surrounded by extensive grounds stretching back to the medieval town ditch. It is likely that the remains identified by the excavation relate to these buildings. The list accompanying the Tithe map records that the 'House, offices, yard, Garden and Pleasure Grounds' were rented from the rector by Holt Askley for 13 shillings and four pence. A poem written in 1875 by Reverend E. W. Sergeant (Ebbetson Porter 1877) describes the house and its grounds, which by then was the residence of A.H. Christie Esquire:

"The Wilderness" you call it - an apt name
To cheat the fancy, lest it should divine
The little Paradise whose modest title
Does but enhance its beauties; graduate lawn
For croquet well designed, at hand, or far,
Beneath the shelter of the spreading Beech,
Whose russet foliage, soft and sumptuous breaks
The rich monotony of the zone of trees,
Forest or fruitful, carelessly combined
Which shield the pleasaunce from the intemperate east
Within, profusion gay of red geranium
With a dash of the deep blue lobelia, - terraced walk
Well laid for daintiest feet, and southward leading
To the warm shelter of the Orchard House
Bright with the ruby Nectarine and the Peach
An English home most home-like: - but beyond,
A wilderness, I grant you; Castle Moat,
Deep and o'ershadowed, - Castle Mound above,
Moat-cinctured, dateless, reft of the eloquence
Of tell-tale masonry, - a vague tradition
Far wandering in the labyrinth of the years

During an archaeological excavation prior to an extension to the car park in 1987 (Flook 1988), evidence of terracing and the remains of possible horticultural buildings were found which date to this period and are very likely to relate to features in the Wilderness. Cartographic evidence shows the house to have been replaced or largely altered in the 20th century (Nos 220 to 224 High Street). The buildings were finally demolished, probably in the 1970s, prior to the construction of the present car park, which retains the title The Pleasance.

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Woodham Walter Hall - its site and setting

by Pat Ryan

An examination of the documentary, archaeological, architectural and ecological evidence connected with the former Woodham Walter Hall and its parklands is presented. The discovery of the old church site, the possibility of a lost garden and the importance of its surviving features are discussed.

Introduction and background

Little has been published about the site of Woodham Walter Hall except for E A Fitch's account in *Maldon and the River Blackwater* written over a hundred years ago. This study attempts to remedy the situation, locate the extent of the park and explain the earthworks of both the manor house site and the park (Fig. 1).

Although the greater part of the parish of Woodham Walter lies on Boulder Clay, the 19th-century Ordnance Survey maps show a distinct difference between the landscape pattern of the north of the parish and that of the south. In the north, a network of winding lanes connects several dispersed hamlets and farmsteads. Many of the fields are relatively small and irregular in shape. In the south, the roads are through routes. The only habitation sites are the isolated farmsteads of the Warren, Oak and Lodge farms, a cottage named The Wilderness and the site of the old manor house which is marked *Woodham Walter Hall (Ruins of)*. The relatively large fields are bounded by straight hedgerows (Fig. 2). This difference in the landscape pattern is due to the fact that the manor house and medieval park were situated in the south of the parish, whilst the free and customary holdings of the manorial tenants lay to the north.

The site of the manor house lies about half a mile south-east of the village of Woodham Walter and two miles west of the small Essex market town and port of Maldon. For much of the year access to the massive earthworks and remnants of brick and stone masonry, which are all that survive of the former Woodham Walter Hall, is almost impossible because the area becomes an impenetrable jungle of vegetation.

Method

Documentary research was undertaken in the Public Record Office, the Essex Record Office and the Winchester Record Office. Long standing residents of Woodham Walter provided information about the more recent history and village lore associated with the 'Ruins'. The Essex Sites and Monuments Record was consulted for aerial photographs. The detailed survey of the earthworks surrounding the site of the Hall compiled by the staff of the Royal Commission on Historic Monuments has been of great assistance (ESMR No.7781).

During a fieldwalking programme a number of additional dams which cross the streams in the south of the parish were identified. A more detailed survey was made of the field to the west of the Hall site during the autumn of 1990. The main house area was investigated during the winter months when the vegetation had died back and a record of the brickwork was compiled. Dr David Trump and members of the Cambridge Extra-mural Landscape History and Field Archaeology Course undertook a resistivity survey of key areas of the site in March 1991 with inconclusive results. The older houses in the southern part of the parish were recorded; a survey of the parish hedgerows and an ecological investigation of the mansion site were undertaken.

The owners of Woodham Walter Hall from the 12th to the late 18th century

The manor of Woodham Walter was granted to Robert, a younger son of the Lord of Clare, by Henry I early in the 12th century. His descendants, who were known by the name of Fitzwalter, from which the second part of the name Woodham Walter is derived, held the manor until 1431 when the male line failed and the estate was brought by the marriage of the heiress to the Radcliffe family.

John Radcliffe, steward to the Household of Henry VII, was amongst those involved in the plot to overthrow Henry VII and install Perkin Warbeck in his place in 1496. He was convicted, beheaded and his lands, including the manor of Woodham Walter, confiscated (Cal of Patent Rolls 11 Henry VII, pt 1, 39).

In 1505 John Radcliffe's estates and honours were restored to his son, Robert, an influential member of the court of Henry VIII. He was given the title of Viscount Fitzwalter in 1525 and created Earl of Sussex in 1542. His children supported the Roman Catholic Mary Tudor in the troubled times after Henry VIII's death. Anne, married Sir Thomas Wharton, one of Mary's household and Henry, the second earl of Sussex, lent the princess the manor house of Woodham Walter, when she

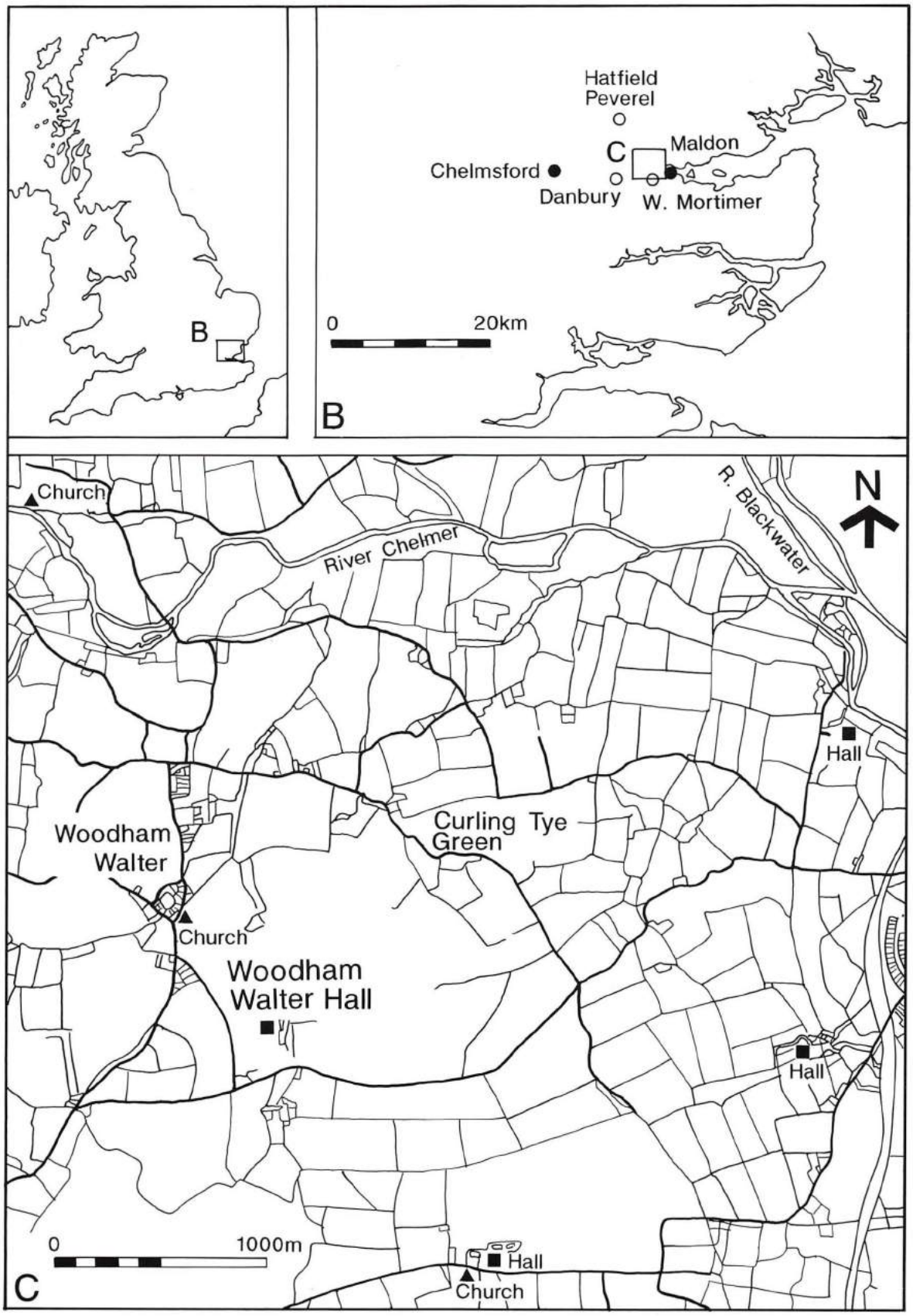

Fig. 1 Woodham Walter Hall - general site location (Reproduced from 1885 Ordnance Survey map)

planned to escape from England in 1550 (Cal of State Papers (Spanish), 95 et seq). Henry's son, Thomas, the third earl of Sussex, was a soldier, statesman and staunch supporter of Elizabeth I. In 1573 she granted the former royal residence of New Hall, Boreham, to him and it became his main country seat.

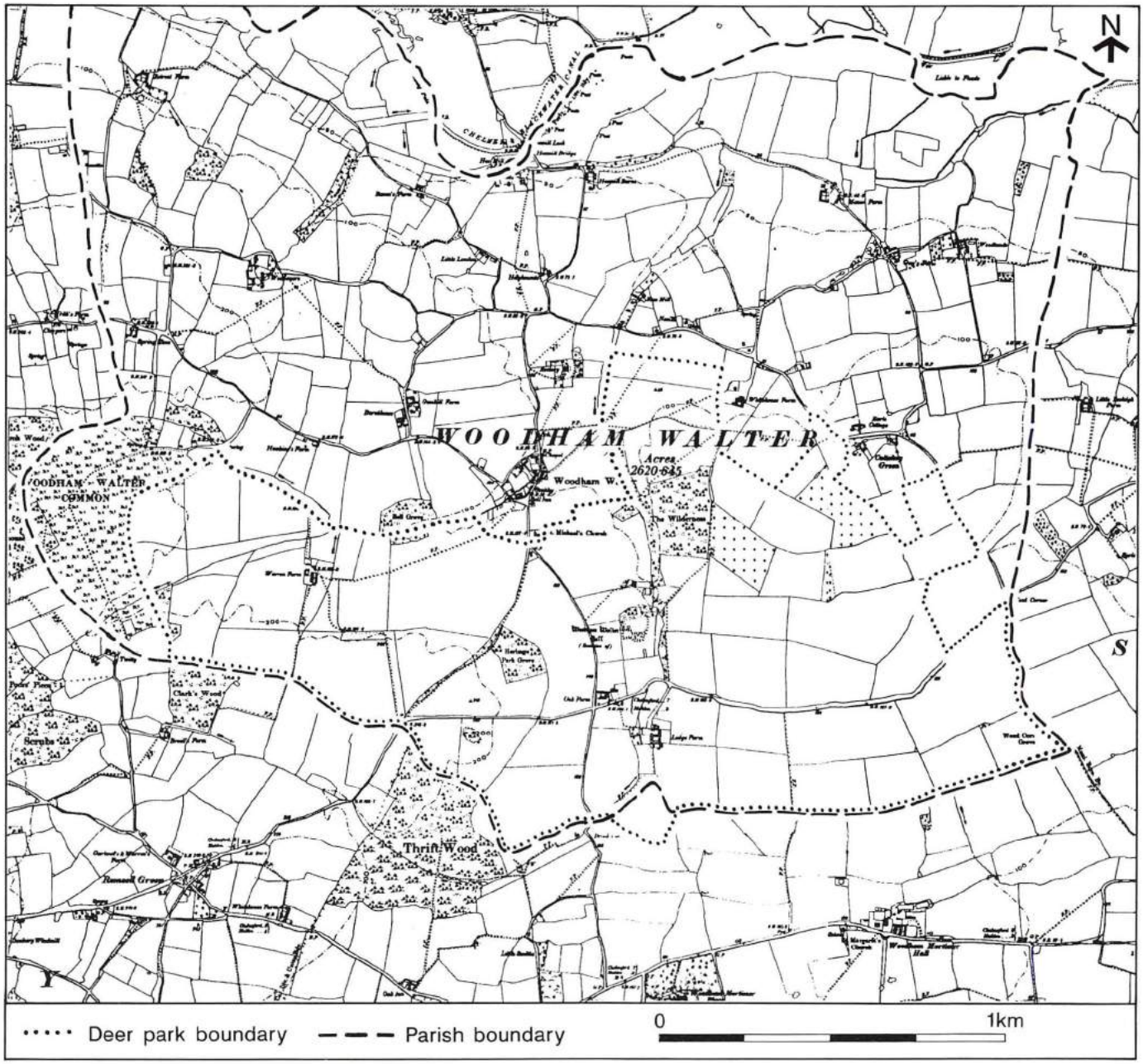

Fig. 2 Woodham Walter Hall - 19th-century OS map of the area (reproduced from 1885 Ordnance Survey map)

The fourth earl of Sussex was an official in the courts of James I and Charles I and is said to have resided mainly in London. He sold New Hall, Boreham, to the Duke of Buckingham in 1622 and disparked the park at Woodham Walter (ERO D/DU 262/2; D/DM T92). His father's cousin, Sir Edward Radcliffe, inherited the estate on his death in 1629 (ERO D/DM T92). Sir Henry Mildmay of Moulsham had accepted the Radcliffe's Woodham Walter property as security for a loan three months previously and eight years later sold it to Sir William Fytche (ERO D/DM T92).

The Fytches and their descendants owned the manor for almost 200 years. For the first 37 years, Woodham Walter Hall became the main seat of this branch of the family. William Fytche inherited the property at the age of two, in 1672. His mother died in 1674 and he and his sister were brought up by her relations, the Bramstons. In 1695 William married Elizabeth Cory, the heiress of Danbury Place (Danbury Park). It became the chief residence of the family (Morant 1768, I, 340).

More recent history

During the first three decades of the 19th century the estate was sold to a number of purchasers who continued to let the farms (ERO D/DC 22/32-122; D/DW T277/5; D/DGe T116; D/DOp T27). The Duke of St Albans, the last hereditary Royal Falconer, built a house near the 'Ruins' for his falconer in the late 1820s. Originally known as The Wilderness, it is now named Falconer's Lodge.

The last hundred years have seen many changes in the area. Two cottages were built for farm labourers on

Lodge Farm in the late 19th century and a farm bailiff's house and additional cottages in the 1930s. During the post-war period the old house at Oak Farm was sold away from the land and a modern farm house was built for the farmer. Oak Farm was re-named Woodham Walter Hall. In 1904 the Warren Farm was purchased by a wealthy stockbroker who modernised the old house. He built a number of cottages for his workers and elderly relatives and laid out a private golf course. Since his death, it has become a golf club and the barns have been converted into the club house and restaurant. The outbuildings at Hawkyns Farm provide similar facilities for the new public Bunsay Downs golf course. A considerable acreage of orchards and soft fruits were planted at The Warren and Whitehouse Farm during the middle years of this century but as a result of the Common Market's Common Agricultural Policy these were grubbed up in the 1970s. Gravel has been extracted from a number of sites, including a major pit to the east of The Warren. A planning application for a 90-acre extension to the Whitehouse Pit was refused in 1988. More recently gravel has been taken for the new Maldon western by-pass from Woodham Walter Lodge land close to the Maldon boundary. The greater part of the former park area is now used for the production of grain and oil seed rape. Most of the hedgerows, which were probably planted in the early 17th century when the park was disparked, have been pulled out to facilitate the use of modern agricultural machinery.

During the past 20 years the site of the mansion has become very overgrown. The older residents of Woodham Walter recount how as children they played in the grassy meadow where the house once stood and on the steep slopes of the dried up moat. Whilst the girls picked wild flowers and pretended to be royal ladies the boys played more robust games of soldiers defending forts, dug for buried treasure or searched for the secret tunnel which they believed connected the old house to Beeleigh Abbey. They knew the place as the 'Ruins' or 'Queen Anne's Cellars', but it was Mary Tudor, who had had a closer association with Woodham Walter. They tell how the third earl of Sussex pulled down the old church and moved it to its present position nearer to the village in 1563. In 1973, an attempt was made to bring part of the site under cultivation; however the irregularity of the ground surface made it impossible to use modern harvesting machinery and further attempts at cultivation were abandoned. Nettles, thistles and willow herb rapidly invaded the recently cultivated area and in the next eight years selfsown seedlings of ash, oak and sycamore, some of which reached heights of over three metres, were rapidly turning it into secondary woodland. Many of the elms which had grown up in the moat were affected by Dutch elm disease and were blown down in gales. In 1982 a new owner cleared the area of undergrowth in an attempt to control the rabbit population. The hedge to the west of the site was grubbed up, dead trees were removed from the moat and saplings were pulled up from the house platform. In 1986 the site was sold to the owner of Falconer's Lodge.

The Park

Documentary evidence

No evidence relating to the initial creation of the deer park at Woodham Walter has been found, but it was in existence by 1237 when William FitzRichard was its custodian during the minority of Robert Fitzwalter (Cal of Close Rolls 22 Henry III, 12). In 1285 Robert Fitzwalter was granted permission to enlarge his park by enclosing a hundred acres of heathland within his manor of Woodham adjoining his park with a dike and hedges (Morant 1768, I, 340; Cal of Charter Rolls 13 Edward 1). Extents in Inquisitions Post Mortem relating to Fitzwalter lands in 1329 and 1362 refer to a capital messuage and the deer park but no additional details are included (Cal of IPM 2 Ed III; Cal of IPM, XI, 82). In 1496 an entry in the Patent Rolls, recording the granting of the stewardship of the Fitzwalter estates to John Raynesforth, refers to the park and stanks or fishponds at Woodham Walter (Cal of Pat Rolls 11 Henry VII, pt 1, 39). In 1511 Sir Robert Radcliffe purchased land called Hawkyns and added part of it to the park (Feet of Fines for Essex, IV, 124). He may have been responsible for building Hawkyns Lodge, a house which was leased to and occupied at various times during the 17th century by Sir Anthony Buckingham, Sir Richard Winckfield and John Adcocke, gentleman (ERO D/DABw 55/98; D/DM T92).

The documentary sources become more informative in the early 17th century when the parkland was converted into farms (D/DM T92; D/DU 261/2). The first reference to the disparking is in 1606. A series of leases drawn up between the earl of Sussex and Jonas Latelaes in the early 1620's indicate that the park was divided into several sections. The mansion house was sub-let to Sir Edward Radcliffe. The south part of the Great Deer Park, that is, 'All those closes of pasture ground containing eight score and nine acres on the south side of the king's highway leading from Maldon to Chelmsford and extending from the ponds there eastwards towards Maldon and abutting on the lands of Woodham Mortimer Hall south, late part of the disparked park and also the Little Lodge and the barn, outhouses, yards and gardens belonging thereto and the Dovehouse adjoining', the predecessor of Lodge Farm, was sub-let to Bartholomew Freeman. The Red Deer Park with Hawkyns Lodge was occupied by a third under-tenant. Jonas Latelaes presumably occupied the house at the pond head, Churchfield and the remaining part of the park east of the ponds and north of the Chelmsford to Maldon road. The tenants had permission to remove 'the old post, pales and rayles of the park pale together with all the decayed or diseased trees standing and being on or upon the Bankes of the said Pale provided always that they do sufficiently hedge ditch or fence the said park by a sufficient ditch and

quick sett the same Bankes as shall be necessary' (ERO D/DU 261/1). Jonas Latelaes was permitted to build one or more mills and to 'continue the fishponds as now they are or to convert them to any other use'. In addition to a cash rent, he had to provide the earl with ten carp, ten pike and ten bream during the season of Lent each year. He was also allowed to 'dig clay, sand or any other soyle for brick and tilemaking (ERO D/DM T92). The earl reserved to himself the right to take the rabbits in the Red Deer Park until the following Christmas Day (ERO D/DU 261/2). At the end of the lease 100 acres of the Great Deer Park and 60 acres of the Red Deer Park were to be left as pasture. By 1629 the description, 'the tenement at the pond head' had disappeared from the documents and was replaced by 'the messuage late in the tenure of Giles Blaque deceased and now in the tenure of Henry Offyne. It is not possible to say whether both these descriptions relate to the same building. Both Giles Blake (Blaque) and Henry Offyne were described as occupying the Great Park with Sir Edward Radcliffe and John Wall. A barn, marked Place Farm on a map of c.1814 may be all that remained of this farmstead by the 19th century (at W on Fig. 5; ERO D/DC 22/117).

The Fytches' interest seems to have been in rabbits rather than in deer. By the end of the century the deer parks of the early 17th-century leases had become Lodge Farm, The Place, The Oak Warren and a house called the Royal Oak, the New and Old Warrens and 'the house lately built thereon and let to William Mathews, who was the warrener, according to the marriage settlement of William Fytche and Elizabeth Cory in 1695 (ERO D/DC 22/117a-119). Fifty years later the profitability of arable farming caused many rabbit warrens to be converted into cornfields (Brown 1969, 42). The Oak Warren and The Royal Oak became Oak Farm, William Matthews' house became Warren Farm. Thomas Fytche improved the facilities there by building a new barn in 1744.

Evidence as to the exact extent of the park was found in a relatively recent group of documents, the tithe survey and apportionment award for the parish dated 1845 and an inquiry form concerning *The Parklands of Woodham Walter* (ERO D/CT 411; D/DOp B39/102). The latter has not been completed, but it is evident from its contents that tithes were not to be paid on parkland. The tithe map includes only the northern part of the parish, the remaining area must have been tithe-free and therefore parkland (Fig. 3). Hawkyns Farm and a strip of land south of the Woodham Walter/Little Baddow road are included in the tithe survey and were probably not originally part of the park. This may have been the land purchased by Robert Radcliffe in 1511 which he then added to the park.

Fieldwork evidence (Figs 3, 4 and 5)

The parkland area of Woodham Walter fulfils all the requirements of a 17th-century writer for the ideal park for it consists of parts of various hills, plains and valleys and is well watered by several streams suitable for damming to form fish ponds (quoted in Hunter 1985, 77-78; Fig. 4).

The park pale

The bounds of the park were walked in order to discover if any stretches of the pale banks mentioned in the 17th-century leases could be identified. In most instances there appeared to be little difference between the park boundary bank and ditch and those of neighbouring fields. The bank and ditch between the Warren and the Common may have been larger originally, but erosion and deposition of the light soil has almost obliterated them. Blind Lane forms the eastern boundary from Wood Corner to the Woodham Mortimer boundary. This green lane is bounded by a bank and ditch on each side and its surface is a little lower than that of the adjacent fields for much of its length. The lane is both parish and manor boundary and is probably more ancient than the park. The outline of the park conforms to a certain extent to the typical oval shape of a medieval park except for the north-east sector in the vicinity of Curling Tye Green, where the original boundary seems to have been lost.

Fishponds (Figs 3, 4 and 5)

The documentary sources refer to a number of fishponds which were still in existence in 1621. None are shown on Chapman and Andre's map, surveyed between 1772 and 1774, nor on the 19th-century Ordnance Survey maps. The park streams were followed in an attempt to locate the sites of these ponds. Remnants of two medieval dams which had been constructed across the brook which flows through The Warren grounds were identified (Figs 3 and 4). At Dam 8, where only the southern half of the medieval dam survives, a modern dam holds the water back to form a smaller pond. The remnant of Dam 7, shown on the 25-inch OS map of 1897, has been converted into a series of driving greens and is scarcely recognisable. The lowest dam on this stream, Dam 6, which lies to the north of the Warren House and forms a sizeable lake, is not an ancient feature but the result of recent landscaping. A series of four medieval dams and a possible fifth smaller dam were located in the valley of the brook which flows from the south of the parish, past the site of the mansion house and on to join the Chelmer in the north. The causeway which carries the 'old' London to Maldon road across the valley to the north of Lodge Farm utilises the site of Dam 4.

The dams are simple banks of earth, built across the valleys of existing streams, probably with material excavated from the valley sides. All the earthworks were examined for possible sluice sites, overflow channels, leats or other evidence for sophisticated pond management schemes. No additional features were found in association with Dams 1 and 5. Later ground work has made it impossible to judge whether any

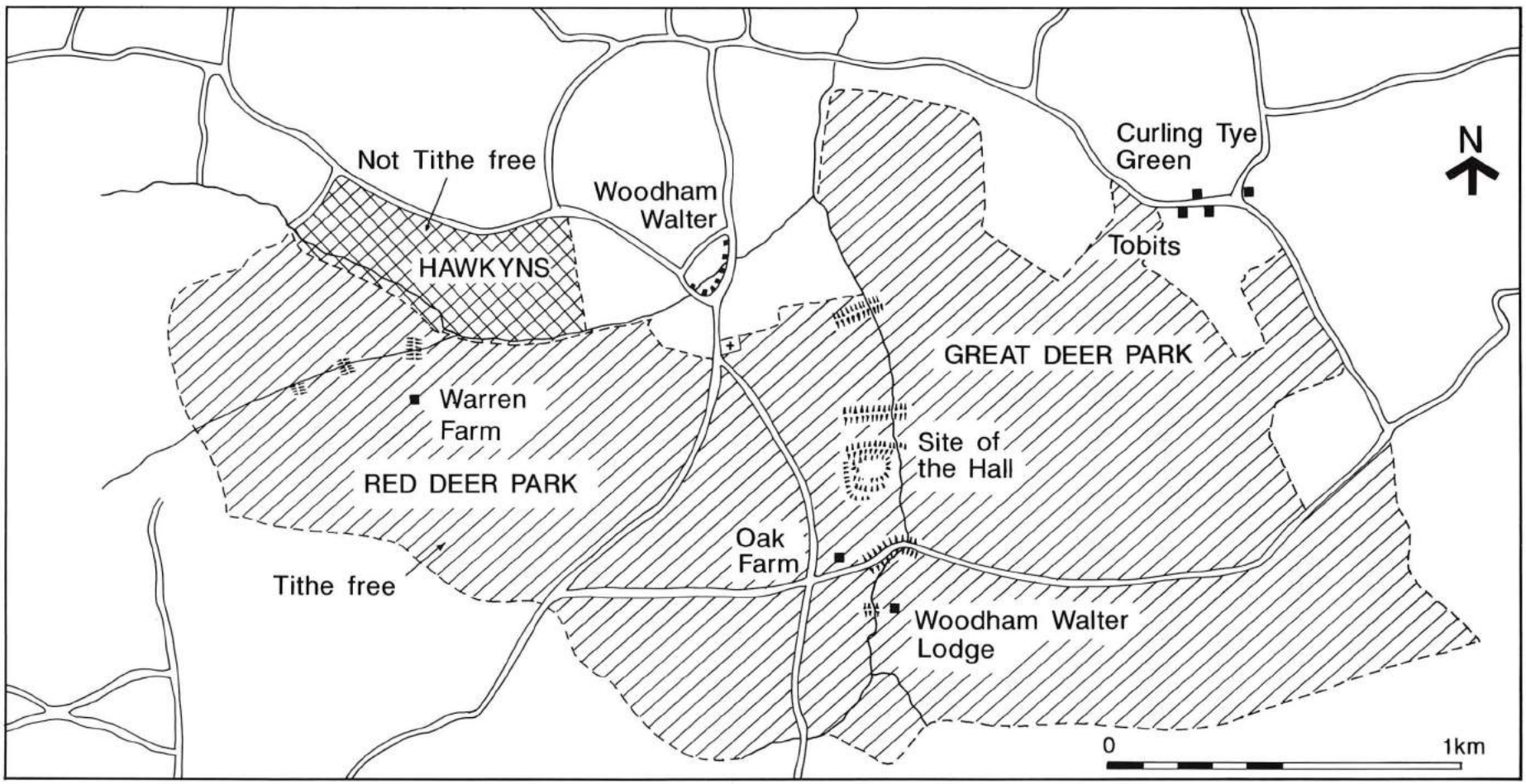

Fig. 3 Woodham Walter Hall - extent of the deer park

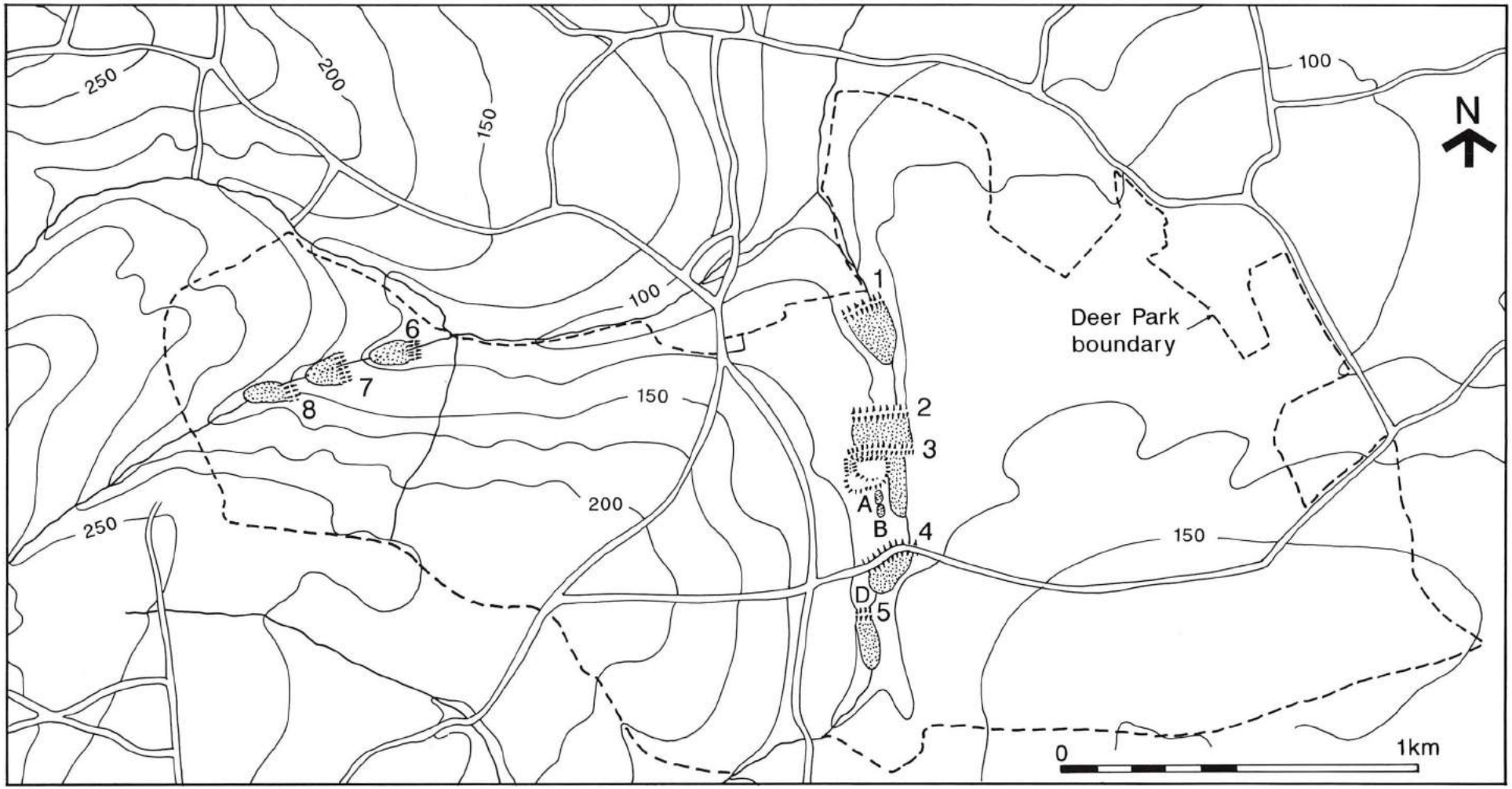

Fig. 4 Woodham Walter Hall - physical features of the deer park

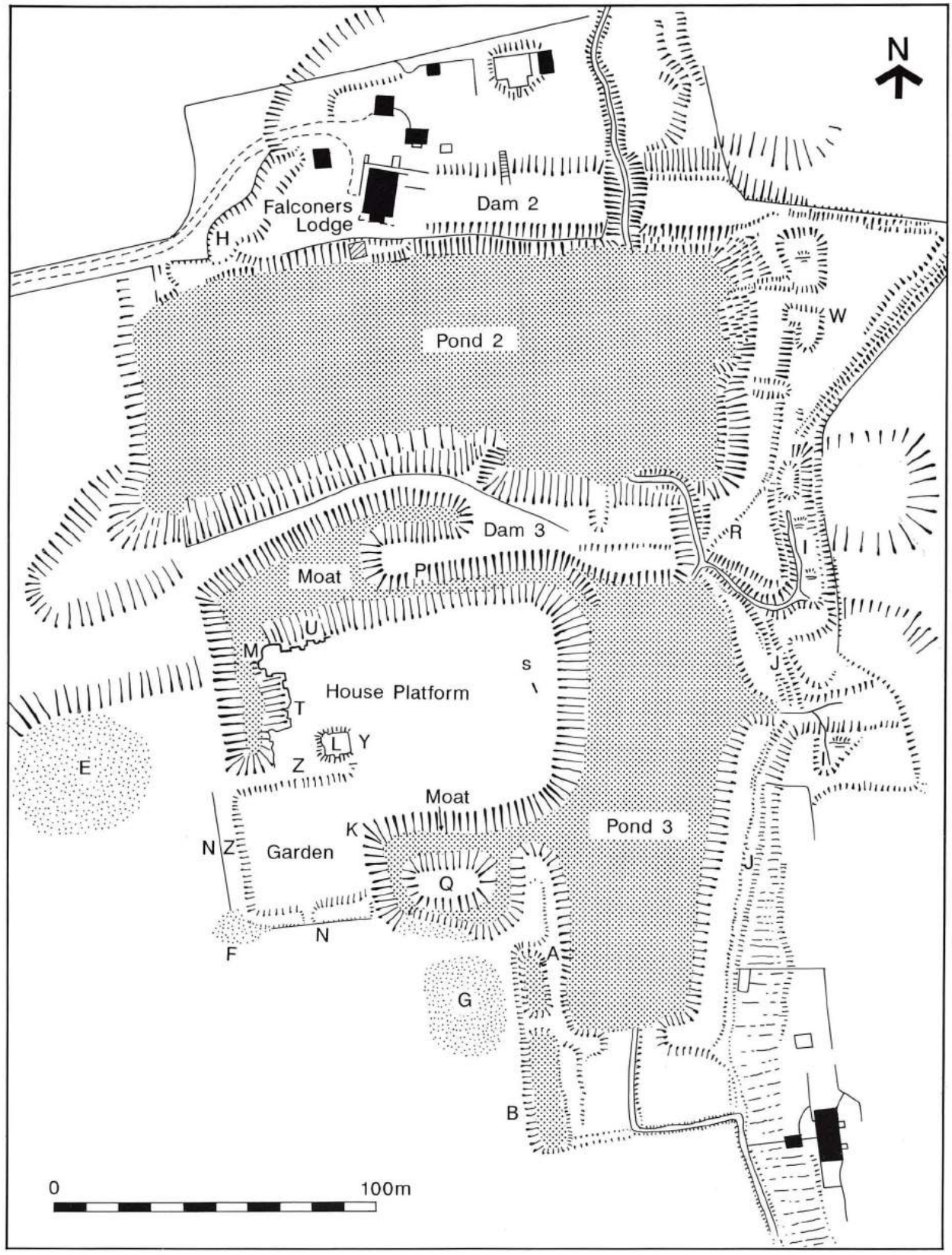

Fig. 5 Woodham Walter Hall - plan of surviving earthworks (based on 1988 RCHME survey)

further features at Dams 4, 7 and 8 have been destroyed. The earthworks connected with Dams 2 and 3, those nearest to the house, are more complex (Fig. 5). Dam 3, *c.* four metres high at its greatest point, held back the water not only in the fishpond but also in the moat surrounding the house platform. The depression H to the west of Dam 2 may have been an overflow channel. The rectangular depression A close to the house site and the extant pond B, may have been 'stews' or fish stores. Some consideration was given to the idea that a former

course of the brook, J, extant in 1897 (OS 25-inch map) and recorded on the Royal Commission's recent survey, may have been a leat constructed for greater control of the water supply but examination on the ground proved that this was not the case. It is, however, a man-made feature for it does not follow the lowest ground level and is bounded by a bank on the west.

Remnants of brickwork found lying in the brook where the stream cuts through Dam 2 at C suggest that the dam was used as a routeway, had been breached and required bridging by the 18th century. Similar brickwork is still *in situ* where the stream cuts through Dam 5 at D (Fig. 4). A foot-bridge is shown at this point on the 19th-century OS maps. No trace of earlier brickwork was discovered at any of the dams.

[Aspects of Dams 2 and 3 connected with the house are described below.]

The old church site

Permission to demolish the old church of Woodham Walter and to replace it with a new building nearer to the village was granted to the third earl of Sussex in 1562. The old church was described as 'being ruinous and standing at a great distance from the village so that it was inconvenient for the parishioners to resort thither for divine service' (Morant 1768, I, 340). The new brick church was built on the hill overlooking the village and consecrated two years later. According to village tradition the site of the old church was near the Hall but its exact location was uncertain.

In the autumn of 1986 a large piece of carved stone was found on the edge of the field west of the ruins and was identified as a medieval grave cover. Two years later it was recognised as being from the Barnack School of grave cover production and later 12th or 13th-century in date (Ainsworth *et al.* 1991). A second section has been discovered and both pieces have been deposited in the Chelmsford and Essex Museum. This discovery pinpointed the field to the west of the Ruins as being the probable site of the old church. In the autumn of 1990 a fieldwalking survey was carried out in order to find its exact location. Three concentrations of material were discovered at E, F and G (Fig. 5).

Concentration E was nearest to the place where the tomb cover fragments had been found. A considerable quantity of Roman tile, septaria, building stone, large flints, roof tile, some of which was glazed with a dark brown glaze, floor tiles and bricks in addition to a small quantity of pottery were found scattered over a 40 m square area. The re-use of Roman tile in churches is said to have occurred in the 11th and 12th centuries (RCHM, IV, xxxiv). The glazed roof tiles were products of the late 13th/early 14th-century tile kilns at Danbury (Drury and Pratt 1975, 111). The pottery sherds were dated from the 13th to the 16th century. An aerial photograph, which shows a rectangular cropmark with an east/west axis and length twice that of its breadth in the position of Concentration E, is further evidence for the identification of this as the site of the old church of Woodham Walter (Fig. 6; ESMR No. 7986).

Fig. 6 Woodham Walter Hall - cropmark corresponding to the former church

The minor houses in the park

The structures of the older houses in the park were investigated in order to date them. Oak Farm, Warren House, Hawkyns Farm (not named) and Woodham Walter Lodge are the only ones marked on Chapman and Andre's map of Essex of 1777. Of these only Oak Farm, built of brick, could be dated to the late 16th or early 17th century. It was unusual for a house of this size to be constructed of brick in Essex at this time. Its proximity to the mansion house may have influenced the choice of material. The Warren House has a 17th-century timber frame, whilst Hawkyns Farm is 18th century in date and Woodham Walter Lodge replaced the Little Lodge in 1757. It is also a brick house but by the mid-18th century many farmhouses were being built of brick for tenant farmers in Essex.

The documentary evidence points to the existence of at least two earlier houses within the park; firstly, the 16th or 17th-century Hawkyns Lodge and secondly 'the house at the pond head'. Hawkyns Lodge had at least three chambers and was a house, which was suitable for the accommodation of gentry families (ERO D/ABW 55/98). Not only was the present Hawkyns Farm built in the 18th century but it has only two upper rooms. When the orchards at Hawkyns Farm were pulled out in preparation for laying out the Bunsay Downs golf course no evidence for the position of Hawkyns Lodge was found. It was probably located on the site of the present Hawkyns Farm/Bunsay Downs buildings.

Trees and undergrowth prevent any investigation in the vicinity of the *c.*1814 Place Farm barn for proof whether or not this was the site of 'the tenement at the

pond head' (at W, Fig. 5). Another possibility is the site now occupied by Falconers Lodge, Nothing was shown in this position on either the 1814 or 1777 maps.

A scatter of finds was recovered from an area south of the mansion house site at G, Fig. 5. They included roof tile, floor tile, a few pieces of very abraded Roman tegula, a little building stone and brick as well as oyster shells and pottery dating from the medieval to the post medieval period. No later sherds were found, i.e. Metropolitan ware, 18th-century stoneware, creamwares or 19th-century pottery. The soil in the vicinity of the concentration was much blacker in colour than the surrounding area. The presence of building materials suggests a house site rather than a site for the disposal of rubbish from the mansion house.

Ecological survey

A survey of the tree and shrub species in the woods and more accessible hedges throughout the parish was undertaken to discover if the incidence of species was of any historical significance in connection with the development of the parklands. In recent years some doubt has been cast on Hooper's 'thirty yards of hedgerow/one species per hundred years theory' and as many hedges in the area have been pulled out and others are very poor it was thought that more reliable information would be obtained from noting the species present rather than species counts.

The majority of hedges throughout the parish included hawthorn, blackthorn, oak, ash, elm, maple, hazel and holly. The oak, ash and elm, often spaced at regular intervals in the hedgerows, are probably the result of a deliberate policy of tree-growing for timber. Hazel, maple and holly, species in the authors experience often associated with older hedges in mid-Essex, were found throughout the parish. Spindle reckoned to be an indicator of very ancient hedgerows was identified in the boundary hedge of Blind Lane and in the hedgerow of the lane leading to Retreat Farm and the old common meadows. This sunken lane, like Blind Lane, is likely to be an ancient landscape feature for it marks the boundary between two manors, Woodham Walter and Bassets or Middlemead.

Woodham Walter Common, Herbage Park, the wood near Ravens, another near Woodlands and Thrift Wood, just over the boundary in Woodham Mortimer, all contain considerable areas of hornbeam. This species is also found in the hedgerows in the park and in the vicinity of the common. Cherry or wild gean is restricted to the park but crab apples, though more numerous in the park, are found elsewhere. Sweet chestnut is found in the shaw alongside the road to the south of the village, in Herbage Park Grove, in the wood adjoining the brook to the south of the Ruins and in Thrift Wood in Woodham Mortimer. Although the sweet chestnut tree was introduced by the Romans it is considered to be self-planted in some areas. However the absence of this species in the Common and some of the other smaller woods in Woodham Walter suggests that these may be planted trees. Sycamore, also an introduced species, was found in a variety, but limited, number of places. The wealthier 19th-century owners planted foreign species such as wellingtonia, turkey oaks, swamp cypresses and cedars of Lebanon in the grounds of their houses. Four lime trees growing along a boundary bank in the Ruins area and spaced at regular intervals must also be planted trees. An avenue of horse chestnuts and plantations of conifers were established in The Warren in the early years of this century. There are very few trees still growing in the parish which are old enough to have been planted before the Hall was demolished, but such an oak stood on the west end of Dam 3 close to the house site until it was blown down in the gale of 1987. Another can be seen on the remnant of Dam 8.

The most significant observation resulting from the survey is probably the fact that hornbeam was only found in the common, in two woods which have all the characteristics of ancient woodland and in the parkland. Cherry or wild gean, crab apple and sweet chestnut, all of which are found mainly in the parklands may have originally been planted for the benefit of the deer and other game.

The Mansion House and curtilage

Documentary evidence

Medieval documentary sources provide little information about the manor house. Although extents of the Fitzwalter lands in Inquisitions Post Mortem list a capital messuage as well as a deer park at Woodham Walter in 1329 and 1362, it is not proof that the house was situated in the park (Cal of IPM 2 Edward III; Cal of IPM, XI, 82). According to the records of the Sessions of the Peace, Lord John Fitzwalter's house in Woodham Walter was broken into in 1349, but no indication of its location is given (Furber 1953, 114). Later documentary sources are almost as disappointing. Woodham Walter Hall was included in the itinerary of a proposed royal progress by Henry VIII in 1541 and it was considered suitable as a temporary residence for Lady Mary Tudor when it was reported that the plague had broken out at New Hall in Boreham, part of the aborted escape plot of 1550 (L & P Foreign and Domestic Henry VIII, XVI, 323; State Papers (Spanish), 95 et seq). The inventory made after the third earl's death in 1583 is of little assistance. The house was almost unfurnished so only the contents of a few rooms are listed (ERO D/DP F240/1). Some idea of the size of the house can be inferred from the Hearth Tax Returns of 1671 when Sir Barrowe Fytche was assessed on sixteen hearths, a figure which suggests a fairly modest manor house somewhat similar in size to Killigrews in Margaretting with seventeen hearths, or Broadoaks in Wimbish which had fifteen (ERO Q/RTh 5).

Holman, the early 18th-century historian, did not mention the demolition of the house (ERO T/P 195).

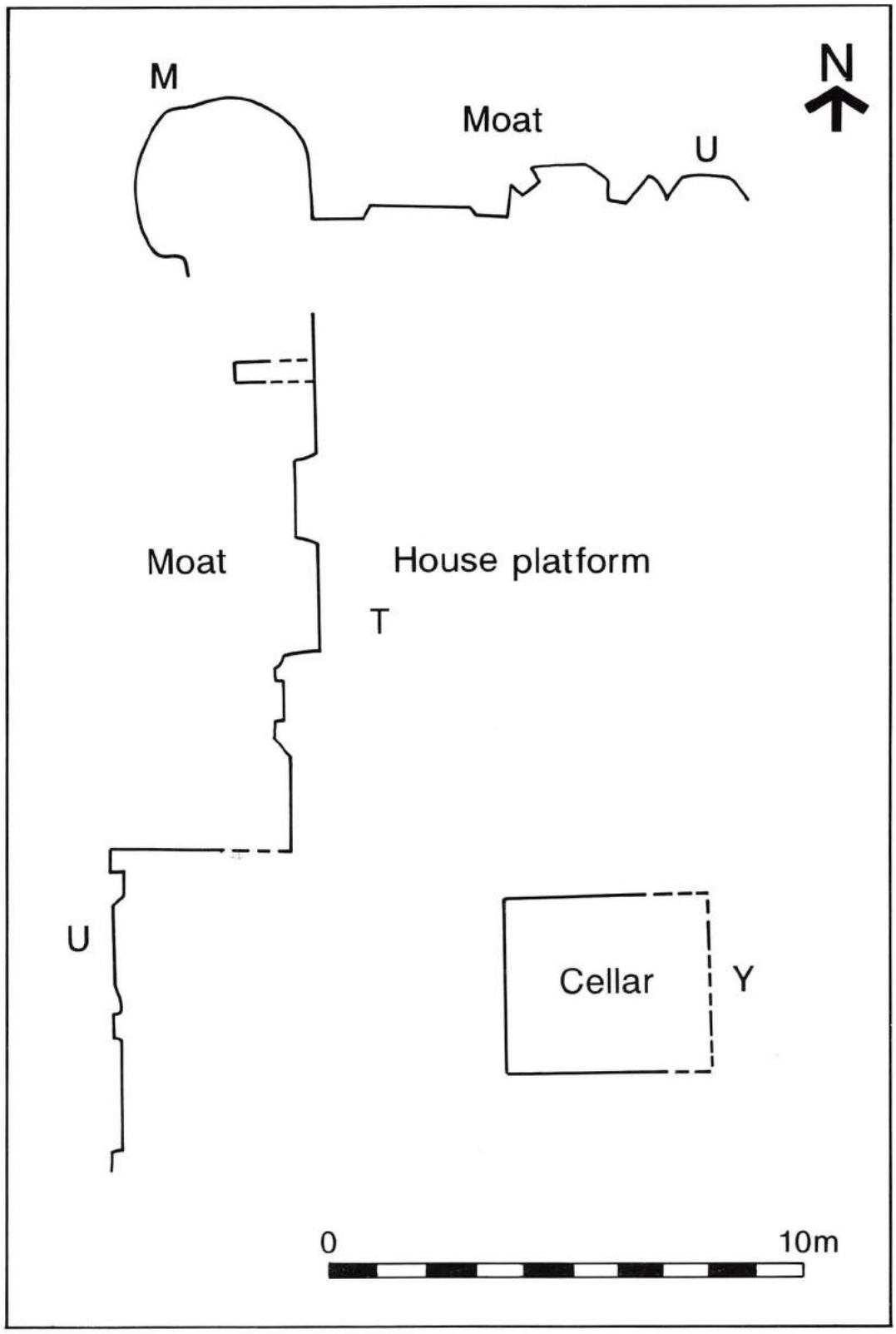

Fig. 7 Woodham Walter Hall - plan of surviving brickwork at the north-west corner of the house platform

He described it as having many windows decorated with the heraldic devices of the Fitzwalters and Radcliffes. His information was probably out of date, for he obtained it from notes made by Richard Symmonds during the Civil War period. In 1768 Morant stated that William Fytche and his new bride took up residence at Danbury Place in 1695 because 'he had taken down Woodham Walter Hall' (Morant 1768, II, 340). The fact that the manorial court was held at the Royal Oak in 1697 may be significant (ERO D/DSu M89). There are

no references to the house in any documents after this date. E A Fitch suggested that the local name 'Queen Anne's Cellars' might be an indication that the house was pulled down during her reign.

Fieldwork evidence (Figs 5 and 7)

Fieldwork has been considerably more informative about the building and its immediate surroundings.

Earthwork survey (Fig. 5)

Fig. 5 shows the earthworks which now occupy the site of the former house and its immediate surroundings. (I am indebted to the RCHME for permission to use the results of their survey.) The chief features include Dam 2, Dam 3, the incomplete 'moat', the house platform, *c.* 80 m by 60 m, and a relatively level sunken area in the south-west corner of the site, *c.* 40 m square and *c.* one metre below the general level of the surrounding terrain, which can be identified as a garden. The majority of water features are now dry.

As the house platform slopes gently from west to east towards the 'pond' the 'moat' depressions are deepest to the west and become shallower towards the east. Both branches are 15 m wide at their junctions with the 'pond' but broaden out to form 'pools' 40 m in width. The south branch contains a small 'island' and the north branch has a 'promontory' connected to Dam 3 at its eastern end. When viewed from the house this must have had the appearance of another island. The hollow, H, at the west end of Dam 2 may have been an over-flow channel. Water from springs, part of the supply to the pond system, now seeps through the swampy depressions marked I and into the stream which drains the area. The depression at A and the extant pond B were probably 'stews' for the storage of fish for the table. The shallow channel J is shown as the course of the stream on the 19th-century OS maps. The shaded areas on Fig. 5 indicate the former water features. The 'sunken garden' area is bordered on the west and north by a raised terrace Z.

Brickwork survey (Figs 5 and 7)

The positions of surviving masonry features are also shown on Fig. 5. They include the brick and stone masonry revetting of the north-west corner of the house platform at M and the brick lining of the cellar L. Further brick revetting survives at the west end of the south branch of the 'moat' at K. The footings of a brick wall N, 60 cm wide, which surround the garden on two sides were exposed by the removal of the hedge to the west, and by recent ploughing to the south. The concentration of broken brick located at F is probably the corner section of this feature. The broad bank, which now forms the southern boundary of the sunken garden area, contains many bricks and has probably developed over the collapsed wall. The eastern wall of the cellar at Y and an area of brickwork on the south side of the 'promontory' at P have been observed in animal burrows. A large piece of building stone, a few bricks and some broken roof tile have been found on the southern 'island' at Q and a large quantity of broken roof tile at R. A section of a 36 cm wide foundation wall with a north/south axis has been seen at S.

The bases of bay windows, chimneys and a possible garderobe chute can be identified (Fig. 7). The location of these taken in conjunction with the position of the cellar and an area paved with plain glazed tiles in the vicinity of T which were uncovered for a short period several years ago during scrub removal, establishes the approximate position of the house. The brickwork is laid in English bond, except for areas of diaper patterning, (U on Fig. 5). Little of the brick casing of the base of the north-west corner tower remains so leaving the core of brick and stone rubble exposed at M. The core contains fragments of worked stone from window openings, etc., septaria, clunch, yellow bricks of early 14th-century date and red 'Tudor' bricks. The corner tower seems to be a later feature because there are straight joints between the tower base and the main building.

The characteristics and dimensions of the bricks in the various features were recorded in order to discover how many building phases could be identified. The bricks were all typical 'Tudor' bricks, irregular in shape and with creased faces. Many of the glazed bricks had been used for diaper work. Most of the bricks had rough pitted bases indicating they were 'place' bricks. In the one instance where it was possible to examine the base of a moulded squinchon it proved to have the smooth base of a 'stock' brick. In all cases the dimensions of the bricks were 240 x 110-115 x 55-60 mm. Similar bricks have been found in Essex buildings dating from the 15th to the early 17th centuries.

Archaeological finds

When the house platform was cultivated in 1973, brick, tile, building stone, pottery and fragments of clay tobacco pipes were seen scattered over the whole area but no formal record was made. Since then plant growth has covered the surface. From time to time chance finds have been made in the upcast from animal burrows. The pottery includes a few medieval grey ware sherds, some red ware with painted cream slip decoration of the 15th century, several Raeren stoneware sherds of the early 16th century, sherds from 17th-century bellarmines and post-medieval lead glazed wares and a single sherd of Metropolitan ware. Though more common in 18th-century contexts, this pottery can be dated to the second half of the 17th century. A number of late 17th-century clay pipe bowls and a quantity of small pieces of coloured window glass (1 mm thick) have turned up on the western slope of the house platform below the brickwork. Several late 16th-century clay pipe bowls have been found on the north slopes of the house platform and in the moat.

Ecological survey

An ecological survey of the earthworks was made in the spring of 1991. The distribution of two key plants was

investigated - dog's mercury, a woodland indicator plant and nettles, a phosphate-loving plant and a sign of habitation.

Patches of dog's mercury were found on the upper slopes of the moat banks, dams and 'pond' areas. Nettles were widespread; only three areas of the earthworks appeared to be free of this plant - the bottom of the ponds, the north 'moat' between the 'promontory' and the dam and the ridge of gravelly soil in the bottom of the western part of the north 'moat'. Small patches of sweet smelling violets and soap-wort growing close to the house site and one wild daffodil plant found nearly 20 years ago on the southern 'island' may be relics of the old garden. (A recent owner has sown modern garden varieties of violets on the house platform). It is just possible the lime trees noted in the hedgerow survey may have been descendants of earlier planting.

Discussion

The Park

Place name evidence suggests the wooded character of Woodham Walter and the neighbouring area during the Saxon period[1]. According to the Domesday survey the manors of Woodham Walter still retained sufficient woodland for 540 swine in 1086 (VCH Essex, I, 683-4). Chapman and Andre's map of 1777 shows substantial areas of woodland and heathland common in both Woodham Walter and the surrounding parishes of Woodham Mortimer, Hazeleigh, Danbury and Little Baddow, but much of this was enclosed in the early 19th century (Fig. 9).

No trace of a great boundary bank and ditch was found surrounding the parklands of Woodham Walter. In this, it is similar to many other medieval parks in Essex. Mrs R Hoppett has found a similar lack of park banks in Suffolk (pers. comm.). Although there is little physical difference between the park boundary and other field boundaries, the park can be identified from the information contained in the tithe survey. Whilst the greater part of the outline of the park conforms to the oval shape typical of a medieval park, the northern section of the original boundary from the Brook to Curling Tye Green seems to have been lost. Tobits, a customary holding which lay between the park and the green, reverted to the lord of the manor and was incorporated into the park when the tenant died without an heir.

The deer park at Woodham Walter was amongst a number of Essex parks which were disparked in the late 16th and 17th centuries. Norden recorded 49 parks on his map of Essex in 1594 but the number had been considerably higher during the medieval period. According to Shirland only eleven parks remained in Essex in 1857. He also noted that it was common practice to segregate red and fallow deer in separate parks in the 16th and 17th centuries (Shirland 1857, 78; 236 citing Gervase Markham, 1616).

The difference between the landscape patterns of the north and south of the parish is explained by the location of the deer park in the south and the resultant concentration of farms and settlement in the north. New straight field boundaries were laid out either when the park was disparked or when the farms in this area were being re-organised at a later period. Most of these hedges were destroyed when the orchards were planted.

No concrete evidence for the location of the lodges mentioned in the early 17th-century leases was found. This may be because extant buildings at Hawkyns Farm and Woodham Walter Lodge occupy their sites. The 'tenement at the pond head' may have been at the east end of Dam 3 but the vegetation cover prevented any examination of this area. If it was at the west end of the dam, the early 19th-century Falconers Lodge inhibits investigation of this site. The topographical description 'at the pond head' fits either of these locations whereas it is incompatible with the site of the finds concentration at G (Fig. 5).

The House

The antiquity of the site of Woodham Walter Hall is proved firstly by the medieval pottery sherds found in the upcast from the animal burrows and secondly by the discovery of the old church site near by. The church was originally a proprietary or manorial church, the advowson of which was granted to the Knights Hospitallers by the lord of the manor, Walter son of Robert, ancestor of the Fitzwalters, in the late 12th century (Morant 1768, I, 340).

In Essex during the medieval period, the majority of lodges and manor houses built in deer parks were surrounded by moats e.g. Stansted Hall and the lodge in its park near Halstead, Abchilds Lodge and the lodges in Pleshey Great and Little Parks at High Easter and Great Waltham, and Canfield Lodge in the park of Great Canfield. It seems reasonable to assume that the manor house of the Fitzwalters in their Woodham Walter deer park would also have been moated in the medieval period despite the fact that the Inquisition Post Mortem of 1496 only refers to fish ponds.

The archaeological surveys and finds indicate Woodham Walter Hall was built principally of brick with possibly some dressings of stone and had a plain tile roof. The brick walls were decorated with diaper patterns in grey glazed headers and the glass windows with heraldic designs associated with the Fitzwalter and Radcliffe families. Brick became the fashionable building material of the nobility in the 15th century particularly in the eastern parts of the country. Initially wealthy patrons preferred continental brickmakers and brickmasons to carry out building projects (Ryan 1996, 67). By the end of the century, local craftsmen had become proficient in the necessary skills and building with brick became available to a wider clientele. The surviving brickwork of the Ruins is characteristic of this period. Whilst the type of brick has a wide dating range

from the 15th to the early 17th century, the use of diaper work was restricted to the late 15th and first half of the 16th centuries in Essex.

When the circumstances of the various owners of Woodham Walter Hall during this period are considered, Robert Radcliffe, the first Earl of Sussex is the most likely person to have built the brick mansion. He had enlarged the park by purchasing Hawkyns Farm. He was a wealthy and influential member of Henry VIII's court at a period when men of quality and substance were building fine new country houses. The increase in the quantity of finds from the site, which dates to the early 16th century, also supports this view.

Only two construction phases were identified from the brick survey, the north-east tower base being a later addition. It could be argued that the re-used stone in the rubble core came from the old church when it was demolished in 1563 but this is unlikely as no 14th-century yellow bricks were found on the church site and no Roman brick was amongst the material of the core. The dissolution of the monasteries released large quantities of second-hand building material on to the market. In the immediate neighbourhood Maldon Friary, Beeleigh Abbey and St Giles Hospital were pulled down and sold off. The rubble core of the corner tower base contains the same range of materials which have been found in recent excavations at The Friary in Maldon making this the most likely source, and the late 1530s to 1560s the most likely date for the construction of the north-west corner tower, and a date prior to this for the main building.

It is possible that the third earl may have been considering enlarging his mansion when he sought permission to move the church in 1562. The church may have been ruinous, but his excuse that it was at a great distance from the village and inconvenient for the parishioners to attend services seems rather lame as the new church is only five minutes walk from the site of the old one. If the earl had been planning further construction work, either nothing of it survives or he did not carry it out, for it seems reasonable to assume that the work would have been similar to that of the new church which is constructed of larger bricks than those in the Hall. They are also laid in a distinctive bond which was not found at the Hall. (A stretcher course alternating with a course consisting of alternate header and stretcher.) Perhaps he was only increasing the privacy of his home. Ten years later, when he was granted New Hall, Boreham, already a substantial mansion, he embarked on a major building programme there.

An entry in the parish registers recording the burial in 1638 of a stranger who was burning clamps of brick for Sir William Fytche suggests building work was in progress at that time (ERO T/R 37). The bricks may have been for the house now known as Woodham Walter Hall formerly Oak Farm, the Royal Oak and originally the Oak Warren. Not only the documentary evidence but also the details of the brick and timberwork support such a date. The size and layout is very similar to the timber-framed house at The Warren which was described as 'the house newly built and let to Thomas Mathews at the New Warren' in 1694 (ERO D/DDw T277/5).

The Garden and Associated Waterworks

Gardens are rather an ephemeral landscape feature. They require constant attention; neglected, they become over-grown and rapidly return to nature. They are subject to fashion and few major gardens escaped the attentions of the 18th-century landscape designers. No complete Tudor garden survives today so our knowledge is restricted to glimpses of those in the backgrounds of 16th-century portraits and a very limited number of plans (Strong 1979, 11). Travellers' descriptions provide us with details of some of the more notable gardens such as Hampton Court, Whitehall and Nonsuch (Strong 1979, 26-28, 33-34). Contemporary gardening books like Thomas Hill's *The Gardener's Labyrinth*, published in 1571, or Gerard's *Herball* of 1597 list the plants and explain the techniques of 16th-century gardeners.

The 'great houses' of the Tudor period were usually approached through one or more entrance courts which were frequently enclosed by service buildings. The house itself was often built round a central court. The principal rooms often overlooked enclosed gardens, of which there may have been more than one. Beyond these lay orchards, valued not only for the fruit they produced but also as extensions to the pleasure gardens.

The Walkers' maps of Moulsham Hall (1591), Old Thorndon Hall (1598) and Ingatestone Hall (1605) give some idea of the lay-out of the surroundings and gardens of the 'great houses in Essex at this period (Edwards and Newton 1984, pls vii, x and xii). The entrance courts are coloured green, presumably indicating they were grassed. The central courtyards are brown suggesting a gravelled, cobbled or paved surface. The orchards are usually surrounded by brick walls or paling fences and are generally divided into four quarters by broad grass walks. The gardens, invariably enclosed by brick walls, are adjacent to the house unlike the 18th and 19th-century walled gardens which were often at some distance. At Ingatestone Hall and Moulsham Hall the gardens are bordered and divided into four square quarters by gravelled walks. According to the gardening books of the time these plots would have been enclosed with low hedges and either laid out with raised beds for vegetables and herbs or planted as knot gardens or mazes. In the early part of the period knots were often made with coloured earths, crushed brick and grass but later on sweet smelling herbs and flowers were preferred. Walker shows a more elaborate garden at Old Thorndon Hall with a centre piece of a conduit or fountain and a banquetting house in one corner. This garden may have dated from 1589-90

Fig. 8 Woodham Walter Hall - Chapman and Andre's 1777 map of the area

when a dramatic increase in garden expenditure was recorded in Sir John Petre's accounts (Edwards 1975, 47-8).

The garden and the associated water features at Woodham Walter Hall are perhaps the most interesting and the most puzzling aspects of the site. Are all the surviving features part of one elaborate design or were they the product of several periods of re-fashioning? Who was responsible for them? Did any of the noted gardeners of the day have a hand in the work? Are any of the features connected with events after the demolition of the house?

Many of the earliest brick houses were built on moated sites such as this, their owners preferring to extend and renovate old buildings - Nether Hall in Roydon, Old Thorndon Hall at West Horndon, Heron Hall in East Horndon, Horham Hall, Thaxted, and Stansted Hall in Halstead to name a few. With the outbreak of the Tudor Pax in the late 15th century, defensive moats became unnecessary. Gradually even their value as status symbols dwindled and many of the New Men of the 16th century either partially or completely filled in the old moat or built on a new site.

At Woodham Walter the manorial site was limited even beyond the confines of the moat by the ponds on the north and east and by the church and churchyard on the west. Prior to Sir Thomas Radcliffe's removal of the church in 1563 the only opportunity for expansion was to the south where the configuration of the earthworks suggests that a garden was created on this side of the house by the excavation of a level area and the backfilling of this corner of the moat with the surplus soil. The knots and mazes, important elements of 16th century gardens, could have been viewed from the windows of the house and the raised walk or terrace which bordered the west and north sides of the garden.

Whilst fountains were often used as centre pieces in Elizabethan and earlier gardens, the development of ponds and islands as garden features was a major innovation of garden design in the early 17th century (Strong 1979, 124-5). Gervase Markham included a plan for a complex series of fishponds, islands and walks in his *Cheap and Good Husbandry* in 1614. The widening of the southern branch of the moat and the creation of the island are more typical of this period.

Two explanations can be suggested for the 'promontory' in the northern branch of the moat. If the main entrance to the house platform, which has not been established, were by way of Dam 3 the complexity of this feature would be explained. Although uncommon in manor houses, a circuitous approach such as this, controlled by areas of water, was quite a feature of some castles. Alternatively, the 'promontory' may have been part of the second stage of the development of the garden and may have been cut out of the dam in order to create a second 'island' feature.

Another component of the 17th-century English garden was the 'wilderness' which lay beyond the formal garden and generally took the form of a grove planted with evergreens and native trees. The 'wilderness' at Woodham Walter probably enclosed part at least of Pond 1 (Figs 4 and 8). The field to the west of Falconer's Lodge was shown as 'The Wilderness' on the early 19th-century map (ERO D/DC 22/117). The name was then given to the cottage built by the Duke of St Albans for his falconer, now Falconer's Lodge. The wood to the east of the brook was marked as The Grove on the earlier map but as 'The Wilderness' on the first edition of the OS 6-inch map. All this area was shown as woodland on Chapman and Andre's map of 1777 (Fig. 8).

Whilst the backfilling of the moat and the creation of the sunken garden were probably the work of one of the 16th-century Radcliffes prior to the acquisition of New Hall in Boreham in 1573, the water features are more likely to have been the work of a 17th-century owner. It is unlikely that Robert, the fourth earl, was responsible for he disparked the park and rented the farms. He sold off much of his patrimony. It is possible that Sir Edward Radcliffe may have commissioned the work for he was sub-tenant of the house during the early part of the century and eventually inherited the property. It may have been carried out by one of the Fytches after their purchase of the estate in 1638.

We shall probably never know if John Tradescant, senior, had any part in the making of the garden. Gardener to the royal family and one of the foremost plant-collectors of his day, he was not only employed at New Hall in Boreham by the king's favourite, the Duke of Buckingham, between 1624 and 1628, but also leased a property in Woodham Walter and left the remainder of the lease to his son in 1638 (Ross 1984, 103). Prior to his employment by Buckingham, Tradescant had been working at St Augustines, Canterbury, during the period when Edward, Lord Wotton was constructing his new garden there. A detailed account of this garden, dated 1635, describes a pool with an island surmounted by a statue of Charon in his boat surrounded by water-spouting snakes, scorpions and fish. It is quite possible that elaborate fountains such as this may have been incorporated in the garden at Woodham Walter.

The outline of knots and mazes, pipework connected with the water supply to fountains, post holes from trellises and arbours or from the supports of heraldic ornaments much favoured in Henry VIII's reign, pollen from the herbs and flowers chosen not only for their sweet scents but also for emblematic reasons when courtiers designed gardens as compliments to Queen Elizabeth may all lie under the soil at Woodham Walter. It is even possible that there may be evidence of hydraulic devices such as the automata or moving statues and startling water effects which were introduced into England in the early years of the Stuart kings by the continental engineering brothers, Salomon and Isaac de Caus. Perhaps the references in the 1621 lease which permitted Jonas Latelaes to leave the ponds

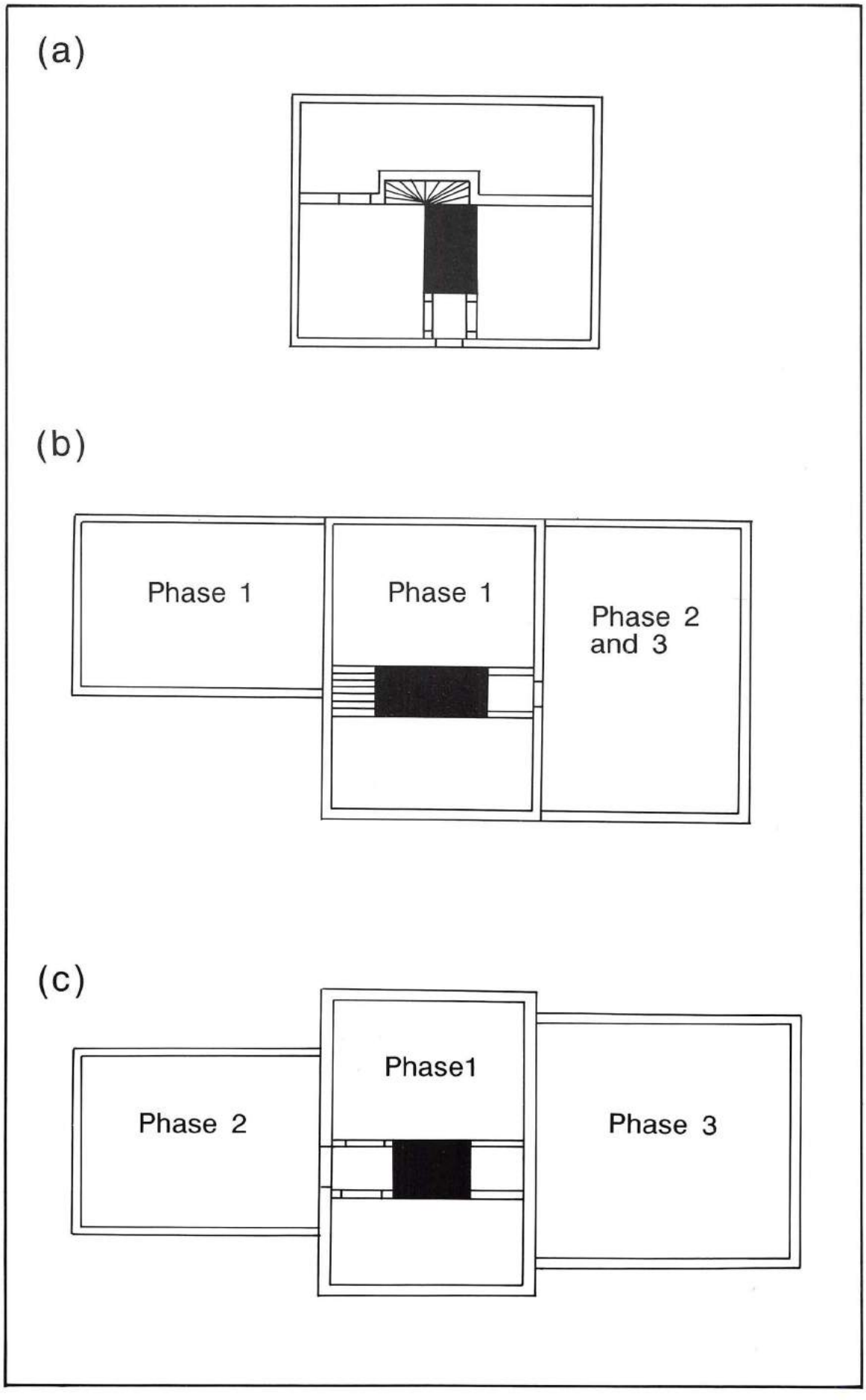

Fig. 9 Woodham Walter Hall - plan of (a) Hawkyns; (b) The Warren House; (c) Oak Farm, now Woodham Walter Hall

as they were or to do whatever he wished with them, to take earth for the making of bricks, etc may have had some connection with the garden and the water features.

Whatever the history of the development of this garden may have been, its importance to the subject of garden history cannot be over-estimated for the site has remained relatively undisturbed since it was abandoned in the late 17th century. Should it be necessary to excavate the area at some future date, the opportunity to carry out a comprehensive archaeological study should not be missed. In the meantime every care should be taken to ensure the site remains undisturbed.

Appendix 1

Oak Farm (Fig. 9c)

Three building phases can be identified in Oak Farm (now Woodham Walter Hall). The earliest part of this two-storey house has a two-roomed plan with lobby entrance and central chimney. It is built of brick and has a plain tile roof. Details of its construction suggest a late 16th or early 17th- century date. To the west is a 17th or 18th-century, single storey with attics, timber-framed wing. The timber is of inferior quality. This part of the building may have been an outbuilding originally. A substantial eastern extension of brick was added in the mid-19th century.

The Warren House (Fig. 9b)

Three construction phases can also be identified in The Warren House. The first consists of a two-storey timber-framed building with a plain tile roof. It has a two-roomed plan with lobby entrance and central chimney which supports the stairs. The timber frame suggests a 17th century date. The west wing, originally an outbuilding and according to the present owner formerly the cow house and dairy, is probably of a similar date. The front and most recent section, phase 3, was built in the early years of this century. It stands on a cellar constructed from 18th-century bricks. In the roof space at the junction of the earliest and latest sections of the building is a timber framed wall, the wall plate of which is higher than the eaves levels of both the 17th or 20th-century part of the building. This wall and the cellar are all that remain of a second phase of building, most of which was demolished when the 20th-century front was added.

Hawkyns Farm (Fig. 9a)

Hawkyns Farm is a two-storey, timber-framed house with a plain tiled roof. It has a two-roomed plan with entrance lobby and central chimney. An outshot to the rear accommodates the stairs and service room area. The timber frame and the bricks of the chimney suggest an 18th-century building date.

Acknowledgements

My thanks are due to all the owners, past and present, of the site of Woodham Walter Hall, of the land which was included in Woodham Walter Park and of the houses in the park, who so generously allowed me access to their property. Thanks are also due to the staffs of the Essex Record Office, the Public Record Office, the Winchester Record Office, the Essex County Council Archaeology and Historic Buildings Sections and the Essex County Library Service for their advice and assistance. The Royal Commission on Historic Monuments (England) is thanked for permission to use the results of their 1988 survey, Dr David Trump and the members of the Landscape History and Field Archaeology Course (1990-1) for carrying out the resistivity survey of the site of the house and Mr Steven Potter for assistance with surveying the old church site. Last but not least I owe a debt of gratitude to all those friendly Woodham Walter folk who shared their childhood recollections of 'Queen Anne's Cellars' with me.

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End note

1. Woodham Ferrers, Woodham Mortimer and Woodham Walter - The first part of the names of these parishes is derived from the Old English *wudu* meaning wood and *ham* meaning a settlement. The second part of the names is derived from the Norman families who became the lords of these manors. Hazeleigh and Purleigh end with the Old English suffix *leah* which means a clearing in a wood. *Danegris*, a former alternative name for Runsell manor in Danbury parish, means the 'brushwood of the Daeningas' (Reaney 1953; Gelling 1984).

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Victoria County History - *Essex* (1903) I

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Work of the Essex County Council Archaeology Section, 1998

Edited by A. Bennett

This annual report enables the Section to publish notes on a number chance finds made during the year, and current projects being carried out by the Archaeology Section. Summaries of excavations, evaluations and watching briefs can be found elsewhere in this volume (p. 210-31).

Reports for finds are arranged in parish order, and reports on projects follow. The Section is grateful to all who have undertaken work on its behalf, especially those museums and individuals who have allowed finds to be published here. The illustrations are by the following: Nick Nethercoat (Fig. 1), the late Stewart MacNeil (Fig. 2), Iain Bell (Fig. 3), and Roger Massey-Ryan (Figs. 4 and 5).

Full details of all sites can be found in the County Sites and Monuments Record (ESMR).

Finds

Braintree (ESMR 18213)

Hilary Major

The *tegula* which is the subject of this note was found amongst material deposited in Braintree Museum by Essex County Council on behalf of the Brain Valley Archaeological Society (Fig. 1). It was apparently originally given to the Society by a member of the public who had found it in his garden in Marlborough Road.

The presence of graffiti on Roman tiles is quite commonly noted, usually a few words scratched on the surface of the tile. More rarely, the graffito is a drawing; one of the most famous is a tile from London with a scratched drawing of what appears to be a Pharos-like building (Brodribb 1987, 131). The tile from Braintree, tantalisingly incomplete, does not depict anything immediately recognisable, and may be abstract. The drawing is very deliberate; it consists of a framework of lines lightly impressed into the wet clay, probably using the end of a stick, and superimposed on this, overlapping circles made by an object with a smooth, flat end. The circles are not quite complete; a small gap can be clearly seen on most of the impressions. The object used could be a metal tube, or perhaps an animal long bone, cut and smoothed, as the walls of the object show no trace of roughness in the impression. The walls are thin, suggesting the use of a large avian bone rather than a mammal bone.

The only suggestion that the present writer has as to the subject of this drawing is that it could possibly be part of a very stylised boat, with the keel lying parallel to the flange of the *tegula*, and the projection at the end of the tile representing the steering oar. However, the drawing is so close to the edge of the tile at this end, that there would scarcely be room for the prow to be depicted, and this interpretation offers no clue as to the significance of the circles.

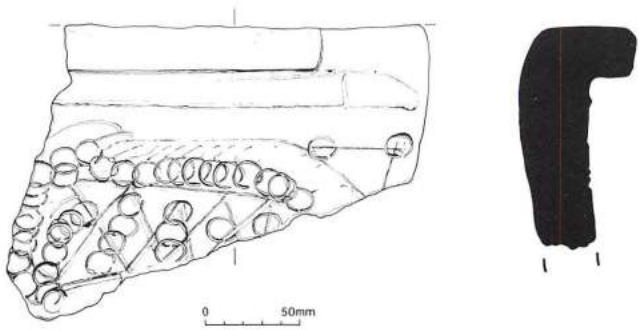

Fig. 1. Roman tile from Braintree

Earls Colne, Nightingale Hall Farm (ESMR 18189 - 18191)

Owen Bedwin

Following contact from Mr Leslie, a group of prehistoric and later finds collected by him over several years was examined. The finds had come from three separate areas.

The first group consisted of a scatter of flintwork, comprising 2 polished axes, thumbnail and side scrapers, and many flakes and blades. The raw material is variable, but much is of good quality, glossy, dark grey flint. Diagnostic pieces indicate a general Neolithic and Early Bronze Age date.

The second group consists of a spot find of 6 small square/rectangular ceramic or stone discs, possibly pieces of *tesserae*. No other Roman pottery or building material has been found here.

The last group comprised *c.*25 pottery sherds, dating to the 17th - 19th century. The sherds were relatively unworn and there were several joining sherds. According to the finder, there had formerly been a cottage in the vicinity, long since demolished.

High Laver (ESMR 18205 - 18208)

Over the year Mr. P. Sharp has kindly lent the following metal detected objects for study. All finds are copper alloy unless otherwise noted.

P. McMichael

Badly damaged silver denarius, diameter. 15mm, wt. 1g. Some of the legend remains, but not enough to positively identify the coin, although this is likely to be a coin of the Severan family from 218-235 AD.

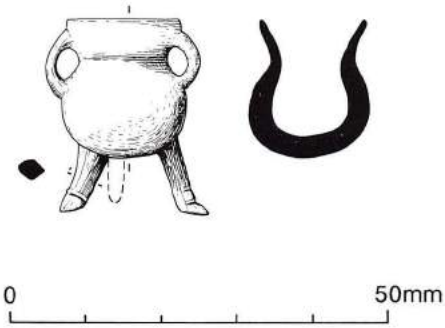

Fig. 2. Late medieval/early post-medieval miniature handled tripod vessel from High Laver

Hilary Major

1. Miniature handled tripod vessel (Fig. 2). This is a type of late medieval/early post-medieval toy with a widespread distribution, although not a particularly common find, and the majority are dated to the 16th century (Egan 1996, fig. 14). This particular type of toy is unusual in that while most late medieval metal toys are made of lead alloy, the majority of tripod vessels are copper alloy. The reason for this is unknown.
2. Roman brooch in the shape of a swimming duck, in poor condition, with the head and catch-gear missing. It is similar to Hattatt 1987, 230, no. 1166, but with ?lozenges rather than circles at the tail end. Traces of enamel survive, but the original colour is not determinable. The type is 2nd century; an example from St. Albans comes from a context dated *c.*AD 150-160 (Waugh & Goodburn 1972, 118, no. 21). Length is 29mm.
3. Colchester B brooch, complete bar the spring, with plain cavetto moulding on the bow, and a pierced foot. Length 39mm; also a head from a similar but larger brooch, with an eight coil spring. Mid 1st century AD.
4. Three brooch feet, pierced, with narrow bows. One bow has traces of knurling up the centre. These are from Colchester or Colchester derivative brooches, and are probably earlier than the two other brooches, dating to the earlier to mid 1st century AD, possibly pre-conquest.
5. Seal box base. It is difficult to date this without the lid, but the circular base has a projection at the front, a feature which suggests that it is likely to be from an enamelled seal box of the 2nd-3rd century AD. The arrangement of the four holes in the base is unusual, as they are arranged in a square, rather than the normal grouping of three holes round a central hole. Diameter is 19.5mm.
6. Three bell-shaped stud heads of a widespread and common type, often interpreted as a lock pin (e.g. Crummy 1983, 124, no. 4143); however, the same shape of stud was also used as a decorative element on, for example, boxes (for discussion of the type, see Allason-Jones and McKay 1985, 30). The smallest of the examples from this site probably is a lock pin, as it has a rectangular sectioned shaft broken across a hole. One of the studs has iron traces on the back, and is more likely to be decorative. These objects are not closely datable.

Sue Tyler

A metal detected find of an Anglo-Saxon disc brooch was kindly lent for recording. The brooch is copper alloy with slight traces of tinning on the upper surface, particularly around the edge. It is decorated with five 'ring-and-dot' or 'bull's eyes' motifs (each comprising an incised circle with central dot) in a quincunx arrangement. The pin catchplate is in position on the undersurface, with two rivet holes for the attachment of the pin hinge. The pin is missing. It is in fairly good condition. Slight traces of iron oxide on the under surface may be the remains of an iron pin. The maximum diameter is 29mm.

Disc brooches with ring-and-dot ornamentation are dated by Dickenson (1979) primarily to the period AD 450 to 550. They are almost exclusively manufactured in copper alloy, often silvered or tinned. They have been found on a number of Essex settlement and cemetery sites, including: Great Chesterford (see grave 18, fig.21.1a and 1b in Evison 1994); Mucking (see Grubenhaus 62, fig.120.1 in Hamerow 1993); and Springfield Lyons (see grave 2906, Nos.1 and 2 in Buckley *et al.* forthcoming).

This example from High Laver is unusual in that instead of having the usual single pin hinge, it has rivet holes for what was presumably a double pin hinge, a feature most commonly found on later Anglo-Saxon disc brooches, for example, three examples from Winchester (see fig.170. Nos 2010 to 2012 in Biddle 1990). These 9th- to 10th-century disc brooches tend to have much more elaborate decoration however, and are frequently enamelled.

It seems reasonable therefore to place the High Laver brooch in the earlier group i.e. AD 450 to 550, and to suggest that because of its double pin hinge it belongs towards the end of the postulated date range, i.e. mid-6th century.

Magdalen Laver (ESMR 18209)

Hilary Major

The following Roman object is a metal detector find, kindly lent for study. It is a brooch head (Fig. 3), from a small T-shaped hinged brooch, with slightly faceted cylindrical side-wings with two transverse lines across each end. The pin is incomplete, and is in a different alloy to the brooch. It originally had a head loop, only the stub of which is still present. The strip bow has an angled head and a central moulding.

This brooch is of a type apparently found only in the West Country, centred on Dorset, and described by Hattatt (1987, 112) as the 'Dorset' type. None of the examples cited is from a dated context, although a 2nd-century date is likely. The Magdalen Laver brooch has particular affinities with Hattatt 1985, nos 400 and 401, although the latter brooches have longitudinal grooves rather than a moulding.

Material traded from the West Country is not unknown in Essex; there were, for example, two whetstones from the late Roman site at Gt. Holts Farm, Boreham, which are probably from the south-west, a hairpin of West Country type from Elms Farm, Heybridge (both Major in prep.), and at least some of the 2nd-century Trumpet brooches from the county are likely to have been made in the West of Britain. However the 'Dorset' brooch is rare even in its area of manufacture, which indicates that production must have been limited. It is possible that the example from Magdalen Laver represents an object discarded by a visitor, rather than a traded item.

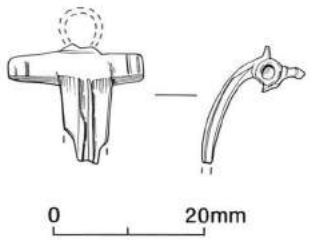

Fig. 3. Roman brooch head from Magdalen Laver

Projects

Aerial Survey 1998

David Strachan

Objectives

The objectives for the year were to continue reconnaissance with the primary aim of locating and recording new cropmarks, soil marks and built landscapes. Funding was made available by the Royal Commission on the Historical Monuments of England (RCHME) to fly both in Essex and Suffolk, while flights over West Essex and Hertfordshire were part funded by the Archaeology Section of Hertfordshire County Council. Post-reconnaissance and printing costs were funded entirely by the Archaeology Section of Essex County Council. Prints from the year have been accessed both to the relevant Sites and Monuments Record (SMR) and the National Monuments Record (NMR) at the RCHME offices at Swindon.

Results

From early in the year, it was evident that cropmark development would be minimal over the summer. Flights in May and June confirmed that heavy rainfall through the early part of the year, including the notable 'Easter floods', had resulted in poor cropmark development. Only a number of occasional, ill-defined cropmark sites were recorded. As a result, survey was channelled into the following areas: workhouses in Essex, to supplement ground assessment; building groups due to be developed in Essex, notably the demolition of the explosive factories at Waltham Abbey South Site and Enfield Lock; historic townscapes in Hertfordshire, in order to create a colour oblique record to compliment black and white vertical sources; and earthwork sites in Suffolk.

Inter-tidal aerial survey was also carried out over the Blackwater estuary in May in order to integrate information with ongoing sonar survey being carried out by Southampton University Oceanography Department on behalf of the RCHME (see below).

Blackwater Estuary Sonar Survey

David Strachan.

Between the 23rd to the 28th May, Dr. Justin Dicks and PhD student Joe Lenham of the Department of Oceanography, University of Southampton, visited the Blackwater estuary to carry out an experimental marine geophysics, or sonar, survey. High-frequency *digital side-scan sonar* detects submerged structures by sending a pulse of sound and listening for echoes returning from the seabed. This can pick-up and locate features protruding from the seabed, such as fish-weirs and wrecks. *Chirp sub-bottom sonar* penetrates softer, more recent deposits and can record buried features, such as old land surfaces. Both types of recording system were mounted onto a catamaran which is towed behind a flat-bottomed boat, hence functioning in shallow waters. On this occasion, local archaeologist and boatman Ron Hall towed the survey equipment behind the vessel 'Olan' over a grid dictated by differential GPS (a satellite location system accurate to within one metre). The results of the survey will take several months to map and interpret, although initial indications are that the survey will record wrecks, fish-weirs and possibly old land surfaces which would be extremely difficult, or impossible, to visit any other way.

Blackwater Foreshore Survey 1995-6: revisiting the Hullbridge Survey sites

David Strachan

As part of a programme of archaeological survey in the Blackwater Estuary Management Plan (BEMP) area

(Maldon District Council 1996; Strachan 1996; Strachan 1997), the inter-tidal sites discovered by the Hullbridge Survey between 1984-5 (Wilkinson and Murphy 1995, 1) were revisited in order to assess erosion rates around the estuary. The Hullbridge Survey originally identified 36 sites around the Blackwater (Table 1), of which 26 were successfully relocated. The survival of such a high percentage of sites indicates that the impact of erosion on these delicate inter-tidal sites is not as great as had been expected. More comprehensive details of which elements of sites were found to survive, and discussion on the logistical problems associated with inter-tidal survey and their implications to interpretation of the results, are available within the Sites and Monuments Record (Strachan 1999). A single new site was recorded on Thirslet Creek, Tollesbury (Plate 1), where an Old Land Surface (OLS), a probable continuation of BL18, produced a concentrated scatter of flint waste, three blades, and an extended-end scraper of Neolithic date.

Essex Mapping Project 1998

David Strachan and Caroline Ingle

Work has continued throughout 1998 on the Essex Mapping Project, as part of the Royal Commission on the Historical Monuments of England's (RCHME) National Mapping Programme (NMP). The 22 sheets mapped in 1998 (Fig. 4) brings the total completed to 129. The number of records on the MORPH database now stands at 9133, with 358 individual records being added during the year. In addition, 65 new sites have been added to the SMR over the year. This year has seen completion of the mapping of Block 12, in the north of Braintree district immediately west of Sudbury, and Blocks 13 and 14 which cover Epping Forest and Brentwood. The former area borders with Suffolk and is contained by the Stour river valley, while the latter overlies heavy clays on the London fringe. The aerial photography from these contrasting areas have produced equally diverse types of site. These are briefly outlined below.

SITE	NGR	PARISH	DESCRIPTION	RELOCATED
BL1	TL 881 052	Mundon	OLS; flint scatter, prehistoric pottery and briquetage.	y
BL2	TL 907 035	Mayland	Roman site - eroding spur.	y
BL3	TL 912 042	Mayland	Mesolithic site on OLS; Late Bronze Age wooden structure.	y
BL4	TL 914 043	Steeple	OLS; flint scatter.	y
BL5	TL 960 056	St Lawrence	OLS; hearth; flint scatter.	y
BL6	TL 960 055	St Lawrence	Red Hill.	y
BL7	TL 973 059	Bradwell on Sea	OLS; charcoal scatter.	n
BL8	TM 004 093	Bradwell on Sea	Early Neolithic site; OLS; Iron Age wood.	y
BL9	TL 886 051	Mundon	prehistoric flint and pottery; OLS.	y
BL10	TL 908 079	Goldhanger	Neolithic flint and pottery; OLS.	y
BL11	TL 939 084	Tollesbury	Red Hill (Roman/?medieval).	y
BL12	TL 962 111	Tollesbury	Red Hill (Late Iron Age/Roman).	n
BL13	TL 955 117	Tollesbury	Red Hill (Roman).	y
BL14	TL 978 140	Gt & Lt Wigborough	Red Hill (Roman).	y
BL15	TL 977 140	Gt & Lt Wigborough	scatter of Roman pottery.	n
BL16	TL 977 139	Gt & Lt Wigborough	Red Hill (Roman).	y
BL17	TM 068 144	East Mersea	?prehistoric wooden structure; flint scatter.	n
BL18	TL 941 080	Tollesbury	"Rolls Farm": Early Neolithic site; Late Bronze Age wooden structure.	y
BL19	TL 896 077	Goldhanger	Red Hill (?Roman).	y
BL20	TL 898 077	Goldhanger	Red Hill (Roman/?medieval).	y
BL21	TL 896 048	Mundon	Red Hill (?Roman).	y
BL22	TL 878 054	Mundon	OLS; prehistoric flint and pottery scatter.	n
BL23	TL 908 083	Goldhanger	Red Hill (Roman - reclaimed).	y (not inter-tidal)
BL24	TL 926 078	Tolleshunt Major	OLS; flint scatter.	y
BL25	TL 918 081	Tolleshunt Major	OLS; flint scatter.	y
BL26	TL 914 081	Goldhanger	OLS; prehistoric flint and pottery scatter.	y
BL27	TM 060 141	East Mersea	Red Hill.	y
BL28	TL 901 072	Goldhanger	"The Stumble": Neolithic site; Iron Age wooden structures.	y
BL29	TL 911 066	Osea Island	Red Hill.	y
BL30	TL 924 061	Osea Island	OLS; prehistoric flint and pottery scatter.	y
BL31	TL 876 057	Northey Island	OLS; prehistoric flint and pottery scatter.	n
BL32	TL 875 077	Maldon	briquetage resorted into old sea-wall.	y
BL33	TL 910 043	Mundon	OLS; prehistoric flint scatter.	n
BL34	TL 904 066	Osea Island	OLS; flint scatter.	n
BL35	TR 009 088	Bradwell on Sea	Red Hill.	-
BL36	TL 914 046	Stone Point	OLS; prehistoric flint scatter.	n

Table 1: The Hullbridge Survey sites within the BEMP area (OLS = Old Land Surface), indicating the variety of sites which exist within the estuary, and indicating sites which were successfully relocated. Note that site BL35 is outside the BEMP area and is therefore not included. Hullbridge sites within the Blackwater estuary and prefixed by BL in Hullbridge Volume 1 (Wilkinson and Murphy 1995).

Plate 1. The Neolithic Old Land Surface (OLS) and Neolithic site BL18 at Rolls Farm, Tollesbury, appearing in section as the Lower Peat 'cliff' erodes. The site, shown during a revisit on 8/7/96, appeared much as it had over ten years previously and produced similar artefact assemblages. (photo: D. Strachan/copyright: ECC).

North Braintree

This area comprised 7 sheets continuing westwards from the areas mapped in 1997. Most of the sheets encompassed the Stour valley, two (TL83NW, TL73SW) to the south of the valley. As was observed with previous sheets in this area, the majority of cropmarks lay along the valley slopes where glacial sands, gravels and brickearths overly the boulder clay and so reflect the distribution of these deposits (Strachan and Ingle 1998).

Although the density of features is on the whole less that that seen in the river valley further east, again a major feature of this geographical area is the occurrence of ring ditches, both singly and in clusters. These are generally interpreted as cemeteries of Bronze Age date, although dating evidence has not been recorded for the majority of these cropmark features.

Ring ditch complexes include a loosely spaced group of 7 ring ditches over a distance of *c.*1km on the west side of the Stour valley (ESMR 8528, 8531), in a field which also contained linear and rectilinear features on two different alignments, one interpreted as recently removed field boundaries. Centred on TL 855455 groups of ring ditches were mapped on either side of the Stour, three on the Essex side (ESMR 8533) and six of various sizes, from *c.*6m to *c.*40m in diameter on the Suffolk side (ESMR 9837). The latter included two with visible central pits and this complex of features also included a possible long mortuary enclosure or long barrow *c.*62m long. To the north of Ashen a group of features includes a cluster of 3 ring ditches, two other larger circular enclosures and an oblong enclosure

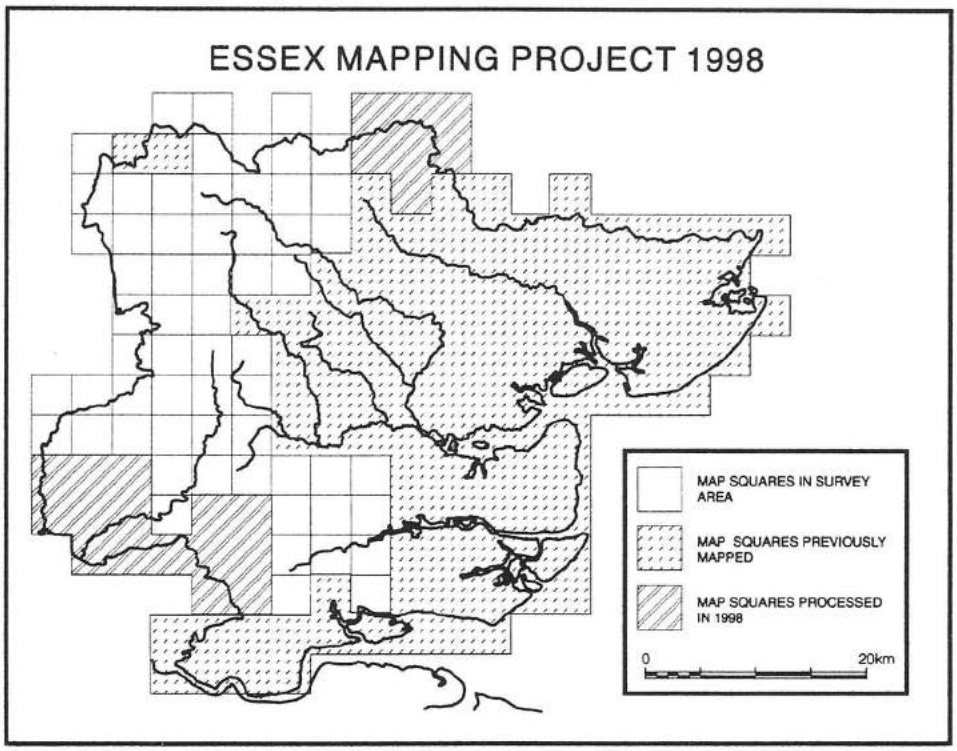

Fig. 4. Essex Mapping Project progress to date

which has been interpreted as a mortuary enclosure (ESMR 7025). A similar complex occurs at *c.* TL 817463 (ESMR 8511) where there is a barrow cemetery which includes 3 concentric ring ditches, 7 examples of various size (*c.* 8-20m) with a single ditch, and a possible long barrow. These features lie within a rectilinear field system which is thought to be of later date. A further concentric ring ditch is recorded on the Suffolk side of the Stour at TL 796455 (ESMR 9828), one of a dispersed group of four barrows, each with a central pit. Features newly recorded by the project include 3 ring ditches south of the Stour near Cavendish (ESMR 19730).

The largest group recorded in this area is ESMR 7027, comprising 10 ring ditches showing considerable variation in diameter and including one large example with part of an inner ring ditch visible. Fieldwalking between 1983 and 1985 by the Haverhill and District Archaeological Group had recovered predominantly Neolithic and Bronze Age material and it had been suggested that this largest circular feature was a Neolithic henge. This feature was investigated by the Essex County Council Field Archaeology Unit in 1998 as part of the Cropmark Enclosures Project (Brown *et al.* 1999). Trenches dug across the inner and outer rings of the enclosure produced only a few finds of Neolithic and Bronze Age date. From these, and partly on typological grounds, the feature was concluded to be the probable remains of a large Bronze Age barrow.

The majority of linear and rectilinear features recorded in this area are thought to be the remains of field systems of various date. Many are on similar alignments to extant field boundaries and have probably been removed earlier this century. For others, cross cutting existing alignments, an earlier date is suggested, probably pre-medieval, although no dating evidence is known for any of these sites. There are relatively few examples on these map sheets of enclosures that might be indicative of settlement. These include a regular rectangular enclosure with an entrance to the north-east, with an adjacent, smaller, square enclosure (ESMR 9829, Suffolk) near Clare, and a large wide ditched rectangular feature, probably a moat, south-west of Pentlow (ESMR 17139; Plate 2). Included in this category is a small rectangular feature which is the lost church of St. Albrights (ESMR 8526-7), which lies in a field named Chapel Yard. Cropmarks show the position of an apsidal ended building. A 16th-century terrier refers to a chapel of St Albrights on this property. On a visit to the site in the mid 1960s the Deserted Medieval Village Research Group recorded flint rubble and medieval tile fragments from the area. Foundations are reported to have been recorded in trial trenching some 30 years previously.

Plate 2. Possible moat showing as a cropmark at Pentlow

Epping Forest and Brentwood

This area, containing 15 1:10,000 map sheets, covers the Essex Greater London fringe from Enfield and Waltham Abbey, through Epping Forest to Brentwood. Geologically, the area consists of London Clay, Chalky Boulder Clay and Claygate and Bagshot Beds, with alluvium forming along the river valley of the Roding. The area also contains large tracts of urban development and large woodland expanses. Cropmark development is therefore limited, although it does occasionally occur along the river valleys and, in exceptional conditions, over even heavy clays. Many of the features mapped in these blocks have been earthwork sites of post-medieval date. Indeed, the aerial archaeology of the area is dominated by the two large industrial complexes of Waltham Abbey North (ESMR 3450) and South (ESMR 15096) sites. Detailed ground survey was carried out over North site, by the RCHME in 1993, and over South Site, funded by British Aerospace in 1996. Aerial photographic mapping recorded features including canals and diverted streams, and blast enclosures. Historic aerial photographs, dating back to 1946, recorded the development of the canal network (connecting North and South sites) which was first replaced by tramways and later roads, all constructed on the same lines. The surrounding area also contained bomb craters and anti-obstruction ditches dating from World War II.

In addition to urban and industrial development in the area, another group of earthwork features recorded in large numbers dated from World War II: three airfields, North Weald Bassett (ESMR 10119), Stapleford Aerodrome (ESMR 16633) and Fairlop airfield (Greater London), were mapped using a variety of vertical photography dating back to the RAF National Survey of the mid-1940's.

Spreads of aircraft obstruction ditches, typically appearing as straight, cross-shaped ditches with parallel lines of small upcast mounds occurred throughout the area. Indeed, these would appear to continue around the outer fringe of London around to the Thames where they then occur extensively along the coastal marshes of the Thames, as mapped by NMP in Block 4 (Ingle and Strachan 1995). In particular, a series to the east of Fairlop airfield (Greater London), were recorded as earthworks on early RAF sources, and subsequently as cropmarks overlying cropmarks of a probable Medieval moated site. Other areas of aircraft obstruction ditches were along the river Roding to west of Chigwell and the north of Clay Hall, Woodford Wells and Havering Park (Greater London). An additional feature of the Greater London fringe was the regular appearance of bomb craters, which often appear initially as earthworks on historical sources and subsequently as cropmarks on oblique sources. This site-type, along with back-filled ponds, can be erroneously interpreted as ring-ditches. In addition, numerous anti-aircraft batteries were recorded including an 8-gun battery at Chigwell (ESMR 10376) and the 6-gun battery at Fulwell Cross (Greater London).

Cropmark archaeology was sparse within these blocks, primarily occurring along the Roding river valley, and in sporadic clusters. Notable sites included a double-ditched, sub-circular enclosure at Theydon Garnon (ESMR 18098), and Havering-atte-Bower in Greater London (ESMR 0559-0560), where a cropmark complex consisting of a square enclosure with annexes and associated trackways, appear on the site of a walled garden and orangery, which was in use as a bowling green in the 18th century.

Earthwork sites in the area were mainly occasional moated sites, such as the example at Thornwood (ESMR 3731), and notably parts of the monastic precinct at Waltham Abbey, which includes the large moated site of the Abbey gardens (ESMR 3671) and the series of fishponds (ESMR 0084).

Historic Towns Survey

Maria Medlycott

The Essex Historic Towns Survey has assessed thirty-two towns, as part of the nation-wide reassessment of the management of the urban archaeological resource funded by English Heritage. Supplementary Planning Guidance is being prepared to submit to the County and District Councils delimiting the historic town extent and providing advice on how best to manage the areas of urban archaeological potential within the planning process. The Supplementary Planning Guidance is supported by a Historic Town assessment report for each town, collating and synthesising the current knowledge on the history and development of the town using archaeological, architectural and documentary sources.

Industrial Archaeology Survey

Shane Gould

Having started the project in 1994, 570 'new' industrial sites have been added to the ESMR; in addition to iron foundries, mills and maltings, these also include hospitals, former workhouses and workers' dwellings. With the completion of extensive surveys of Essex maltings, World War I and II airfields, limekilns, historic boundary markers and iron foundries, a further report has now been completed on buildings erected in Essex following the introduction of the New Poor Law of 1834. Members of the public are currently working on similar surveys of the public water supply industry, brick and tile works, the archaeology of the Chelmer and Blackwater Navigation, and Essex hospitals. Once an assessment of all the surviving monuments of a given type has been completed, informed policies can be implemented on their importance, protection and ultimately, preservation.

Essex Poor Law Buildings (T. Garratt). Essex retains a large number of buildings erected as a response to the Poor Law Amendment Act of 1834 and until recently the majority were in the ownership of the National Health Service (NHS). Many are exceptionally well

preserved and include those based on the model plans of 1835, designs by nationally important architects, and outstanding examples of Poor Law schools and cottage homes. The buildings are of enormous significance in terms of 19th-/20th-century social history adding both character and historical depth to numerous settlements; many sites retain information on the treatment of the poor, gender segregation, accommodation and changing attitudes to welfare provision. However, with the contraction of the NHS and the move towards new hospital buildings the majority of these sites have become, or are becoming, surplus to requirements.

Increasing numbers of paupers and the rising cost of outdoor relief throughout the early 19th-century culminated in the introduction in 1834 of more radical measures by the Government. Concerns over working class unrest and growing numbers of rural unemployed led to pauperism being viewed as a social crime; in order to gain 'relief', the poor would have to succumb to the demoralising conditions of the new Union Workhouse.

Hundreds of individuals were accommodated in purpose-built structures on the edge of existing towns or within the countryside; discipline, a strict timetable and the separation of sexes would effectively deter all but the most deserving poor from claiming relief. Critics noted similarities between the architecture and plan of the new workhouse and model prisons; Pugin believed paupers were being reduced to pathetic and powerless figures who were robbed of their dignity. Concern was also expressed over the deliberate break-up of families and the treatment of those who entered the workhouse through no fault of their own such as the aged poor and pauper children. Lunatics and imbeciles were housed amongst other inmates and it was only in later years that they were given separate accommodation.

The new workhouse adopted a powerful design with radial and cruciform plans focusing on a central hub. Day rooms, work rooms, kitchen and dining hall were often located on the lower floors with dormitories above; the master being accommodated in the central hub where all activity in the yards could be closely observed. Ancillary buildings would often include an entrance range, chapel, infirmary, laundry and school rooms.

Many of these physical attributes can be seen in the standing fabric of Saffron Walden Workhouse (Plate 3, ESMR 15384). The main three-storey structure is of cruciform plan with square pavilions at the end of each wing, and a central octagon, designed with close reference to the model plans created for the Poor Law Commission by Sampson Kempthorne in 1835. One of the most important features to survive is the workhouse clock, which is located high up on the entrance front; this clock would have played a vital role in the strict regulation of the workhouse day, and would have informed vagrants in the neighbourhood when they might enter the casual ward for the night.

Plate 3. Saffron Walden Union Workhouse (PRN 15384). Three-storey wings project from the central hub enabling the master to view activity in the yards; the site is currently being converted into flats.

By the mid-19th century, the corrupting influence of adult paupers on workhouse children was causing concern; the buildings were often lacking facilities and this was redressed by erecting 'barrack' schools and later, cottage homes. Built at turn of the 20th century, the latter often adopted a similar plan with the buildings erected around a central green or aligning a long avenue. It was usual for each cottage to provide accommodation for between 15-30 children; the house mother lived in the centre of the range with inspection windows overlooking the dormitories on either side. Gender segregation was strictly adhered to and sex specific buildings were located in those areas; the laundry on the female side, whilst workshops for woodwork, boot making and tailoring were provided for boys. The original buildings at Chipping Ongar include a porter's lodge, probationary cottage, administration block, eight cottages and an infirmary located around a green; a school being added in 1907 (Plate 4, ESMR 15396).

Detailed site surveys continue to be undertaken within the planning framework in order to inform future schemes of re-use or to make a permanent record of those fixtures/fittings that will be destroyed. Those cited below only offer a summary of the findings and synthesised articles will appear in future issues of *Essex Archaeology and History* or *Industrial Archaeology Review.*

The Embassy Cinema, Braintree (Plate 5, ESMR 15114) Opened in 1935, the Embassy replaced the earlier Palace Cinema which had stood on the site since 1912. The building was designed by the architects Kemp and Tasker, who, along with other cinema architects of the day, had been highly influenced by the 'Odeon Style' which had developed by the early 1930's. Contrary to cinemas of the previous decade, especially those with 'Atmospheric' interiors, the emphasis was now placed on the exterior, rather than the interior of the building. The interior decoration of the Embassy was carried out by the London firm of 'Architectural Decorators', Mollo and Egan.

The building was of a fairly standard design and construction for cinemas of the mid 1930's, with brick external walls, and a steel frame supporting the balcony without an intermediate structure interrupting the sight-lines in the cinema stalls. The design and specification appear to have been prepared with an emphasis on economy. The plan form utilises most of the available site area to maximise the seating capacity of the auditorium, with the entrance and circulation spaces, the cafe and ancillary functions all accommodated under the spread of the rear balcony.

Although the stalls of the cinema have been much modified in form and decoration in recent years to facilitate new functions of the building, certain original features survive including balustrades, door handles and

Plate 4. Children's Cottage Home, Chipping Ongar (PRN 15396). Erected between 1902 and 1905, children were housed in the end bays with the matron and staircase located within the central range; the kitchen/dining hall stands to the rear. The buildings are currently being converted into flats.

Plate 5. Embassy Cinema exterior in 1935. The massing evoking the prow of an ocean liner confidently facing the heart of the town and stepping down either side as it extends from the entrance corner (PRN 15114).

fibrous plaster detailing. Much of the original mechanical and electrical equipment also survives, including ventilation plant and boilers, as do the projectors still *in situ* in the projection room.

Bush Hall Farm Malthouse, High Laver (ESMR 15280) Erected between 1847 and 1873, the building is a typical two-storey farm malting and comprises three main elements; the growing floors in the malthouse, the drying kiln and the malthouse. Original surviving features include a slate growing floor at first floor level, hoist mechanism and chute in the barley store, hand-operated water pump at the north-west corner and the iron shutter windows in the kiln. Many other features such as blocked doors and reused windows remain.

Malting progressed gradually eastward from the barley store at the western end. Grain was transferred via a chute to the steeping tank below the barley store. Following steeping the grain was couched and then shovelled onto the growing floors at ground and first floor level. After germination it again moved eastward into the drying kiln; once cured the malt was transferred to the maltstore where it was bagged ready for dispatch.

The following survey reports have also been received during 1998

St. Faiths Hospital, Brentwood (PRN 15390)
High Street Maltings, Saffron Walden (PRN 15030)
Rochford Hospital, Phase II (PRN 15012)
Salcote Maltings, Maldon (PRN 15052)
Black Notley Hospital, Witham (PRN 15131)
Nos. 3, 4 and 7 Maltings, Mistley (PRN 15060)
Stanford Rivers Hall Farm, Epping Forest (PRN 4219)
Epping Forest Union Workhouse (PRN 15377)
No. 1 Malting, Mistley (PRN 15059)
Pumping Station, Maldon (PRN 15371)

Lost, Ruined and Redundant Churches in Essex

Ellen Heppell

This desk-top survey was jointly commissioned by the Archaeology Section and the Historic Buildings and Design Section of Essex County Council. The survey was carried out by the Essex County Council Field Archaeology Unit.

Essex has an unknown number of Anglican and Roman Catholic churches that, through the years, have vanished from the landscape, are ruinous, or are no longer in use. This has occurred for a variety of reasons, such as the ecclesiastical reorganisation of the county during the medieval and post-medieval periods, settlement shift, rural depopulation and a general change in attitude to religious observation. These sites form an important part of the history of the county. The ESMR and Historic Buildings database did not, at the time of commissioning this study, contain complete lists of these lost, ruined and redundant churches in the

county. In addition to this the current use of some of the standing buildings was unknown. As such it was decided that a list of the churches should be compiled and entered into a database which would make the information easy to access and update as necessary. In addition this list could be used to make informed planning decisions.

This list was compiled using a variety of sources. The desk-top study identified a total of 101 churches and 45 chapels, including a number from denominations other than Anglican and Roman Catholic. Of the 101 churches identified 48 were listed buildings, and 6 were scheduled ancient monuments. Of the 45 chapels identified 10 are listed buildings and 7 are scheduled ancient monuments. For the purposes of this study only chapels with a known location were included, and these represent only a fraction of an estimated countywide total of 150.

It is hoped that further work will be carried out involving field survey, assessment, and photographic recording. Further work also needs to be done on the private and manorial chapels in the county, which provided the basis on which the parochial system was built and as such are an important part of the ecclesiastical history of the county.

World War II Defences Survey

Fred Nash

The winter of 1997/8 saw the survey of the county's World War II defences along the GHQ Line from Bowers Gifford to North Benfleet (Nash 1998b). Continuing the recording of this line - in the event of an invasion Britain's major line of defence - the section from Battlesbridge to East Hanningfield has now been completed. The wartime anti-tank ditch along this stretch zigzagged back and forth across the A130 road

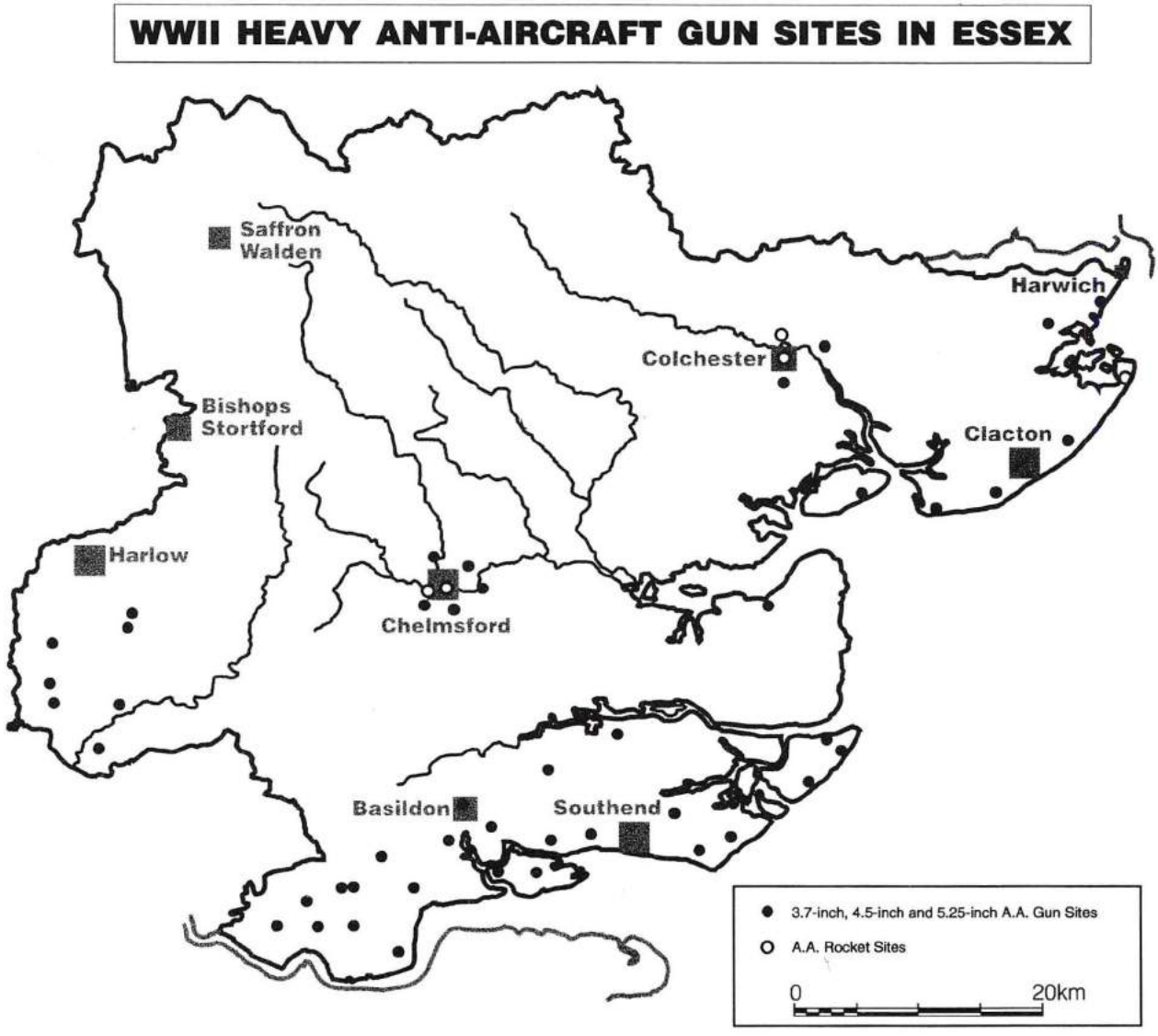

Fig. 5. Map showing the World War Two heavy anti-aircraft sites in the county. (Thurrock and Southend, although now Unitary Authorities and therefore not part of the survey, have been included here (using information from documentary sources) to complete the historical picture.)

Plate 6. Documented in 1942 as being equipped with 3.7" guns manned by 104 Regiment, one of the four ack-ack emplacements still surviving at Sutton. Now somewhat overgrown, the gun would have been mounted in the immediate foreground of this photo, surrounded by the concrete ammunition chambers.

and the extant pillboxes which paralleled the ditch can be clearly seen in the fields on each side of the highway. The sites of forty pillboxes and anti-tank barriers have been recorded in this three miles, over half of which still survive.

In 1938, with the deteriorating political situation and the crystallisation of the threat posed by German bombers, a concerted program of anti-aircraft defence construction was initiated. Throughout the country, likely 'ack-ack' sites were plotted and surveyed, and work was begun on emplacements to hold the guns. The standard heavy 'ack-ack' site comprised four gun emplacements. These took a number of forms which developed throughout the war ranging from an earthen enclosure to a substantial 40-foot-wide base of concrete with shoulder-high walls around. Embedded in the centre would be the 'holdfast' - the metal framework on which the gun was mounted - and around the outside of the emplacement the ammunition recesses, or galleries, provided readily available shells stacked on wooden racking. These emplacements were designed to accommodate 3.7" and 4.5" guns which replaced the obsolete 3" 'ack-ack' piece that had been the mainstay throughout the inter-war period. Each group of gun emplacements was controlled from a central command post which held the spotting, heightfinder and predictor equipment. Close-by, an on-site magazine housed reserves of ammunition.

During the latter half of 1998 a survey of the county's World War II heavy anti-aircraft gun sites was undertaken and completed (Fig. 5). From documentary sources, wartime Gun Location Lists and 1940's aerial photographs, the survey was able to trace the great majority, possibly all, of the county's sites, added to which, research has provided much of the historical detail such that, at 'spot-dates' throughout the war, the gun strength and the regiment which manned each site is known. This information has enabled the records for the Sites and Monuments Record to be compiled with far more historical background than would otherwise be possible.

A total of 39 'ack-ack' sites have been documented and visited. As a 'greenfield' project, the results, and the survival, were difficult to predict. However, it is now known that although over half the sites have been demolished with no trace, a number of them still, to varying degrees, remain. These can often be unrecognised; the lone command post surrounded by farm buildings at North Weald; the huge grassy mounds on a children's play area on Canvey Island - the gun emplacements are buried underneath! At Little Oakley and Sutton (Plate 6), all four of the original emplacements, with their central holdfasts and ammunition chambers, survive. At Hadleigh and Vange, amid the World War II features are the massive concrete command buildings from the 'cold war' era. These were built during an upgrade of Britain's anti-aircraft

Plate 7. One of the 64 twin rocket projectors which were sited in Central Park, Chelmsford. On the right, just above the helmet of the Home Guardsman loading the rocket, the railway viaduct arches can be made out.

defences before 'ack-ack' guns became obsolete and finally dismantled in 1959.

At Lippitts Hill, near Waltham Abbey, the former 3.7" site has retained, in remarkable condition, a great number of the wartime and post-war structures. Two of the four gun emplacements remain, with their command post. The nearby on-site magazine is one of only two in the county. Ten of the wooden accommodation huts which housed the gunners and ATS women have survived in fine condition. It is one of the memorable aspects of World War II that the formation of mixed batteries was an unqualified success. Within 18 months 170,000 ATS were engaged at 3.7" and 4.5" gun sites.

It is, perhaps, not well known that anti-aircraft rockets played an important part in Britain's 'ack-ack' defence. Unlike the later guided weapons, these were launched from aimed cradles, or projectors, to explode at a pre-set height. The projectors were deployed in blocks of up to 64 twin-launchers so that 128 rockets could be hurled into the sky at the same time. There were two operational sites in Essex - in Central Park (Plate 7), then the Recreation Ground, at Chelmsford, and Abbey Field, Colchester. Training was at Writtle, Lexden and Walton-on-the Naze.

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Archaeology in Essex 1998

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 103 projects were reported to the County Archaeological Section (Fig. 1).

Sites are listed by category of work and 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 19' (N.B. prior to 1992 this report was entitled 'Excavations in Essex 19'.

Contributors are once more warmly thanked for providing information. The illustrations are by: Alison Bennett (Fig. 1), and Mark Atkinson (Fig. 2).

The original summaries, and any associated limited circulation reports, have been added to the County Sites and Monuments Record (SMR) held by the Archaeology Section at Essex County Council, Planning Division, County Hall, Chelmsford CM1 1QH. Regarding sites in the London Boroughs of Barking and Dagenham, Havering, Newham, and Redbridge, enquirers should contact the Greater London SMR, English Heritage London Region, 23 Savile Row, London, W1X.

Progress in Essex Archaeology 1998

Introduction

This year the total number of summaries is at approximately the same level as last year, having dropped by one to 103. However evaluations have dropped from 48 to 34, showing a drop in the number of new developments with archaeological implications, whilst excavations have risen by three to 15. Four of these excavations show the continuation of archaeological recording, having resulted from evaluation work carried out in the previous year. There is local society involvement in six of the excavation and survey projects reported here, and individual involvement in three of the survey projects and one of the excavations. One survey project alone, the Essex Place Names Project (reported on elsewhere in this volume), involves 17 local societies and over 50 individuals.

Given the large quantity of summaries, only the most significant are mentioned in the following period paragraphs.

Prehistoric

The earliest evidence this year is of Neolithic/Bronze Age activity, consisting of worked flint recovered during fieldwalking at Stanway (28), and as residual finds from Kelvedon (44). Bronze Age features were excavated at Southend Airport (21), probably agrarian in nature, and a Middle Bronze Age ring ditch, and Late Bronze Age cremation burials were excavated at Redbridge (46). Middle Iron Age occupation features were excavated at St Osyth (25), including possible industrial remains. Several sites show evidence of the Late Iron Age to Roman transition of settlement and land use, including: rural, eg. Chrishall (35); urban, eg. Kelvedon (44); and industrial (70) sites. Possibly prehistoric natural features were found at Upminster (31), which included a possible flood meander of the river Ingrebourne.

Roman

Again, Colchester is well represented for Roman remains. Of particular interest is evidence for the Roman river frontage (12), finds of burials (38, 39), and the Roman suburbs (11). Also, of note is the wealth of material revealed at the Colchester Co-op site (40). Further work has been carried out at Gosbecks (29). More of the fort at Great Chesterford (15) has been revealed. Rural settlement is also represented with sites at Chrishall (35) and Redbridge (46).

Saxon

Evidence for Saxon occupation comes from Great Wakering (17), where a substantial ditch was excavated. Finds of early Saxon pottery came from South Hornchurch (26) and Boreham (51), Residual finds of pottery also came from Colchester Co-op (40) and Heybridge Hall (43).

Fig. 1 Location of archaeological projects in Essex 1998.

Medieval

A wide variety of medieval sites were investigated this year. In Waltham Abbey, part of the original course of the mill stream (48) was excavated, and further investigation took place of a dock (49) in the Longpool, where it is thought laden boats would have come with the building material for the abbey. In Saffron Walden (74), a deep fill may have been part of the town defensive ditch. In Romford (25), medieval features may be part of a building, close to an area of settlement.

Outside the towns: features dating to the 12th to 13th century were found at Heybridge Hall (43), probably representing an earlier phase of the Hall; further excavation was carried out in the vicinity of the suspected Mill Green ware pottery kiln at Noak Hill (45); a mid 15th-century house was recorded in Southend (93); and a series of fishponds were recorded at Radwinter (98).

Post-medieval

In Springfield (27) evidence was revealed of a demolished farm and outbuildings. An earthwork at Brinkley Grove, Colchester (36) may be part of the defensive circuit of the Civil War Fort Suffolk. Further recording has taken place at the Waltham Abbey Gunpowder Works (76, 77). At Hylands House (79) the brick footings of the original west wing were revealed.

Building recording included: workhouses at Billericay (80), Epping (84) and Saffron Walden (90); St Faith's Hospital, Brentwood (82); Elmbridge School, Fyfield (85); maltings at Mistley (87) and Saffron Walden (89); and a bakery oven at Purleigh (88).

Evaluations

1. Ardleigh, Elm Park, Station Road (TM 0557 2876)

R. Trevarthen, H.A.T.

Four trenches (1-4) were opened within the proposed building footprints. Residual flint and calcined bone was found in trace/small quantities in later features. A small truncated cremation burial (unurned and undated) was located in Trench 3.

Three Roman ditches and one small circular Roman pit were found in Trench 2, sealed by a red-brown subsoil, possibly Roman or post-Roman. Four Roman coins were discovered in Trench 2, three clustered centrally, and one in an upper (unexcavated) ditch fill.

Trace amounts of Iron Age pottery were found, including one sherd from the fill of a tree throw. Some modern pitting and truncation was observed.

Archive: H.A.T., to go to C.M.

2. Barking, BARDAG Sports Ground, River Road (TQ 4546 8219)

A. Telfer, P.C.A.

A single trench was excavated revealing topsoil overlying a natural sequence of two layers of natural alluvial clay, at up to 0.3m OD, over a band of peat. The peat sealed two further layers of alluvial clay. Below the clay lay the Thames river terrace gravels. No evidence of anthropogenic activity was uncovered in any of the deposits.

3. Barling, Barling Quarry (TQ 904 941)

D.A.G. Gadd, E.C.C. (F.A.U.)

A 2.3 ha area immediately to the north-east of Barling Hall Farm was fieldwalked in advance of gravel extraction. A concentration of slag, briquetage and post-medieval pottery was recorded in the south-east part of the survey area. While it may represent an industrial site, the material is probably derived from the continued clearance of a drainage channel, and the spreading of the upcast over the field.

Archive: S.M.

4. Birch, land NE of Palmer's Farm (TL 924 193)

C. Crossan, C.A.T.

The distribution of Roman pottery, tile and building stone recovered during a 1997 fieldwalking survey suggested the sites of at least two Roman buildings. 1998 work consisted of a limited geophysical scan followed by small-scale trial trenching.

A magnetometer survey of a 5,600 m^2 area in field one, and a 1,600m^2 area in field two detected several point anomalies, but no distinct outlines of buried features. Both survey areas were located over the concentrations of surface finds, but also extended into blank areas beyond the concentrations.

Seven trial trenches (2.4m wide: total length 184 m) gave a total assessment area of some 430m^2, which is 0.64% of the area within the site grid. A number of linear features and pits were located. Where dateable, the features were Roman, and coincided strongly with the locations of the surface scatters. Two of the geophysical anomalies were found to have been caused by iron ground pins associated with a WW Two airfield which once covered the northern part of the survey area.

Previous summaries: Bennett (ed.) 1998, 195-6

Archive: C.A.T., to go to C.M. (accession code: 1998.250)

5. Broomfield, Woodhouse Lane (TL 7030 1150)

S.I. Gibson, E.C.C. (F.A.U.)

An evaluation of land at the corner of Woodhouse Lane and Court Road, Broomfield, consisting of 24 machine-cut trenches, revealed some evidence for previous land use. The main indication of human activity on the site prior to the 20th century, consisted of sherds of prehistoric pottery, all derived from a single vessel, and a worked flint recovered from the interface between the topsoil and the undisturbed subsoil.

Archive: E.C.C., to go to Ch.E.M.

6. Chelmsford, rear of Chelmsford and Essex Health Centre, County Place (TL 7087 0646)

D.A.G. Gadd and M.J. Peachey, E.C.C. (F.A.U.)

An evaluation, consisting of a single linear trial trench

running parallel to New London Road, identified one archaeological feature. This was a truncated ditch or rectangular pit. The truncation of the site and levelling off with modern rubble suggests that any evidence of the Roman road leading to the *Caesaromagus* settlement to the south-east has been destroyed by 19th-century building works and 20th-century demolition.

Archive: Ch.E.M.

7. Chelmsford, land to rear of 171-173 Moulsham Street (TL 7070 0627)

R. Wardill, E.C.C. (F.A.U.)

The excavation of two test pits to a depth of 1.2m revealed a probable 15th/16th-century deposit. The test pits also indicated that whatever archaeological material does survive above 1.2m is likely to be significantly truncated by 18th-century and later intrusions.

Archive: E.C.C.

8. Chrishall, Chiswick Hall (TL 4501 3755)

T. Vaughan, H.A.T.

Three trenches were excavated within the moated site of Chiswick Hall. A medieval wall footing of mortared flint and chalk was revealed in Trench 1. It lay within a wide shallow foundation trench which cut the natural boulder clay. In Trench 2 a very small quantity of struck flint and animal bone was recovered from the subsoil in association with modern brick and tile debris.

The natural clay was located at a very shallow depth over the site. It was generally level, but sloped downwards to the south-east within Trenches 2 and 3, possibly indicating an earlier line of the moat.

Archive: H.A.T.

9. Colchester, land adjoining Birch Grove Golf Club, Layer Road (TL 9781 2145)

C. Crossan, C.A.T.

An evaluation carried out in advance of a proposed golf course extension revealed a straight ditch-like feature of indeterminate but possibly early date. The feature lies in the western corner of a large field showing cropmarks of linear features and ring ditches.

Archive: C.A.T. to go to C.M.

10. Colchester, 157a-167 North Station Road (former Tweed's Bakery Site) (TL9929 2619)

C. Crossan, C.A.T.

This 0.13 ha site lies close to known Roman burials, and is 400 m north of the suburbs of the Roman town. Four trenches were cut, giving an 8% sample. Overall site stratigraphy was characterised by very mixed post-medieval to modern deposits of make-up and levelling, sealing a number of features which themselves cut natural. Although there was one possible early pit, most were convincingly post-medieval.

Archive: C.A.T. to go to C.M. (accession 1998.79)

11. Colchester, Old Poultry Market Site, North Station Road (TL 9931 2570)

C. Crossan, C.A.T.

This site lies 400m north of the Roman town, and in an area of Roman suburbs of unknown extent. Four trenches were cut, giving a 2.2% sample. Principal discoveries were: T1: a Roman footing of mortared septaria and ragstone; T2: a slot or robber trench, and a post-medieval brick structure, possibly built to house an oven. Elsewhere, there was evidence of soils dumped to raise Roman ground level, in places possibly preceded by demolition of existing Roman buildings.

The Roman footing shares the same NNW-SSE alignment as the Roman buildings previously discovered in the Victoria Chase area (Crummy 1992, 346), and is the most southerly evidence of the Roman suburb yet to be found north of the river Colne.

Archive: C.A.T. to go to C.M. (accession 1998.100)

12. Colchester, St Peters House, St Peters Street (TL 995 255)

S. Benfield, C.A.T.

This site lies on the south bank of the Colne, approximately 150m north-east of the Roman north gate. An evaluation by trial trenching was carried out on behalf of Jay Gate Homes. Four trenches (total length 65m) were cut.

In the Roman period, a substantial gravel construction, possibly a bank or road, appeared to define the Roman waterfront. North of the gravel were river silts, and south of it material had been dumped (no earlier than the early to mid-2nd century) to raise ground level. The extent of reclamation on the banks of the Colne is demonstrated by the fact that the Roman gravel bank was some 90 metres south of the present river bank. There is presumably a Roman timber revetment somewhere to the north of this bank. Several large fragments of stone were recovered from the dumped material.

Post-medieval features were present throughout, and consisted of pits, a set of timber piles, and a wooden water-main. The tops of the timber piles, driven into the silts of a probable old river channel, are now between 1.2 and 1.5m below modern ground. An associated pot sherd dates to the 16th or 17th century. The water main, constructed of bored elm trunks, was laid at some point between the 17th and 19th centuries.

Archive: C.A.T. to go to C.M. (accession 1998.251)

13. Cranham, Broadfields Farm (TQ 580 860)

M. Peachey, E.C.C. (F.A.U.)

A fieldwalking survey identified a concentration of burnt flint around a stream in the south of the survey area, and a further concentration of slag along the south-eastern boundary.

14. Dagenham, Ford Road (TQ 4937 8420)

S. Foreman, O.A.U.

Field evaluation in a car park and waste ground off Ford Road revealed a ditch which produced post-medieval brick and roof tile. An undiagnostic prehistoric pottery sherd was a residual find within a plough furrow.

Archive: O.A.U.

15. Great Chesterford, site of new Village Hall (TL 5053 4328)

M. Germany, E.C.C. (F.A.U.)

An archaeological evaluation by trial trenching at the sports pavilion in Great Chesterford has located the ditch which defined the north-east side of the mid 1st-century fort. It has also determined that the Roman horizon in that particular location is sealed by a 0.4m layer of alluvium.

Archive: S.W.M.

16. Great Dunmow, Dunelm, Flitch Lane (TL 6317 2140)

T. Vaughan, H.A.T.

Six evaluation trenches were excavated. Two former water-filled features were revealed in Trenches 3 and 6. A ditch was revealed in Trenches 1 and 2, and probably a continuation was seen in Trench 5. Eight abraded and residual Roman pottery sherds were recovered from the latter feature in association with modern debris. The anticipated Roman road and cemetery, and Saxon/medieval park boundary were not revealed and the site is considered to have been largely disturbed during its use as a railway yard.

Archive: S.M.

17. Great Wakering, land adjacent to St Nicholas Church (TQ 9595 8755)

R. Wardill, E.C.C. (F.A.U.)

The evaluation identified significant archaeological deposits and artefacts dating from the Middle Iron Age, Roman and Early Saxon periods. The majority of the material represented evidence of settlement during the Roman period including a number of boundary/drainage ditches, an oven/kiln and a human cremation. Sufficient evidence of Saxon and probable Saxon activity was uncovered, including at least one substantial ditch, to support the hypothesis that the area may have been a focus of Saxon occupation.

Archive: S.M.

18. Kelvedon, Durwards Hall (TL 8465 1690)

J. Murray, H.A.T.

Prehistoric features were located in a large untruncated area to the south-east of the main hall. Few finds were recovered, possibly suggesting a peripheral site to an occupation site. They are possibly associated with the mortuary enclosure and ring ditches in the field to the south.

The evaluation also located yard surfaces associated with outbuildings and stables of the 1850 hall (and possibly it's forerunners). Little conclusive evidence for the construction of a former hall was identified, though an infilled ditch was not aligned with the present hall. This ditch was infilled after construction of the present house and is possibly related to an earlier house.

Archive: H.A.T., to go to Bt.M.

19. Kelvedon, Lances, Church Street (TL 8569 1852)

T. Ennis, E.C.C. (F.A.U.)

Two trenches (3.5m by 2m) were excavated on the proposed site of a new vicarage. Four archaeological features were identified. These consisted of a Late Bronze Age posthole, a possible Roman pit, an undated posthole and an undated ditch. The ditch appears to run at right angles to modern day Church Street and probably represents a former property or field boundary. As such it is likely to be medieval or post-medieval in date.

Archive: Bt.M.

20. North Weald Bassett, Ongar Radio Station (TL 5498 2038)

R. Dale, E.C.C. (F.A.U.)

Fourteen trenches were opened across the area of the proposed development. Only two of the trenches contained archaeological features. Two ditches were identified in Trench 5 and it was thought that these may represent the remains of the "deerhey" boundary. Another ditch was identified in Trench 10, but it had no recognisable function. The remaining trenches were sterile with considerable root disturbance. Towards the north-west of the site, the trenches were waterlogged and Trenches 4 and 6 flooded as soon as they were opened.

Archive: E.F.D.M.

21. Rochford, Southend Airport (TQ 8752 8910)

R. Wardill, E.C.C. (F.A.U.)

An archaeological evaluation by trial trenching, and the recording of Second World War airfield buildings, was carried out on the site of a proposed new airport terminal and railway station.

The excavations uncovered archaeological deposits probably indicating Bronze Age and later activity. The identified features consisted mainly of ditches, probably agrarian in function, although there was some limited settlement evidence.

The building survey identified three surviving World War Two buildings. These comprised an air raid shelter, a brick hut and a latrine.

Previous summaries: Bennett (ed.) 1997, 213

Archive: S.M.

22. Romford, Motorpoint Showroom, London Road (TQ 5044 8835)

S. Chew, M.o.L.A.S.

All trenches revealed a sequence of concrete and 20th-century make-up above an agricultural horizon capping naturally deposited gravel. The natural gravel and ploughsoil sloped gently from east to west following the natural slope of the land.

Trench 3 revealed a sequence of 6 ditches and two pits or post-holes of late-medieval/early post-medieval date. The earliest ditch appears to have been dug primarily for drainage purposes rather than as a boundary *per se*, and this is the probable function of the later ones as well. The site appears to have been marginal, boggy land in this period. The archaeological trenches had a maximum depth of 1.20 metres below present ground surface, except where a sondage was excavated at the south of trench 3.

Archive: M.o.L.A.S.

23. Romford, former Brooks Timber Yard, South Street (TQ 5155 8800)

D. Divers, P.C.A.

Excavations revealed a complex sequence of alluvial deposits associated with the River Rom and these deposits overlay natural terrace gravels at 10.45m OD. No evidence of anthropogenic activity was uncovered in any of the deposits.

24. Romford, land W of White Hart Lane, Collier Row (TQ 494 907)

C.P. Clarke, E.C.C. (F.A.U.)

Two trenches were excavated to evaluate the site of a proposed housing development to the west of White Hart Lane, which is documented as a medieval thoroughfare in an area of known medieval farm settlements.

A group of post holes were recorded at the north end of the site, several of which contained mid 13th- to 14th-century pottery, including Mill Green ware. A medieval quernstone was also found. The post holes were shallow, suggesting that they had been truncated. They represent a timber structure, although because of the limited area investigated it is not possible to decide whether they formed part of a building or merely a fence line or other minor feature. The follow-up watching brief failed to locate any further post-holes. It is thought that the site lies close to an area of settlement, but not actually at its centre.

Archive: E.C.C., to go to M.L.

25. St Osyth, St Osyth Lodge Farm (TM 1335 1545)

J. Murray, H.A.T.

Trial trenching of cropmarks confirmed the general intensity and distribution of features suggested by the cropmark evidence. A large number of features of likely Middle Iron Age date were identified across the site. These were predominantly ditches representing droveways, trackways, field boundaries and enclosures. Evidence of occupation, in the form of pits, postholes and industrial/oven features was also located. Two areas of intense activity were apparent on either side of a natural depression which crosses the centre of the site from north to south.

Archive: H.A.T., to go to C.M.

26. South Hornchurch, LESSA Sports Ground, Rainham Road (TQ 520 831)

N. Holder, M.o.L.A.S.

Natural gravels were overlain in a few of the 32 evaluation trenches by a thin buried sandy subsoil. Using a combination of archaeological field evidence, pottery dating and aerial photography analysis, it is suggested that a field system bounded by ditches developed at the end of the Iron Age/early Roman period. A well and the upper backfill of one of the Roman ditches contained domestic type refuse including both late Roman and early Saxon pottery. It is therefore suggested that the field system may have continued in use into the 5th or early 6th century and that there may be early Saxon occupation close by.

Archive: M.o.L.A.S.

27. Springfield, Ind 1 (TL 7385 0820)

P. Andrews, W.A.

Evaluation involved the excavation of 13 trial trenches. Only post-medieval activity was revealed, with traces of farm outbuildings and two field boundaries, all of which survived until this century. These represent the site of a demolished farm and associated outbuildings. Also found was an anti-tank ditch of the Second World War. The results have generally borne out the conclusions derived from the earlier fieldwalking and geophysical surveys, which had pinpointed only one potential area of archaeological interest.

There was no evidence to suggest the continuation of a possible causewayed enclosure of Neolithic date into the area evaluated. It is suggested that the features excavated earlier to the west of the evaluation area may have been part of a curvilinear causewayed ditch cutting off a small headland between two streams.

Previous summaries: Bennett (ed.) 1998, 203

Archive: W.A.

28. Stanway, Abbotstone (TL 943 227)

C. Crossan, C.A.T,

Following a 1997 fieldwalking survey on 5.2 hectares of land east of Bellhouse Farm (Phase 1 of the proposed mineral extraction area, centred on TL 945 232), a similar fieldwalking survey was carried out on behalf of Tarmac Quarry Products Ltd. on phases 2 and 3, to the south.

Roman tile and brick were recovered in sufficient quantities to suggest the presence of one or more Roman buildings in the vicinity. Although lacking in strong surface concentrations, the distribution pattern displayed an emphasis towards the north-western corner of the survey area. There was no strong connection between the surface finds and the cropmark features in the central part of the survey area. Other finds included a light scatter of flint tools, cores and flakes mainly representative of later Neolithic to early (or possibly middle) Bronze Age activity.

Later, a north-south magnetometer traverse across the middle of the site by Howard Brooks and Peter Cott failed to show any buried features, (or the expected cropmark ditches).

Previous summaries: Bennett (ed.) 1998, 203

Finds: C.A.T. to go to C.M. (accession code: 1998.54)

29. Stanway, Gosbecks Archaeological Park (TL 968 228)

S. Benfield, C.A.T.

An archaeological evaluation combining geophysical survey and trial trenching was carried out on behalf of Colchester Museums, Colchester Borough Council and English Heritage in the north-west corner of the Gosbecks site. The purpose of the evaluation was to assess the extent and condition of the archaeological remains in relation to proposals to locate an interpretation centre and visitor access facilities there.

The trial trenching revealed a number of pits and ditches, and a single post-hole. These were all of late Iron Age and early Roman date, principally 1st century AD. Ploughing of the site had removed all stratigraphy, and the features were all isolated. Finds included samian, mortaria, Gallo-Belgic type wares, amphorae, fragments of querns, triangular loom-weights, brooches, a small amount of poorly preserved bone, a strap-end and a probable military horse-harness.

The nature of the area had radically changed by the 2nd century, and only two features can be ascribed to this period. These include a water-main (constructed of a series of wooden pipes with iron collars 1.7m apart) which has now been traced for about 250m, heading toward a large L-shaped cropmark south-east of the evaluation area (near the Roman temple complex). A test pit excavated into this cropmark feature showed it to be about 1m deep, and 19th- to 20th-century material was recovered from its upper fill. This may indicate the location of a previous (unrecorded) excavation, though the feature appears to be of Roman date. A reasonable quantity of Roman tile was recovered, including two combed flue-tile fragments, together with a small quantity of other building materials. If supplied with water from the main, then this feature could represent a lowered floor area in a building to accommodate a hypocaust (indicating a bath-house?).

Though only a very small quantity of residual prehistoric material was found (worked and burnt flint), a single large pit of late Bronze Age date was excavated. It contained a small assemblage of pottery, worked flints, and burnt flint.

The geophysical (gradiometer) survey was carried out by Peter Cott (Cott 1998). Although many of the linear features encountered in the later evaluation were successfully defined by the gradiometer survey, several ditches and most of the smaller features defied close definition. By contrast, the large Bronze Age pit was clearly visible.

Previous summaries: Bennett (ed.) 1997, 220-1; 1998, 206-7

Archive: C.A.T., to go to C.M. (accession 1998.171)

30. Tolleshunt D'Arcy, D'Arcy Cottage (TL 9282 1173)

C. Bateman, Cw.A.T.

Evaluation sought to assess if any archaeological deposits associated with the adjacent 14th-century church survived within the development area. No evidence of medieval activity, excepting sherds of residual medieval pottery, was encountered. Post-medieval and modern deposits, associated with a now demolished 18th- or 19th-century house, were identified.

Archive: C.M.

31. Upminster, 2-4 St Mary's Lane (TQ 5535 8675)

N. Holder, M.o.L.A.S.

Undated (prehistoric?) natural features relating to the river Ingrebourne were observed, including a possible ancient flood meander that cut the natural gravely brickearth. Several landuse features, dating to around the 17th century, including two ditches, a land drain and two possible fence lines were recorded. They may represent a change from pastoral to arable agriculture on this part of the flood plain of the Ingrebourne.

Archive: M.o.L.A.S.

32. Waltham Abbey, Copped Hall Estate (TL 4273 0170)

R. Humphrey, H.A.T.

A single evaluation trench revealed a 19th-century pit, 19th-century burnt material and deep soil layers. Three partly demolished glasshouses of late 19th-/early 20th-century date were also recorded.

Archive: E.F.D.M.

33. Wickford, Berne Hall, Station Road (TQ 7410 9465)

R. Dale, E.C.C. (F.A.U.)

Three trenches were opened and two archaeological features identified. A medieval pit was located in Trench 3, while a modern pit containing medieval pottery was found in Trench 2. The trenches were all heavily disturbed by activity related to the most recent episode of dredging. This disturbance was particularly extensive in Trenches 1 and 3.

Archive: Ch.E.M.

34. Writtle, Kitts Croft, Lordship Road (TL 6773 0657)

A. Robertson, E.C.C. (F.A.U.)

Two trenches were excavated running north-south and east-west giving a total excavated area of 105.6m². The excavations uncovered archaeological deposits probably indicating post medieval activity, most likely associated with the creating of the garden in the late 1800's. Three postholes that possibly form part of a fence line were identified along with two possible pit bases. A truncated semi-circular gully of indeterminate use was also uncovered.

All the features seem to be post medieval garden features with residual medieval pottery. Two test pits recovered pot from the interface between the natural and garden layers, which range from prehistoric to modern in date. No features were uncovered in either of these test pits.

Archive: Ch.E.M.

Excavations

35. Chrishall, Northern Link Main (TL 4400 3818C)

K. Henry, H.A.T.

A rapid walkover of the route identified possible sites of archaeological interest. These, with sites previously identified by desk-based assessment were topsoil stripped under archaeological supervision. Within Chrishall parish (Area 13), this revealed a slice through a late Iron Age to 4th-century Roman rural settlement. Ditches, gullies, pits, post-holes, and hearths were revealed. Also enclosures, field strips and a possible round house gully were recorded. Archive: S.W.M.

36. Colchester, Brinkley Grove, Highwoods (TM 0031 2785)

S. Benfield, C.A.T.

The woodland area called Brinkley Grove is part of the Highwoods Country Park in the northern suburbs of Colchester. Within the wooded area is a large earthwork (Essex SAM 177) in the form of a substantial L-shaped ditch with indications of a small internal bank, and possible counterscarp bank outside (ESMR 0011). The original extent of the earthwork is unknown, as is its date of construction. It might possibly represent part of the defensive circuit of Fort Suffolk, an earthwork fortification built by the Parliamentarian forces in the Civil War of 1648. A limited scheme of trenching was intended to throw light on its origins.

Two small trenches were dug at the northern end of the earthwork with a view to recovering material from the postulated bank, and from the ditch fill of the presumed northern extension of the ditch. Later, a third small trench was opened up, well back from the earthwork, to establish the normal soil profile.

Unfortunately, no clear evidence for the date or function of the earthwork could be established by this limited intervention. The trenches failed to show any clear indication of a northern continuation of the ditch - in fact T2 picked up a post-medieval ditch (F1) running east-west across the northern end of the existing earthwork. Finds included post-medieval brick, and burnt flints (presumably prehistoric). Further work is planned.

Archive: C.A.T., to go to C.M. (accession 1998.139)

37. Colchester, Beverley Road, Lexden (TL 9800 2485)

A.J. Fawn, C.A.G.

Excavation of the Roman road immediately to the north of the Longinus tombstone site has shown that although most of the road has been destroyed, evidence of its northern metalled track and its northern wide ditches remains. The alignment corresponds with previous sightings of the road which, because of its substantial three-track structure, has been suggested as that to London. A stone and brick foundation found alongside the northern edge was probably the cavity for a funerary monument, apparently removed later in the Roman period.

Previous summaries: Bennett (ed.) 1998, 204-5

Archive: C.M.

38. Colchester, 47 Butt Road (TL 9928 2477)

S. Benfield, C.A.T.

This site lies just beyond the south edge of the large Roman cemetery on Butt Road (Crummy & Crossan 1993). Following an evaluation in 1997 which demonstrated the survival of Roman inhumations on this site, a full excavation was carried out by CAT on behalf of Beaumont Seymour & Co. on the site of a proposed extension.

Three east-west aligned Roman inhumations were excavated. Grave 1 was very close to the surface, indicating that ground level has been lowered here. The other two inhumations were in coffins. Grave 2, a decapitation, had the skull and upper neck vertebrae at knee level and slightly above the level of the remainder of the skeleton. Grave 3 had a series of interlinked copper alloy bracelets, heavily corroded. Two of the graves cut a large early Roman feature, part of whose edge was observed in a later watching brief.

Previous summaries: Bennett (ed.) 1998, 198

Finds: C.A.T., to go to C.M. (accession 1998.14)

39. Colchester, Sovereign Crescent, 32-34 Lexden Road (TL 982 249)

C. Crossan and H. Brooks, C.A.T.

This project involved observation of foundation trenches, drains and a water main, and excavation of sensitive areas on a site now redeveloped as 'Sovereign Crescent'. Following observation of early features cut by a hospital cellar, house plots 1 to 3 were excavated in advance of contractor's trenching. Eleven features were

examined. Most were found to be pits containing large quantities of Roman pottery, also tile and burnt bone. Other objects recovered from individual pits include a grid-iron, a copper-alloy brooch, tweezers and glass beads.

At the front (north side) of the new building, a water main between the two Lexden Road entrances revealed a further eight pits. In addition to pottery and cremated bone, finds included parts of a human mandible, and parietal bone which showed no trace of burning.

The majority of the early features in the northern part of the site appear to represent disturbed Roman cremation burials, with one possible inhumation.

Later, a watching brief was carried out on the east side of the site (TL 9882 2492) when the removal of a retaining wall and its foundations on the west edge of the former Maternity Hospital gardens left an observable section face of some 1.4 metres in height, and around 14 metres long (north-south). This location is on the postulated course of a Roman Road, previously located at numbers 24 and 26 Lexden Road by James Fawn and P.R. Holbert respectively (Hawkes & Crummy 1995, 160 and figure 6.1). A number of cuts were seen in the section. Several of them were deep (below trench bottom), others bottomed out within the visible section. It was not possible to demonstrate (stratigraphically, or by finds) the date of any of the cuts. There seems no over-riding reason why they should not all be recent flower beds, or similar. There was one possible ancient cut towards the south end of the section. There was no sign of road metalling at all, and so it is not possible to know whether this was a road ditch.

Finds: C.A.T., to go to C.M. (accession 1998.7)

40. Colchester, Co-operative Stores, Long Wyre Street (TL 9980 2507)

H. Brooks, C.A.T.

An evaluation in December 1997 had made it clear that large areas of archaeological remains would be disturbed by the proposed rebuilding of the stores. Consequently, a 'mitigation strategy' was put in place. This involved an alteration to the design of the building (raising the floor slab to leave larger areas of archaeological remains undisturbed), and 'preservation by record' (i.e. full excavation) of those areas which would still be disturbed by the proposed works - principally the northern edge of the site and the positions of the pile caps.

The full excavation was carried out on behalf of the Co-operative Stores by C.A.T. during April and May 1998. The excavated remains were principally Romano-British, as summarised here:

- an early 1st-century 'trample' layer, and post holes representing a light structure;
- several mid- to late 1st-century floor levels;
- an early 2nd-century structure with clay walls, a concrete floor, and two ritually deposited pots;
- an extension to the above structure (timber walls on stone rubble foundations);
- several phases of activity including ovens and hearths;
- the later 2nd-century building of a house with deep stone-rubble footings and tessellated floors.

Other material was as follows: a few residual prehistoric struck flints; a few medieval features (principally robber trenches, which also contained residual Saxon material); extensive post-medieval pit digging.

Previous summaries: Bennett (ed.) 1998,

Archive: C.A.T., to go to C.M. (accession 1998.59)

Final report: Essex Archaeol. Hist.

41. Cressing, Dovehouse Field, Cressing Temple (TL 8006 1870)

M. Atkinson, E.C.C. (F.A.U.)

The geophysical (magnetometer) survey revealed an extensive ditch system delineating rectilinear enclosures, fields and a possible trackway occupying the upper (northern) part of Dovehouse Field. Some of these equate with features excavated in CT3 and the whole complex is likely to be of Late Iron Age and Roman date, with the exception of one ditch anomaly which joins with one of medieval date excavated in the car park in 1988.

The excavation investigated a corner of the most north-westerly of these enclosures (Fig. 2). Three major phases of activity were identified:

Late Iron Age (?early 1st century AD);

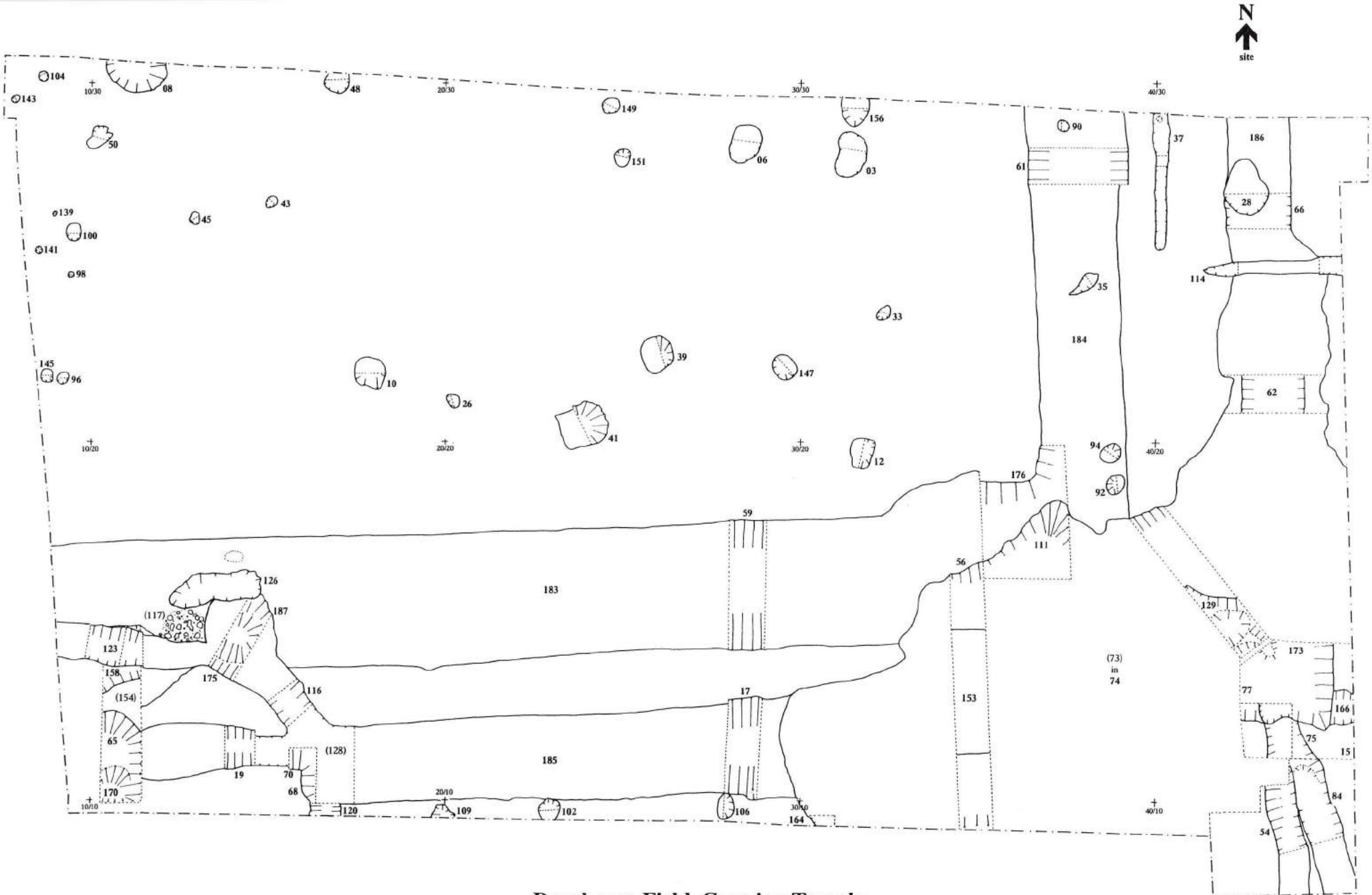
Late Iron Age-early Roman (mid 1st - 2nd century AD);

Late Roman (4th century AD).

Two phases of late Iron Age enclosure ditch were identified. The first was possibly deliberately backfilled and passed out of use fairly quickly. The second showed a slight shift to the south-east but was clearly a direct replacement. This second enclosure ditch functioned into the 2nd century AD, apparently signifying continuity of land use from the late Iron Age to early Roman periods. Within the enclosures, a scatter of post-holes and pits was excavated but only a few of these features could be confidently associated with either phase. Outside, a likely 'ritual deposit' of pottery, loomweights and animal jaw bones was excavated in the terminal of a late Iron Age ditch which ran up to the corner of, and was associated with, the second phase of enclosure ditch.

The infilling of the enclosure ditches by the mid-2nd century AD and an absence of 3rd-century AD remains suggests that a break in land use followed. In the 4th century, a rectilinear building containing a possible hearth was built over the line of the earlier enclosure ditches. This was associated with a large man-made 'hollow' which overlay the corner of the earlier enclosures. It contained a dark homogenous soil from which a wide range of very fragmented artefacts, including pottery, animal bone, lots of iron nails and slag, were recovered.

Archive: Bt.M.



Dovehouse Field, Cressing Temple
(CTDF 98)

Post-excavation plan (multi-phase)

Fig. 2 Dovehouse Field, Cressing Temple: 1998 excavations.

42. Great Tey, Teybrook Farm (TL 8887 2516)

A.J. Fawn, C.A.G.

Further excavation of a ring ditch adjacent to a Roman road at Teybrook Farm has produced just one fragment of Middle Bronze Age pottery. No evidence of burial or habitation has been found. The Middle Bronze Age date may well apply to other ring ditches and features in the area, visible as cropmarks on aerial photographs. The site seems likely to have been levelled by the Roman period.

Another excavation to confirm the alignment and characteristics of the Roman road quadruple ditches is planned. (See also No. 67 below for watching brief elsewhere on the same farm).

Previous summaries: Bennett (ed.) 1998, 205-6

Archive: C.M.

43. Heybridge, Heybridge Hall (TL 8595 0770)

M. Holmes, N.A.

Excavation was carried out in advance of a residential development at the east and north of Heybridge Hall. Two separate areas were examined.

Area 1 was an open area excavation *c.*0.2ha in size located approximately 100m to the north of the Hall. It revealed a series of late Iron Age and early Roman ditches which form part of a more extensive field and enclosure system along the Blackwater Valley. Limited structural evidence was represented by several timber slots and post holes. The south-west half of the site was affected by post-medieval activity which included ditches and quarry areas.

Area 2 was a smaller trench measuring 20m by 5m located immediately to the east of the hall. The excavation revealed the remains of a series of foundation slots and associated post holes denoting the outline of former timber structures related to an earlier phase of Heybridge Hall. A total of nine pits were also recorded. The features date to the 12th-13th century, but residual material, comprising early-middle to late Saxon pottery suggest earlier activity on the site.

Archive: N.A.

44. Kelvedon, The Star & Fleece, High Street (TL 8646 1912)

M. Trevarthen, H.A.T.

Excavation revealed evidence of the late Iron Age and Roman town. Features comprised a late Iron Age ditch, an early Roman track, a gravel quarry pit, boundary ditches, and 1st-/2nd-century dumping of domestic and industrial waste. A 2nd-century pit or grave containing fragments of human bone was also recorded. During the 2nd century there was industrial/domestic activity on site. The site was levelled and hard surfaces were formed by dumping of sand and gravel. The abandonment of the town was indicated by a soil deposit of 3rd to 4th-century date which had developed over earlier features. There were residual finds of mesolithic and neolithic/Bronze Age flintwork.

Post-Roman and medieval activity was recorded in the form of sparse pottery sherds. A post-medieval boundary, pits, and post holes were recorded. These may be related to the malthouse that was known to be on the site in this period or to earlier activity.

Previous summaries: Bennett (ed.) 1998, 200

Archive: H.A.T., to go to Bt.M.

45. Noak Hill, Weald View, Paternoster Row (TQ 5340 9405)

R. Mackley, R.H.F.A.G.

Recovery during the excavations of 1996 and 1997 of over 8,500 Mill Green potsherds had strengthened the feeling that a production kiln could have been sited in the immediate vicinity. Dr. Wilson of English Heritage acted in an advisory capacity for the duration of the excavations in 1998, and also provided technical and other equipment. Three trenches were put in.

Trench 1, 2m square and 1m deep, was sited due north of and adjacent to the position of the 1996 excavation. The purpose was to investigate a feature, thought to be a flue, exposed in the north face of the earlier trench but which could not be dealt with then due to lack of time. This work was unproductive, there being nothing found, other than a small number of pot sherds.

Trench 2, 2.8m by 2.3m and 1.4m deep, was sited east of and adjacent to the position of the 1997 excavation. This revealed twin tile-constructed stokeholes terminating the flue leading from the kiln chamber exposed during the previous year's dig.

Trench 3, 3m square and 1.4m deep, was aligned on the north-west segment of the tile kiln area detected in 1997. The purpose was to provide further details of the tile kiln structure. This exposed the north-west corner of the kiln chamber, which contained a complex layout of arched and possibly collapsed, tile-constructed, sleeper walls. These, presumably, once supported the kiln floor.

More than 5,000 Mill Green potsherds were recovered during the 1998 fieldwork, making a total of almost 14,000 for the 3 years of the project. This further strengthens the likelihood that a pottery kiln had been sited close by, but in all probability not in the garden of Weald View. Further work on the adjacent farmland is not possible, so this season represents the end of fieldwork, with the task of analysing the pottery collection and writing up the final report lying ahead.

Previous summaries: Bennett (ed.) 1997, 212; 1998, 206

Archive: R.H.F.A.G.

46. Redbridge, Fairlop Quarry, Hainault Road (TQ 4640 9090)

R. Dale, E.C.C. (F.A.U.)

In 1997 limited excavations as part of a continuing programme of survey and investigation recorded Late Iron Age enclosures and cremations and a Roman field system. Further work on this large site was carried out in 1998. This work recorded further boundary ditches

belonging to the Roman field system, thinning out towards the south. Some of these contained large amounts of pottery, representing domestic rubbish. The main feature of interest was a late Roman post-built agricultural structure with a sunken floor, dated to the 3rd-4th century. Numerous lava quern fragments were found in and around the building, suggesting that it was used for crop processing.

The majority of features belong to the Bronze Age. These include a Middle Bronze Age ring ditch. This contained substantial deposits of pottery and pyre debris (burnt human bone, ash and charcoal), largely concentrated around the south-west part of the circuit. Fifty metres from the ring ditch a Middle Bronze Age palstave was recovered from the fill of a recent field boundary. Also located were a number of cremation burials, most of late Bronze Age date, although one group, lying just inside a Roman enclosure, was undated. A possible Late Bronze Age structure associated with a pit containing large amounts of pottery also lay within the excavation.

Archive: E.C.C.

47. Tendring, Hill Farm (TM 133 237)

E. Heppell, E.C.C. (F.A.U.)

Hill Farm, Tendring is the site of a proposed reservoir, located on the Tendring plateau, to the south-west of the village of Tendring. In 1997 trial trenching was undertaken in order to investigate a cropmark complex, identified on aerial photographs. This investigation identified multi-period activity dating from the prehistoric to Roman periods. The earliest identified features dated to the Middle Iron Age. Earlier Bronze Age pottery was recovered but this was not associated with any features. The remains of a Roman field system, dating to the first and second centuries AD was also identified. The presence of pre-AD 70 pottery would suggest that the origins of this field system lay in the Late Iron Age. Excavation of this field system revealed a complex of ditches, surviving to a greater degree than anticipated from the evaluation. The majority of these ditches were aligned north-west to south east, or south-west to north-east. This alignment is still true of the field boundaries which survive today. No structural remains were located. The ditches varied greatly in both depth and profile, with the majority of deep, wide ditches located in the eastern area (Area A). Shallow ditches or gullies were located in the western area (Area B). Excavation showed that the majority of ditches which appeared to be a single feature on the surface were actually two or more ditches, running along the same alignment, intercutting in places. The deeper ditches also appear to have been recut a number of times. This, along with the consistent alignment of the ditches, would suggest continuity between the Iron Age and Roman eras on this site.

Preliminary examination of the finds recovered from the excavation shows the same date range as that in the evaluation; further study is being undertaken at the present time. In addition to this, provisional observations of finds distribution, undertaken in the field, are similar to those encountered during the evaluation. The highest concentration of pottery was encountered in the areas at the northern edge of the site (in the area by evaluation Trenches 24 and 25).

A watching brief was carried out during the construction of a haul road along the edge of the site and the excavation of a borrow pit in the field to the west. A single pit was located in the borrow pit, and ditches were located on the haul road which runs alongside the existing hedgerow.

Previous summaries: Bennett (ed.) 1998, 203

Archive: E.C.C.

48. Waltham Abbey, Cornmill Refurbishment Works (TL 3807 0070)

I. Blair, M.o.L.A.S.

The removal of the west wall along the Cornmill Stream provided a 15m long section, composed almost entirely of alluvial deposits, within the postulated lower mill channel. This ran parallel to the Cornmill Stream during the early medieval period and is considered to be the original stream to the mill at Waltham Abbey.

Beneath the alluvium, to the south, is a short length of a robbed timber structure composed of an east-west oak baseplate set between two driven oak posts. This is likely to be associated with the front of an early medieval mill set into the lower stream.

At the south end of the area the machine removal of the existing 18th-century riverside wall exposed a 5m long stretch of an earlier brick wall. This had been utilised as part of the later wall's lower foundation. The bricks in the earlier wall could be as early as 16th century, and appear to mark a major phase of reconstruction to the riverside walls.

Works to the west wall of the central mill island similarly produced two phases of identical brick wall. These are considered to be contemporary with those found along the west side of the Cornmill Stream. Immediately behind these footings the north-east corner of a 13th-century masonry structure was partially exposed in plan. These walls would clearly have formed the forward section of one of the early mills, or the surround to its island.

Archive: M.o.L.A.S.

49. Waltham Abbey, Longpool (TL 380 008)

P. Huggins, W.A.H.S.

Excavation continued with further new trenches, with the aim of revealing more detail about the dock found last year. The dock appears to consist of a rectangular area, measuring 43ft 6in by 27ft 9in. It was bounded on the east and west side by beams which had mortises for a fence. Another side was bounded by a ground beam with an iron bar set on its upper surface. This iron bar was presumably to protect the timber from damage by laden boats entering the dock.

The entrance to the dock was originally the full western width. In a second phase the entrance was narrowed off, certainly to the south. This was done by building a wall of coursed Kentish ragstone with new timber ground beams and planking at the south-west corner. This created a slightly funnelled entrance, and a berth on the south side of the dock on the Romeland (or Roomland) side, where the stone for the Augustinian church building was thought to have been worked. Two trenches to the east revealed another beam angling off and forming what may have been a three-sided turning bay for the boats. The imperial measurements quoted above for the rectangular part of the dock, represent measurement in the medieval rod. Although the date of the dock is not known, it was almost certainly built when statute measures were in force. There would also have been customary measures for timber sizes. The ground beams measure nearly 13½ inches square, which represents the *manupes* or foot which was measured by hand (two hands with the thumb outstretched).

The excavation was carried out together with the West Essex Archaeological Group, and members of the Enfield Archaeological Society provided additional help.

Previous summaries: Bennett (ed.) 1998, 207

Archive: W.A.H.S., to go to Lee Valley Regional Park

Watching briefs

50. Barking, Wey Estate, London Road/Hertford Road (TQ 4365 8418)

M. Beasley, P.C.A.

Monitoring of ten engineering test pits and one borehole revealed that potential archaeological deposits survived across the site below alluvial deposits. The borehole revealed a sedimentary sequence indicating transitional phases from a riverine environment to more terrestrial conditions.

Archive: P.C.A.

51. Boreham, Boreham Airfield (TL 7445 1175)

R. Clarke and E. Heppell, E.C.C. (F.A.U.)

A watching brief was undertaken on the stripping (by the contractor) of Area 3 of Boreham Airfield as part of an ongoing programme of archaeological work in advance of gravel extraction. Area 3 had been fieldwalked and trial-trenched in the Autumn of 1996, but no significant archaeological features were identified other than several ditches. The majority of these were believed to be post-medieval field boundaries, although one was partially investigated and found to contain Roman pottery.

Initially the area to the immediate south of the medieval windmill site in Area 2c (BOAF 96) was investigated to identify any associated settlement evidence. The possible Roman ditch identified during the evaluation was further uncovered and a small gully containing medieval pottery of a similar date (10th-13th century) to that from the main excavation was also recorded. Features were generally difficult to define due to the uneven machine strip which had left swathes of silty topsoil in places, and strips of hard-core and concrete where the runways had been.

The area to the south and east of this was then investigated and revealed several features in the eastern half of the area. The majority of the larger features had been identified during the evaluation, however the smaller discrete features had not. The exposed features were then excavated where appropriate, and a digital plan of the remaining area was created. Several small discrete features, possibly post-holes or small pits, were excavated. One of these contained burnt bone and Middle Iron Age pottery, whilst the other features are undated or contained undiagnostic prehistoric pottery. The topsoil removal by the contractor was similarly uneven to that in the first watching brief area and it is quite likely that other features were masked by remnant soils. Some surface finds, often comprising fairly large pottery fragments, were retrieved including early Saxon sherds and further sherds of Middle Iron Age, which may indicate additional features of these dates in the vicinity.

Two parallel ditches running diagonally (south-east to north-west) up the site are probably the remains of the western boundary of Dukes Wood. This covered the site in the post-medieval period until it was destroyed in advance of the airfield. No reliable dating evidence was retrieved, although medieval (10th- to 13th-century) pottery was recovered from the surface of the easternmost ditch. Two large undated features, interpreted as a pond and ditch terminal, were located on either side of these ditches. Both these features contained a high proportion of wood and leaf-mulch in their upper fills, suggesting that these features were at least in part still open when Dukes Wood was standing, and may even predate it.

Previous summaries: Bennett (ed.) 1997, 216

Archive: Ch.E.M.

52. Braintree, College Road (TL 7528 2301)

E. Heppell, E.C.C. (F.A.U.)

A watching brief on the construction of three houses and associated services at College Road, Braintree, identified four cut archaeological features, two of which contained pottery dating to the early Roman period. These features were sealed by a subsoil deposit, up to a metre thick in places.

Archive: Bt.M.

53. Braintree, 15 Rifle Hill (TL 7586 2249)

R. Havis, E.C.C. (A.A.G.)

A brick-built well was identified in the rear garden of this property. A second circular brick-built structure was close by, possibly representing a Victorian cess pit. The site was reported to the Archaeology Section by the owner, following the finding of animal bones in the vicinity of the brick structures.

54. Chelmsford, Chelmsford Cathedral (TL 7086 0696)

P. Connell, E.C.C. (A.A.G.)

A watching brief was carried out on the rebuilding of the precinct wall. This revealed evidence for possible medieval footings and for several phases of rebuilding.

Three courses of tile bedded on mortar were noted surviving *in situ*, and may represent medieval footings largely removed by later rebuilds. Bricks, dated to the late 17th/early 18th century, used as footings supporting a flint rubble wall point to a rebuild around this time. Backfill from behind the wall produced quantities of ceramics including post-medieval red earthenware, possible metropolitan and Staffordshire slipwares, tin-glazed earthenwares, borderwares and stonewares, all of which support this dating. Also found were quantities of animal bone, oyster, and bone from disturbed burials.

55. Chelmsford, Wig and Mirkin, Moulsham Street (TL 7078 0628)

T. Ennis, E.C.C. (F.A.U.)

4 trenches were observed. A number of archaeological deposits and features were identified. In trench 2 a linear interrupted slot feature and the base of a posthole were probably Roman in date. Another posthole was probably medieval along with a definite post-medieval (16th-century) pit located below part of the concrete foundations of the pub. Undated archaeological deposits were also identified in trench 3 and an undated linear feature running parallel to Moulsham Street in trench 4.

Archive: Ch.E.M.

56. Colchester, 6 Ashley Gardens (TL 9830 2505)

S. Benfield, C.A.T.

Footings trenches for an extension off the south-east corner of the existing house produced a combed flue tile fragment of late 2nd- or 3rd-century type in a probably residual position. Trenches for a separate extension around the north end of the house revealed a probable post-medieval feature. This contained brick chips, a fragment of peg tile, and charcoal.

Archive: C.A.T., to go to C.M. (accession code: 1998.194)

57. Colchester, Castle Park (TL 9997 2560)

H. Brooks, C.A.T.

A hole for a new cedar in Lower Castle Park was hand-excavated by CAT. The hole was in line with the course of the Roman rampart north of the Roman town wall, and was close to the break in the wall near the 'old mess hall', on the east side of the path west of the upper bowling green. The material through which the hole was dug was surprisingly stony, and contained 1.2 kg of Roman brick, tile and septaria, as well as post-medieval peg tile.

The context is clearly not an undisturbed Roman one, and probably relates to 19th- or 20th-century landscaping work in the park. An obvious source for so much Roman building material would be the interval tower (60m north of here) which was hacked off the rear side of the Roman town wall in 1853 (Hull 1958, 35).

Archive: C.A.T., to go to C.M. (accession code: 1998.195)

58. Colchester, Colchester Garrison (TL 9957 2362 and TL 9852 2304)

C. Crossan, C.A.T.

Thirteen small test pits, dug by engineering consultants in various parts of the garrison grounds, were monitored over a period of three days. Two features of indeterminate but possibly early date were recorded in the following locations: Ypres Road (TL 9957 2362); Kirkee McMunn Barracks (TL 9852 2304).

Archive: C.A.T.

59. Colchester, Colchester Institute, Sheepen Road (TL 9884 2551)

S. Benfield and H Brooks, C.A.T.

This site lies on the eastern edge of the Iron Age settlement at Sheepen. This was mainly a building refit, and below-ground work was not extensive.

A drain run between 'H' and 'K' Blocks revealed much modern disturbance, and residual Late Iron Age and Roman sherds. A shallow lift shaft on the south end of 'H' Block (opposite to 'F' Block) exposed a medium brown topsoil, which looked and felt post-medieval. This sealed a gravel layer, which in turn sealed yet more of the brown topsoil. This sequence appeared to be redeposited material, perhaps sinking into an underlying feature.

Archive: C.A.T., to go to C.M. (accession code: 1998.258)

60. Colchester, 33 Crouch Street (TL 9931 2499)

H. Brooks, C.A.T.

Shop refitting exposed a stretch of the south face of the Roman town wall, occupying about the eastern third of the shop's back wall. This wall exposed in the shop is not original wall face, but only part of the *core*, and the wall has (some years ago) been hacked back by about 0.8m, and painted over. A measured sketch was made of the dimensions of the exposed part. The shop fitters gave an assurance that the Roman wall was to be left exposed.

Archive: C.A.T.

61. Colchester, Williams & Griffin, 155 High Street (TL 9946 2522)

C. Crossan, C.A.T.

Removal of a basement stairway revealed a 1.9m high section containing a Roman north-south wall foundation (consisting of six courses of mortared septaria). To its west was a bed of mortar and septaria, probably the base of a floor associated with the wall. Layers above this floor represent various phases of burning and destruction. The recorded section was under the centre of the arcade running off High Street,

and approximately 3.8m north of the High Street frontage. The Roman floor was approximately 1.6m below modern ground level.

Archive: C.A.T.

62. Colchester, 117-119 and 124-125 Hythe Hill (TM 0005 2539)

H. Brooks, C.A.T.

Ground reduction and wall trench digging was observed at both the above addresses. Only at 124-125 was anything archaeological seen. Approximately 1m had been taken off on an area including and immediately north of our 1997 evaluation trench. Over most of the area, the ground reduction did not penetrate the deep topsoil, and natural clay was only revealed in one small area. Archaeological features observed in section were: a rubble filled pit, possibly a wall footing; a cobbled surface, probably an old yard. The possible wall footing was quite a long way back off the Hythe Hill frontage. In this position, it is presumably part of a rear outbuilding. The cobbled surface (not necessarily connected with the wall) must have been part of a yard surface, probably not of any great antiquity.

Previous summaries: Bennett (ed.) 1998, 198

Archive: C.M. (accession 1998.178)

63. Colchester, Northgate Centre (former Railway Mission), North Station Road (TL 9933 2573)

H. Brooks, C.A.T.

Two contractors' footings trenches (for a link between two blocks of the Northgate Centre) were inspected. In the west trench, the top of a layer of possible Roman demolition debris (clay with tile) was observed at 1.5m below modern ground, and a large pit (presumably post-medieval), cutting the edge of a deposit of gravel. In the east trench, a huge pit extending below the 1.8m depth of the trench cut an 0.8m thick deposit of gravel at about 1.3m below modern ground level.

Gravel deposits of this type would normally be interpreted as Roman road gravel. The line of the Roman road leaving the North Gate of the Roman town is not known with any certainty, and it is tempting to see this gravel deposit as part of the Roman road, linking in with a gravel patch recorded on the west edge of no 26 North Station Road (Crummy 1992, 347). However, the position of the Roman building at 26 North Station Road (now the Midland bank) and especially the position of the mosaic floor found in Victoria Chase in 1880 (*ibid.*) make it very difficult to fit in a road on the west side of the present North Station Road. This would seem to confirm that the road must pass along the east edge of North Station Road, which is normally assumed to be the correct alignment (Hawkes & Crummy 1995, figure 6.1). Perhaps the 1998 gravel is part of a courtyard to the rear of the Roman houses on North Station Road, or an alley between them.

Archive: C.A.T.

64. Colchester, Quaker Burial Ground, St Helen's Lane (TL 9978 2538)

S. Benfield and C. Crossan, C.A.T.

A 75cm deep test pit was dug by engineers prior to replacement of the western boundary at the former Quaker Burial ground in St. Helen's Lane. The wall lies close to the west side of the site of Colchester's Roman theatre. The soil in the lowest 25cm of the pit was dominated by small fragments of mortar and septaria with no obvious post-Roman inclusions. The pit was too small to establish the archaeological significance of this deposit. One possible interpretation is Roman destruction debris, but this remains speculative as the foundation trench subsequently dug for the replacement wall was too shallow to permit further observation.

Archive: C.A.T.

65. Colchester, Turner Rise (TL 997 266)

S. Benfield, C.A.T.

A watching brief over an area of new housing recovered the following material: TL 9985 2681 (junction Thornton Drive/Brickmakers Lane) 5 pieces Roman tile, 1 piece Roman flue tile, 2 sherds Roman or later pottery, 2 worked flints; TL 9980 2662 (junction Thornton Drive/Peto Avenue) 9 pieces Roman tile, 1 sherd Roman pottery; TL 9962 2665 (Peppercorn Close) 2 pieces Roman tile, 1 sherd medieval or later pottery, 2 worked flints; TL 9955 2665 (Peto Avenue) 6 pieces Roman tile, 1 burnt flint; TL 9974 2669 (Riddles Drive) 6 pieces Roman tile. None of the material came from identifiable features.

Previous summaries: Bennett (ed.) 1998,

Archive: C.A.T., to go to C.M. (accession 1998.17)

66. Fordham, Fossett's Lane (TL 931 279)

H. Brooks, S. Benfield, and C. Crossan, C.A.T.

Ploughsoil was stripped by contractors over an area of approximately 2.5 hectares, in advance of the creation of an agricultural reservoir. Several features were observed, all of them post-medieval or modern, although ground conditions were hardly favourable to the observation of small features. These were a very prominent line of an old hedge boundary (still an earthwork at the south edge of the area), a freshly dug out crater close to Fossett's House with fragments of medieval brick and mortar in loose soil (post-medieval), and (between the crater and Fossett's Lane) a darker soil outline, possibly a ditch but too poorly defined to follow.

Loose finds were: three Roman *tegula* fragments (355 grammes), one sherd Early Medieval Ware (2g) (Cunningham 1985), 8 sherds Medieval Coarse Ware (fabric 20) from the same pot, embedded in a loose lump of soil lying on the surface.

Archive: C.A.T., to go to C.M. (accession 1998.259)

67. Great Tey, Tey Brook Farm (TL 8897 2485)

S. Benfield, C.A.T.

Examination of the footings for a new barn in the meadow west of Chase Cottage (at the west end of the Tey Brook Farm complex) revealed no features, but one possible worked flint flake and a burnt flint were found loose in spoil. (See also No. 42 above for excavation elsewhere on the same farm).

Previous summaries: Bennett (ed.) 1998, 205-6

Archive: C.A.T., to go to C.M. (accession 1998.193)

68. Harlow, Princess Alexander Hospital, Hamstel Road (TL 4420 1017)

D.A.G. Gadd, E.C.C. (F.A.U.)

The development area consisted of a strip of parkland 150m long by 5m wide. The scheme of works involved the removal of the topsoil in order to build a cycle path linking Hamstel Road with Forth Avenue. The route passes 10m to the west of an Early Bronze Age bowl barrow (Scheduled Ancient Monument 20657), one of three that are situated on the flood plain of the River Stort. This watching brief identified one archaeological feature cutting the natural subsoil. This linear feature, was approximately 1m wide and 130mm deep and appeared to be running east-west in alignment with the northern edge of the bowl barrow.

Archive: H.M.

69. Harwich, 46-47 Kings Quay Street (TM 2610 3270)

M. Medlycott, E.C.C. (A.A.G.)

A watching brief on the foundation trench for a new garden wall, encircling the gardens of 46 and 47 Kings Quay Street, Harwich revealed a layer of post-medieval build-up. The site is located immediately to the east of the medieval town wall, on what was foreshore in the medieval period. The foundation trench averaged 0.60m deep and 0.40m wide. At the westernmost end of the trench, closest to Kings Quay Street the fill comprised a very loose sandy matrix with charcoal and coal clinker inclusions, also clay-pipe stems, oyster shell, fragments of lead and post-medieval pottery and glass (18th/19th century). To the rear of the properties there were at least five post-medieval walls at right-angles to the trench on the western side. The area between two of these was filled with loose back-filled brick rubble, presumably the back-fill of a cellar.

Behind No. 47 a brick circular structure with a domed lid, lined with a black asphalt-like substance, was cut by the trench. This is reminiscent of a well, but it is more probable in Harwich to be a rainwater storage tank.

Study of the maps shows that in the late 19th and early 20th century, there were two dwellings and a public house on the eastern side of the present property.

70. Hullbridge, Willow Pond Farm, Lower Road (TQ 8352 9468)

M.J. Peachey, E.C.C. (F.A.U.)

An archaeological watching brief on flood defence works by the River Crouch at Willow Pond Farm, Hullbridge found evidence of a "red hill" in the side of a small drainage trench and in redeposited material discovered in the stripping of an earlier embankment. No archaeological features were found in the area of the borrow pit or of the new embankment.

Archive: S.M.

71. Ilford, Aldborough Hatch Chapel, Newbury Park (TQ 4575 8923)

K. Sabel, P.C.A.

The watching brief monitored excavation work to the east of the surviving Aldborough Hatch Chapel. Natural alluvial deposits were sealed by a layer of agricultural soil dating to the post-medieval period. An early post-medieval timber building was built on a pad of tiles laid on a bed of crushed chalk mixed with grit, indicating the surroundings were damp at the time of construction. The earlier building was subsequently rebuilt or modified in the mid/late 16th to 17th century with locally produced bricks being used to build two walls. During the 18th century a brick wall was built which probably formed a southern extension to the main building. During the early 19th century this building and the adjoining chapel wall were demolished, the east gable wall of the chapel was rebuilt and was later replaced by a wall using yellow stock bricks.

72. Pleshey, Pleshey Castle Bridge (TL 6651 1444)

R. Wardill, E.C.C. (F.A.U.)

Repairs to Pleshey Castle bridge consisted of renewing the road deck and installing a drainage system to carry rain water from the deck into the ditch below. The replacement of the road deck necessitated the removal of the existing surface which was made up of modern materials. The exposed bridge core was similarly made up of modern rubble. No structural features were revealed. The excavation of the pipe trenches also failed to expose any features or artefacts of archaeological interest. The excavated material consisted largely of topsoil and turf which contained occasional fragments of brick.

Archive: E.C.C.

73. Romford, Golden Lion junction and the Market Place (TQ 512 889)

C.J. Tripp, E.C.C. (F.A.U.)

A watching brief was carried out in advance of a programme of regeneration of Romford Market Place, the site of a market from the mid 13th century. Twelve trenches for lighting standards, trees etc. were examined to the south of the church of Edward the Confessor, but all except two were archaeologically sterile, mainly through modern disturbance.

No evidence of medieval strata or artefacts was recorded. This is largely a result of post-medieval and modern truncation, but the full build-up above the natural brickearth (almost 1m) was not visible in every trench, and medieval deposits may survive undisturbed

in some areas. A sandy clay levelling and a shallow feature recorded at the base of Trench 1 may equally be medieval as post-medieval. Unfortunately this strata contained no dating evidence and a definite interpretation is not possible.

The other strata recorded probably relates to the 18th- and 19th-century development of the market area, especially Tree Pit 1 at the south side of the market place which contained a brick footing and drains.

Archive: E.C.C.

74. Saffron Walden, 39 Castle Street (TL 5369 3869)

R. Havis, E.C.C. (A.A.G.)

A watching brief was carried out on an extension to the rear of this property, making access into the cellar and realigning the drainage system. A depth of *c.*2.5m of topsoil and sub-soil had been removed from the rear of the property down to the depth of the bottom of the cellar and for a distance of 5m into the garden. All of this material was fill, the only evidence of natural consisted of chalk *c.*5m from the house. No dating evidence was visible although the quantity of backfilled material would seem to be too great to relate to the construction of the cellared buildings on the Castle Street frontage. This may be related to the town defensive ditch, but it is impossible to confirm this.

75. Stanway, land N of New Farm Road (TL 9595 2482)

C. Crossan, C.A.T.

A watching brief on new housing development has revealed a broad, ditch-like, but otherwise indeterminate feature, running approximately east-west and at right angles to nearby Grymes Dyke. Work continues.

76. Waltham Abbey, former Royal Gunpowder Factory, Highbridge Street (TL 3768 0060)

J. Murray, H.A.T.

Observation and recording was carried out during construction of a new access road. This revealed extensive remains of the foundations of a succession of previous buildings on the site. These included the foundations of a surgery built in 1872, and evidence for the construction of a previous acetone factory and guncotton building.

Previous summaries: Bennett (ed.) 1996, 274; 1997, 225-6

Archive: E.F.D.M.

77. Waltham Abbey, former Royal Gunpowder Factory, Lower Island (TL 3760 0014)

D. Gadd, E.C.C. (F.A.U.)

Lower Island contained a purpose-built black powder factory comprising various mills for incorporation, glazing, pressing, etc. Rapid archaeological recording was undertaken after removal of 300 - 800mm of contaminated topsoil prior to the construction of an access road. This revealed brick foundations, culverts, the edge of canals/leats, and various moorings.

Previous summaries: Bennett (ed.) 1996, 274; 1997, 225-6

Archive: E.C.C.

78. West Mersea, 79 Coast Road (TM 0018 1275)

S. Benfield, C.A.T.

A terrace had been cut to give a new house plot west of the existing house. The surface was much obscured by loose soil, but post-medieval and modern debris was observed. One patch on the south edge of the plot might have been a layer or feature. It contained peg tile, oyster, one sherd of medieval pottery, and post-medieval debris.

Archive: C.A.T., to go to C.M. (accession code: 1998.192)

79. Writtle, Hylands House (TL 6865 0380)

M.J. Peachey, E.C.C. (F.A.U.)

An archaeological watching brief on renovation and drainage works at Hylands House identified several features. In the east wing basement, two square brick piers, originally supporting the ground floor of the 1842 rebuilding, were recorded. In an external service trench, excavated against the basement wall of the house, a number of walls and drains were revealed. Walls 10, 11 and 12 on the north side formed an alcove, possibly for fuel storage. Walls 26 and 27, on the south side, were probably the footings for a decorative 19th-century garden feature. Four bricked-up basement windows of the original house of 1730 were exposed on the south side. However, no trace of the associated light wells was found although their base was clearly at the foot of the windows, the basement wall being unfaced below this point.

The brick footings of the original west wing of 1815 were also exposed at the front of the house, revealing three arched recesses and a rectangular buttress. At the extreme west end of the service trench a vaulted brick passageway was discovered leading from the west wing basement towards the servants' quarters and stable block. This had been used to deliver sacks of coal to the boiler room. The roof had been demolished and it had been backfilled with brick rubble when the servant's quarters were demolished in 1971. The passageway was probably built in the 1815-1818 rebuilding. The floor joists of the east wing hallway were also recorded. Under the east wing footings a 5m section of curved wall was exposed which could have been footings of the original east wing or of an earlier building.

Previous summaries: Bennett (ed.) 1998, 204

Archive: Ch.E.M.

Plate 1 Billericay Union Workhouse casual wards. Vagrants were housed within the central range and the flat roofed part of the structure contains the stone breaking cells.

Building Survey

80. Billericay, St Andrew's Hospital (TQ 6780 9520)

A. Garwood, E.C.C. (F.A.U.)

A survey was carried out on the hospital buildings (Plate 1) prior to residential development of the site. The survey concentrated on the detailed recording of four buildings. These included the former Billericay Union Workhouse and porter's lodge, both Grade II listed buildings built in 1840 to plans by George Gilbert Scott, and the 1898 Infirmary and Casual Ward. Part of the workhouse and the porter's lodge are to be converted in the new development, but the other buildings are to be demolished.

81. Braintree, Embassy Cinema (TL 7589 2292)

A. Upson and S. Richarson, A.O.C.

See No.87

82. Brentwood, St Faith's Hospital (TQ 588 936)

A. Upson, A.O.C.

Recording was carried out in advance of redevelopment of the site. The original buildings of the complex were constructed in 1854 by the Trustees for the Poor of the parish of St Leonard's, Shoreditch, as a residential Agricultural and Industrial School for the children of the parish. By the 1920's the institution had been turned into a home for epileptics, providing accommodation and training both for women and children of Hackney, and for others sent by the Metropolitan Asylums Board. The institution was taken over by London County Council in 1930, when it was renamed St Faith's Hospital. It continued to function as a hospital for epileptics under the National Health Service until 1991 when it closed. The buildings have been unoccupied since that date, and subject to vandalism and fire.

No plans of the original buildings could be found, the first plan showing the internal layout dating to 1930. Information relating to the successive phases of construction and modification can be gleaned from written sources. At the time of the survey the surviving building complex comprised a main three-storied E-shaped block, with a front range of red brick with white brick and render detailing. Long narrow side wings extended north from the east and west ends of the front range, and a wider block, containing a large dining hall and kitchens, extended centrally at the rear. These three rear ranges were constructed of yellow brick with simple red brick detailing. The only built elements of the original 1854 school which survived comprised the central five sections of the south range of the main block, and the original infirmary building to its rear. It would appear from documentary research that the original building was more extensive, but parts of it were demolished when the school was enlarged in 1870. The long east and west wings were constructed at this time. The design, layout and detailing of the original buildings was found to be similar to other institutions of this type.

Three additional blocks were added to the east of the main building in 1879, providing a new infirmary with separate contagious wards, and a block of probationary wards for new arrivals. The facilities were further improved in 1891 with the addition of a swimming pool, and a separate workshop building was added in 1898. The swimming pool was converted to a school when the institution became a home for the care of epileptic women and children. A nurses' home was added in 1936.

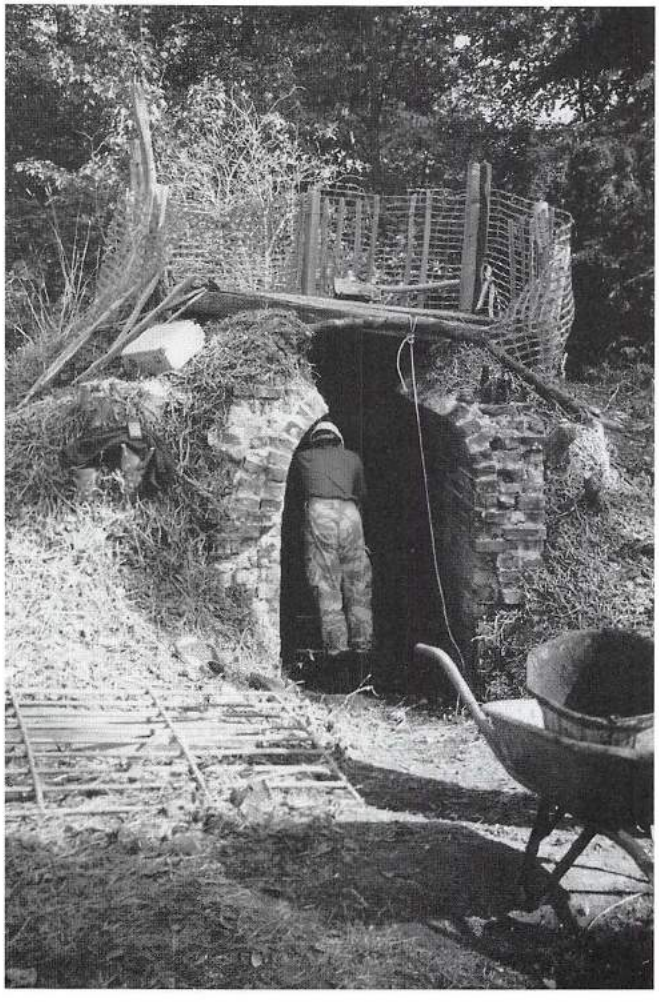


Plate 2 Danbury Park Icehouse: View of entrance.

83. Danbury, Icehouse, Danbury Country Park (TL 7655 0462)

M.J. Peachey, E.C.C. (F.A.U.)

This icehouse appears on a plan drawn up for the valuation of Danbury Place Estate in 1829 (ERO D/DOp T27), and there is documentary evidence for its use in the diaries of John Round, the owner from 1831. The icehouse was first cleared out (Plate 2), revealing that drainage was through natural percolation rather than a sump. It was then photographed and plans, profiles and elevations drawn. The earliest bottles in the ice chamber indicated that it fell into disuse in the early years of this century.

Archive: Ch.E.M.

84. Epping, St Margaret's Hospital (TL 468 027)

D. Freke, R.P.S.C.

Three wings of the 1837 workhouse survive together with the much altered entrance block and the buildings around the north-west yard. The 1880's phase of buildings is represented by the south wing (Forest Ward), the chapel/dining room, a west range of workshops, and an infirmary (later the schoolroom?). A nursery of *c.*1910 and a large infirmary of 1911 also survive. The Grade II listed laundry is probably the 1846 infirmary, but it is much altered. The basic shell of the surviving wings are in good condition, but have been much modified by modern accretions and subdivisions. Few internal features survive, although the layout and segregation can still be discerned.

85. Fyfield, Elmbridge School (TL 5626 0625)

A. Garwood, E.C.C. (F.A.U.)

Elmbridge School or Fyfield Truants School was built in 1884 by the West Ham School Board to cater for persistent truants. Initially built to accommodate 80 boys, its capacity was increased to 110 boys, when it was enlarged in 1910, with the addition of a new dormitory/classroom block. Contemporary with this expansion was the addition of a two-storey observation block and the construction of further staff accommodation (Abbey flat). In 1923, the school re-opened after a period of closure for renovation, as an Open-air school, dealing with children affected by respiratory problems. Also, it is at this point that the school moves away from a single sex institution by providing accommodation for 60 girls. In 1956 the Open-air school closes and re-opens in 1958 after its acquisition by Essex County Council. Renamed Elmbridge boarding school the site gradually expands with the construction of further dormitories, classrooms and staff accommodation to the north and west. Latterly reverting to a boy's boarding school, it was finally closed on July 15th 1994.

The original school building (Abbey House) is H-shaped in plan and built in a mixture of three, two and single storeys with two single storey classrooms extended to the front, either side of a courtyard. Built of yellow brick, in an Eclectic Arts and Crafts Style, the building has an ornate façade, with tall Dutch gables, red and blue brick dressings and hipped roofs with terracotta finials and ridge bonnets. Central to the main roof is a clock turret with a leaded cupola and weather vane. The later extensions to the school are built in keeping with original style but lacked the ornate decorative detail. Internally, the majority of the school rooms/dormitories remained intact, as did the spatial integrity of much of the building. Circulatory routes, demonstrating the segregation of masters and boys, are still in place as are original features such as the observation portals that overlooked each of the three main dormitories.

86. High Laver, Bush Hall Farm Malting (TL 4992 0925)

A. Garwood, E.C.C. (F.A.U.)

See No. 87

87. Industrial Archaeology Survey

S. Gould, E.C.C. (A.A.G.)

See this volume, pp. 202-5

88. Mistley, Maltings Nos. 3, 4, & 7 (TM 120 315)

A. Menuge, R.C.H.M.E.

Three large maltings designed for the floor-malting process and built for the firm of Free, Rodwell & Co. were surveyed. Nos. 3 and 4 were built by 1896 and operated as a conjoined pair, with a common barley store. The larger No. 7, thought to date from 1904, is free-standing. The buildings illustrate the rapid evolution of structural methods and mechanical processing over two decades.

Previous summaries: Bennett (ed.) 1998, 212

89. Purleigh, The Old Bakery, The Street (TL 8436 0199)

Arcady Architects

Recording of an original oven and its external structure took place before demolition. The oven was a typical example of an early 19th-century side flue oven, of which many thousand were built and are still commonly in existence today. The oven on this site had collapsed inwardly many years previously and had been replaced by a 'Perkins' steam oven for the bakery use. The stages of dismantling the oven were recorded, as was how the oven functioned.

90. Saffron Walden, Raynham's Garage (former High Street Maltings) (TL 5364 3852)

S. Richardson, A.O.C.

The documentary and on-site research identified the earliest part of the existing building as the remains of a two storey floor maltings, typical of the East Anglian region and probably built in the early 19th century. It was associated with a brewery that had been present on the site since at least 1758 and was built during a period when Saffron Walden became one of the most important malting centres in Essex. Malting probably ceased in the late 1870s and the building appears to have undergone extensive internal and external alterations at about the same time. From *c.*1880 until 1897, the building was used partly as a hop store and probably also for other activities related to the brewery. After 1897, brewing on site finished and the building was turned over to storage as part of a regional distribution centre for a large brewery company. From 1920 until recently, the building formed part of an automobile engineers and garage complex.

91. Saffron Walden, Workhouse, Radwinter Road (TL 5500 3860)

A.O.C.

Survey was carried out in advance of redevelopment of the site. The main workhouse building is of cruciform plan, with square pavilions at the end of each wing, and a central octagon, designed with close reference to the model plans created for the Poor Law Commission by Sampson Kempthorne in 1835. The main building is of yellow brick, and was originally roofed with slate. There were eight staircases, and no original corridors.

Most of the building has been adversely affected to some extent by its use as part of a modern hospital, but the effects are mostly superficial. The building was designed specifically to be austere and forbidding, and the level of internal detail and finishes would have been extremely low.

Other buildings on the site comprise a detached casual ward block to the south-west, a detached building on the boundary of the site in the original north-east yard, and modern prefabricated buildings. There were also single-storey wings added to the main building at various times during the first sixty years of the institution's existence, which tended to house the ancillary functions of the institution, such as the wash-houses, the laundry and the workshops. These wings are of a very simple design and construction and of a purely functional nature.

92. Southend-on-Sea, Shoeburyness Barracks (TQ 9340 8440)

A. Martin, G.& P.L.

The survey produced a comprehensive photographic and written record of all the structures and earthworks - upstanding and demolished - that occupied the site since 1849. The survey revealed that the majority of the upstanding buildings survive in reasonably good condition and that they retain much of their original character.

93. Southend-on-Sea, 255 Victoria Avenue, Prittlewell (TQ 877 868)

A. Menuge, R.C.H.M.E.

Survey followed fire damage to this property. It comprises a mid 15th-century 3-bay timber framed structure, which probably was originally the cross wing to a once larger house fronting the former market place. It has a crown-post roof. It was functioning as a bakery by the mid-19th century, and retains a large baker's oven of that date.

Field Survey

94. Aerial Survey

D. Strachan E.C.C. (A.A.G.)

See this volume, p. 198

95. Essex Place Names Project

J. Kemble, E.S.A.H.

See this volume, pp. 272-3

96. Foulness, Great Burwood Farm (TR 002 910 and TR 000 911)

R. Crump, F.C.A.S.

Research here forms part of the ongoing study of Foulness Island. Antiquarians have mentioned the presence of a Roman mound at Great Burwood, since destroyed (*Essex Review* XXXVI 1927, 167). This may have been a red hill. Field walking at Great Burwood

after harvest revealed no evidence for red hills or Roman occupation, however a watching brief will be maintained in this area.

The Tithe Award Map shows a dwelling at Great Burwood, which was, on anecdotal evidence, demolished in 1924. A 20m grid was laid out and probing has revealed what would appear to be a brick foundation. It is most likely that this building originates from the first phase of brick buildings on Foulness, that is between *c.*1687 and *c.*1700. Great Burwood is mentioned in documentary sources as far back as the 12th century, so the aim of future survey is to establish the earliest date for occupation on this site.

Archive: F.C.A.S.

97. Historic Towns Survey

M. Medlycott, E.C.C. (A.A.G.)

See this volume, p. 202

98. Radwinter, SW of Radwinter Church (TL 605 372)

A. Oswald, R.C.H.M.E.

Archaeological survey of a series of fishponds near Radwinter, presumed to be medieval in date, suggests that there may have been four or five ponds, rather than three as suggested previously. There were several episodes of remodelling, with the two extant ponds being actively maintained into the post-medieval period and up to the present day. Evidence was also recorded for various leats and spillways associated with the ponds.

Archive: R.C.H.M.E.

99. Southend-on-Sea, Prittlewell Camp (TQ 8899 8783)

P. Pattison, R.C.H.M.E.

Analytical field survey, at a scale of 1: 1000, revealed the full extent and preservation of Prittlewell Camp. Just over half of its circular enclosing bank is in ploughsoil, surviving as a very spread feature up to 1m in height. The remainder is preserved in an area of woodland, much disturbed and adapted for use as a post-medieval hedged and ditched field boundary. Nevertheless, the bank's outer face remains prominent and stands up to 1.7m high.

An oval mound is built over the bank in the south-east. It is undiagnostic but is possibly a late medieval windmill mound. The camp itself is generally regarded as late prehistoric in date, though as yet there is no direct dating evidence.

Archive: R.C.H.M.E.

100. World War II Defences Survey

See this volume, pp. 206-8

Geophysical Survey

101. Colchester, Castle Park (TL 999 255)

H. Brooks, C.A.T.

A magnetometer survey of 3.4 hectares in upper Castle Park, and 0.96 hectares in lower Castle Park was carried out on behalf of Colchester Borough Council and Landscape Design Associates. The principal aim was to map the extent of the surviving features of all periods of this historic park.

Generally speaking, the results were disappointing. It is suspected that the large amounts of ironwork in the park (benches, bins and buried bottle tops) had a masking effect. Further, some areas were deeply buried by Victorian or more recent landscaping. Some known features of the Roman town were detected (for example, the Roman town ditch north of the town wall, and the drain running out of Duncan's Gate), but most of the known Roman buildings eluded detection. Observed features were: a large, circular, rather fuzzy and undated anomaly in Lower Park (TL 9995 2565); the scars left by the removal of trees behind Hollytrees House; and a large pit dug by Wheeley on the north side of the Castle. A later resistivity survey by Peter Cott in the area north and east of the Children's Playground was more successful in defining the known Roman street dividing *insulae* 15 and 16 of the Roman town, its ditches, and parts of adjacent buildings.

102. Great Sampford, Shillingstone Field (TL 640 363)

P.J. Cott

Magnetometer survey was carried out at the request of Ken Neale of the Sampfords Society and with grateful thanks to Peter Berridge of Colchester Museum for loan of the magnetometer. The aim was to survey the general area fieldwalked by the Sampfords Society. The survey identified a system of field ditches which agrees well with the findings of the 1997 excavations (Garwood 1998). It is intended that further survey by magnetometer will be carried out to determine the layout of more of the field system to the north.

103. Heybridge, land to the SW of the Elms Farm site (TL 8474 0790 & TL 8490 0776)

R. Wardill, E.C.C. (F.A.U.)

A geophysical survey over 4 hectares of land to the south-west of the Late Iron Age/Roman settlement at Elms Farm has located anomalies characteristic of archaeological features. These include ditches, pits, possible trackways and structures. It is clear from the survey results that the settlement extended into the survey areas and are likely to have continued beyond.

Abbreviations

A.O.C.	AOC (Archaeology) Ltd
Bt.M.	Braintree Museum
C.A.G.	Colchester Archaeological Group
C.A.T.	Colchester Archaeological Trust
C.M.	Colchester Museum (formerly Colchester and Essex Museum)
Ch.E.M.	Chelmsford and Essex Museum
Cw.A.T.	Cotswold Archaeological Trust
E.C.C.	Essex County Council
E.C.C. (A.A.G.)	Essex County Council (Archaeological Advisory Group)
E.C.C. (F.A.U.)	Essex County Council (Field Archaeology Unit)
E.F.D.M.	Epping Forest District Museum

E.S.A.H.	Essex Society for Archaeology and History
F.C.A.S.	Foulness Conservation and Archaeological Society
G.& P.L.	Gifford and Partners Ltd
H.A.T.	Hertfordshire Archaeological Trust
H.M.	Harlow Museum
M.L.	Museum of London
M.o.L.A.S.	Museum of London Archaeology Service
N.A.	Northamptonshire Archaeology
O.A.U.	Oxford Archaeological Unit
P.C.A.	Pre-Construct Archaeology Ltd
R.C.H.M.E.	Royal Commission on the Historical Monuments of England
R.H.F.A.G.	Rochford Hundred Field Archaeology Group
R.P.S.C.	R.P.S. Clouston
S.M.	Southend Museum
S.W.M.	Saffron Walden Museum
W.A.	Wessex Archaeology
W.A.H.S.	Waltham Abbey Historical Society

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Historic Buildings Reports 1998

ed. D. D. Andrews

The articles and reports presented here are derived from observations made either as a preliminary to, or during, building works. We should like to thank the property owners and contractors whose co-operation has been essential to the success of the recording.

The Essex Tree-ring Dating Project

by D. D. Andrews

Progress in tree-ring dating in Essex was reviewed in the 1998 Cressing Conference on *Tree-ring dating and timber-framed buildings*. Thanks largely to the initial work of constructing a chronology based on the Cressing Temple buildings, there is now a good chance of being able to date Essex buildings, though it is becoming apparent that many more modest urban buildings are made with timber of too slight a scantling, and thus with too few rings, for there to be much chance of success in undertaking systematic dating programmes in historic town centres. For similar reasons, the use of dendrochronology to help with dating the types of bellframes identified in the Essex Bellframes Survey was disappointing (Tyers 1996; Watkin 1996). However, a large proportion of the better known Essex buildings and those which figure prominently in the literature on timber-framed buildings, have now been dated.

A relatively large number of Essex buildings have been assessed for dating or sampled in the last few years, and those which have not yet been published in this journal are given in the table below. Most of the successful results presented here have already appeared in *Vernacular Architecture*, but it is useful to bring the Essex material together and to include buildings which could not be dated. The work commissioned by English Heritage is written up in the form of Ancient Monument Laboratory Reports. Copies of these, together with reports by the Sheffield Laboratory on Essex buildings, are held by the Historic Buildings Record and Sites and Monuments Record at County Hall.

PARISH	BUILDING	DATE	TIMBERS	REPORT	ANALYST
Barking	Eastbury	1566	Posts	AM Lab	I. Tyers
Colchester	Rose & Crown, East Hill	Negative assessment		RCHM	I. Tyers
Colchester	C. Brown's, East Hill	Negative assessment			I. Tyers
Colchester	St. Martin	1365-82	Chancel rafters		I. Tyers
Cressing	Rook Hall	Failed			I. Tyers
Fyfield	Fyfield Hall	1167-85	1st phase of hall	AM Lab 17/98	M. Bridge
	Fyfield hall	1397-1416	Rebuild of hall		M. Bridge
Good Easter	Falconer's Hall barn	1131+10-55yrs	Post in NE corner by porch	VA 1996	M. Bridge
	Falconer's Hall barn	1457+10-55yrs	Aisle tie & plate, 3 posts		M. Bridge
Gosfield	Gosfield Hall	1547-83	Roofs	AM Lab 19/98	M. Bridge
Great Clacton	Cann Hall	1511	Rafters		I. Tyers
Great Dunmow	Boyes Croft malting	1557-80	Posts, mid rail, binding joists	AM Lab*	M. Bridge
Great Dunmow	15 High Street	1381-1407	South cross-wing	AM Lab*	M. Bridge
Greensted-iuxta -Colchester	St. Andrew	Negative assessment	Rafters		I. Tyers
Harlow	Harlowbury	*c.*1221-25	Hall rafters		I. Tyers
Little Braxted	Little Braxted Hall kitchen	1398-1410	Posts, mid rail	AM Lab 8/99	M. Bridge
Magdalen Laver	St. Mary	1527-35 1534-35	Belfry Stud wall round belfry	AM Lab	I. Tyers
Messing	Lodge Farm Barn	Failed. Probably C14	Timbers from enlarged doorway, E. gable		I. Tyers
Navestock	St. Thomas	1365-82	Belfry	Sheffield	I. Tyers
	St. Thomas	1511-56	Arcade repair		I. Tyers
Thaxted	Market Cross	Failed	Cellar		I. Tyers
	Market Cross	Negative assessment	Hall		
Wimbish	Tiptofts	1296-1327	Cross-wing joists & post	AM Lab 6/99	I. Tyers
	Tiptofts	1282-1322	Hall post		I. Tyers

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Bocking, Bradford Street Mill

by D. D. Andrews and V. Pargeter

The Mill Building

Standing on the south bank of the river Pant or Blackwater by a concrete balustraded bridge with cast-iron lamps in the shape of the Bocking dolphin by McFarlane of Glasgow, this timber-framed and weather-boarded mill is perhaps the most attractive building in a street famous for its period houses (Fig. 1). After ceasing to be used for making animal feed in the 1980s, the mill had become increasingly dilapidated until in 1998 it was repaired and converted to a house, becoming shamefully surrounded by houses or so-called enabling development. Although grade II* listed, the mill retained none of its original machinery, except for the bottom quarter of the water wheel sitting in the wheel pit.

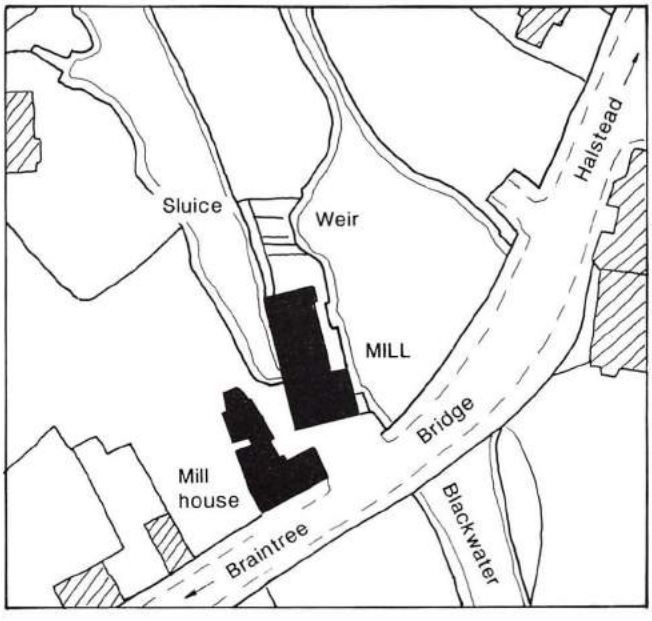

Fig. 1 Plan showing the location of Bradford Street mill and the mill house

The mill is a rectangular building of six bays. Visually, it divides into two halves, a tall three-storey block towards the road, and a single-storey unit at the rear. The repairs saw the building stripped back to its frame, which was clearly fairly modern of primary-braced type with much evidence of modification and repair.

Examination of the building revealed two things of interest. First, the front half of the mill had clearly been raised in height. The eaves wall plates of the back half ran through to the east end of the building, and the former tie-beams had been cut through, their ends being trapped beneath the posts of the upper storeys. Thus the mill is of several building phases, two of the principal ones being still clearly recognisable from the parts into which it divides visually. Secondly, on the north side of the mill there are arched braces between the main posts and the top plate. This pattern is, or was, continuous down the north side of the mill, and examination of the frame suggests that there was no studwork infill between the posts and braces. In particular, in the third bay from the west end, where the timbers are relatively unaltered and the existing studwork was never carried up to the soffit of the plate, there is no evidence of fixings beneath the plate or in the sides of the posts. In the westernmost bay, there are dowel holes in the soffit of the plate, the function of which is unclear.

Phase 1

Thus as originally constructed the building was single storey of six bays, and apparently with an open arcade facing the river (Fig. 2). It was made of a mixture of softwood and reused oak timber. All the large timbers, notably the main posts, principal rafters, ties and plates, are pine, some pieces having export marks. The top plates were made in two pieces on each side of the building, each measuring about 10m long and joined with a face-halved scarf. Between the posts and tie-beams there are hanging knees which are mortised into the posts. In general, the carpentry is of good quality. The studs are mortised, although not pegged. The original roof survives in the western half of the building. It is a butt (or tenoned) purlin roof, with wind braces which, like primary braces and studs, interrupt the rafters. There was no ridge piece, though one has now been introduced for much of its length. The joists are mortised and tenoned into the tie-beams, so there was always an attic storey, though one that was not well lit as the dormer window on the north side belongs to a later phase. There is no evidence of an internal stair in the western half of the building, or of original doorways. Unfortunately, the later remodelling has modified the original frame of the eastern gable end.

Phase 2

The eastern three bays were raised in height, the roof being removed and posts erected on the ends of the tie-beams. The old attic floor remained in position as the first floor. Since it is unlikely that building work on this scale would have been carried out just to achieve more headroom at the first floor, it can be assumed that there was an attic storey providing an extra storey in the top of the building. The roof was built with a ridge piece and the purlins supported by struts, leaving plenty of unimpeded space at this level.

The evidence for this phase is very clear. It consists of the ends of the tie-beams left trapped in the side walls when the floor was later cut out and raised in height. Had the building been raised in height and the floor level not remained the same, the tie-beams would have

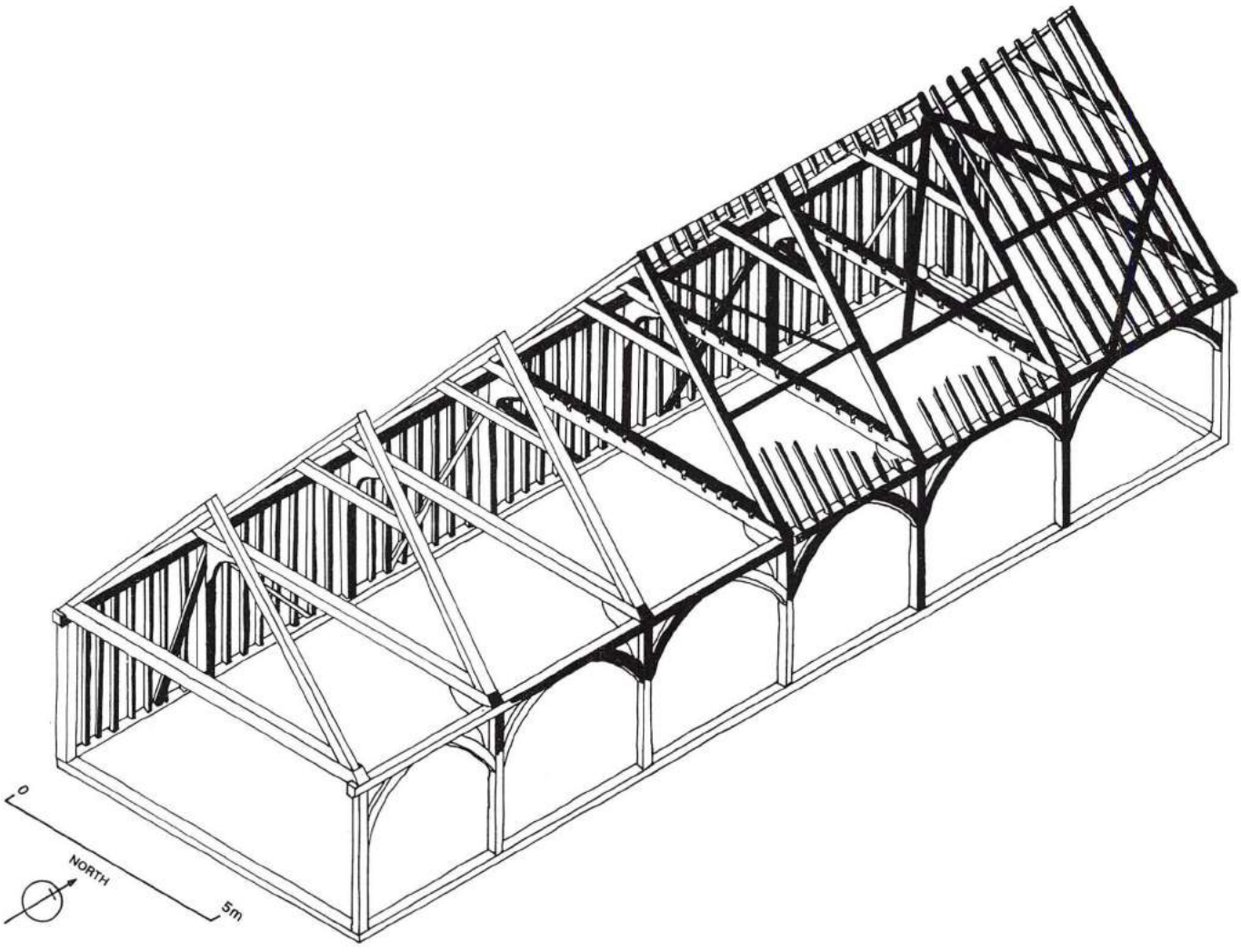

Fig. 2 Phase 1 of the mill, as it was originally built. Surviving original timbers are shaded.

been totally removed and the new posts would have been inserted above the old top plate.

Again, this phase was constructed in a mixture of pine, used for the main structural members, and reused oak for floor and wall framing, the latter being primary-braced with mortised studs. The joints between plates, posts and tie-beams were all routinely strengthened with wrought-iron straps. The provision of extra height and capacity at the eastern end of the building presumably indicates that it was functioning as a corn mill. In the absence of a clearly defined stone floor, it is possible that there were millstones mounted on a hurst frame as at the former Boxted Mill, Suffolk.

Phase 3

The front half of the building was remodelled: the first floor was raised by about 700mm, the new joists being supported by hanging knees bolted to the posts. This made it possible to insert a new first floor about 1m below the original top plate of the phase 1 building (Fig. 3). The later phases of the building were complex and were not systematically analysed, but it is probable that this remodelling included, or was closely followed by:

1. reconstruction of the top floor in the roof on two levels with a central raised walkway below and to either side of which are corn bins. The walkway is served by a lucam for raising sacks on the eastern front of the mill. That the lucam is an addition to the phase 2 building is evident because its construction involved cutting through the former collar in the gable of the mill.

2. The wheel pit in the rear (or western) bay of this enlarged half of the building is enclosed by walls in 19th-century brick. Whether the wheel pit was in this position before this phase is uncertain (see discussion below).

3. The outshot or extension attached to the front two bays on the north side of the building is demonstrably a later modification of the phase 3 remodelling, as in the end bay it included a raising of the phase 1 top plate to provide increased head room at the new first floor level.

4. In the old single-storey western half of the building, a dormer window was formed in the roof, and its rear or westernmost wall was rebuilt in 19th-century brick with a small outshot on the north side.

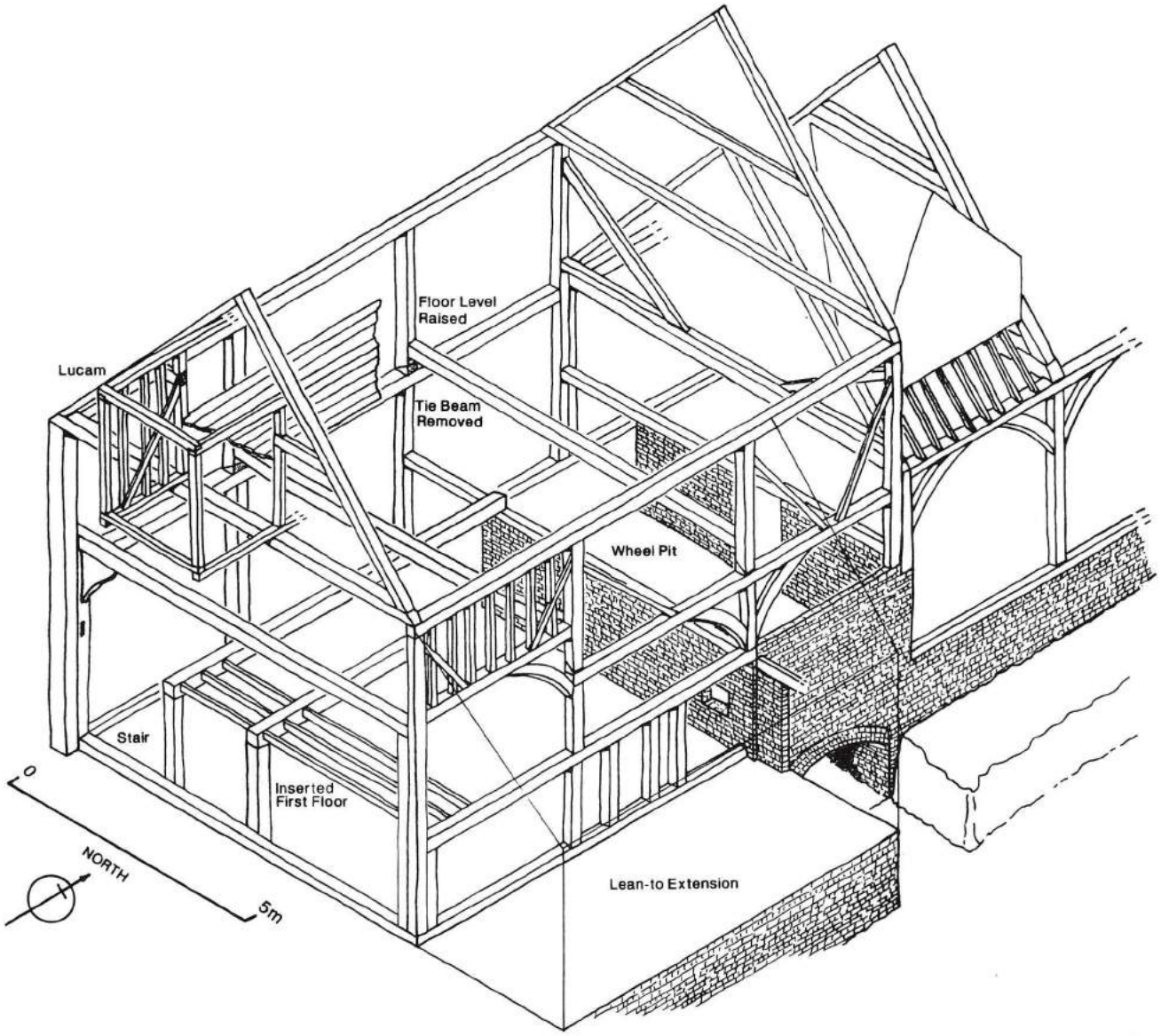

Fig. 3 The eastern half of the mill as remodelled in phase 3.

The Water Wheel and Machinery

Little remains of the working gear of Bocking Mill, most of it having been stripped out when the power-driven feed milling machinery was installed.

The remaining fragment of the water wheel shows it to have been approximately 16 feet in diameter by a little less than 9 feet wide. There were three sets of cast-iron frames carrying approximately 50 sets of wooden starts and paddles. The capacity of each of these was about 6 1/4 cubic feet of water. The wheel was breast shot, the water being delivered a few feet below axle height.

The wheel was situated in a brick-lined chamber with curved brick breast-work fitting tightly to the wheel. The upper part of the breast was formed by a curved cast-iron plate behind which the wooden gate slid down to admit water to the wheel. There was a fixed wooden upper gate, and a sliding bottom gate which was lowered by racks and pinions to control the flow to the wheel. The gate control gear was missing, and nothing remained of the water-wheel shaft. A wooden boarded apron continued out from the brick floor of the wheel chamber to prevent erosion of the mill's foundations.

All the machinery and millstones were missing from the mill and the chamber for the pit wheel had been filled in. The millstones had been on the first floor, which was very low, and suggested that the mill might have been overdriven, i.e., with the great spur wheel above the millstones rather than under them, as at Stisted. One relic of the machinery remained in an outbuilding - a wooden pattern for casting an iron shaft, which appeared to have been the upright shaft. Unfortunately, this pattern, which was in very poor condition, was destroyed during the conversion. If examined closely, it might have revealed whether the mill had been overdriven or not.

Discussion

An assessment of the building may begin with the question of its date. The first phase had a butt purlin roof, a type current in Essex from the 16th to the 18th

century. It also incorporated substantial softwood timbers which are unlikely to have been used before the 18th century. The second phase may have followed fairly swiftly on the first. The third can be assigned to the 19th century on the evidence of the brickwork, assuming that to be integral to it.

For such a modern building the first-phase structure is strangely unfamiliar. It is not recognisably a corn mill. It lacked the height necessary for moving grain through the building as it is processed. Furthermore, it cannot be said whether it had a water wheel or not. The existing wheel pit had been entirely rebuilt in modern brickwork and concrete. The floor in the rear half of the building was suspended, but for the residential conversion the sub-floor void was infilled. It looked as if there was a former wheelpit in the westernmost bay, and this observation is confirmed by other evidence. The top of an archway can just be seen in the side of the foundations of the mill at this point, implying that there was a wheel race here. In addition, maps of 1803 and 1838-39 (ERO D/DO P2 and D/CT39) indicate that the mill channel at that time served a wheel located at the west end of the building. It may also be significant that this bay is slightly wider than the others.

Several possible interpretations of this original building come to mind. The most probable is that it was a fulling mill servicing the Bocking textile industry. A fulling mill did not need to be high. One forms the subject of the title illustration of Chapman and Andre's map of Essex of 1777: it is a modest single-storey timber-framed building. What may be a dormer suggests the existence of an attic storey. On the river bank men are washing and drying cloths (Fig. 4).

Fig. 4 The fulling mill represented on the title page of Chapman and Andre's 1777 map of Essex

It unclear whether an open side was a typical feature of a fulling mill, though this might have lent itself to drying cloths. This feature has prompted other suggestions, that the building could have been a warehouse located on what was a main north-south road and also on the Blackwater river, or that it might have been a spinning or weaving gallery, the open side providing an even north light. The open side also bears some resemblance to another Bocking building, Hill Malting in Church Lane, which had a similarly built side, though in this case there seems to have been an outshot beyond the arcade (Andrews 1998).

By raising the eastern part of it in height, the phase 2 alterations created the potential for accommodating the processes associated with grinding corn. The wheel pit must have been moved to its present position at this time. On this assumption, the map evidence can be used to put this phase to some time between the 1838-39 tithe map and the1875 1st edition O.S. survey, which is the first map to show the wheel pit where it is today. By phase 3, the building was evidently a fully developed corn mill. Aspects of its design were, however, not entirely perfect: in particular, headroom at the ground floor was uncomfortably low, as is also found at Stisted mill in the adjoining parish.

On Chapman and Andre's map of Essex of 1777, the building is not indicated as a mill, even though most mills are scrupulously annotated as such and indeed are identified as being of a particular type. This is presumably an omission rather than evidence that it was not a fulling mill. Nockold's 1803 map of Bocking (ERO D/DO P2) also does not identify it as a mill, the buildings being simply referred to as a house with an associated ash ground to the north-west. However, since the river is shown as being channelled through it, there can be no doubt that it was in fact a mill. The outshot at the eastern end is represented, suggesting that it may already have been adapted substantially to the form in which it appears today. It was occupied by a Mr. Mead, whose name occurs in the Parish Rate Book of 1765-1804 from 1801, sometimes being listed as having a mill and a house (ERO D/P 268/11/3). In the register accompanying the map, his name has been crossed out and 'Mr. Green' written in pencil. The Post Office Directory for 1855 lists 'Green Pattich and Robert Rutland, millers, Bocking Mill.' Benham (1976, 59) says the Green family owned it from 1832-88, and that in 1836 it had three floors, four pairs of stones and a six-foot fall. If correct, this implies that the conclusion drawn from the intepretation of the map evidence is erroneous, and that the phase 2 alterations had been carried out before the 1838-39 tithe map.

There is circumstantial evidence that the building was a fulling mill. A survey made in 1793 of the inhabitants of Bocking refers to the bridge as 'Fullen Mill Bridge' (ERO D/P 268/18/2). The house over the road which now belongs to the Franciscan Convent also used to be known as Fulling Mill House. It belonged to the Nottidge family who were prominent in the local textile industry, and it would be natural to conclude that they were the builders of the original fulling mill.

The Miller's House

This is most distinctive today for the vine pattern in pargetting that climbs over its southern flank, and the more formal pargetting patterns of its other elevations. This is of no great antiquity, as it is executed in a cement render on expanded metal lath. A wooden bead at the corners suggests that the render replaced weatherboarding. The walls are brought up to a parapet on the roadside elevation. Inside, the house has spacious rooms and hall and landing, with depressed arches formed in joinery, all Regency in style and typical of the first half of the 19th century. But as the walls suggest, and as the partial stripping out of the frame revealed, this is in fact a casing and remodelling of a somewhat earlier building. This had a gambrel roof. Its entrance was located, as today, centrally, but there was no evidence of a central stack or lobby-entrance arrangement. Either side of the entrance is a large room. That on the left-hand (south) side has a chimney stack in its back wall with brickwork that looks 18th century in character. The right-hand room has a chimney on its end (or north) wall which is built of 19th-century brickwork. In the ceilings of these rooms the longitudinal spine beams were originally exposed: as part of the 19th-century remodelling, they have been concealed by packing out the common joists to the same depth as the main beams. To the rear of the left-hand or southern room, there is a range which was probably original but is now almost entirely rebuilt in 19th-century brickwork.

At first-floor level, where plaster had been removed, a storey post, top plate, studs and a curved brace indicated that here, and apparently here alone, was encapsulated the scanty remains of a 15th-century building that had occupied the site. A dovetail joint on the top of the top plate for a tie-beam indicates that this structure was at right angles to the street, and thus a cross-wing. This is a significant discovery, suggesting that there was fairly continuous occupation at this end of Bradford Street as far as the river.

Acknowledgements

We are grateful to Anne Holden, Dave Stenning and Pat Ryan for their thoughts on this building, and to Barry Crouch for assistance on the preparation of the drawings.

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Cressing, Hawbush Green, Bakery Cottage

D. D. Andrews and P. Ryan

On the east side of the road junction at Hawbush Green there are two cottages which, with the exception of the moated Hawbush Farm, must be the oldest buildings in the hamlet. Of Bakery Cottage, the statutory listed building description says it is 18th century or earlier, but the surveyor was unable to inspect the interior. Until relatively recently this was the village bakery. In 1998 the building was lovingly refurbished with internal wattle

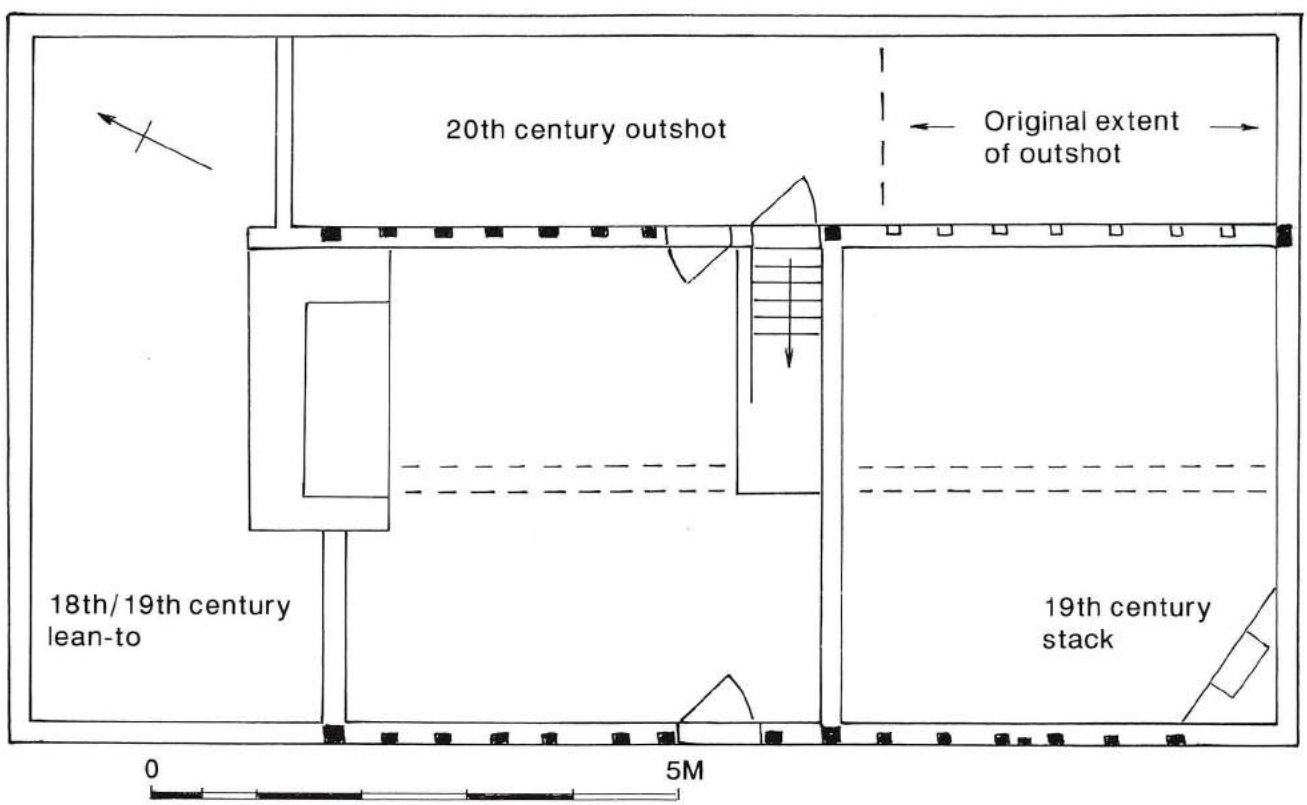

Fig. 5 Cressing, Bakery Cottage, ground plan.

and daub and external lath and plaster, work which provided an opportunity to examine the fabric in detail.

The cottage is aligned approximately north-south and is of two bays with a lean-to half bay to the north and a modern outshot to the rear. The two full bays measure 4.14-4.52m, and the cottage (without the outshot) is 4.50m wide (Fig. 5). In the northern partition wall there is a chimney stack. The entrance door is approximately in the middle of the two full bays, and opposite it a stair rises to the first floor. This floor is at about 800mm below the top plate and the joists rest on clamps pegged to the studs of the side walls which lack a mid rail. The side walls are built with primary bracing. The studs are mostly 70-120mm wide and are pegged to the top plate. The timbers are all oak and of quite good quality, though many if not most of them are reused, some being charred and probably coming from an open hall. The floor joists, which have soffit tenons with diminished haunches, are reused timbers sawn in half and measure 50-70mm wide by 100mm deep. The storey posts do not have jowls and like the tie-beams are not reused. The roof could not be examined in detail, but is of clasped purlin construction and is not smoke-blackened. It has a ridge piece, a later addition perhaps dating from the time when it was thatched. (It has not been possible to assess whether the building was originally thatched). The infill between the studs consists of daub on hazel rods. This seems original, and observation suggests it was inserted after the external lath and plaster had been applied.

Crucial to an assessment of the evolution of the building are the two tie-beams at the northern and the southern ends of the two full trusses (Fig. 6). (The central tie-beam is obscured and cannot be properly examined). The northern tie has no mortices in its soffit or peg holes, except for those for the two shallow curved braces. The existing studs are all nailed and fitted round the braces. The southern tie-beam also lacks mortices in its soffit, apart from two which are in the right position to have housed braces like those in its northern counterpart. In other words, it looks as if these were open trusses of a building which was originally longer than it is today. Face-halved scarf joints in the top plate indicate that the two full bays are contemporary.

The carpentry features, i.e., the scarf joints, primary bracing, roof, and the reused timber, all indicate a 17th-century date, and may be compared to other buildings in the parish that were built in the 1620s and 1630s (cf. Ryan *et al.* 1997). At the base of the plinth walls were found small Tudor-type bricks measuring 100-110 x 50-55mm and probably of 17th-century type. It was noted that these occurred in the northern lean-to, implying, like the open truss, that the building continued further in this direction. The open trusses do not fit readily with house types of this period. Instead they suggest that the building was originally a small barn or had an agricultural function, only later being adapted as a dwelling.

The clamped construction of the floor is consistent with it being an insertion, and indeed on the east side the clamps seem to have been cut into the studs. The spine beams have chamfers with plain step stops. Both the full bays were provided with a floor at the same time as the spine beam is a continuous member with an edge-halved scarf occurring at the central truss. The chamfer stop at the north end is obscured by the brickwork of the chimney stack which supports it. The original brickwork of the stack (as opposed to the extensive fletton rebuild) is probably 18th century, perhaps of the later part of the century, and it therefore supplies a *terminus ante quem* for the floor. That there was an earlier stack, contemporary no doubt with the floor, is indicated by a deep chamfer in the middle, and on the north side, of the tie-beam, apparently cut to accommodate the top of a stack where it passed upwards into the roof. This chamfer does not fit the existing stack, and is partially filled with the daub which was used to plaster the 18th-century brickwork. To summarise, it seems that the building was converted to a dwelling in the late 17th or early 18th century, when the floor and a chimney, in the same position as the present one, were first inserted.

It is conceivable that the cottage was originally a lobby-entry house, but no evidence has been detected for earlier positions for doorways. Without knowing how many missing bays there are, it is dangerous to speculate and safer to assume that its existing lay-out is original to the conversion. Two softwood joists in the south-east corner indicate that there was once a stair in that position, but whether that dated from the time of the conversion, or was put in later when it was divided into two dwellings, is uncertain. At some time the tie-beam of the central truss has been cut to create access between the two upstairs rooms, something which would not have been necessary had there been two stairs and were it two cottages. The bedrooms each have dormer windows. It can be seen that the northern one is not original to the building, the rafter having been cut. They are probably original to the residential conversion. At the rear of the building, the daub covering the southern 7m or so has never been limewashed, indicating that there was an extension here which can be seen on old maps and which must also have been original to the residential conversion.

At the south-east corner of the cottage there is a chimney set diagonally built of bricks with horizontal pressure marks and frogs, indicative of a date in the second half of the 19th century. This was probably inserted when it was divided into two cottages. In this century, the Collins family ran a bakery from the cottage for about 50 years, one of two such businesses in the village. They turned it back into a single dwelling, building the existing rear outshot running the full length of the house, and the detached bakery to the back which bears the initials 'A.C.' and the date 1938. Both are in fletton brick. The bakery still houses a 'Popular' steam

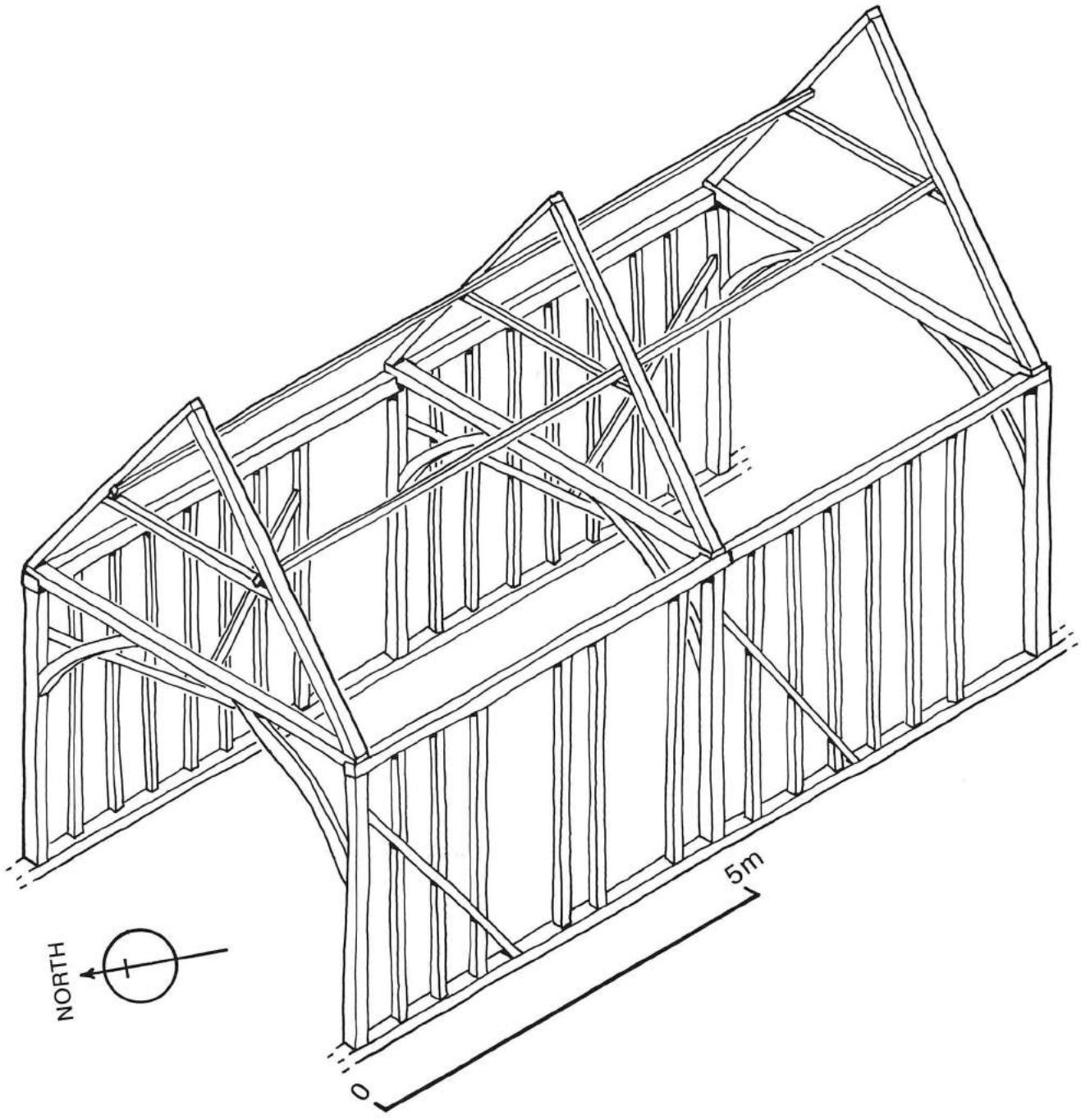

Fig. 6 Cressing, Bakery Cottage: isometric drawing of the surviving original elements in the frame of the building, apparently a barn, later converted to a dwelling.

oven made by Collins of Bristol. Arthur Collins, baker, is listed in the 1929 Kelly's Directory, but absent from the 1926 one. He also added a small shop to the front (removed in the recent restoration), though the distribution side of the bakery was more dependent on deliveries than the shop. His son, Norman Lambert, continued the business into the 1980s.

With the Tithe Map as a starting point, it is possible to trace the history of the cottage through the manorial records back to the 17th century. In 1634, John Dynes, pailmaker [possibly palemaker], left his customary tenement, parcel of Petwyns, and two acres of land, the part of Great Stockes Croft nearest to the house, to his son Jeremy. His son John was to have the two acres of Great Stockes Croft which lay next to Great Church Field (ERO D/ACW 12/89). By 1656 Jeremy owned the whole property. He left it to his wife, Mary, for her life, and then it was to be divided between their three sons. Francis was to have the house and orchard, Jeremy the croft next to the house, and John the further croft next to Church Field (ERO D/ACW 16/105).

The property belonged to the Dynes family until the early 18th century when Francis mortgaged the 'messuage, barn and four acres of land' to Sara Punt in 1715. As he did not repay the loan it became hers on his death in 1719. Samuel Punt, probably her son, was the

owner in 1780 (ERO D/DU 191/67). In 1842, James Josselyn, the husband of Sarah Watkinson Stevenson, was listed in the Tithe Award of 1842 as the owner of what is now Bakery Cottage, which was described as a cottage and garden containing 1 rood 13 perches, and also of Carpenters Field (the former Great Stockes Croft) containing 5 acres 2 roods and 21 perches. Jonas Lait, the tenant in 1842, still occupied the cottage in 1851, when in the Census return he was described as a labourer.

Although the history of the property is fairly clear, as is not unusual the stories indicated by the building and the documents do not quite come together. Thus it is not evident how or when the barn became a dwelling. It may be that this happened when the property was subdivided amongst the Dynes family, or perhaps more probably after it passed to Sara Punt in 1715.

The cottage is of interest for the following reasons:

1) it is the third 17th-century agricultural building converted to a residence found in the parish. (The others are the Cressing Temple farmhouse, part of which was probably a granary, and Hungry Hall, which began life as a building probably used by the warrener on the Cressing Temple estate, cf. Ryan *et al.* 1997).

2) field barns and small agricultural buildings are unusual survivals in Essex.

3) the residential conversion implies population increase and the growth of the hamlet at Hawbush Green.

4) the modern baker's ovens, which are probably quite rare survivals.

The question of which property the barn belonged to is not clear from the documents. It was probably linked to the adjacent Appletree Farm Cottage which the listed

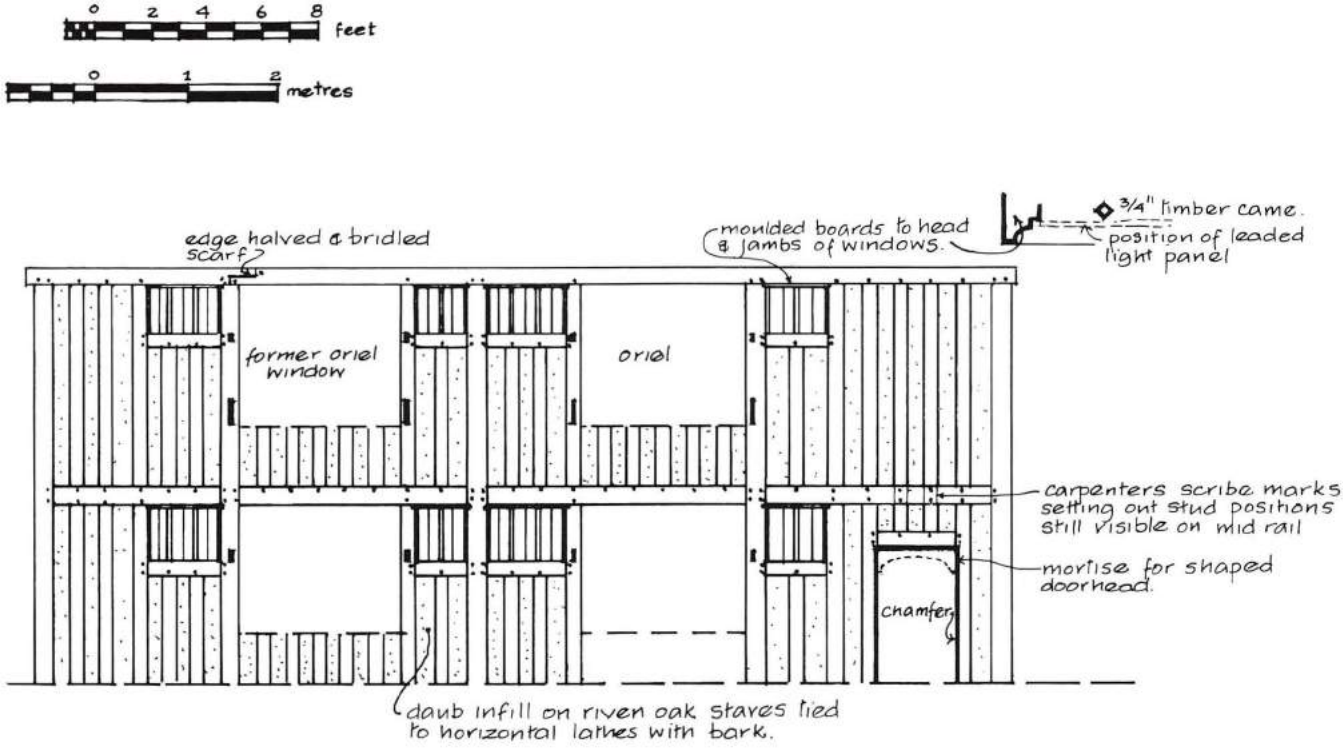

Fig. 7 Great Maplestead, Luckinghouse Farmhouse, north-west elevation

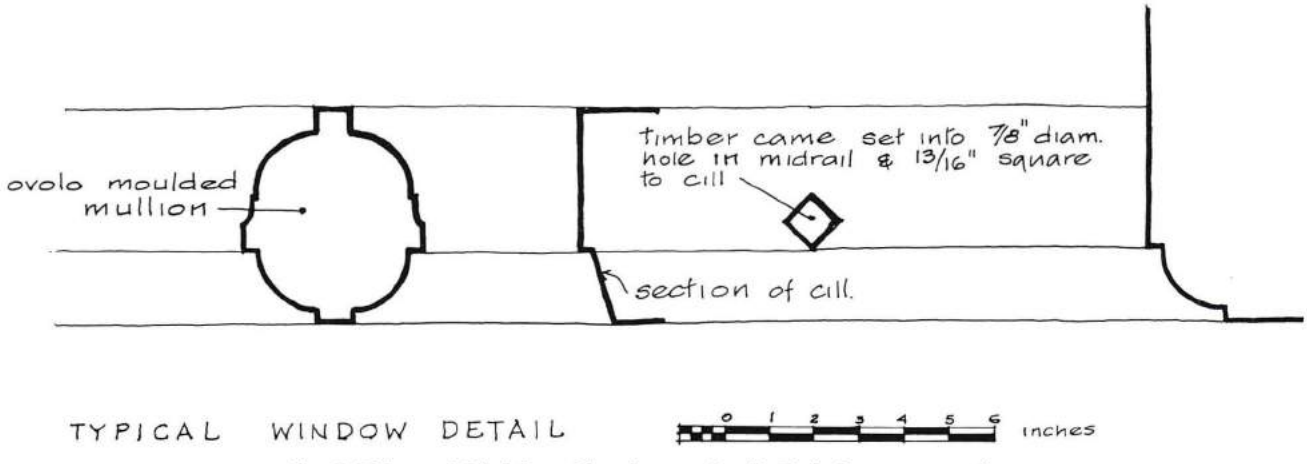

Fig. 8 Fairstead, Littlebury Farmhouse, detail of window construction

building description says dates from *c.*1500 and which may have been part of an old holding called Petwyns.

Acknowledgements

We are grateful to Ray Dodd, the restorer of Bakery Cottage, and Roy Martin for information incorporated in this paper.

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Great Maplestead, Lucking House Farmhouse, Lucking Street (TL 811 344)

by Brenda Watkin

The farmhouse lies to the south east of the church which is positioned on the edge of a spur of high ground, a common occurrence in Essex. This relationship makes the north-west elevation of the building very prominent when viewed from the church. The statutory list description of any building is mainly a tool that helps to identify the building rather than describe its every feature. The opportunity was therefore taken to record the north-west elevation whilst the render was being stripped prior to it being re-rendered.

The house is of multi-phase development, and the northern wing is of close-studded construction with the width of the infill between the studs being nearly the same as the width of the studs themselves. The daub infill was applied to riven oak staves which shows a ready supply of good oak or sufficient funds to avoid the use of cheaper and less durable hazel or elm rods. Close spacing of the studs is an attempt to show the amount of timber that the owner could afford and this display of wealth was also evident in the number of windows provided. On the elevation to the church, four oriel windows, two to the ground floor and two to the first floor, were each flanked by two frieze lights (Fig. 7). All of these were glazed and would have created a sparkling display when the sun picked out the individual glass quarries, cut from the flat spun circle of crown glass and individually held by lead cames to make a panel. However, despite the attempt to impress with the amount of glass and timber, the carpenter has chosen to detail the frieze windows with inset moulded window boards to the heads and jambs. This is instead of the more expensive option of moulding the sides of the storey posts and studs and the underside of the wall plate or mid rail. A good example of this detailing occurs in Littlebury Farmhouse, Fairstead, a 17th-century two-storey house (Fig. 8).

William Harrison, rector of Radwinter, writing in 1587, described the change from the use of lattice in windows "Of old time our country houses instead of glass did use much lattice, and that made of either wicker or fine rifts (strips) of oak in checkerwise. Likewise the demise of horn, "because glass is come to be so plentiful and within a very little so good cheap, if not better than the other" (Edelen 1994, 197). In contrast to the earlier low medieval range, the impact of the newly built parlour wing with its array of oriel and frieze windows must have made a great impression when viewed from the church.

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The Blue Boar Hotel, Silver Street, Maldon

by D.F. Stenning, D. D. Andrews and P. Ryan

Introduction

The Blue Boar Hotel is a substantial early 19th-century building in the heart of the historic town. Within the building are various medieval fragments that have been modified and adapted to fit a coaching-inn function. The oldest part of the Blue Boar is the southern or left-hand range, a cross-wing at right angles to Silver Street separated from the main part of the hotel by a carriage arch (Fig. 9). This wing is of two builds, the front being the older, of the late 14th or early 15th century to judge from the ogee door heads, and the rear the later, datable to the 16th century, with a cross quadrate crown-post roof.

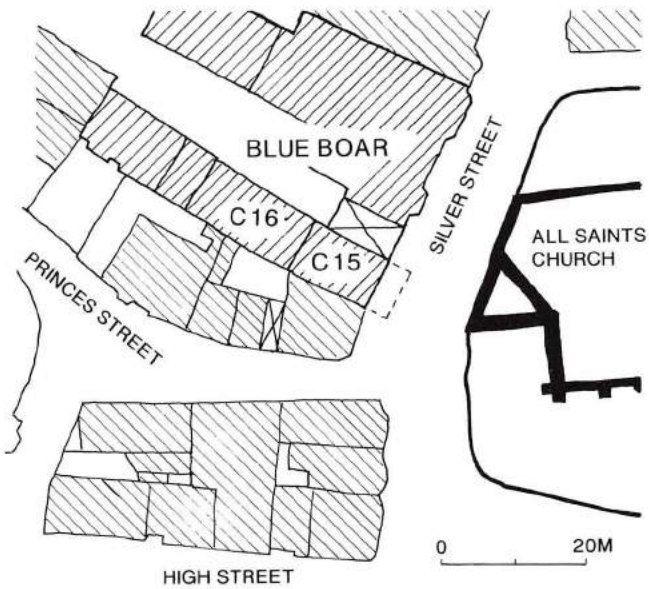

Fig. 9 Sketch map of the west end of Maldon High Street, showing the distinctive curving street pattern and the location of the Blue Boar. An extra 10 foot bay projecting into the street has been indicated by dashed lines.

The late medieval part of the complex, which forms the subject of this paper, is of relatively substantial timber-framing, comprising three fairly equal bays which were originally two storeys in height. The early 19th-century alterations involved truncation of its front, removal of the roof and upper part of the two eastern bays, and the raising and relocation of the flooring in these two bays. It seems improbable that there were

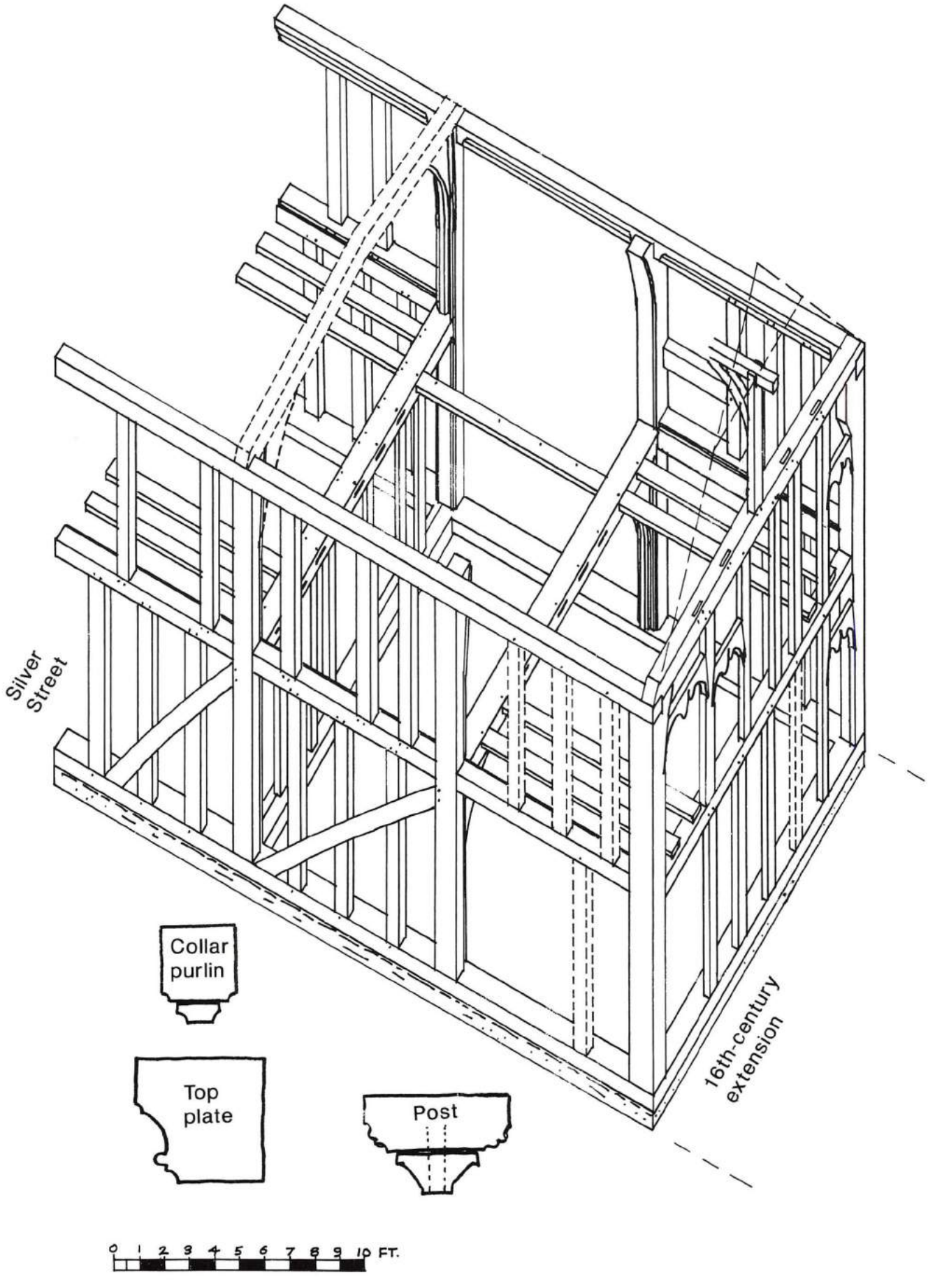

Fig. 10 The Blue Boar, Maldon, timber frame of the late medieval three-bay cross-wing on the Silver Street frontage

further bays to the east as they would have projected unacceptably into Silver Street (see below for further discussion of this point). However, it is curious that the existing brace in the frontage bay is housed across two studs as opposed to three, a complication in the framing pattern which suggests that the front of the building may not be entirely predictable. Probably in the 1540s, a long timber-framed range, was added to the rear, jettied along its internal face. It appears that this was intended to provide a purpose-built accommodation for the inn and involved some adaptation of the pre-existing structure.

The late medieval range

Recent repair works to the three-bay frontage structure provided a new opportunity to examine and record the surviving fabric (Fig. 10). The accommodation provided would seem to have comprised one three-bay chamber on the upper floor. On the ground floor, there was a single-bay chamber and a two-bay chamber to the rear. The partition between them took an unusual form; the evidence of the mortices in its soffit indicates that there was a central door flanked by joggled or staggered studs. Such a stud arrangement is, as far as is known, unique in this part of Essex. Partitions of a somewhat analogous character have, however, been noted in western Essex and elsewhere.

The 19th-century raising of the floor level has had the effect that the exact relationship, between joists and side girts is difficult to establish. However, the balance of the evidence would suggest that the missing front elevation was not jettied.

As has been stated, the four easternmost main posts have been truncated at varying heights above the original side-girt level. However, within the main early 19th-century hotel block to the north are a pair of reused tie-beams and part of a post and brace. The mouldings and detailed treatment of these relocated members are a possible match for our missing structure. Unfortunately, both have been shortened and so confirmation by measuring is not possible.

Happily, the western bay, survives substantially complete. This includes a crown post with longitudinal brace and both moulded top plates. The presence of a much eroded cill at first-floor level on the southern flank represents the only surviving evidence for a window, but the possibility of a further window, immediately below it, should not be ruled out.

A later fireplace chimney stack now occupies the entire central bay of the southern flank. This is now well embedded in the adjoining 19th-century building and is thus impossible to examine. It is noticeable that there is one less floor joist in this bay and that the joist nearest the stack has pegs near its outer edge. It is possible that these were connected with support for a first-floor hearth. The framing of the western bay differs in that the studs are smaller and are only single pegged. This must be significant and might be suggestive of an external staircase or some other adjoining structure that would have obscured them from view.

It is the rear western wall of this building that is its most distinctive feature. It has features which remain perplexing despite many years acquaintance with the building. In it are a series of ogee 'door' heads set at various heights in a unique manner. The drawing (Fig. 10) represents a reconstruction based on the evidence of peg positions, as there has been a certain amount of rearrangement. The ogee heads that remain, and there may have been more, have flat chamfers on their inner faces that carry on down their jambs. The opening on the first floor, second in from the north, is rebated for some form of internal shutter. Its outer face is marked out for a further flat chamfer that was evidently not carried out. The purpose of these features remains an intriguing mystery. There is now no evidence for weathering on the external face of this wall, which suggests that it was originally a partition. The lack of a brace on this side of the crown post seems to preclude any major shortening of the building. Possibly it was built up against a pre-existing building, such as an open hall, that had been truncated at this end. It remains unproven as to whether the ogee-headed features, with one exception, were intended to be open or were merely decorative panels. The presence of the flat chamfers, now disappearing into plasterwork, would favour the former option.

An unusual feature of the carpentry, virtually unknown in the county, is the double-pegging of some of the studs and joists. This may be explained partly by the large scantling of the timbers, but this is clearly not all of the story. Only the front-bay floor joists are double-pegged, despite the fact that all of the joists are similar in size. Sufficient remains of the wall panels to reveal the relative massiveness of the wall braces and the studwork. As is often the case, the upper wall studs are closer together and slightly smaller than their ground floor equivalents. Examination of these timbers showed that many of them were half or quarter trees. Too few rings were present for tree-ring dating to be attempted.

The Swan Hotel, in Maldon's High Street, has carpentry of a similar character. Like the Blue Boar, there is a high quality of 'finish' and use of a similar palette of mouldings. However, The Swan has no ogee doorheads and the frame is all single pegged. It seems likely that the two buildings are contemporaneous and a date *c.*1400 seems likely. In lacking any evidence for a hall range at right-angles to the cross-wing, the Blue Boar is a distinctly urban building apparently designed to fit the constraints of a cramped site.

The archaeology of the late medieval range

The original sole plate of the north wall survived, though it was almost entirely renewed on the occasion of these repairs. Beneath it was the original masonry cill wall. This was made of mortared flint. Below the plate, there was a levelling course of pegtiles, and then on the external face a course of bricks laid stretcher-wise. The only one of these bricks which was examined in detail was a pink and white Flemish-type brick, which, if not reused, is another indication of a 14th-century date.

A trench was excavated along the line of the wall to underpin it. The archaeological sequence (Fig. 11) on the south side of the trench (i.e. inside the building) was as follows (from bottom up):

I. in places on the bottom of the trench, especially to the west, there was a fairly clean sandy gravel which looked like natural.

II. a layer of grey dirty silty sandy gravel, clearly derived from the above and altered by use and human occupation.

III. a dirty laminated yellowish clay about 50mm deep, of the sort typically associated with flooring in a building.

IV. a black layer, consisting mainly of charcoal, 40mm thick.

V. a dirty yellowish clay, probably two discrete layers separated by a band of charcoal and with some small fragments of brick and tile. These too looked like flooring layers.

VI. brownish hoggin, running under the cill wall but not extending to the north of it, apparently a levelling layer put down for the construction of the building.

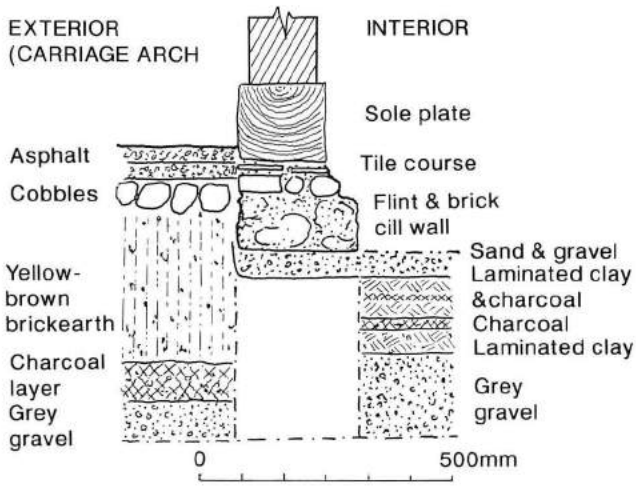

Fig. 11 Sketch of the stratigraphy below and around the sole plate of the north wall of the late medieval cross-wing on the Silver Street frontage.

Above this level, the stratigraphy in the building had been removed in the course of reflooring.

It should be noted that the sequence represented by layers III, IV, & V did not extend much to the west of the partition wall that formerly existed in the building. Beyond that point, there was a layer of dirty clay without any evident lamination. Nor was this sequence replicated in the north side of the trench, where above the gravel there was a black charcoal layer, above which was a deep layer of dirty yellow-brown brickearth beneath a cobbled surface, in turn sealed by at least two phases of modern asphalt.

There are limits to what can be inferred from small-scale observations of this sort, but some things are clear. Dirty laminated clays are typical of the flooring material found inside medieval buildings. The clays seen here were well below the level of the cill associated with the existing building. At least three clay layers were present. It is always questionable whether a sequence of such layers represent a renewing of floors or the construction of new buildings. In this case, their interruption by a well defined charcoal horizon suggests that there may have been at least two buildings. The interpretation of these deposits as indicative of structures is reinforced by their spatial extent, inasmuch as they did not extend beyond the north wall of the building. It is possible, therefore, to argue convincingly that the existing structure was preceded by one, and perhaps two or more, buildings with a similar footprint. Whether one of these buildings was destroyed by fire, as might be deduced from the charcoal layers, is another matter. Similarly, it would be stretching the evidence to claim definitively that these buildings had been erected over a marketplace represented by the dirty gravel layer. Nevertheless, this dirty gravel must indubitably have been an external surface, and the Blue Boar forms part of a block of buildings which look like market infill.

The 16th-century rear range

This structure, with its impressive long-wall jetty, has not been surveyed in detail, but its general character can be discerned. At the point where it abuts the earlier block, there is a staircase bay accessed from an exterior door. Beyond this, there are large two-bay chambers on each floor, presumably public rooms. That to the ground floor has a rear wall stack, apparently contemporary, but now much altered. The room over has a notable central crown post, seemingly old-fashioned for the supposed date. The rest of the block contains smaller rooms on each floor, but details of the original sub-division are now obscured by modern work and finishes. The courtyard elevation (Fig. 2) with its exposed frame, provides evidence for windows, both conventional and oriels, and, as expected, in this part of Essex, tension braces. The floor joists have diminished haunches to their tenons, confirming a 16th-century date. This structure would be worthy of more detailed examination, particularly in view of its presumed use as a public building.

Documentary history

In 1539/40, Master John Church paid 6d to the Maldon Borough chamberlains, the assized rent for half a year for 'the grete tenement sometyme Thomas Crosses afterwards John Richemonds and late in the Kynges hands' (ERO D/B 3/3/236). The charging of an assized rent by the Borough chamberlains may have been the result of an encroachment on the town land, possibly by the underbuilding of a jetty. This appears to be the first time an assized rent was charged on the building for it is not mentioned in any of the surviving, undamaged chamberlains' accounts for earlier years. In 1540-41, John Church paid 12d for his 'tenement sometyme Thomas Grooses and afterwardes Master Richemondes' (ERO D/B 3/3/237). Most of the other rents of this type were between one penny and sixpence per year. In 1543-44 the building is referred to as the 'tenement

somtyme Grooses tenement nowe the Blewe bore', and in 1571 as 'sometyme Grosses and now commonly called the Blewe bore' (ERO D/DB 3/3/328 and 256).

John Church was a freeman of the Borough of Maldon, and played a prominent part in the management of the town's affairs. He served as a bailiff of the Borough ten times between 1533 and 1539. He was also bailiff of the estates of Beeleigh Abbey and an agent for the earl of Oxford (Petchey 1991, 137, 260). This fact may account for his use of one of the badges of the de Vere family, the blue boar. Inasmuch as John Church had been bailiff of Beeleigh Abbey, and the tenement had recently been in the king's possession, it could be inferred that it had belonged to the Abbey.

It is uncertain precisely when the tenement became an inn, but in 1565 a payment to the Blue Boar was recorded in the chamberlain's account 'for mansmeat and horsmeat for Littlehale, the chief mason, and Symondson, the head carpenter, when they first came to Maldon to bargain for the work on Hebredge' (ERO D/B 3/3/254). After this date, there are fairly regular payments to the Blue Boar for hospitality for official visitors to the town (ERO D/B 3/3/254 *et seq.*). When Thomas Furners was admitted as a freeman of the Borough in 1572, he was described as 'innkeeper of the Blue Boar' (ERO D/B 3/3/257). It may be that this use dates back to John Church's time and that he was responsible for building the presumed lodgings range at the back, perhaps in the 1540s. Such a date would be consistent with its carpentry.

The Blue Boar and the development of the historic town centre

This part of Maldon is topographically of great interest and remains in need of critical assessment. The curious curving arrangement of the west end of the High Street and Silver Street suggests a former D-shaped enclosure related to the Anglo-Saxon *burh* which was located to the west of this part of the town. Whether this street pattern is indeed *burh* related, post-Conquest, or purely coincidental, remains open to question. The irregular-shaped block of land on which the Blue Boar stands, with tightly packed buildings round the Silver Street and Princes Street frontages, many of which lack ample backlands plots, looks like infill of the sort associated with market places. If the tenement indeed belonged to Beeleigh Abbey, then it is possible to speculate that it was from it that the monks conducted their business in the market place.

The Blue Boar is almost directly opposite the 13th-century tower of All Saints church. This unusal if not unique triangular tower is generally thought to have assumed this shape because of constraints of space. If so, then the archaeological deposits beneath the Blue Boar may represent the buildings that caused this to happen. If too these buildings extended no further west than the partition wall dividing the front bay of the cross-wing from the rear two bays, as the evidence suggests, then it is likely that their original footprint projected out into the street beyond the existing Blue Boar frontage. Indeed it is necessary to believe that this was so if the argument that the shape of the tower is dictated by lack of space is accepted. Assuming a projection into the street of an extra bay 10 feet long, this would leave the street itself at a not unreasonable width (Fig. 9).

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Toppesfield, The Cottage, 59 The Causeway (TL 738 369)

by Brenda Watkin

Introduction

During the later part of 1998 works were undertaken to The Cottage that resulted in the removal of modern plasterboard to the ground and first floor walls, and ceilings. This provided the opportunity to make a detailed record of the timber frame (Fig. 12). It was already known that remnants of a simple arcaded scheme of wall painting survived in the attic space. With the removal of the inserted ceiling and the later plasterboard to the walls, the extent of the painting became more apparent.

Description

The house is of two distinct builds: a two-storey hall range set parallel to the street and, not considered in this paper, a later cross-wing to the south. The hall range is built of substantial section timbers, but from elm as opposed to the more common use of oak. The two bays allow for a one-bay hall and a one-bay parlour, with the central chimney stack intruding to the parlour side. The plan form is of the lobby-entry type with the doorway defined by an additional stud adjacent to the storey post at the front and opening into the area formed in front of the stack. The stack then fills the space to the rear wall leaving no space for a stairs at the rear of the stack, unlike many plans of this type of building. No framed stair trap was present in the parlour but evidence was found for a door at ground and also at first floor on the northern gable wall suggesting an outshot or tower containing the stairs. As the house is fully rendered externally the former existence of an adjoining structure cannot be confirmed until rerendering takes place at some future date.

The floor joists are of flat section and housed into both the axial beam and the mid rail with diminished haunch soffit tenon joints, as opposed to the more commonly found method with the external joist ends being lodged onto the mid rail. This is a feature of high quality carpentry and was also found at Boblow House, Helions Bumpstead (Watkin 1997). The storey posts are jowled and have chamfers stopped at first-floor level consistent with the fact that there has always been a first floor. The end bay abutting the cross-wing has been built as an open truss showing that there was a structure extant at the southern end before the two-storey hall was built. Unusually the transverse bridging joist at the

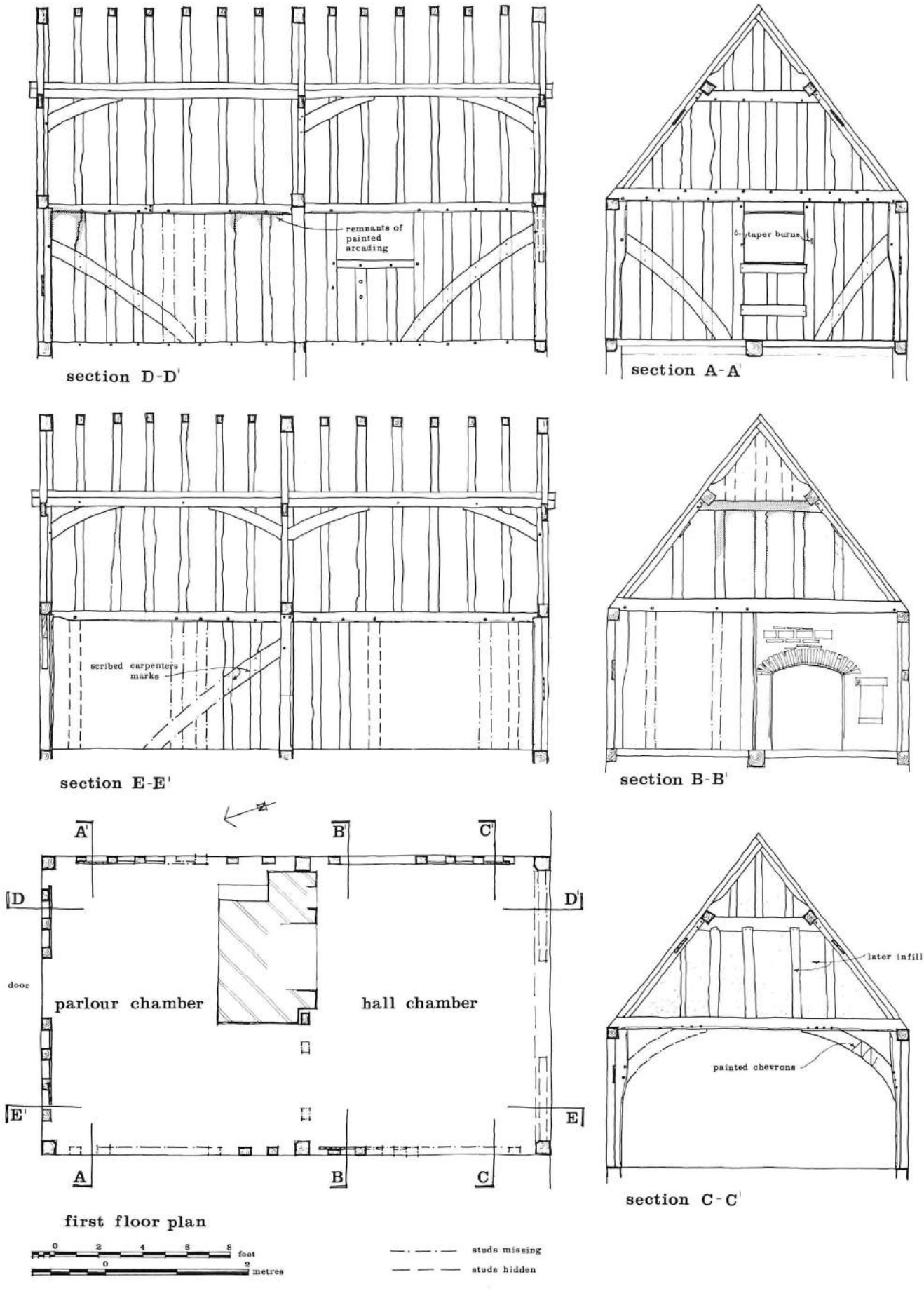

Fig. 12 Toppesfield, 59 The Causeway, plan and sections of the two-storey hall

southern end is chamfered on both sides. Was it proposed to build on another bay extension in line to the hall? However the now extant structure at the southern end is a three-bay service cross-wing of similar construction but of smaller section timbers to those of the hall range. The ground floor of the hall was enclosed by the fully studded wall of the new cross-wing whilst at first floor level the open bay of the hall was enclosed by the addition of studs with wattle and daub infill.

The brick stack has the wide cooking hearth to the hall and a small hearth with brick arch to the first floor hall chamber. No stud infill was used against the brick stack jamb on the rear wall of the house. The ground floor brickwork to the stack has been much altered whereas at first floor the arched surround to the hearth still shows signs of ruddled paint work

Tension braces of curved and straight profile are trenched internally to the studs and nailed into position. The scribed setting out marks of the carpenter are still visible on the face of the braces. These would have defined the width of the stud to allow for central fixing of the nails. A simple scarf joint is used to join the rear wall plate and takes the form of a straight three-quarter depth housed bridling with straight abutments secured by two edge pegs. This type of scarf joint, which is very common in Bedfordshire, was also found at Hosdens, Great Maplestead (Watkin 1998). Windows to the first floor were blocked by infill but mortices for diamond mullions were evident on the underside of the mid rail.

The roof is of housed side-purlin construction with the principal rafters reduced for a short length above the purlins to facilitate their placement. Wind braces are used symmetrically in each bay except at the rear, adjacent to the stack. Here the end of the purlin is housed into the stack.

At first-floor level the newly exposed studs showed signs of two distinct paint schemes. The first is a red ruddle with evidence for a more adventurous pattern on the brace of the southern open truss where black chevrons were also visible. The ruddle only appeared to be taken up to the wall plate level and no higher, with no traces recorded on the later infill of the southern open truss. The second colouring scheme consists of 'grey' arcading, the studs being painted grey with the round-headed arcading over-running the plaster at wall plate level and also at collar level above the first-floor hearth. Some roof timbers, including the common rafters, principal rafters, side purlins and collars, also showed signs of the grey paint.

The round-headed arcading represents a style of decoration that is representative of the classical detailing of the Jacobean period. The simple form, such as that found at The Cottage, Toppesfield, has also been recorded by Muriel Carrick at Springmede, The Causeway, Finchingfield, an early 17th-century house. It has also been noted at the former King's Head in Maldon (Andrews and Stenning 1996, 216). Other schemes found in Essex have been more decorative and can include capitals, and/or central pendants, such as in the former Falcon Inn in Castle Hedingham and Knights Templar Terrace in Kelvedon. The stylistic date of this second phase of painting at Toppesfield accords with that of the new 17th-century cross-wing added to the south of the two-storey hall.

Paint Analysis

The paint restoration was carried out by Miss Andrea Kirkham and I am indebted to her for the information on the pigment analysis. The first colour, the red, is a mixture of red and yellow ochre. The way that the particles are mixed suggests that this is how the oxide occurs in nature and that it is an impure red (cf. Ballantyne *et al.*1998). Where white has been used this is calcium carbonate in the form of carbonated lime rather than natural chalk. The analysis of the grey decoration has identified two schemes of painting with the black particles in the second of these schemes being large and sharp edged with significant readings for sulphur. Although it has been impossible to verify conclusively, it appears that instead of the more common use of charcoal black, crushed coal has been used. Similar results were obtained for the earlier grey paint scheme. The standard source of black pigment, carbon black, is from charcoal or soot collected from burning various organic compounds. Coal, although often noted in documentary sources, is rarely found and identified

Discussion

It is now impossible to define the original form of the house, but the lobby-entry replacement two-storey hall/parlour is of interest due to the changing schemes of decoration and the possible use of a stair tower on the flank elevation. The date of *c.*1575 for the building accords with the use of lamb's tongue stops, internal braces and flat section joists. It is built at a time when added privacy is being provided by the control of access to the upper solar. Unlike many buildings where a stair tower is built on the rear wall and access is both from the upper end of the hall and the parlour, this access is not only completely within the parlour but also means that the parlour space has to be crossed before the stairs can be reached. There was space for a rear tower to be provided but due to the small size of the parlour this would probably have had to be accessed from the hall. Was privacy the paramount reason for the unusual position?

Acknowledgements

I would like to thank Mr. and Mrs Collard for their consent to record the building, and also to Mrs Muriel Carrick and Catherine Hassall for their help in providing similar examples of wall painting and the analysis of the paint.

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Wethersfield. The Manorial Chapel At Great Codham Hall

D. D. Andrews

The chapel stands to the north of Great Codham Hall, a manorial site on the edge of the valley of the Pant or Blackwater. Morant (1768, II, 372) described it as a 'considerable Chapel, upon the green near the House,' and remarked that 'Divine service was performed in it till about the latter end of Qu. Elizabeth's reign, but it is now put to mean uses.' The late medieval topography is no longer very apparent, but examination of the site would probably reveal the usual pattern of rectilinear enclosures surrounded by wide ditches. Chapman and Andre's 1777 map of Essex certainly gives the impression of there being two such enclosures. The chapel would seem to be in the outer one, curiously distant from the hall. Their map also shows the green which survives today, though now wooded and quarried for gravel.

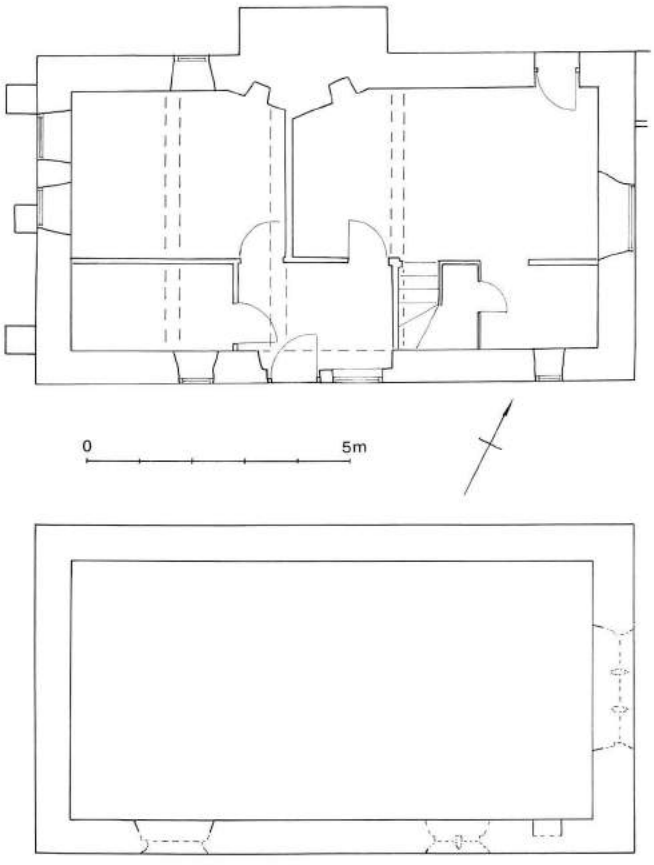

Fig. 13 Great Codham Hall, the manorial chapel: above, as it was before the 1998 refurbishment; and, below, the medieval fabric with the recognisable features reconstructed (after a plan by J. Boutwod).

The county historian somewhat exaggerated its size: it is a single cell building (Fig. 13) measuring only 11.30m by 6.25m, and standing about 10 feet to eaves height. It is built of flint rubble with dressings of oolite (mainly quoins) and clunch (mainly the windows and door). The quoins are rather small, only 5-8 inches high. The flints and field stones are relatively small (3-7 inches) and well sorted, tightly packed in an off white mortar with common small pieces of lime. The masonry includes the occasional lump of chalk, and also fragments of pegtile and brick. Both are in a sandy fabric, and the pegtiles are relatively thick. One of the latter is 11½ inches long. These factors indicate that the bricks are of the Coggeshall type, and that the pegtiles are of the earlier varieties found at Coggeshall and elsewhere. The pegtiles were used to cap putlog holes which occur at a height of about 6 feet 4 inches.

Of original features there are few, even when the building was seen after the removal of the external cement render. The blocked south door has been exposed. It is 5 feet wide with splayed jambs terminating in a rebate. Externally on the east side, there is the hint of the beginning of a simple wave moulding on this rebate. The door has a segmental head, as the eaves are too low to have accommodated a pointed arch. In the same wall, towards the eastern end, there is the western side of a window, the position of which is marked by a brick patch. The jambs are of clunch, the cill of oolite. This was at least 2 feet 6 inches high, and was of one or perhaps two lights. Inside, close to the east wall, there is a piscina in the south wall with a moulded and projecting drain. Its arched surround has been relined in brick, and has been modified to form a window. The jambs of the window in the east wall can be detected on the inside. It was 2.33m wide, and must therefore have been a large three or four-light window. There was no obvious evidence for an altar at the east end of the chapel.

Of what remains of the original fabric, there is little that is diagnostic for dating purposes. The combination of the mortar characteristics, the bricks and pegtiles, and the doorway moulding, all point to a construction date *c.*1300. It was probably built by Ralph de Coggeshale or his son John, rather than his grandson, also John, to whom the construction of the oldest part of Great Codham Hall can be attributed (Ward 1991; Watkin 1997)

The chapel was eventually converted to a dwelling, a floor being inserted and a chimneystack being added to the north side. Three original binding joists of the floor survive. They are elm, and have swept chamfer stops and narrow section common joists. One of these joists was set over the window in the south wall. This probably explains why the window has been blocked in Tudor bricks bonded with brickearth and plastered with daub. A brick patch in the east wall was similarly bonded and plastered. The base of the chimneystack is built of Tudor bricks measuring 220-230 x 105-110 x 50mm. They are regular in shape with square arrises, fairly smooth faces, and occasional diagonal pressure marks, and can be assigned to the later 17th century or early 18th century. The fireplace has a segmental arch with a wrought iron strap beneath it.

If correct in dating this conversion of the chapel to *c.*1700, it seems to have been used as a dwelling for a

relatively short period of time. Apart from Morant's reference to 'mean uses', there are numerous graffiti on the south door jambs which are 18th-century in style, including one which reads '178[ ]'. Alternatively, and perhaps more probably, it was used not as a dwelling but as a brewhouse, storeroom or some other type of service building.

The fabric of the chapel bears the scars of many subsequent repairs and alterations. The most significant of these was the insertion of a stud partition wall along the south side to accommodate an entrance hall, a staircase, a bathroom, and another room. It was at this time that the south door was blocked and a new door formed to the east of it. The blocking of the door is in 19th-century bricks, as is the extensive refacing of the west wall, and the rebuild of the brickwork of the stack from a point about 8 feet 6 inches up where it narrows in width. If the chapel had functioned previously as an outbuilding as postulated above, then it was not until the 19th century that it was converted to a cottage. This argument receives some slight support from two finds made in the course of the refurbishment, a Sudbury trade token of 1793 and William IV farthing of 1837. The top of the stack was later again rebuilt, probably in the early 20th century. The cottage ceased to be occupied some time in the 1960s.

The cottage had a brick pavior floor bedded on a layer of reddish brickearth make-up to 250-300mm deep. This was largely removed in preparation for laying a new floor. The walls have a rough foundation offset which is also evident externally. This was not a true plinth, but when rendered (and the walls would originally have been rendered) may have had the appearance of one. Beneath the floor make-up was a layer of sand and gravel which is presumably a river terrace formed by an earlier course of the river Pant. At the east end of the chapel, a grey deposit containing charcoal was recognised apparently filling a vertical sided cut. This could well have been a grave. Soft spots encountered by the builders on the south side of the chapel might represent the position of other burials. Burial rights were jealously guarded by the parish churches, but it is probable that burials were conducted at many private chapels.

In the Middle Ages, there were many private chapels, usually attached to manorial sites. For Essex, a surprising number of references can be found in the pages of Morant. Today, however, they have almost all totally disappeared. The Codham chapel is a rare and interesting survival. Another Essex example is St. Helen's chapel at Wicken Bonhunt, whilst the site of the chapel at Cressing Temple has been found by excavation.

Acknowledgement

I am grateful to Dennis and Jacquie Tabor, their architect Jim Boutwood, and their contractors, for their co-operation and assistance in the investigation of the chapel.

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Essex Archaeology and History **30** (1999), 250-257

Church Miscellany 1998

Edited by D. D. Andrews

These reports describe disoveries made at churches in the county in the course of building works and excavations. Archives with fuller information can be found in the Essex Sites and Monuments Record and Historic Buildings Record, and in the appropriate museum for the area in which the church is located. We should like to thank the incumbents, Parochial Church Councils, architects and contractors whose assistance and co-operation has facilitated this work.

Black Notley, St. Peter and St. Paul. The Chancel Roof

by D. D. Andrews

The south slope of the chancel roof was opened up to investigate its condition. It was found that behind the boarding that conceals it internally, there is a scissor-braced softwood roof properly made with pegged joints and chiselled carpenters' marks. This must date from the late 19th century, and is doubtless the replacement of a scissor-braced roof of the 13th or early 14th century. The church was restored in 1878 by Arthur Blomfield (ERO D/CF 17/5). The faculty is not very detailed, but the accompanying statement lamented that the church was 'in a very dilapidated state, the timbers of the roof being in places decayed, and the walls cracked, added to this, an unsightly gallery completely hides the west window, the seating is the old square pew, and the floor uneven.' It may be assumed that the chancel was completely renewed at this time.

The timbers of this Victorian roof were originally exposed to view, there being a ceiling of lath and plaster attached to the back of them. Counter-battens fixed to the back of the rafters had split laths (not battens) nailed to them for the fixing of the pegtiles. The laths were secured with both ordinary nails and bent or hooked nails with a flattened ends, possibly coopers' clasps. These had the advantage of hooking the laths to the counter-battens without running the risk of splitting them. At a later date, the existing boarding was put in position and the timbers disappeared from view. This was probably done after the 2nd World War when the church suffered from the effect of bomb blast, which doubtless loosened the key of the plaster ceiling.

The top of the east gable wall was found to be brick-built and faced in stone. It looks as if at least the top half of this wall was rebuilt at the same time as the roof. This is confirmed by Blomfield's plan, which shows the east and also the west walls coloured pink and therefore identified for major restoration.

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Broomfield, St. Mary. The construction of the north extension, 1996-97

by Mark Germany and Sue Tyler

The nave and part of the chancel of this church date back to the 11th century, the masonry of this period including Roman brick. The round tower is assigned to the 12th century. In the 15th century the chancel was lengthened. The church was enlarged in 1867 by Chancellor who added the north aisle. An iron spear of uncertain date was found in the churchyard in *c.*1871 (ESMR 6033). When test pits were excavated in 1993 on the north side to evaluate the site of the extension, a Saxon rim sherd was found (Fig. 1). This can be dated to the period AD 550-700 by virtue of both its fabric and distinctive form. It is from an ovoid fairly straight-sided jar with everted rim, a type found exclusively in 7th-century contexts excavated at the 5th to 8th-century Saxon settlement at Mucking, Thurrock (Hamerow 1993, 42-45). Its fabric, containing abundant organic temper, confirms a late 6th to 7th-century date.

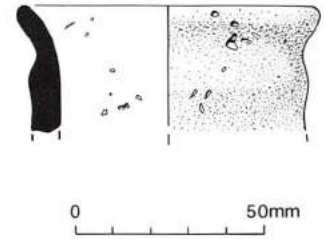

Fig. 1 Saxon rim sherd datable to the late 6th to 7th century

Seventeen foundation pits, 1.5m wide and up to 2m deep, and over 120m of beam trench up to 0.6m wide and 0.6m deep, were dug for the foundations of the extension which was built in 1996-97 to a design by Tim Venn. The burials and vaults disturbed were briefly recorded. All disturbed bones and coffin fittings were either re-interred in a specially dug pit, or put back in

the vaults. Fourteen gravestones and monuments located within the footprint of the building were recorded and re-erected in the western part of the churchyard.

Shallow east-west graves, less than 1.2m deep, were seen in the sections of most footings. Very few of these contained pieces of bone and most were difficult to detect. None were planned. Six burials at a greater depth of about 1.8m were disturbed by the three footings at the north-west corner of the new extension. From west to east, these were a small brick vault containing a coffin with a trapezoid brass breast plate to Jane Edwards (obit 1851), whose husband was rector for 46 years; a grave with two coffins stacked on top of each other, shield shaped breast plates indicating that they belonged to Elizabeth Spurgin (obit 1896) and her son George Cannons Spurgin (obit 1928); and another small brick vault which was not investigated as it was only clipped by the machine trench but which probably belonged to Joseph Holmes Porter (obit 1807) and his wife Elizabeth (obit 1822).

No residual finds of any antiquity were noted in the course of the works, and the spear and Saxon rim sherd remain tantalising clues as to the antiquity of the site. The pattern of burial is consistent with observations elsewhere which indicate that Victorian burials are generally deeper than earlier ones. The shallower graves lacked any dating evidence but probably represent a phase of medieval burial on the north side of the church.

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Great Maplestead St. Giles. Observations on the 1997 repairs

by D.D. Andrews

St. Giles comprises a 12th-century tower and apse, a 13th-century chancel, a 14th-century south aisle and transept, and a 19th-century north aisle, transept and vestry (RCHM 1916, 129). The church was restored by William White in 1888. In 1997, the masonry of the medieval parts was repaired and a dry area excavated round the north side of the church.

The apse is built of coursed flintwork bonded in a pale brownish silty mortar with large chalk lumps. The mortar is in good condition, probably because of the high lime content. Lifts are evident at 6-9 inches. A few bricks are present: it is uncertain whether these are of Coggeshall-type or Roman. The roof is built off lengths of wall plate disposed round the curve of the apse. Below this plate can be seen the ends of the sole plates of an earlier phase of roof.

The Victorian grey ash pointing in the tower was removed. The masonry consists of fairly tightly packed flintwork in a pale cream-coloured silty mortar of quite good quality which contains only small pieces of chalk in contrast with the mortar in the apse. Some lifts are evident. A few bricks 35mm thick occur; again, it is difficult to say whether they are Coggeshall or Roman. The large lancet in the west wall of the tower has had its surround remade with bricks, including paviors.

The RCHM (Essex 1916, 129) believed that the south transept is later than the aisle, and that it was extended in the 17th century to accommodate the remarkable Deane monuments. Removal of render from the south transept did not reveal any clear evidence in the fairly tightly packed medieval flintwork of the east wall for a junction between a pre-existing aisle and a transept added later. The south end of this wall has been rebuilt or refaced with 19th-century brick, and it is possible that this might conceal a 17th-century extension. The south wall is very patched, but a repair in flint with levelling courses of what looked like large Tudor bricks (240 x 115 x 65mm) beneath the window in this wall implies it is medieval, and that therefore the transept has not been extended. Two stages of putlog holes were evident either side of this window. 19th-century mortar round the west side of it is associated with the renewal of its stonework, whilst to the east of it there is a patch of 19th-century brickwork like that at the south end of the east wall. The west wall of the transept has been refaced in the 19th century with flintwork with vertical brick stitches. The relationship between the transept and aisle remains problematic. That the easternmost arch of the south arcade is higher than the others could suggest that the transept was intended from the first. The malformed four-centred arch between the aisle and the transept led Dickinson (1959) to conclude that the aisle was added to the transept, though it might also suggest that the arch was inserted later to connect the two.

Prior to digging the dry area, test pits were excavated against the north aisle and the north wall of the chancel. The former has a deep offset brick foundation. The chancel seems to have a foundation of flints (without mortar) packed into a trench.

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Great Tey, St. Barnabas

by D. D. Andrews

In 1998, a doorway was formed in the wall between the north porch and north transept. Prior examination of this wall revealed a crack in the plaster outlining a buttress, recognisable from a weathering table, 1.15m wide abutting the circular stair tower at the north-west corner of the tower. Further investigation showed that the buttress is made of 19th-century brickwork, and it was therefore decided that the door could be inserted and that the edge of the buttress should form its southern jamb.

When the door was pierced, a rectangular piece of clunch with the inscription 'W.G. Romaine/1829' was found set into the brickwork of the northern face of the buttress. The rubble wall built up against this is made of Roman brick (including flue tile), flint, reused ashlar blocks, and bricks (Tudor and 18th century). This reused material must have come from the nave which was dismantled in 1829, but on the evidence of the buttress the wall must have been constructed at least a few years after that event.

An article in the *Transactions of the Essex Archaeological Society* (vol. IX, 1906, 105-108) records a report on the condition of Great Tey church made by the architects William Tite and James Beadel in 1828. A major cause of the movement in the nave was the weakness of the stair tower at the north-west corner of the tower. The brick buttress must have been built immediately after the demolition of the nave in an attempt to stabilise the tower. The history of the west wall of the transept is not so clear: it may have been taken down and rebuilt against the buttress to further strengthen the tower, or it may be that the transept was left narrower than it is today but later extended westwards.

Great Wakering, St. Nicholas. Repair of the timber south porch

by D. D. Andrews

This timber porch has been clad in stone, probably in the second half of the 19th century. The original Ragstone plinth walls are evident at the base of the sides, the relatively large Ragstone blocks contrasting with the mixed smaller stonework cladding the timber sides. Within the porch, the sides above the plinth are of lath and plaster, and there is no hint of the original framing apart from a large central post.

The porch is dated by the RCHM (Essex 1923, 61) to the early 16th century, probably on the evidence of its three-centred arched doorway. The wall plate inside has a deep quarter circle hollow above a bowtell, a common moulding in the 15th and 16th centuries. The roof is built with a curiously short and squat crown post.

Because the stonework of the east wall of the porch was bulging, it was dismantled in 1998 to investigate its construction and explore methods of repair. This revealed the original plinth 600mm high, identifiable because of its Ragstone masonry and distinctive yellow-brown mortar (Fig. 2). Above the plinth, there was primary bracing mostly in softwood which had been inserted into the timber frame of the porch when it had been clad in stone. Originally the timber sides were made in two bays, the central post corresponding with the tie-beam. The wall plate is chamfered, with small chamfer stops at intervals of about 530mm. At these points, in the soffit of the wall plate there is a pair of pegholes drilled across the width of the timber. These must relate to the position of mullions. Normally mullions would be tenoned into the soffit of the plate. Instead, in this case it can be assumed that like many other porches the sides had traceried heads and that the tracery, being of an open and delicate design, was pegged to the plate at positions corresponding to the mullions.

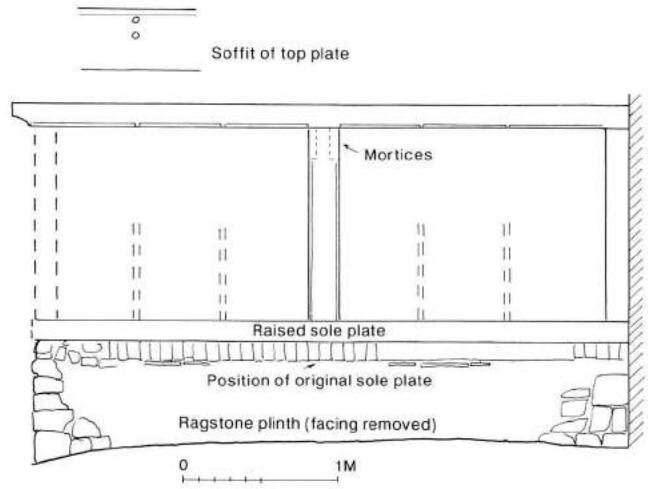

Fig. 2 Gt. Wakering, St. Nicholas. Elevation of east wall of porch.

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Greensted-Iuxta-Colchester, St. Andrew

by D. D.Andrews

St. Andrews is a small church with an undivided nave and chancel and a brick tower that dates from the 16th century. The oldest part of the building is the west part of the north wall, which may be 12th century. The chancel and the east part of the nave were refaced but not perhaps entirely rebuilt in the 18th century and are rendered. The south aisle is Victorian (RCHM Essex III, 1922, 46-7).

The north slope of the roof was retiled in 1998. The nave roof was shown to be of trussed common rafter type with collars and soulaces. The rafters are of quite substantial scantling, but were not considered by Ian Tyers of Sheffield University to have enough rings for tree-ring dating. This was unfortunate as such roofs have few diagnostic features. They can be assigned to the 14th and 15th centuries, though a late 13th-century date is not impossible. The nave of St. Martin, Colchester, is, for example, of this type and has been dated to the mid 14th century.

The eaves could not be examined in detail as the inside face of the ashlars and plate was concealed and the ends of the rafters and sole plates have been rebuilt, being cut off flush with the nave wall, the top of which was raised in brick to support a new wall plate at a higher level. The sole plates are halved over a small central wall plate. The trusses have carpenters' marks, which as is common in roofs are not in sequence.

The truncation of the eaves occurred in the late 18th or early 19th century to judge from the brickwork. It may have been carried out at the same time as the reconstruction of the chancel roof, which is entirely modern and was probably renewed when the roof was ceiled. Before this was done, the chancel may have had a lower roof than the nave.

A new rainwater drain was laid round the church. About 500mm deep, it only revealed a uniform dark graveyard soil with no archaeological layers or features evident apart from some mortar debris in the angle between the porch and the tower.

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Langham St. Mary. Excavation in advance of the organ gallery at the west end of the nave

by Mark Germany

St. Mary's comprises a nave, chancel, south aisle, west tower, and north and south porches. It is largely 14th-century in appearance, though parts of the nave and chancel may date from the 12th century, and the lower part of the tower may be 13th century (RCHM Essex 1922, 148). The church was restored in the 1860s and 1879 after a fire. In 1997, the Essex County Council Field Archaeological Unit excavated four pits (approximately 600mm by 700mm, and 600-800mm deep) for the foundations of a new organ gallery which has been built at the west end of the nave (Fig. 3).

The natural was probably an orange brown silty sandy gravel. Only one articulated burial was found, in pit C. It was aligned east-west and was not accompanied by any trace of a coffin or coffin furniture. All that survived was the lower body. The pit was located only 500mm from the west wall of the church, a distance that would not allow space for the interment of the upper body. The location of the burial is therefore significant, as it implies that it predates the tower and was originally outside the west wall of the church. The position of this west wall, datable to the 12th century or earlier, was probably represented by a foundation of compact flints in a matrix of yellowish brown silty sand in pit D. A flinty deposit in an orange brown silty sandy matrix. in pit B to the north of D may represent robbing of this wall.

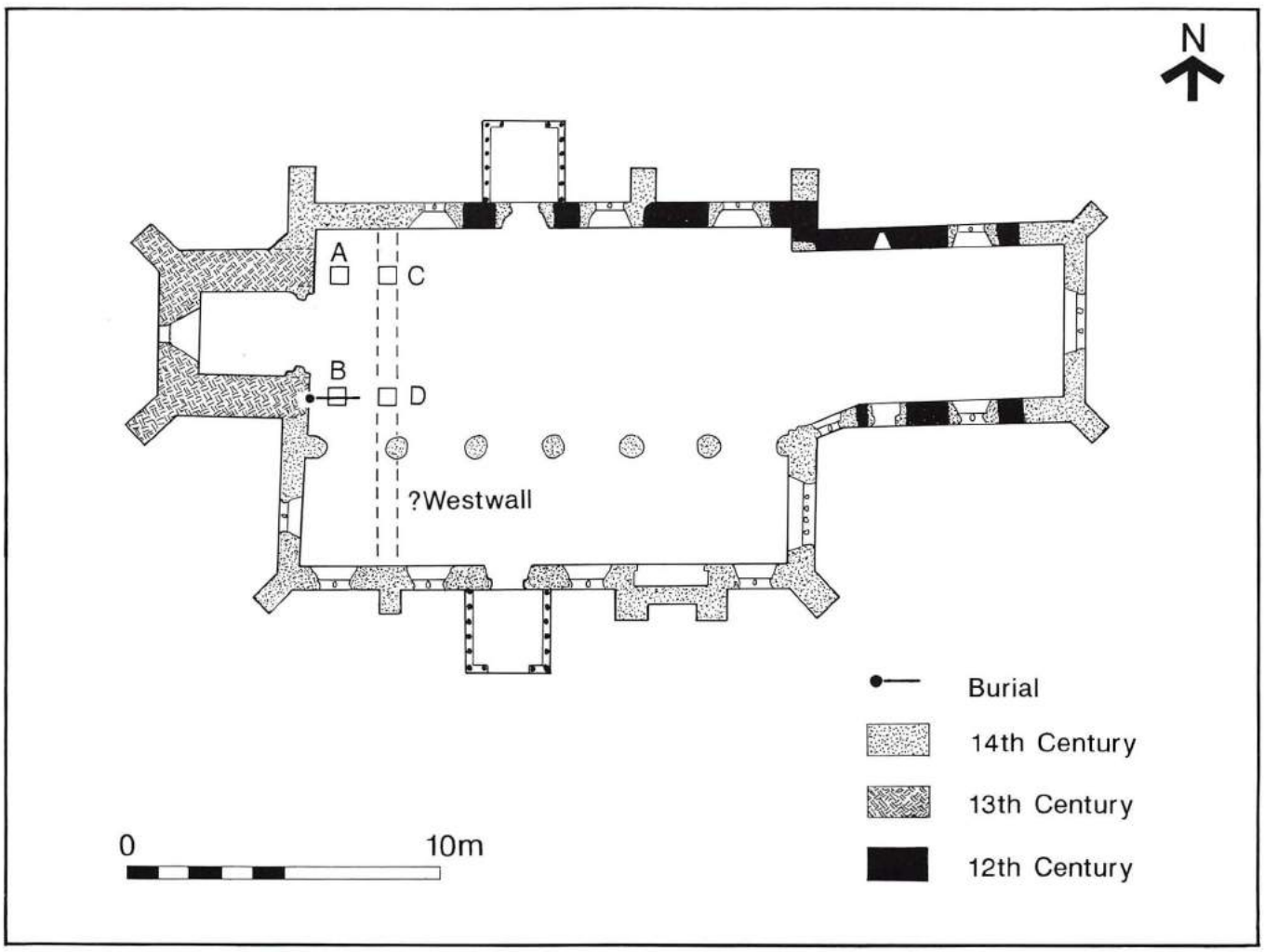

Fig. 3 Plan of Langham church showing the foundation pits, the burial and the probable position of the 12th-century west wall.

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Maldon St. Mary. Observations on the excavation of a dry area, 1997

by D. D. Andrews

This church has a 12th-century nave, a 14th-century tower, a chancel rebuilt in the 19th century, a south aisle added by Frederic Chancellor in 1885 (RCHM Essex 1921, 175; ERO D/F 8.339, D/CF 24/8, W135), and an octagonal extension built in 1993 to a design by Purcell Miller Tritton. Subsequent to the excavation of test pits, a dry area was dug round the perimeter of the church. The following conclusions on what was found are set out chronologically. The observations on the construction of the nave are a reminder of the importance of this church which may be located in an area of Roman occupation, is almost certainly of pre-Conquest origin, and by the 12th century was much larger in size than the average parish church (cf. Powell 1997).

The nave

On the north side, this has slightly offset foundations about 500-550 below ground level. They are mainly made of long rectangular blocks of stone of uncertain type, possibly Ragstone. The appearance of these stones is untypical of Essex medieval churches and suggests that they are reused from an earlier building. A piece of *opus signinum* incorporated in the foundation may or may not be further evidence that this might be the case. The base of the wall is bonded with orangey yellow mortar; above the level of a cement render plinth, the mortar is paler, raising the possibility that it has been rebuilt. The character of the masonry also changes in the upper part of the wall above a height of about 6 feet where, instead of Ragstone and flint cobbles, septaria predominates. A Norman window at the west end of this wall indicates a 12th-century date for it, implying that any earlier build must be older than this. However, the base of the wall was not seen below this window since the narrow space between the porch and the tower was filled with concrete put down for the drain to a down-pipe and probably to underpin the adjacent walls. It is possible, therefore, that if the wall has been rebuilt, this rebuild did not extend to its western end.

Between the porch and the large buttress at the east end of the nave, the foundations were found of a former buttress (Fig. 4) which is in fact marked on the plan published by the RCHM. This buttress was flanked by concrete underpinning and had presumably been demolished because of its instability. The 'buttress' at the north-east corner of the nave incorporates two elements, an original buttress and adjoining it, but wider and of less projection, a stair tower for the former rood screen. The original buttress is, like the rediscovered demolished one, about 1m wide. A scar in the wall above the foundation of the demolished buttress implies that it was bonded and contemporary with the wall. These strongly projecting buttresses are typical of 13th to 14th-century work, and support the argument that much of the nave was rebuilt at that time.

The chancel

The chancel is built of brick and probably dates to the first half of the 19th century. Removal of the gutters made of engineering brick at the base of the walls, and the weak concrete in which these were bedded, revealed that the brickwork rests on the old foundations, in which, like the nave, large blocks of stone predominate. The dry area was not dug round the east end of the chancel, but it is known from previous service trenches in this area that the chancel was at least 4m longer than it is today (Bedwin 1993).

The tower

This was revealed to have a nicely made plinth of one course of chamfered stone above another with a rounded profile. Beneath this the wall is well made and straight-sided, extending downwards to a depth of at least 2 feet. The moulded plinth must originally have been above ground level, which has risen notably, by more than 2 feet on the north side. On both north and south sides, the plinth was interrupted at the east end of the tower and the foundations were found for angle buttresses matching those at the north- and south-west corners and preceding the existing diagonal buttresses. The base of the tower is dated to the 14th century and clearly as originally built it had angle buttresses. The existing diagonal buttresses on the west side probably date from the rebuild of the upper part of the tower in the 17th century.

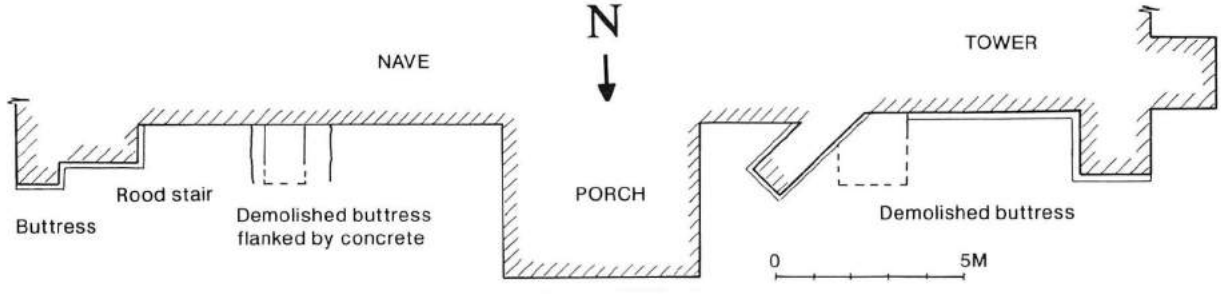

Fig. 4 Maldon, St. Mary, sketch plan of the south side of the nave and tower

The porch

The east and west sides of this are of somewhat different construction. The west side has an offset foundation just below ground level. The bottom of the wall to a height of about 700mm is mainly of large rounded flints without the septaria present in the upper part of it. The mortar in the upper and lower parts of the wall is also slightly different.

The east wall has a foundation without an offset but distinctively built of knapped flints below a levelling course of large Roman bricks (260mm long, 60mm thick). The masonry of the wall otherwise resembles that of the west side.

The significance of these observations is not entirely clear. Both walls butt the nave at their foundation level, and there is no reason to dispute the early 15th-century date assigned to the porch by the RCHM. It seems probable that the west wall has been rebuilt, and that may explain why it lacks the window (now blocked) present in the east wall.

The south aisle

The aisle of 1885 has offset brick foundations beginning to step out from a depth of 600mm, and is built with a damp-proof course.

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Ramsden Crays, St. Mary

by R. Wardill and D. D. Andrews

St. Mary's is a small church comprising a nave, chancel, belfry with broach spire, proch and vestry. Those older features of the church which survived the restoration of 1869-70 are mainly 15th-century, but in the north wall there is a lancet which H.W. King thought to be 13th century when he visited in 1854 (ERO T/P 196/2). The architect of the restoration was Frederic Chancellor. His work was thorough, but alterations were confined mainly to the chancel. The drawings accompanying the faculty application (ERO D/F8 491) show that the chancel was in a poor condition and had been partially rebuilt in brick, probably in the 18th century. A history of movement in the chancel can be traced in visitations

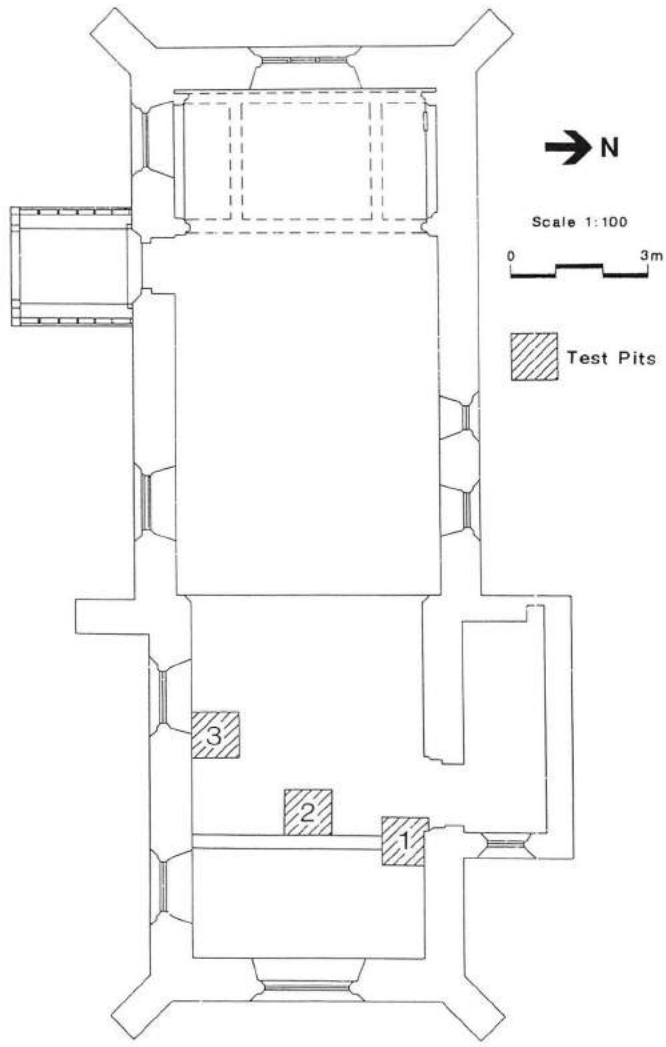

Fig. 5 Plan of Ramsden Crays, St. Mary, showing the location of the test pits.

of 1685, 1842 and 1858 (ERO D/AEV 12; D/AZ/6/3). The chancel was reconstructed in brick faced with Kentish Rag, and the fenestration was rationalised. A test hole made in 1994 in the north wall of the nave revealed flintwork, including what looked like Roman brick, beneath the Ragstone facing. Two test pits were also dug at the base of the north wall, showing that it had flint foundations about 450mm deep. This indicates that Chancellor left the fabric of the nave intact but refaced it in Ragstone.

In 1993 the church was made redundant. A planning application for residential conversion was submitted in 1996, and at the request of the structural engineers acting for the applicants, the County Council Field Archaeology Unit dug three test pits in the chancel to investigate continued settlement and movement in the walls (Fig. 5). Test pit 1 on the north side encountered the wall foundation at a depth of 900mm cut through a layer of rubble and silty clay which sealed a burial which was not investigated. Above these deposits were large quantities of building rubble 600-700mm deep, probably from the demolition of the earlier chancel at the time of the 1870 restoration. In test pit 2, there was a similar pattern of building rubble overlying silty clay, a skull being uncovered at a depth of only 500mm, at which point excavation ceased. In pit 3 against the south wall, the foundations were uncovered at a depth of 550mm, again cutting silty clay sealed by demolition rubble.

No clear explanation of the structural movement in the walls was found. It is probable that there are many burials in the chancel, but those found seemed not to have caused recent settlement. They were relatively shallow and possibly late medieval in date, but too little was seen of them to draw any definitive conclusions. The walls had substantial foundations, with a brick offset above mortared rubble footings. A test pit dug outside the chancel in 1994 showed the rubble footing to be at least 750mm deep, and of considerable projection. Finds from the demolition rubble beneath the floor included Roman tile, a glazed floor tile of the 16th or 17th century, and fragments of flooring bricks of possibly 18th-century date.

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Ramsey, St. Michael

by D. D. Andrews

St. Michael's comprises a 12th-century nave, 13th to 14th-century chancel, and a 15th-century tower. The chancel was re-rendered in summer 1997. The cement render, being very hard and having a damaging effect on the underlying masonry when pulled away, was completely removed only from the lower half of the wall. Above this level, only the weaker lime top coat, which had a brushed finish, was stripped off. The underlying masonry was found to have been liberally dubbed out, or levelled up, with peg tile laid flat. The chancel walls bow out slightly because the rather fine 16th-century

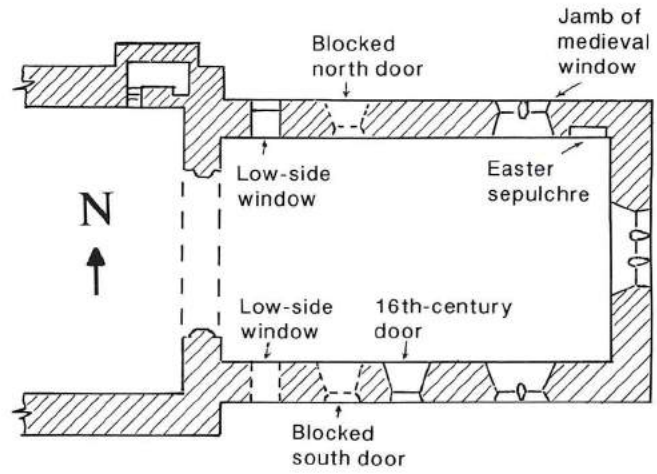

Fig. 6 Ramsey, St. Michael. Plan of chancel showing features mentioned in the tesxt

roof lacks tie-beams, but there seems to be no evidence of recent movement.

The chancel walls are built of septaria blocks 150-400mm in size bonded with an orangey brown mortar. The quoins at the junction of nave and chancel are of tufa or a similar stone, though some have been replaced in oolite.

At the west end of the south chancel wall, a blocked rectangular aperture was uncovered (Fig. 6). It was 0.65m wide and 1.4m high, and was set about 0.9m above ground level. Its jambs were made of Reigate stone and its lintel of oolite. No trace of it was evident inside the church. In the north wall of the chancel, however, there are visible the jamb stones of one side of the embrasure for a similar aperture which was revealed externally as identical to the other, apart from being of slightly smaller dimensions (0.51m x 1.3m). These are low-side windows, and they probably had simple foiled heads within the rectangular frames.

To the east of the low-side window in the south wall, an area of masonry was exposed which consisted of septaria and other stones (mainly Reigate but including a piece of chalk) in a whitish mortar. This looks like a blocking, and it seems to correspond to the top of an arch visible internally to the west of the existing south door. The latter has a wooden lintel which suggests that it belongs to a phase of 16th-century work in the chancel when the door was for some reason moved slightly eastwards. A large patch in Tudor brick on the west side of this door is probably also symptomatic of it being an insertion. In the north wall, a patch of similar masonry about 1.5-1.6m wide seems to represent the blocking of a north door. As well as Reigate stone, this patch included Tudor brick which indicates that the blocking probably occurred at much the same time as the rest of the 16th-century remodelling of the chancel.

In the north wall, it was revealed that the 16th-century square-headed mullioned and transomed window had replaced a narrower arched window with a surround in Reigate stone. This is one of three such windows with brick mullions and transoms in the chancel which are

presumably contemporary with the date '1597' on the chancel roof. The RCHM states that the top of the chancel walls were raised in the 15th century. This would have been to accommodate these windows, and the date suggested is either an error by the RCHM or else they believed the windows to have been inserted in that century, which seems unlikely. This statement could not be confirmed because no render was seen stripped from the top of the walls.

These observations indicate that the chancel is basically of one build, a thorough reconstruction uniformly equipped with low-side windows and doors to both north and south, as well as no doubt with regularly spaced windows in the same positions as the 16th-century ones. The RCHM was inclined to attribute the rebuild to the 13th century. If the cinquefoiled recess at the east end of the north wall, possibly an Easter sepulchre, and the chancel arch were original to it, the rebuild should be assigned to the early 14th century.

Wethersfield, Great Codham Hall. The Manorial Chapel

[See *Historic Buildings Reports* in this volume]

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Essex Archaeology and History **30** (1999), 258-273

Shorter Notes

Early Neolithic remains from Chadwell St Mary

T. Ennis and N. Brown

with a contribution by T. Reynolds

Forty six trenches were excavated on ground proposed for residential development. One prehistoric feature containing worked flint and pottery dating to the Early Neolithic was identified and excavated. No other archaeological features were encountered. The finds from the pit are briefly described and discussed and difficulties in evaluating Neolithic sites highlighted.

The excavation

During April and July 1997 an archaeological evaluation was carried out on a site of proposed residential development in Chadwell St. Mary (Fig.1A). The development site was located within an archaeological sensitive area of prehistoric and Romano-British activity on the terrace gravels of the river Thames (Ennis 1997a; 1997b; Manning 1962). The site was located east of Sabina Road and Saint Francis Way on a long strip of rough grassland. The aim of the evaluation was to establish the extent and character of any prehistoric and Romano-British remains surviving within the development area.

A total of 46 trenches, generally 30m long by 2m wide, were excavated at intervals throughout the development area. Topsoil and modern overburden was removed by machine and the trenches were then investigated by hand. Removal of topsoil revealed mixed natural deposits of reddy brown silty clay, gravel and sand belonging to the third terrace Boyne Hill alluvium and gravels.

The majority of the trenches were found to be devoid of subsoil features. A few possible archaeological features were investigated but all appeared to be of modern or natural origin. The one exception was trench 41, located in the northern development area (Fig. 1B), which contained a well-defined oval pit (Fig. 1C, context 9), 0.95m by 0.80m by 0.20m deep. This was filled with a mid grey-brown sandy silt (context 8) containing Early Neolithic pottery and worked flint. The pit was totally excavated.

The finds

Pottery

by N. Brown

The excavations produced 40 sherds (378g) of prehistoric pottery all from the pit fill, the material has been recorded using a system devised for prehistoric pottery in Essex (details in archive). The material is largely unabraded and almost all of it is derived from a large part (about half the pot is present) of a plain open bowl (Fig. 2.1). The vessel form, rim form, fabric (flint tempered with some sand), roughly wiped exterior and well smoothed interior, can all be matched in Early Neolithic assemblages from Essex (e.g. Kinnes 1978; Brown 1988 and forthcoming). In terms of the regional styles traditionally used to describe Early Neolithic pottery, the bowl can be regarded as part of a plain component of a Mildenhall style assemblage (Longworth 1960). The large number of joining unabraded sherds from a single pot indicate that this material was deposited soon after breakage. A few sherds from other vessels, including a rather abraded pointed rimsherd in a fairly sandy fabric (Fig 2.2), were also present and may have been incidentally incorporated into the pit fill.

Flint

by T. Reynolds

Typology

A collection of 19 pieces from a single context have been studied, and a full list is provided in the archive. Two retouched tools were recovered, a short endscraper on a flake and an obliquely retouched blade. The former would fit into a Neolithic or Early Bronze Age date but is not the typical chunky endscraper, often of thumbnail type, normally associated with the Bronze Age. A Neolithic date would be more likely.

The other retouched tool is not a type formally recognised in typologies but the retouching form suggests backing and therefore a handling function for the retouched edge. The opposing edge is straight and sharp and so a knife function is likely although there is no use damage to support this suggestion.

Technology

There is a single core, of single platform and direction of flaking form. It was used to manufacture bladelets. There are also a number of bladelets in the collection and these dominate the category of knapping products. Both these characteristics of the collection would support a date in the region of the late Mesolithic/early Neolithic. The small size of the bladelets would also support this dating.

Two of the larger blanks show traces of what their core of origin would have been like and again both are from single direction of flaking and single platform cores.

Platforms are mostly broad and plain arguing for hard hammer flaking, the incidence of crushed platforms would also support this. The frequency of cortex on blanks does not suggest any preferential selection of blanks.

Edge Condition

Most pieces are fresh and could come from a single knapping event. One piece exhibits half-moon snaps which result from soil movement or trampling. There is a single intensively burnt piece which is not uncommon nor unrepresentative of prehistoric collections in general, knapping often took place near hearths.

Raw Materials

The core recovered was based on a small pebble of dense black flint. The majority of the remaining pieces derive from a larger pebble source of more brown-black flint. Use of raw materials does not appear to be intense.

Conclusions

The recovered collection is probably a Neolithic knapping event of short duration of which not all pieces have been found. The collection would suggest at least two flint pebbles were knapped. Their condition

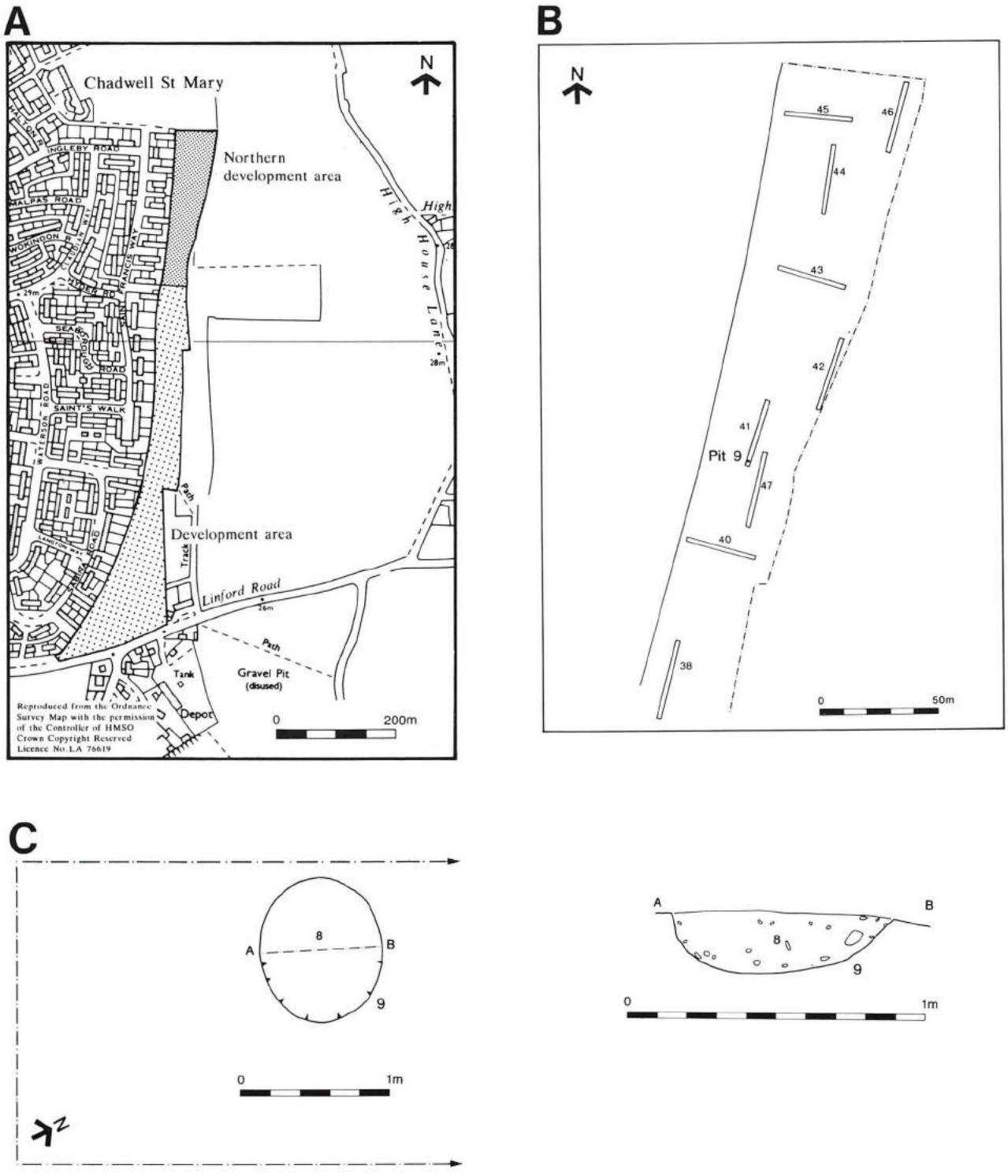

Fig. 1 Chadwell St Mary. Site location, plan and section/ (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

indicates they have not been moved far nor have they been exposed on a surface for very long. It is likely that the collection represents the discard from a single activity event involving retooling or tool production. The two tools recovered show no signs of use.

Discussion

The archaeological evaluation of the development area did not identify evidence for Iron Age or Romano-British activity. One prehistoric pit was recorded, containing an assemblage of flint and pottery dating to the Early Neolithic period. The lack of any other subsoil features might suggest that the development area has not been subject to any intense activity in the past. The material recovered from the pit does not seem to reflect casual rubbish disposal, selective deposition in subsoil features and other contexts is a widespread phenomenon during the Neolithic. However, it is increasingly apparent that subsoil features are relatively minor components of Neolithic settlement sites, and the majority of artefacts were deposited on the surface of such sites (e.g. Brown 1997). The consequence of this

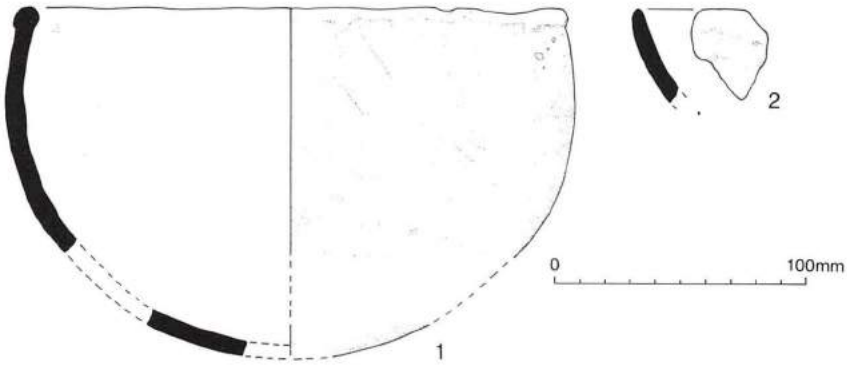

Fig. 2 Chadwell St Mary. Neolithic pottery

is that most evidence of Neolithic settlement will be found in the modern ploughsoil and/or at the ploughsoil subsoil interface. This has serious implications for the way such sites are investigated (Trow 1995,10). Whilst the Chadwell pit might have been an isolated feature, it is more likely that it formed part of a larger settlement of a kind unlikely to be revealed by trial trenching designed to investigate presence/absence of subsoil features.

Acknowledgements

The Essex County Council Field Archaeology Unit would like to thank Barrett Eastern Counties, who funded the archaeological work. This was carried out according to a brief prepared by the Essex County Council Archaeological Advisory Group, who also monitored the work. The fieldwork was supervised by T. Ennis, who was assisted by M. Peachey; EDM surveying was carried out by H. Cooper-Reade. The authors would like to thank T. Reynolds for the flint report, and the late S. McNeill (Fig.1) and I. Bell (Fig.2) for the illustrations.

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A Late Bronze Age hoard from the Blackwater valley

N Brown

The hoard was recovered from a ploughed field by Mr F Nicholls with the aid of a metal detector and was found scattered over an area of a few square metres. The field from which the hoard was recovered lies on the flat top of a spur of land between two streams, tributaries of the River Blackwater. In addition to the Bronze Age objects recorded here, two fragments of post-medieval metalwork were found in the same field.

Catalogue:

The objects have been described as seen with some dirt adhering and unconserved.

Fig. 3, no. 1 Faceted Axe: Oval section, clogged with dirt although traces of internal ribs are visible. Mouth missing, lower stump of side loop survives. All casting flash neatly removed. Slightly concave sides widen rapidly to an expanded blade, cutting edge missing. Large areas of smooth green patina survive on all surfaces, although there is considerable recent damage from ploughing, and one face is pierced by a recent hole. Needham (1986) Class D Schmidt and Burgess (1981) Type Meldreth Wt 49g.

Fig. 3, no. 2: Socketed axe, socket crushed and bent in antiquity, clogged with dirt. Slightly concave sides curving to a slightly expanded cutting edge. Slight trace of casting flash. Large areas of smooth green patina survive, although both faces are somewhat pitted with corrosion. There is some recent damage to the cutting edge. Probably Needham (1986) of Class A. wt.90g.

Fig. 3, no. 3: Socketed axe, socket crushed and bent in antiquity and clogged with dirt. Straight sides curving rapidly to a widely expanded cutting edge. One face is markedly thicker than the other. Slight traces of casting flash. Large areas of smooth patina survive although one face and the cutting edge have extensive recent damage. Probably Needham (1986) Class A. Wt. 125g.

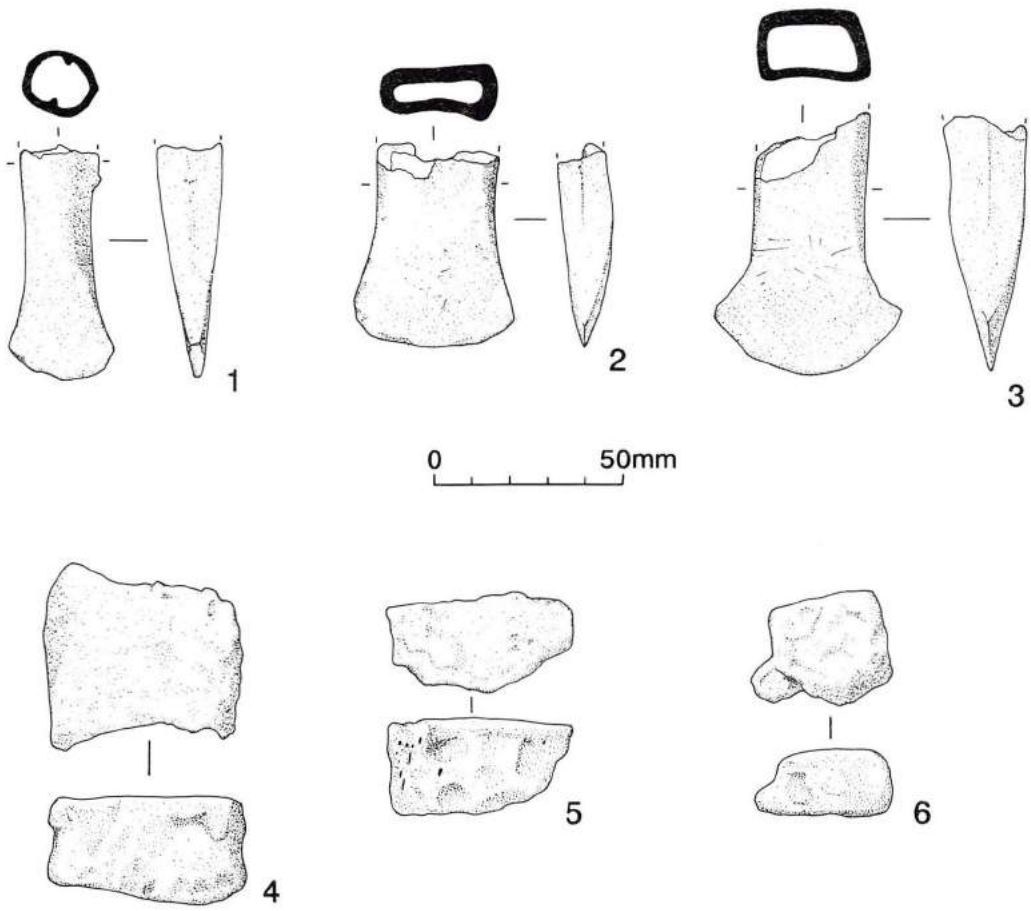

Fig. 3 Late Bronze Age hoard from the Blackwater valley

Fig. 3, no. 4: Fragment towards centre of plano-convex ingot, some trace of columnar growth and rounded cavities towards top, mostly obscured by dirt. Maximum thickness 27mm Wt. 293g.

Fig. 3, no. 5: Fragment towards edge of plano - convex ingot, traces of columnar growth and numerous rounded gas cavities partly obscured by dirt. Maximum thickness 21mm Wt 107g.

Fig. 3, no. 6: Fragment from thin rather flat ingot, rounded gas cavities, surfaces obscured by dirt. Maximum thickness 18mm Wt. 83g.

Discussion

This group of objects appear to represent a small scrap hoard typical of the Ewart Park phase of Late Bronze Age Metalworking (Sealey 1987; Needham *et al.* 1997) which has become dispersed into the ploughsoil. The bent and broken axe fragments and the presence of ingot fragments might indicate a founder's hoard (Needham 1990, 130-40). The collection is a small one and, given the nature of the find with fragments found scattered in the plough soil it is quite likely that not all the pieces originally in the hoard were recovered.

A concentration of Late Bronze Age finds in the Braintree area has long been recognised of and there is a second group of finds in the Rivenhall/Witham area to the east (Couchman 1980). It seems increasingly likely that such concentrations may be misleading. In the case of Braintree, the finds reflect a thriving local archaeological community and considerable archaeological recording, focussed mainly on the Roman town. The second concentration largely reflects the archaeological research conducted by the Rodwells (Rodwell and Rodwell 1986; 1993; Rodwell 1993). The small hoard reported here lies in the Blackwater valley between, and slightly north, of these two concentrations of finds. Metal detector finds are greatly extending the known distribution of Bronze Age metalwork (Brown 1998), and archaeological fieldwork is revealing an intensively occupied landscape (Brown 1996). Rather than being concentrated in particular areas, it is increasingly apparent that Later Bronze Age settlement was widespread throughout the county concentrating in the river and stream valleys, but also spreading onto the higher ground between.

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A medieval pit group in Epping: an evaluation at the Co-op site, rear of 237-55 High Street, 1997

by Adam Garwood

with a contribution by Helen Walker

Although Epping is documented as a medieval market town, little tangible archaeological evidence of its origins have been unveiled, due primarily to the paucity of development within its historic core. However, in 1997, an evaluation of a development site adjacent to the market area recorded the first evidence of medieval stratification in the town. This evidence comprised two pits dating to the 13th to 14th centuries, that lay immediately to the rear of an early 17th-century building (237 High Street) and which, from their location may relate to an earlier medieval street frontage.

Introduction

The medieval pit group was excavated during an evaluation carried out by the Essex County Council's Field Archaeology Group for the Co-operative Retail Services Ltd, in relation to a planning application to construct a new superstore (TL 4603 0224). The development involved the replacement of the existing store and expansion into the area to the rear through the demolition of a former printing works. At the frontage, no. 237 High Street, a grade II listed building dating to the early 17th century, has been retained in modified form. The evaluation trenches were excavated after demolition of the former printing works in the rear of the site, while the frontage buildings were still standing.

The aim of the evaluation was to record any surviving medieval and post-medieval evidence for the development of Epping. However, although features of these periods were identified in the evaluation trenches, it was clear that the site had been heavily disturbed in the 19th and 20th centuries, and further excavation was not justified.

This note focuses on the medieval pit group, as the most significant evidence from the evaluation. The 18th and 19th-century cartographic/documentary evidence and site features are described in full detail in the evaluation report (Garwood 1997).

Medieval Epping

Only a brief summary of the origins of Epping is given here, as a detailed assessment of the historic town has recently been completed (Medlycott 1997), providing an update of an earlier assessment of the town (Eddy and Petchey 1983).

The primary medieval settlement in the area was at Epping Upland north-west of the present town, which probably had Saxon origins. However, from the mid 12th century, the canons of Waltham Abbey, who owned an estate at Eppingbury, 2km (1½ miles) north-west of the town, assarted and cleared land at Epping Heath to extend their estate. As a result the town became established in its present position along the main road, receiving its charter in 1253. Epping was a deliberate plantation by the canons to take advantage of trade along one of the main routes from London to Cambridge.

The historic core of Epping is a conservation area, with many listed buildings, but no buildings survive from the medieval period. This is due to the town's success as a market and staging point in the 18th and early 19th

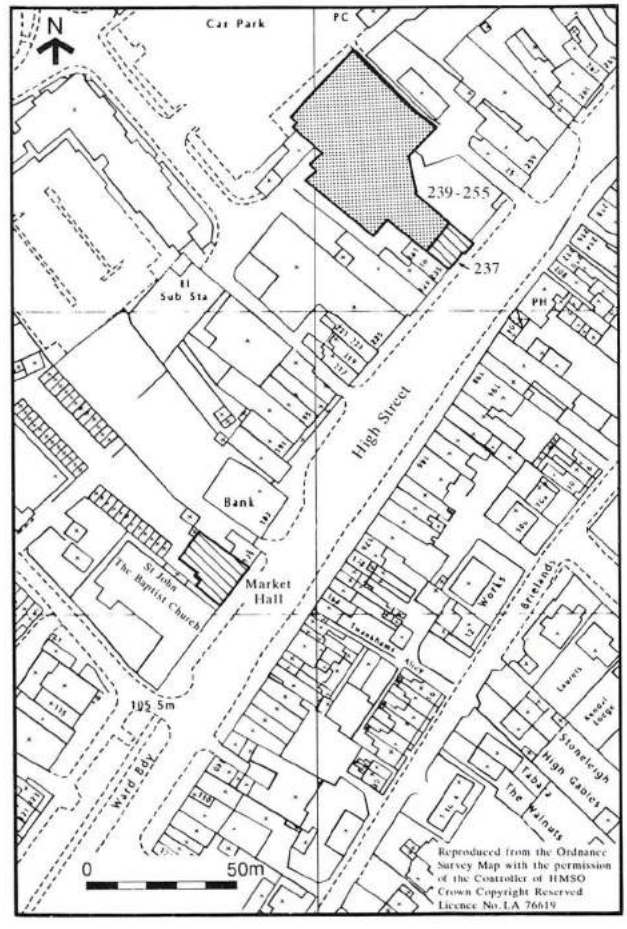

Fig. 4 Epping High Street, showing the site location (stippled), with the early 17th-century listed building at the street frontage (cross-hatched)
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centuries, which led to extensive rebuilding. However, the outline of the elongated medieval market place is fossilised in a widening of the High Street north-east of the church of St John the Baptist (Fig. 4). The church was not built until 1889 (Epping did not have a parish church before this date), but it occupies one of the focal points of the medieval town. Documents show that it replaced a 14th-century chapel on the same site, next to which was the medieval market hall (shown cross-hatched on Fig. 4), also demolished in the 19th century.

No excavation has taken place in Epping; a watching brief in the area of the church of St John the Baptist was inconclusive.

Site background

The site lies on the north-west side of the High Street, towards the north-east end of the market area (Fig. 4). The standing building at the frontage of 237 High Street was an early 17th-century timber-framed structure with jowled storey posts, and original panelling and doors at

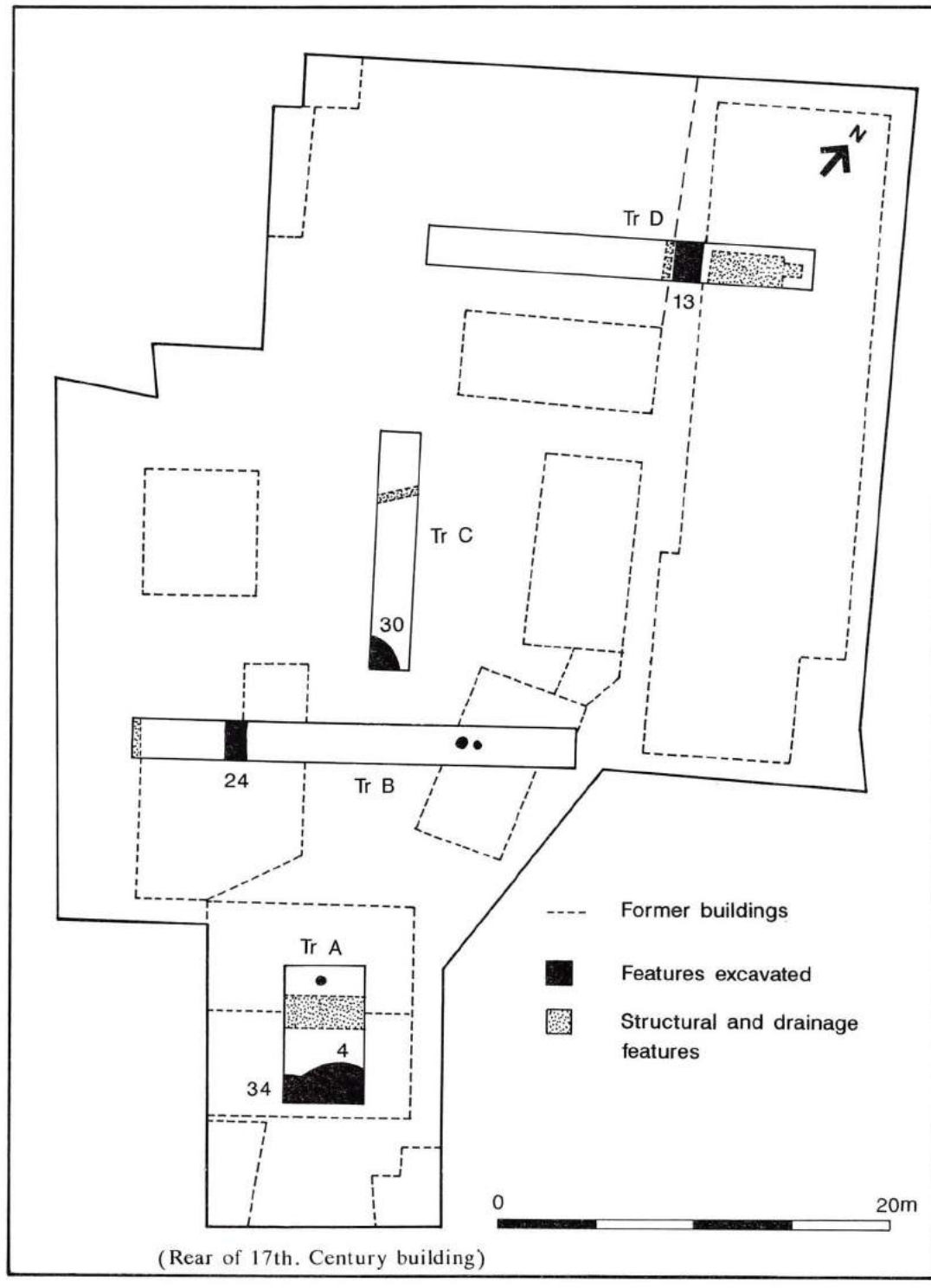

Fig. 5 Evaluation trenches A-D and the excavated features.

first-floor level. At ground level the shop windows are modern, but an 18th-century doorway has survived. The standing building occupies a frontage width of 12m. Behind the building early 17th-century boundaries appear to be reflected in modern boundaries, suggesting that a tenement 12m wide extended for at least 25m back from the frontage.

The site was not recorded in either cartographic or documentary records until the 18th century, although much interesting evidence for tenement layout and use is contained in the Tithe map and award of 1838 (Garwood 1997, 3-4 and Appendix 2). Principally, the Tithe map confirms the suggested layout of the early 17th century tenement at 237 High Street. The other tenements, 239-53 High Street and the yards at the rear of the site, are thought to be more recent in date. Trade in livestock and butchery figures large in the 19th century records. No. 237 was a butcher's shop and slaughter house, while the yard to the rear of 239-53 has been identified as the Old Goose Yard, a stopover for geese being driven into London and a market for sale to local dealers (Pugh (ed.) 1966, 129).

The evaluation

Four trenches (Fig. 5, A-D) were excavated, representing a 5% sample of the site area. Trench A was positioned directly behind the early 17th-century standing building on the frontage of 237 High Street to recover evidence related to that building or any predecessors. Over the extensive area to the rear of the site, trenches B-D were positioned to give maximum coverage, especially across its width, while avoiding the footings of the former printing works buildings. Up to 0.7m of rubbly soil overburden was removed by machine.

The medieval pit group

Two intercutting pits (4 and 34) were excavated in the south-east of trench A, nearest the High Street frontage (Figs 5, 6). Both pits contained medieval Harlow ware, dated to the 13th-14th century.

Only part of pit 34 lay within the trench, measuring at least 1.4m wide and 0.7m deep. It had steep sides and a flat base. It was filled with greenish grey-brown sandy silty clay (35, 36). It was cut on its north-eastern side by pit 4, which measured at least 2.2m wide and 1.0m deep, was irregular in plan, and had steep sides and a curved base. Its fills (5, 32, 33) were very similar to those of pit 34, although they were a little more clayey. The layer of dark grey-brown silty clay (53) sealing both pits represents post-medieval disturbance.

These pits lay only 6m to the rear of the early 17th-century building at 237 High Street, yet clearly predated it. They may have been related to an earlier building.

Boundary ditches

A ditch (24) recorded in trench B was aligned on the boundary between 235 and 237 High Street, which survives near the street frontage (Figs 5, 7). Ditch 24 was 1.0m wide and 0.2m deep with a rounded base but had been truncated by the overlying 19th century

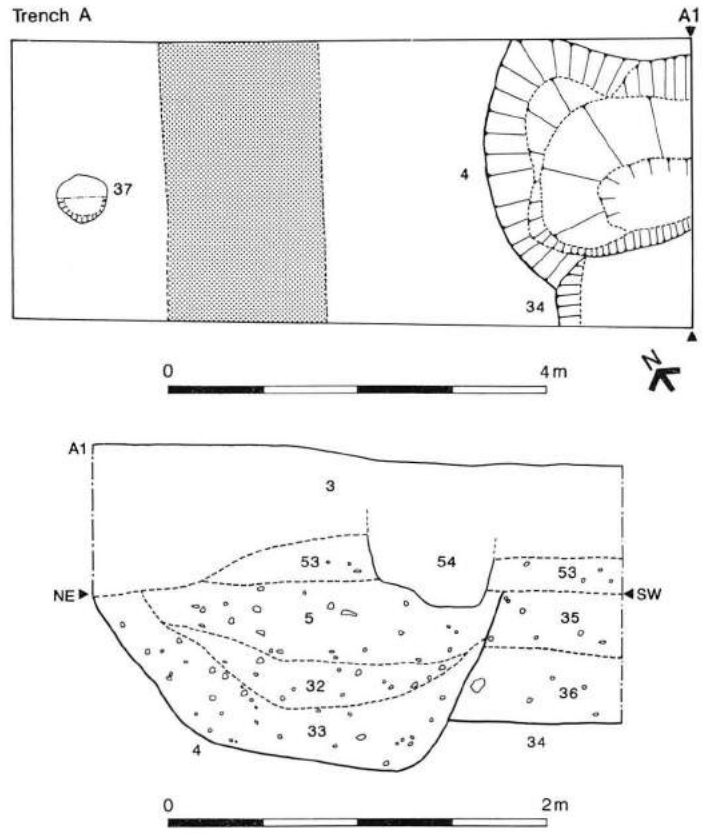

Fig. 6 The medieval pits in trench A: plan and section

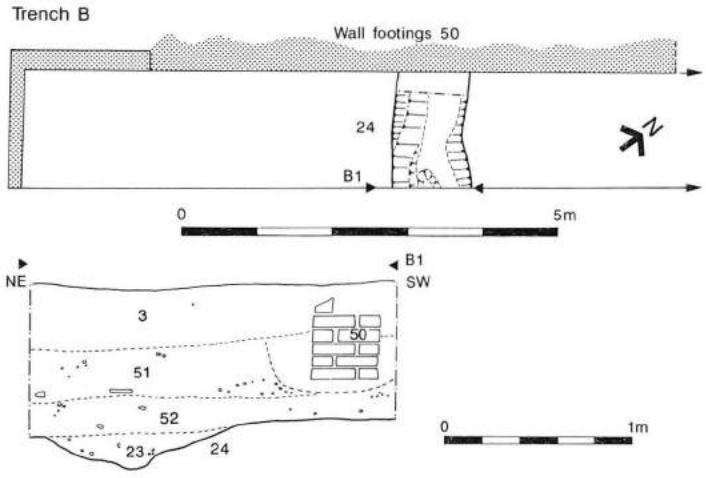

Fig. 7 The boundary ditch in trench B: plan and section

building. It unfortunately contained no dating evidence, but its alignment strongly suggests that it formed a continuation of the original south-west boundary of 237 High Street before the rear of the plot was opened out in the post-medieval period. As with the pit group in trench A, this boundary appears to be related to the early 17th-century frontage building, or a possible medieval predecessor.

A second boundary ditch (13) was recorded in trench D (Fig. 5). It was very large, measuring up to 2m wide and 1m deep. Again, it contained no dating evidence, although a 19th-century brick drain and a sump had been inserted within it. Unlike the ditch in trench B it cannot be related to any topographical elements earlier than the 19th century, and it is likely to be a relatively recent feature.

Other features

The other features recorded in the evaluation trenches were either undated truncated post-holes or the footings of 19th and 20th-century buildings and other structures (Fig. 5). The most interesting of these was a clay-lined well (31) with a domed brick capping (30) at the south end of trench C, almost in the centre of the rear part of the site. This feature possibly appears on the 1838 Tithe map (the map is not very legible) and definitely appears on the 1st edition OS of 1872 (Garwood 1997, Appendix 2).

Medieval pottery

Helen Walker

Examples of medieval Harlow ware, weighing a total of 222g, were found in the intercutting pits 4 and 34 in area A. No rims were excavated, but several sherds have an internal splash glaze and are sooted externally, indicating that they were cooking pots. All could be from the same vessels, although no cross-fits were noted.

Little has been published about the medieval Harlow industry, but there is documentary evidence of potters there from the mid-13th century, and it seems likely that the industry carried on into the late medieval period, eventually evolving into the better-known post-medieval industry. These sherds probably date to the 13th-14th century.

The presence of medieval Harlow ware at Epping is not unexpected as both towns are situated on the Lea Valley routeway and the old London to Cambridge/Newmarket road. To the author's knowledge, this is the only medieval pottery to have been found in Epping. Post-medieval pottery recovered from the site is described in the evaluation report (Garwood 1997, Appendix 4).

Discussion

The medieval Harlow ware recovered from the two pits represents the first excavated medieval evidence from Epping. This assumes greater importance than it would normally, because of the complete absence of other excavated material, and also of surviving medieval buildings in the town. Even the medieval market area can only be recognised from the study of later maps.

The pits lie directly behind the early 17th-century standing building at the frontage of 237 High Street, and appear to lie within the boundaries of a tenement related to that building. The pits are dated to the 13th-14th century and clearly predate the building, and it is a reasonable assumption that they relate to a medieval predecessor. It is even possible that the early 17th-century tenement boundaries have their origins in the 13th or 14th century. Unfortunately, the ditch in trench B which could represent the south-western boundary of the tenement cannot be dated. Even if the medieval pits were not related to a building at the frontage, at the very least they represent evidence of activity on the north-west side of the High Street, and adjacent to the market, as early as the 13th-14th century.

Although the pits represent some evidence for the medieval origins of Epping, this is very limited, and further excavation is needed to gain any understanding of the character of the medieval town and its market. Because Epping High Street is a conservation area, opportunities for future archaeological work are likely to be few, and probably on a small scale in back yard areas. Nevertheless, any record of well-dated medieval features would provide useful evidence, especially if it were possible to date any tenement boundary ditches.

Finally, the 19th-century historical evidence gives an interesting glimpse of Epping as a market town, showing

that an extensive trade in livestock was carried on, with the back yard of 239-53 being used as a goose market. It is clear that animals and poultry were being driven along the main road, both for the local market and onwards to London. Epping was bypassed by the London-Cambridge railway, and was not linked to the railway network at all until 1865, which probably accounts for the survival of many aspects of its traditional market through the 19th century.

Acknowledgements

The Essex C C Field Archaeology Unit is grateful to J. Trevor and Webster, architects, who commissioned the archaeological evaluation, and to the Co-operative Retail Services Ltd who funded it. The evaluation was carried out according to the brief prepared by Rob Butler of the Essex C C Archaeology Advisory Group. The fieldwork and documentary research was supervised by Adam Garwood, with the assistance of Mark Peachey and Dave Kenny.

The report text and illustrations are based on the evaluation report by Adam Garwood, which was edited by Patrick Allen to relate the site more directly to the development of medieval and post-medieval Epping. The author would like to thank Helen Walker for preparing the medieval pottery report, and the late Stewart MacNeill, who revised the illustrations for publication.

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Moat Cottage, The Street, Pleshey: excavations 1988

by C. P. Clarke and N. J. Lavender

with contributions by O. Bedwin, H. Major, H. Martingell and H. Walker

A small trench in the garden of Moat Cottage, The Street, Pleshey was excavated in advance of the construction of a conservatory. The site lay in the area of the original northern bailey, or outer court, of Pleshey Castle. Evidence for medieval pits and post-medieval activity, possibly structural, was also recorded.

Introduction (Fig. 8)

This report describes the results of a small archaeological excavation in the garden of Moat Cottage, The Street, Pleshey, TL 6658 1455. The building of a conservatory on the south side of the house offered an opportunity to investigate the archaeological potential of the northern earlier bailey of Pleshey Castle. For recording and archive purposes the site was allocated the unique site code PY3.

Whilst a number of excavations had taken place previously, these had been directed towards the recovery of evidence for the earthworks of the bailey, rather than for activity within it. It was hoped, therefore, that signs of 12th-century occupation would be located.

The site lies to the northeast of the motte of Pleshey castle, the southwest boundary of the garden of Moat Cottage being formed by the castle moat. The history and topography of Pleshey and its castle have been summarised by Williams and Sellers (Williams 1977), and the documentary evidence for the medieval town by Ryan (1988). The background for the planning policy regarding archaeology in the town is outlined by Priddy (1988), and a detailed study of the historic town has recently been produced (Medlycott 1998).

The first mention of the castle was in 1143, when Geoffrey de Mandeville surrendered it to King Stephen and it had presumably been standing for several years by this date. At this time it comprised the motte and the northern bailey (later the outer court), the northern limit of which is now marked by Back Lane. The castle was slighted by Henry II and refortified from 1167 following its restoration to the de Mandevilles, with a new bailey to the south of the motte, which still survives. The town enclosure almost certainly dates from this phase of refortification. During the late 14th century Thomas of Woodstock, first Duke of Gloucester held the castle and this was probably the wealthiest period in its history. When the Crown confiscated the castle in 1397, £1,961 16/8d worth of goods was seized. Whilst the castle was still being maintained in the 1480s, by 1558 it was in a ruinous state. The fortunes of the castle were reflected by the town, which was reduced to village status by the beginning of the 16th century.

Excavations at the castle began in 1907, when the owner, Colonel Tufnell, examined the summit of the motte. In 1921-22 the Morant Club conducted further excavations on the motte (Christy 1923). Rahtz's excavations in 1959-63 located timber-framed buildings and a possible chapel in the south bailey (Williams 1977). These were of late 12th-century date and presumably belong to the refurbishment of the castle in 1180.

The north bailey, or outer court, occupied the area now outlined by Back Lane (formerly Bret Street). A ditch excavated at the Village Hall site (Priddy 1988) appears to belong to this enclosure. Internal features, a series of post holes of 12th to 13th-century date, were located at 'The Gardens' along with two large pits contemporary with the existing 15th to 16th-century house (Godbold 1997).

Fig. 8 Moat Cottage, Pleshey. Site location (Reproduced by kind permission of Ordnance Survey. © Crown Copyright NC/00/494)

Excavation (Fig. 9)

The hexagonal footprint of the conservatory, 6m long by 4.4m wide (Figs 9, 10), was excavated entirely by hand. A plastic-lined goldfish pond, 106, cutting through the turf and underlying layers towards the north end of the trench, penetrated the natural boulder clay subsoil for eight centimetres. Although this appeared to be within a featureless area of the trench, it is possible that it had eradicated small, shallow features.

Topsoil (Fig. 12; S1)

Directly below the turf was a layer of dark grey loamy garden soil (3), which contained post-medieval building rubble. This rubble was more concentrated towards the southeast corner of the trench where it formed a distinct layer (2). This appears to be the remains of a bakehouse that stood on the site until comparatively recently. Below layer 3 was a further, similar, loamy garden soil (4), which contained less rubble and a small amount of pottery, ranging in date from the 12th to 19th centuries. This layer sealed all the archaeological features located on site.

Prehistoric

Whilst no prehistoric features were located, struck flint, including both debitage and utilised pieces were recovered from medieval feature 113, post-medieval features 101 and 104, as well as from the topsoil. In addition, medieval features 108, 112 and 113 contained undiagnostic sherds of flint-tempered prehistoric pottery.

Medieval (Figs 10 and 12; S2-4)

No features were located that could date from earlier than the foundation of the castle in the 12th century. Although pottery of 11th to 12th-century date was present, it was associated with material of later date or stratigraphically later features. Several features, however, have been dated to the medieval period since they contained exclusively 12th to 13th-century material.

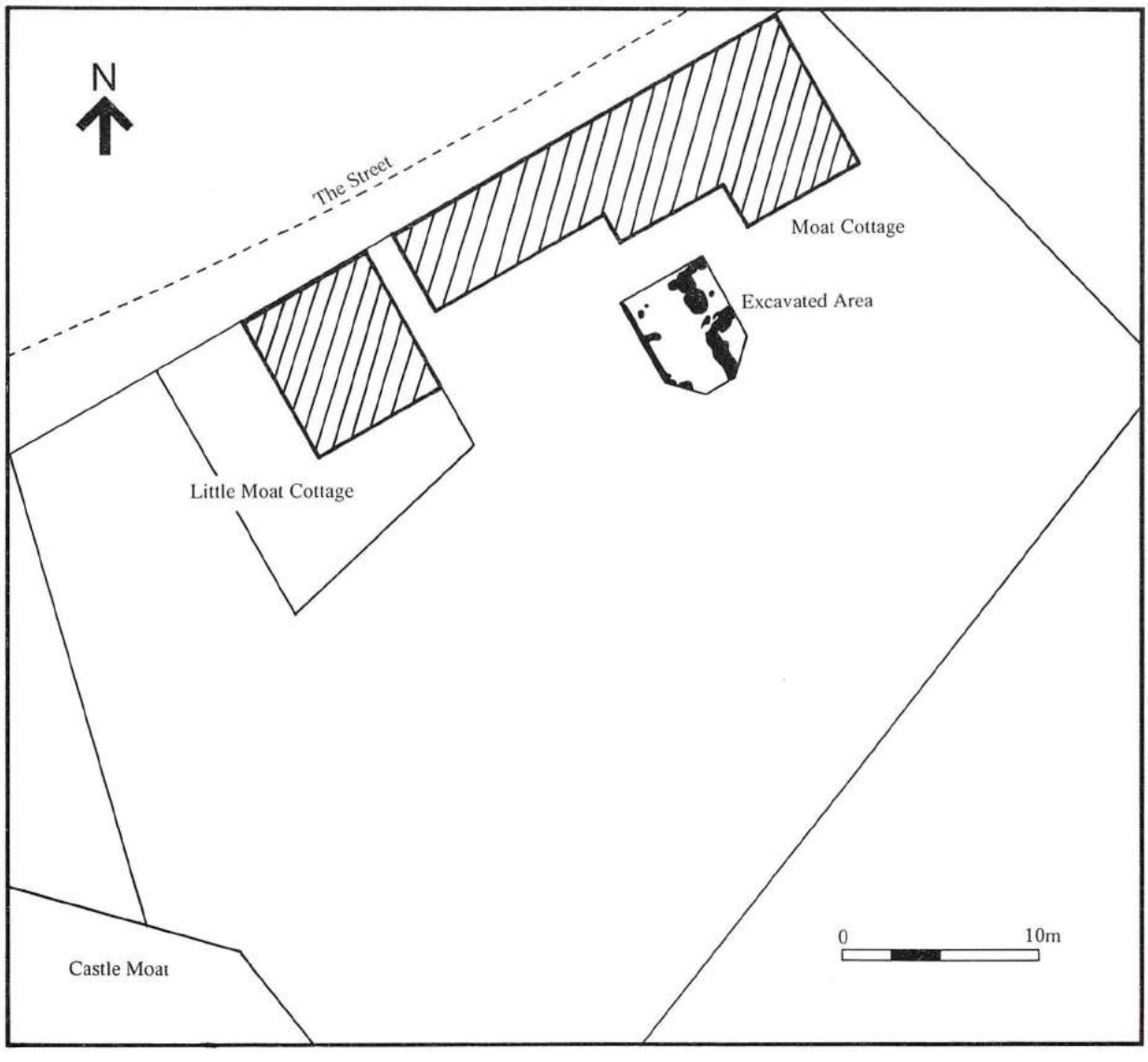

Fig. 9 Moat Cottage, Pleshey. Trench location.

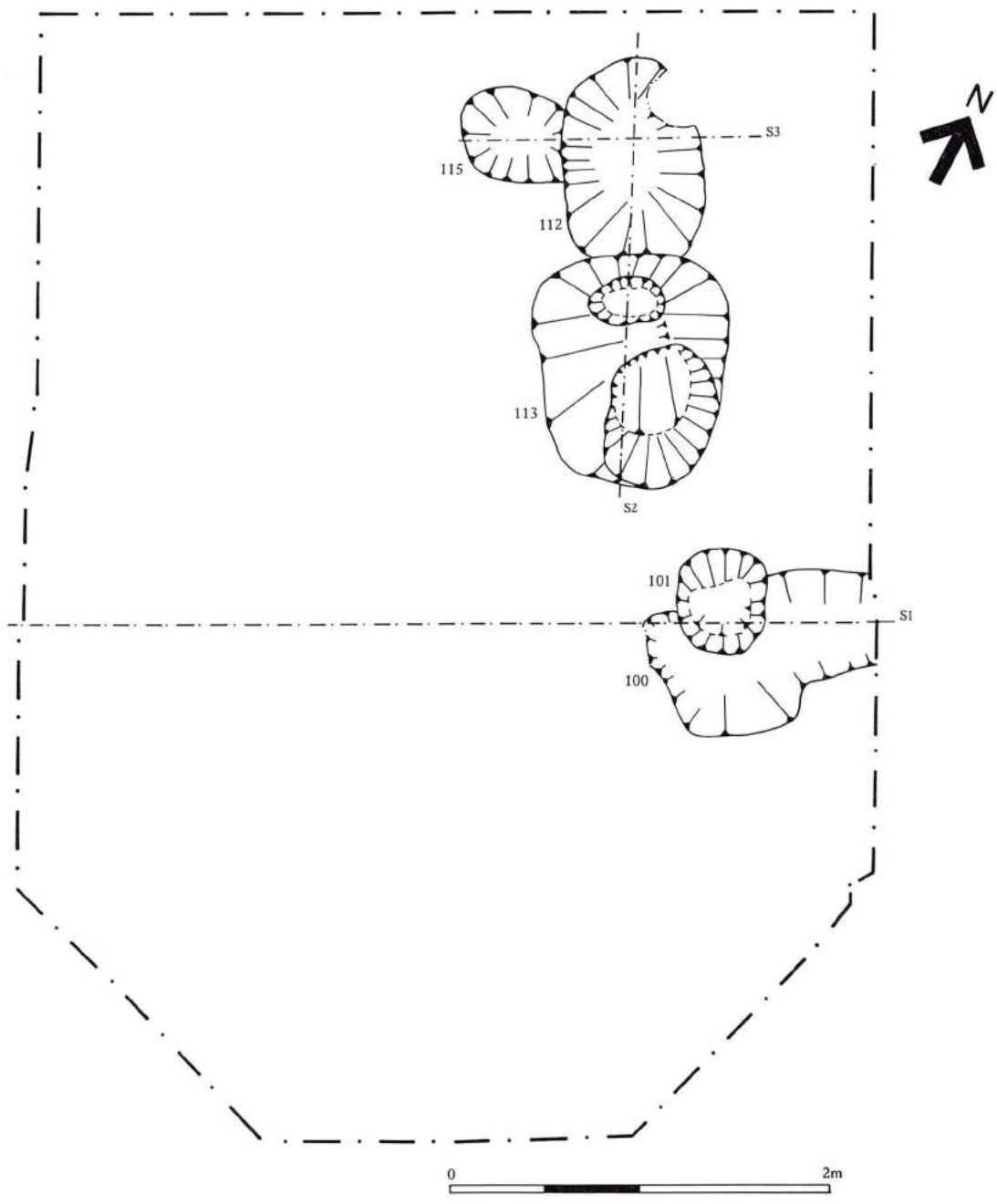

Fig. 10 Moat Cottage, Pleshey. Medieval features.

Three intercutting medieval pits (112, 113 and 115) lay in the northeastern part of the trench. Pit 115 was rectangular, orientated east-west, and 0.17m deep. It was cut at its east end by a much shallower pit, 112. This was also rectangular, but orientated north-south. The final pit of the sequence 113 was sub-circular, with an irregular base. The southern end was 0.41m deep and bowl-shaped, with a ridge of natural across the centre of the feature that divided it from a smaller, steeper depression to the north. The whole pit was filled with a homogeneous fill, which suggested that it was a single feature rather than two intercutting pits.

Pottery from these pits suggests a date within the 12th or 13th century. No other closely datable finds were recovered from any of these features. Bone and shell were found in most contexts, and the features appear to be domestic rubbish pits, probably dug and backfilled within a short space of time.

A short length of irregular shallow gully 100 entered the trench from the east, terminating in a bulge 0.92m wide 1.8m from the limit of excavation. Its width away from the terminal was 0.64m, and its depth varied between 0.08 and 0.17m. It is possible that the bulge at the terminal could be the remains of a round pit cut by or cutting the gully, but again the homogeneous fill suggested this was a single feature. Too little of this feature was located within the trench to interpret its function. A small, square pit 101 cut the fill of 100 on the north side. Five sherds of medieval pottery were recovered from its fill.

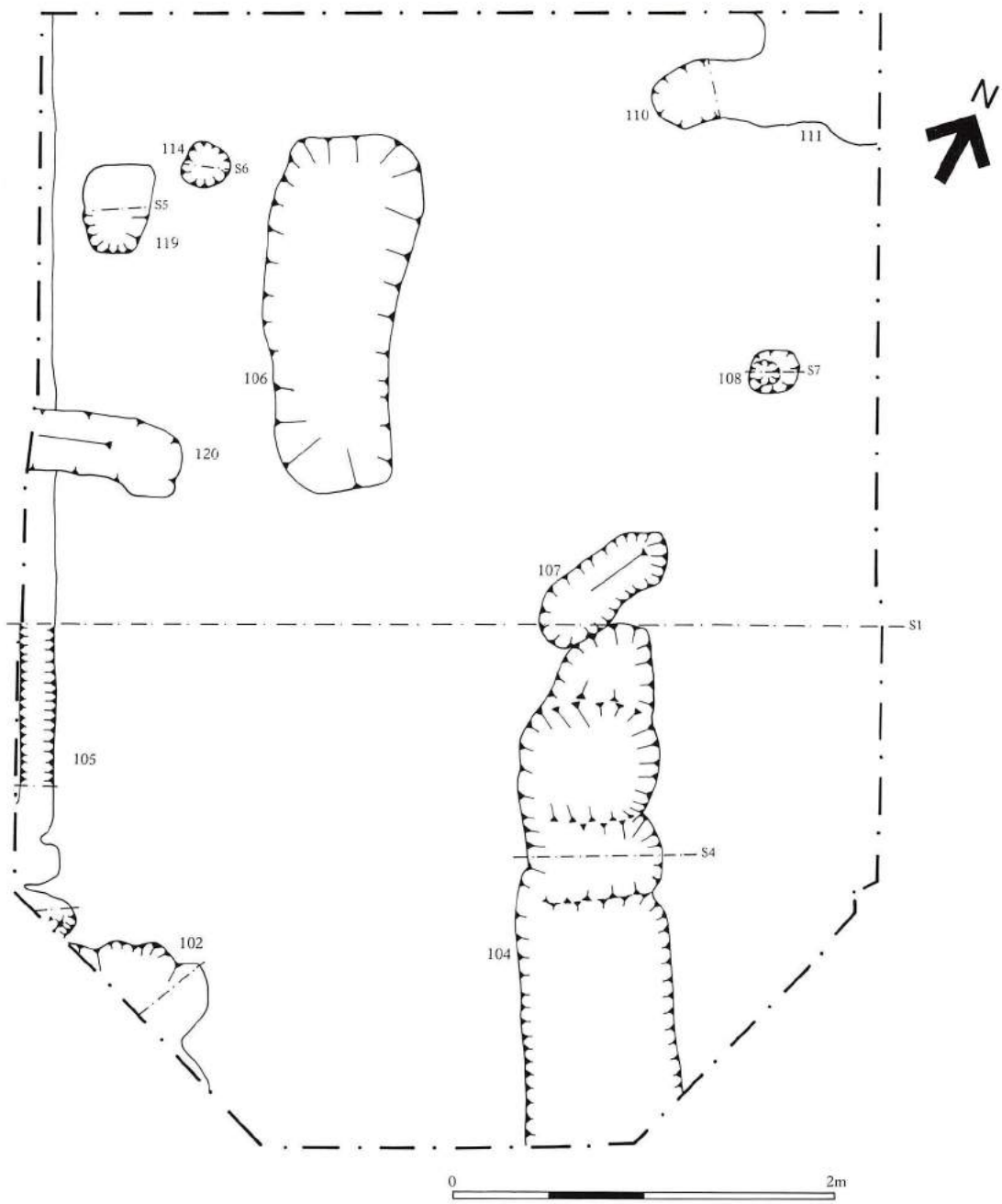

Fig. 11 Moat Cottage, Pleshey. Post-medieval features.

Phase 3, Post-medieval (Figs 11 and 12; S5-8)

Most of the other features in the trench were probably 18th century and later.

The three post holes (108, 114 and 119) did not yield enough material to be closely dated, but brick, tile and coke from these features suggest a relatively recent date.

Gully 104 was very irregular and appeared to have been dug as a series of connected pits. Its linear nature and homogeneous fill, however, suggest that this was all a single feature. It ran north to south at the eastern side of the trench. It contained pottery of late 18th or19th-century date. The terminal at the north end of 104 was cut by pit 107. This feature contained finds up to the 18th century, but a later date is indicated by its relationship with the gully.

A narrow, steep-sided slot (105) ran parallel to the western edge of excavation. This was 0.21m wide and 0.37m deep, and may have been structural, although no related features were located. Other pits (102, 110 and 111) all appear to be of 19th-century date.

Finds

Medieval and later pottery

H. Walker

A small amount (nearly 2kg) of medieval and later pottery was excavated and is described in the archive report using Cunningham's typology (Cunningham 1985, 1-2). Early medieval sand and shell tempered wares and Early Medieval ware were found (Fabrics 12B, 12C, 13) but only as residual sherds in later contexts.

Some of the rim sherds are comparable to vessels found at Pleshey Castle, Period I (Williams 1977, fig 31.9, 11, 13) dated to the '?later 12th century +'. Of interest are six sherds of Early Medieval ware

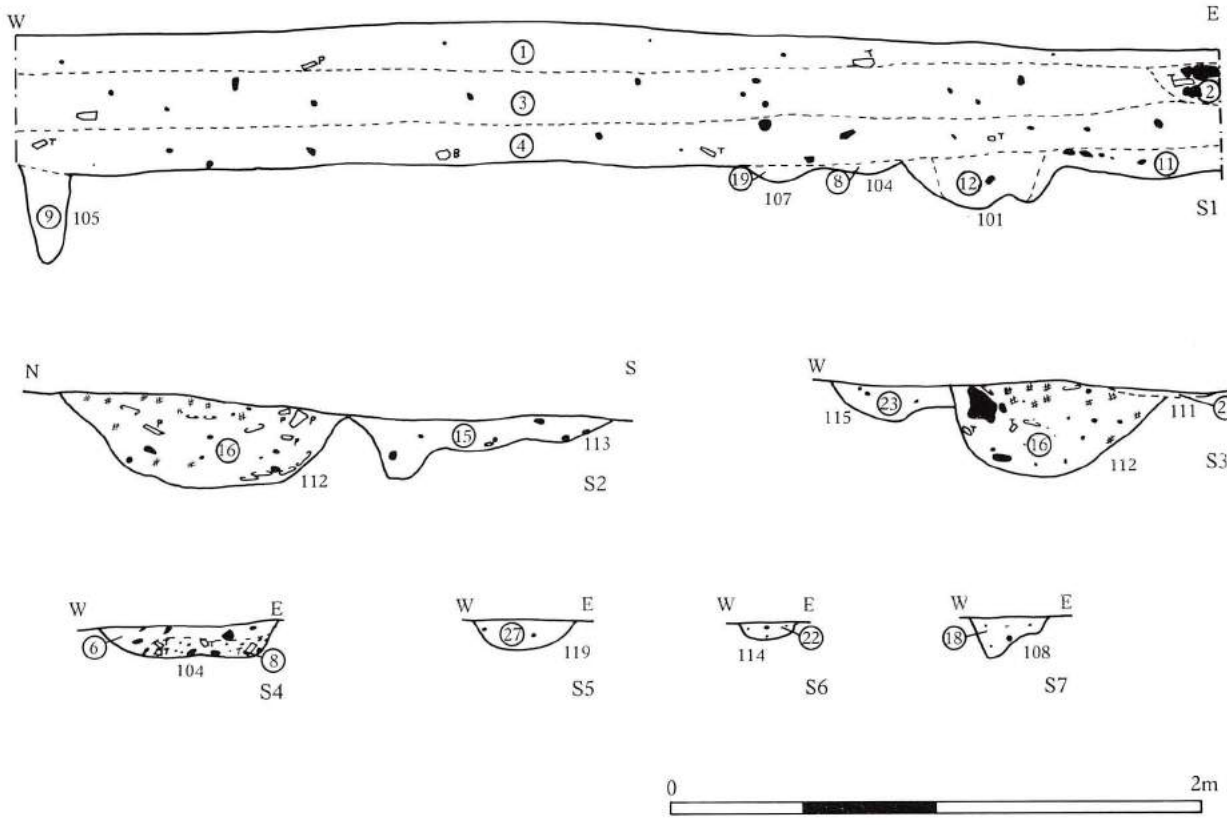

Fig. 12 Moat Cottage, Pleshey. Sections.

with a plain splashed glaze; of these, three are decorated with incised horizontal grooves and must represent some of the earliest glazed wares in Essex.

The largest group of pottery was excavated from Pit 112, fill 16 (78 sherds, weighing just over 1kg). This contained 12th- to 13th-century pottery. Perhaps the latest pottery to be deposited in this group comprised fragments from three medieval coarse ware cooking pots (Fabric 20). Each has a sloping top above a short upright neck. This rim type is thought to belong to the 13th century and occurs in two main mid-13th-century groups in Essex (Drury 1983, 81). One complete cooking-pot profile was reconstructed (Fig. 13).

Medieval fine wares from this excavation comprise sandy orange ware (Fabric 21) and Hedingham ware (Fabric 22). Unfeatured examples of both these wares occur in pit 14, and a Hedingham ware jug rim was residual in modern slot 120 (fill 28). It is comparable to a rim found at King John's Hunting Lodge, Writtle (Rahtz 1969, fig. 52.15A). There is no pottery evidence for activity in the later medieval period; i.e. the end of the 13th to 16th century. Post-medieval wares are present; most are quite recent, belonging to the late 18th to 19th centuries.

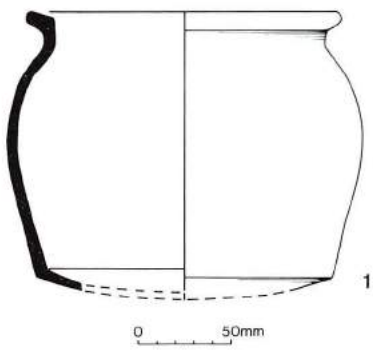

Fig. 13 Moat Cottage, Pleshey. Medieval pottery.

(Fig. 13)

1 Cooking pot: medieval coarse ware; grey with thick pale grey core; uneven blackening on sides up to shoulder. Fills 14, 16 (pit 112).

Brick and Tile

H. Major

One hundred and eight fragments of brick, weighing 5115g, were recovered from 9 post-medieval contexts. None of the brick fragments bore any traces of frogs.

Three brick fabrics were identified as follows

Fabric B1: Red, fairly hard, moderate coarse flint tempering.

Fabric B2: Reddish-brown, quite soft, and fairly fine with rare small flint inclusions.

Fabric B3: Same as Fabric B1, but without flint inclusions.

Nine fragments of tile (total weight 405g) were recovered from 7 post-medieval contexts. All the tile appeared to be pegtile.

Two tile fabrics were identified as follows -

Fabric A: Red, hard, sandy, rare small flint inclusions, occasional mica specks.

Fabric B: Same as Fabric A, but with rare small chalk inclusions.

Burnt Clay

H. Major

A total of 11 fragments (195g) of burnt clay was recovered from five contexts With one exception (context 6, 10g) it was all in a single fabric: soft reddish-brown with common small chalk inclusions, often exhibiting wattle impressions.

Most of the burnt clay (160g) came from medieval pits 112 and 115.

Worked Flint

H. Martingell

9 struck flints were studied

Context	Description
4	1 flake with two areas of retouch. Cortex on butt and distal end; wide platform.
6	1 flake; area of utilisation and damage. Cortex on butt.
	1 primary flake (patinated)
	1 trimming flake (patinated)
8	1 thinning flake, area of concave retouch on right lateral edge (patinated)
11	1 nodule with 2 alternate flake removals. Mortar on cortex.
12	1 primary flake with edge damage. (Centre struck flake removal (like gunflint))
15	1 flake with remains of distal retouch. Scraper? Wide platform.
29	1 section of large blade. Excellent quality flint in very sharp mint condition. Butt end wide platform.

This is a mixed collection of flints, the earliest being the thinning flake (PY3/8) which could be Mesolithic. The rest are Neolithic to recent.

Faunal remains

O. Bedwin

A total of 70 fragments of mammal and bird bone were recovered from 9 contexts. Four species were identified:

Bos (cattle): 7 *Ovis* (sheep): 13 *Sus* (pig): 4 *Gallus* (chicken): 1

The remaining 50 fragments were unidentified; many were rib fragments, probably of sheep or cattle. No conclusions can be drawn from such a small assemblage, except that the majority of the bone came from medieval pits 112 and 113, reinforcing their interpretation as domestic refuse pits.

Conclusions

Given the very small area excavated, only limited conclusions about the medieval or post-medieval development of Pleshey are possible. 12th- to 13th-century activity, probably associated with the disposal of refuse from buildings within the north bailey has been demonstrated, but the location and nature of such buildings has not. The excavation has, however, given some indication of the survival and date range of features likely to exist in this part of the town.

The lack of features throughout the later medieval and earlier post-medieval periods may be explained by the absence in 15th-century building accounts (Ryan pers. comm.) of any reference to buildings standing in the outer court. The stable lay in the Stablewicke, to the southeast of the outer court, and it is possible that the excavation area lay within the stable yard.

The earliest post-medieval features belong to the 18th century, and may be associated with activity in the garden of Moat Cottage. It is possible that an 18th-century structure is represented by slot 105, but that most of this lay to the west of the excavated area. It is known that a recent structure, used as a bakehouse, stood to the southeast of the excavation, and rubble encountered during the removal of the overburden (particularly context 2) appears to be derived from its demolition.

Acknowledgements

The excavation at Moat Cottage, Pleshey was funded by Essex County Council Planning Department with the aid of a grant from Chelmsford Borough Council. All excavation and recording was undertaken for Essex County Council Planning Department by the authors (Philip Clarke directing). The illustrations were prepared for publication by N. J. Lavender (plans and sections) and Roger Massey-Ryan (pottery).

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The archaeology of 'Kiln-' and 'Mill-field'

James Kemble

The Essex Place-names project database, currently held in County Hall, Chelmsford, and due for inclusion in the new Essex Record Office search-room facilities, permits search of specified names and word elements. To date, over 7000 place names have been entered onto the database, mostly from the Tithe maps and Awards (*c.* 1840), but, for some parishes, also from earlier 16th to 20th-century documents. Additions have been made from 20th-century documents, OS maps and local knowledge to identify and update the older palce names.

Many place names refer to industry now gone. Some have been preserved in street or later house names, others in field names, though even these are used with decreasing acquaintance. Until the end of the agrarian economy and the centralisation of agricultural and industrial processing into large factories, most parishes required local acccess to milling for their corn. Evidence for watermills in contained in the Domesday survey, but rarely is their exact location identifiable from this source. The heavy hammer worked by watermills and, later by wind power, had been introduced in the 12th century to full cloth. The slow-running rivers of Essex did not easily provide power without extensive irrigation work to create a head of water. An early tide mill, dating from c. 1413, stood until 1963 at St Osyth, and others are later recorded at Fingringhoe, Stambridge, Thorrington and Walton-on-the-Naze. These works often leave identifiable archaeological evidence such as fragments of millstones, ponds, leats and cuts, even though the mill has gone.

Essex Archaeology and History **30** (1999), 274-278

Book reviews

Excavations at the Orsett 'Cock' Enclosure, Essex, 1976, by G.A. Carter, E. Anglian Archaeol. 86 (1999), 184 pages, plus microfiche. ISBN 1 85281 163 3. £15

This report deals with the results of extensive excavations at this major Late Iron Age/Roman enclosed site on the Thames gravels in south Essex. This fieldwork, which was made necessary by realignment of the A13 trunk road, was directed by Hugh Toller for Essex County Council in 1976. The project has seen a number of changes in personnel and other vicissitudes in the meantime. Indeed this publication has been 'overtaken' by full reports on subsequent excavations by Essex C.C. on the line of the A13 in 1980 and 1987, which appeared over ten years ago in *East Anglian Archaeology* and *Essex Archaeology and History* (Milton 1987; Wilkinson 1988). An interim report by Toller was published in *Britannia* in 1980. Many of the conclusions which this presented have been altered or qualified, however, and the present volume supplants this earlier account.

Situated on high ground 6km to the north of the River Thames, the multiple-ditched rectilinear enclosure at Orsett 'Cock' measured approximately 140m x 80m, and was discovered by aerial photography. Although a proportion of the site had been disturbed by recent gravel-digging, the area of *c.* 6600m² excavated in 1976 accounted for the great majority of the enclosed area. While a single round structure of Middle Iron Age date was recorded at the site, the first major features have been dated to the Late Iron Age and the period of the Roman conquest. A sub-square LIA ditched enclosure *c.* 30m square, containing a round post-built structure, seems to have been incorporated into the north-western part of a very much larger enclosure complex during the conquest period itself. The enlarged enclosure was defined by triple or quadruple ditches, some of them over 1.5m deep. Three more circular structures within it, one of them substantial, have been assigned to this period.

Although the exceptionally large enclosures at Sheepen and Gosbecks are two of Essex's largest and best-known Iron Age enclosures, it might be more appropriate to compare the Orsett example with that at Burgh, Suffolk (Martin 1988). Martin has speculated that the latter, which was also sub-rectangular and of broadly similar dimensions, might have been used by local Iron Age leaders during the unrest of the mid 1st century AD. It appears that the conquest period defences at Orsett were not long-lived, and that they were deliberately levelled or slighted. While a group of Iron Age spearheads were found in the backfill of one of the ditches there is no clear evidence that the site was defended against, or seriously damaged by, any major Roman assault.

Occupation continued into and through the Romano-British period, with no clear sign of any major post-conquest hiatus. The area of the main enclosure was subdivided in the later 1st and 2nd centuries. Several post-built structures identified during analysis have been assigned to this period, one of them a large aisled building over 20m long interpreted as the combined main dwelling-house and barn. The later Romano-British period saw further modifications to the land-divisions within the enclosure, continuing building activity, and the use of a series of four pottery kilns. The similarity of these 'new' land divisions to the axis of present-day field systems hereabouts (rather than to that of the earlier enclosure) is striking, as is the presence of the kilns in an agricultural or domestic context. The only significant post-Roman features recorded at the site were a series of five sunken-featured buildings which yielded 6th-7th century pottery. Their dispersed distribution appears to respect the pre-existing later RB land divisions, offering further evidence that these features have influenced the pattern of the modern landscape.

The report was written during the late 1980s. The account of the excavation does not display the modern trend towards summary presentation, with highly selective provision of detailed information. Instead it offers a 'traditional' monograph report, with detailed written descriptions of buildings and other features replete with dimensions and feature reference-numbers. It is not always easy for the reader to extract information rapidly from this densely-written account. Cross-referencing to illustrations and to other sections of the report is sometimes idiosyncratic and difficult to follow, and it would have been helpful if certain parts of the narrative were supported rather more closely by summaries of artefactual and dating information. Yet

the report contains a formidable quantity of detailed information. Many of the figures themselves are excellent (although this particular reader was sometimes disorientated by variations in the alignment of north-points on different plans). The use of a miniature 'thumbnail' plan of the entire site to locate individual detailed plan figures is imaginative and thoughtful, and a great help considering the size and complexity of the site.

The boldest section of the monograph – and that most likely to be queried by critical readers – is the lengthy *Detailed Interpretation* chapter which precedes the main *Discussion and Conclusions*. Here the author presents an analysis of the structural evidence, considering in detail the layout and construction of the defences and of each of the numerous buildings and other structures identified during the research. The picture which emerges from Carter's account is quite different from that offered by Toller's 1980 interim report. The latter report identified only five buildings – three roundhouses, a 'four-posters' and a sunken-featured building, all readily paralleled with features known from other sites. However, the more recent post-excavation research has postulated the existence of well over thirty timber structures. In addition to the types recognised by Toller these include rectangular, sub-rectangular and trapezoidal post-hole buildings, of varying dimensions and in differing states of preservation. Wherever possible, each of them has been considered architecturally and technologically; an extensive series of detailed illustrations suggests the forms which their superstructures might have taken.

In introducing his analysis, the author argues that progress in the interpretation of timber buildings – and towards the identification of previously-unrecognised structural types – has often been hampered by the cautious approach taken by conventional site reports, which rely heavily on comparing possible structures with published 'buildings' from other sites. Certainly this is a thought-provoking issue. The author's approach offers a renewed challenge to excavators to engage as fully as possible with the valuable evidence which post-holes, gullies and other structural features provide, and to ensure that they consider them imaginatively in three-dimensional terms. Certainly each of Carter's putative buildings has been considered very carefully in terms of architectural technology. That said, the writer's apparent intention to assign as many as possible of the individual excavated post-holes to a hypothetical structure of some kind is a highly ambitious one. The resulting analysis surely pushes the spatial interpretation of post-holes from a plough-truncated rural site to the absolute limits of what is possible, and probably sometimes beyond them. Many readers are likely to feel disquiet at (for example) some of the more complex rectangular structures and small trapezoidal 'buildings', and at the detailed presentation of their proposed superstructures.

It is often difficult to decide how – or if – an archaeological field report should present more developed or speculative interpretations. Certainly it is important to guard against presenting tenuous hypotheses (arising, for example, from the layout of excavated post-holes) as interpretative 'fact' in the site narrative itself. At the same time it is also important that the approach is not over-cautious and that the excavator's (or, in this case, the site analyst's) interpretative ideas and insights are freely available to the reader, along with reservations and *caveats* where necessary. In the case of this particular report the emphasis on reconstruction, some of it tenuous, is probably disproportionate. Development of the author's more speculative ideas has been confined to the chapter entitled *Detailed Interpretation*, however. Despite the qualms which some readers may feel, this is an interesting case-study of an imaginative and ruthless approach to spatial and structural analysis. It may well stimulate and contribute to important future debate of the issues involved. Given the significance of the site, and the time which has elapsed both since the 1976 excavation and the drafting of the present report, it has surely been right for Essex C.C. to proceed to publish the monograph in its present form without further ado.

Trevor Ashwin

Martin, E.A., 1988. *Burgh, the Iron Age and Roman Enclosure*, E. Anglian Archaeol. 40

Milton, B.H., 1987. 'Excavations at Barrington's Farm, Orsett Cock, Thurrock, Essex, 1983', *Essex Archaeol. Hist.* 8, 16-33

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Excavations south of Chignall Roman villa, Essex, 1977-81, by C.P.Clarke, E. Anglian Archaeol. 83 (1998), 153 pages plus microfiche. ISBN 1 85281 161 7. £15.

This is the account of several seasons' excavations on an area of 10ha to the south of the well known Roman villa at Chignall St. James in mid-Essex. Although the villa itself, at least one ancillary building, and the northern and eastern sides of the villa enclosure are known from cropmarks on aerial photographs, no such evidence was available for the excavated area. Not unexpectedly, however, the large-scale investigations produced a variety of evidence for features within the landscape contemporary with the villa, including a number of enclosures, trackways, some post-built structures and a small, late Roman cemetery.

The sequence of occupation of the area goes back much further than the Roman period, with slight evidence of both Mesolithic and Late Neolithic/Early Bronze Age activity identified from flintwork. The first unassailable evidence for settlement dates from the Middle Iron Age, with small, curvilinear ditched enclosures. One of these, enclosure A, continued into

the Late Iron Age, at which time there was a single round house (indicated by a ring gully), a typical domestic structure of this period in Essex.

Settlement continued into the Roman period with no sign of a break, but with every indication of a comprehensive re-ordering of the landscape during the second half of the first century and early second century. Although enclosure A, with its round house, continues in use, three small, linked rectilinear enclosures appear, two of which contained rectangular structures. Of these structures, two were characterised by substantial post holes, several of which showed signs of replacement. Trackways and narrow linear features also appeared.

In the late second century and first half of the third century, this landscape was itself re-organised. Enclosure A went out of use, and a new, larger rectilinear enclosure appeared, containing substantial areas of metalling. The timber structures noted above went out of use, but on the site of one of them, a new, rectangular post-built structure was erected, in which the pads rested on pads made of re-used *pila* tiles.

The second half of the third century saw the first signs of the villa enclosure ditch, part of its south and west sides being examined.

At the end of the third century, and into the fourth, the line of the eastern side of this ditch was moved slightly westward, and its interior substantially re-modelled, with three main linear sub-divisions, one of which contained a number of small, curvilinear enclosures, the smallest of which was merely a few metres across. At this point too, a small inhumation cemetery was established, about 150 metres outside the villa enclosure. Twenty five graves were found (with the possibility of a few more outside the area available for excavation). Five burials were accompanied by grave goods; eight provided evidence (in the form of nails) for coffins. These 25 burials included five individuals which had been decapitated.

By about 370 AD, activity in the excavated area had almost come to an end, with many of the earlier ditches being backfilled with a mixture of domestic and building debris, best interpreted as material cleaned out after a fire, most likely in the villa building itself.

For the medieval period, about a quarter of the excavated area showed the remains of narrow-rig cultivation, the demise of which cannot be dated with any certainty.

The finds were fairly unremarkable, though the graves contained a number of glass vessels, and an unusually finely carved bone hairpin.

In his discussion, the author focusses on the underlying causes for the changes in the way in which the landscape is laid out. The excavated area was almost certainly part of the villa estate, and seems to have been managed during the Roman period on the basis of the needs of arable and pastoral farming. Cattle were clearly important not only for the Roman economy, but during the Iron Age too. The villa to the north of the excavation makes its presence felt in the discussion of its origins in a short note by Ernest Black. It is suggested that the villa was established from the earliest phase of Roman activity, but that the substantial courtyard villa in its final form (as known from cropmarks) is more likely to correspond to the time in the second half of the third century when the enclosure ditch was first dug.

This report is well constructed, with the (unavoidable) detail of the dating evidence for the various phases and sub-phases clearly laid out. The discussion sets the development of the Roman landscape into the broader context of what is known elsewhere in mid-Essex, postulating an ordered and well-managed countryside around the Roman town of *Caesaromagus*. As such, there are obvious parallels with the area around the Roman small town at Great Dunmow (Wickenden 1988). A minor, but important, point is the excellent quality of the finds reports and the illustrations which accompany them.

The publication of this book, 17 years after the fieldwork ended, is something of a tribute to the tenacity of the author and of the county council's Archaeology Section. Although mid-Essex has few archaeological sites surviving as earthworks, the cover illustration of the Chignall Roman villa in its heyday (by Frank Gardiner) makes the point dramatically about the grandeur that once existed here.

Owen Bedwin

Wickenden, N.W. 1988 *Excavations at Great Dunmow, Essex; a Romano-British small town in the Trinovantian civitas,* E Anglian Archaeol. 41

A medieval farming glossary of Latin and English words taken mainly from Essex Records, compiled by J.L. Fisher, second edition revised by Avril and Ray Powell (Essex Record Office Publication No. 138, Essex County Council, Chelmsford, 1997).

The first edition of Canon Fisher's book published in 1968 was an unexpected success. It apparently went out of print within a few years, and the reviewer can himself remember a well worn copy which was still producing illicit photocopies for postgraduate students at one University in the 1980s. This attractively presented new edition, published by the Essex Record Office, and carefully revised by Avril and Ray Powell, is sure to be equally popular. They have omitted certain words which were incorrectly defined in the first edition or now seem less relevant while adding many new ones which were frequently used in documents relating to medieval agriculture.

Although the glossary may appear deceptively simple at first sight, being an alphabetical listing of Latin words in **bold face** and Middle English words in BOLD CAPITALS, followed in each case by a definition of the term, let no one underestimate the difficulty of

providing one- or two-word explanations of technical terms deriving from the management or conduct of farming operations 600 or 700 years in the past. Many of the words listed in this glossary do have very substantial entries in the *Oxford English Dictionary* or R.E. Latham's *Revised Medieval Latin Word List* (1965), and the concise entries in Fisher's glossary provide a marvellous short-cut to their interpretation in medieval farming records. In addition, some of the words do not appear in the standard works of reference at all, for Fisher's compilation was based upon local records and contains terms that are particular to Essex in custom or dialect. The wonderfully named *Snotteringsilver* (p. 40), a customary due paid to St. John's Abbey, Colchester, is but one example.

Although such a word-list might seem the very epitome of 'dry' or 'dusty' old history, there is much in the language of past ages to delight and amuse. For example, the straightforward term **precaria** meaning 'boonwork' (p. 34), an additional labour service, could be transformed into **precaria amoris** – 'love-boon', literally a service performed by the tenant for his lord out of love (sic), and **precaria madida** and **precaria sicca**, literally 'wet' and 'dry' boonworks depending on whether or not alcoholic refreshment was provided for the workers. On occasion, however, the definitions can seem a bit too terse for the uninitiated. The explanation of **rebinatio** as 'reploughing' (p. 36), does not really convey the typical sense of multiple ploughings of the fallow to improve the soil structure and tilth, and nor does **seiso** as 'season' (p. 39) indicate its application to groups of furlongs or other lands combined in a course of cropping such as a winter/spring/fallow rotation. Like some other entries, the definitions of **perca** or **pertica**, 'perch (measurement)' (p. 6) and **roda**, 'rood, measurement of land' (p. 37) must be understood as a general guide not a precise meaning. The problem here is that the perch, while nominally 16½ feet in length, could vary customarily and so, therefore, could all other units of area based upon it including the rood (¼ of an acre) and the acre itself.

Although the glossary will not provide the last word in the interpretation of medieval farming documents, in most cases it should be the automatic first choice for the puzzled researcher. It is the ultimate quick-reference guide for use in the archive search room when progress is halted in the face of yet another mind-numbing word or phrase. All of us owe a great debt to Cannon Fisher and to Avril and Ray Powell for producing this small but powerful research tool. May it remain in print for a very long time.

Chris Thornton

Godliness and Governance in Tudor Colchester, by Laquita M. Higgs, University of Michigan Press, xiii + 434 pp.

Sixteenth-century urban studies tend as a rule to focus on social conflict and the more lurid aspects of the Reformation; Higgs' survey goes some distance towards redressing the balance, and the experience of Colchester, as a major provincial town in that era, may well be as representative as any. Without going so far as to suggest that the 5,000 or so inhabitants of the borough took the traumas and successive U-turns of the years 1529-1559 in their stride, it does look much as though they resolved pragmatically to endure what had no obvious cure in the short term, and to survive until central government, abandoning repression, created the opportunity for them to build the kind of community to which they aspired.

Woollens formed the economic base of the Tudor borough, manufacture and distribution occupying the most substantial burgesses from whom were drawn the ten aldermen who elected two of their number as bailiffs, executive officers. Under its charter, the corporation enjoyed wide responsibility for local administration. In a volatile age, the concept of godliness doubtless varied with official changes in doctrine, but in general the civic leaders strove to discharge their responsibilities in accordance with Christian principles as understood at any given time.

An exceptional feature of the community was a relatively high rate of literacy, a legacy, perhaps, of Lollardy there a century or more earlier. Colchester had long been reputed a centre of religious radicalism. As a busy east coast port, it succumbed early to Luther's teachings, so that by 1529 it was ready to go along with Henry VIII's assault on the authority of the Papacy; not for nothing was Town Clerk Thomas Audley elected Speaker in the Reformation parliament, 1529, and promoted to the Woolsack three years later upon the fall of conservative Sir Thomas More. Not the least welcome of Henry's innovations was the appearance of the Great Bible in every parish church in 1539, received, indeed, for what it was, i.e. official sanction of the popular demand for an authoritative English translation of the Scriptures. The simplified doctrine outlined in the Ten Articles, 1536, also won ready acceptance, though it appears from the preambles of contemporary wills - that rich, if problematical, lode for the source miner - that many persons prudently laid an each way bet on eternity, mixing together Catholic and Lutheran beliefs regarding salvation.

The town's monasteries were dissolved without excitement, merely some regret for St. Botolph's Priory and lesser houses which had been well integrated with the community. A history of friction over property rights made for indifference to the fate of the rich Benedictine Abbey of St. John; a move to retain it as a collegiate church, though supported by no less an authority than Audley, failed for want of interest. Ironically, the abbot, having voted in the House of Lords for the bill to suppress the smaller houses in 1536, defied intense pressure voluntarily to surrender the house to the king, was convicted of treason and hanged in front of the gate in 1539.

After having happily enough adopted the new liturgy in English (1549-52), the borough acclaimed the

accession of Queen Mary, and at first loyally seconded her drive to root out heresy, aware that its privileges had been granted by the Crown and could readily be revoked, at least equalling the intimidatory effect of the first few burnings of heretics, but, finally, nowhere did the bitter old woman's vindictiveness fail more completely.

The Elizabethan settlement afforded the returning Protestant exiles the opportunity to put into practice the Calvinist ideals (acquired at Geneva) of clergy and magistracy working together to construct a commonwealth of the godly. Electing reformist aldermen was a straightforward matter of ousting the papists. Finding clergymen learned in Calvin's theology to fill the numerous vacant livings posed a problem to which one solution was to appoint a town preacher financed by public subscription, until the success of the experiment persuaded the Common Council to ordain a stipend charged to the borough funds. Could it have been a re-channelling of the popular piety which had expressed itself in the religious guilds, which (prior to their suppression in 1545) had raised funds to pay for masses additional to the weekly quota? Once enough preachers had been beneficed, the local authorities were able to anticipate central government in ordaining 24 hours in the borough gaol for absence from church at sermon time.

Once in operation, from 1575, godly governance provided a textbook example of praiseworthy ideals unmatched by administrative competence. Ministers obsessed by such trivia as refusal of the surplice – the minimal vestment stipulated by the *Prayer Book*–could offer no practical guidance to the civil leaders, who, consequently, achieved little more than demonstrating the futility of seeking to impose moral standards by means of rules and regulations, a sustained offensive against sexual incontinence (as a nuisance to the neighbours) and alcohol, being more an irritant than an agent of moral regeneration.

To the tidal wave of indigence that threatened to engulf the community they could find no less crude a response than the expulsion of vagrants, and fining any householder who might harbour one. A comprehensive system of poor relief had to await the legislation of 1598, part of which was indeed foreshadowed by Colchester's governors in suggesting a classification of the poor as a step towards effective relief. The concrete achievement of this phase was the founding of the Royal Grammar School – almost half a centurt after Henry VIII had granted the burgesses the town's two richest chantries for this purpose.

The vitality of local puritanism enabled it to outlast by some years the abrupt termination of Edmund Grindal's controversial archepiscopate. Whether, as Higgs has it, the younger generation, which took over from 1588, simply felt out of sympathy with extremism, or was carried along by Archbishop Whitgift's campaign against dissident tendencies, the experiment in godly governance lost its momentum as municipal energies had to be diverted to the struggle to contain the rising tide of social problems during the bleak 1590s.

Higgs' confident management of somewhat elusive subject matter and clarity of exposition make this rewarding to read. At the same time, the real fascination lies in the wealth of detail relating to actual events and individual experiences, which discriminatingly presented, impart life without in any degree tending to obstruct the core structure. As an all-American product, it has the usual quota of mis-spellings, but not so many as to be obtrusive, and the final impression left on the reader is the refreshing quality of the author's style. This is an important contribution to Reformation studies and a must for anyone with a serious interest in 16th-century Essex; there should be a copy on the shelves of every library in the county.

Julian Cornwall

Essex Archaeology and History **30** (1999), 279

Essex bibliography

Bibliography of journal literature on Essex archaeology and history at March 1999.

Both monograph and periodical 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 completeness of coverage.

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Chase, L. 1997 'Modern image and social tone in Clacton and Frinton in the inter-war years', *International Journal of Maritime History* 9, no. 1, 149-69

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Crosby, T. 1998 'The Silver End model village for Crittall Manufacturing Co. Ltd.', *Industrial Archaeology Review* 20, 69-82

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Sokoll, T. 1997 'Old age in poverty: the record of Essex pauper letters 1780-1834' in T. Hitchcock, P. King and P. Sharpe (eds),), *Chronicling poverty: the voices and strategies of the English poor, 1640-1840*, 127-54

Walker, J. 1998 'Essex medieval houses: type and method of construction', in D.F. Stenning and D.D. Andrews (eds), *Regional variation in timber-framed buildings in England and Wales to 1550: the proceedings of the 1994 Cressing conference*, 5-15

Wallis, S.P. 1998 and Waughman, M. *Archaeology and the Landscape in the Lower Blackwater valley*, E. Anglian Archaeol. 82

University theses completed

O'Boy, M.W. 1995 'The origins of Essex recusancy', Cambridge Ph.D.

Hussey, S. 1995 'Agricultural workers and the community 1850-1940', Essex Ph. D.

Cooper, D.L. 1996 'The charters of Thoby Priory, Essex (mid 12th to early 16th century)', London Ph. D.

Pearson, J. 1997 'The rural middling sort in an 18th-century Essex village: Great Tey 1660-1830', Essex Ph. D.

Perkins, M.A. 1997 'The abbey of St. Albans in the 14th century', Leeds Ph. D.

Andrew Phillips
Paul Sealey

Notes for contributors

1 Contributions should be sent to the Hon. Editor, The Manor House, The Street, Pebmarsh, Halstead CO9 2NH.

2. The closing date for submission of articles to be considered for the following year's volume is December 1st of the preceding year. The volume is usually published in October or November.

3. Text should be typed double-spaced on A4 paper, on one side only, with at least a 3cm margin all round and 4cm at the top. Pages should be numbered. Two copies should be provided. Following acceptance, contributors will also be asked to provide a copy of their article on disc (in an ASCII format if possible).

4. Footnotes should also be typed double-spaced. They will be published as endnotes, rather than footnotes.

5. Bibliographical references should follow the Harvard system, i.e. in parentheses after the text, e.g.

(Hawkes and Crummy 1995, 23-56)
(Atkinson 1995, fig.5)
(Medlycott *et al.* 1995)

Where it is inappropriate to identify a work by author (e.g. Victoria County History or Royal Commission volumes), an abbreviated title and volume number may be given, e.g.

(Essex iii, 171)

The expanded bibliography should appear at the end of the text, arranged in alphabetical order:

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Cover illustration: The church of Maldon St. Mary, from the south, before the addition of the octagonal extension. Archaeological observations made at the church recently are described in Church Miscellany 1998