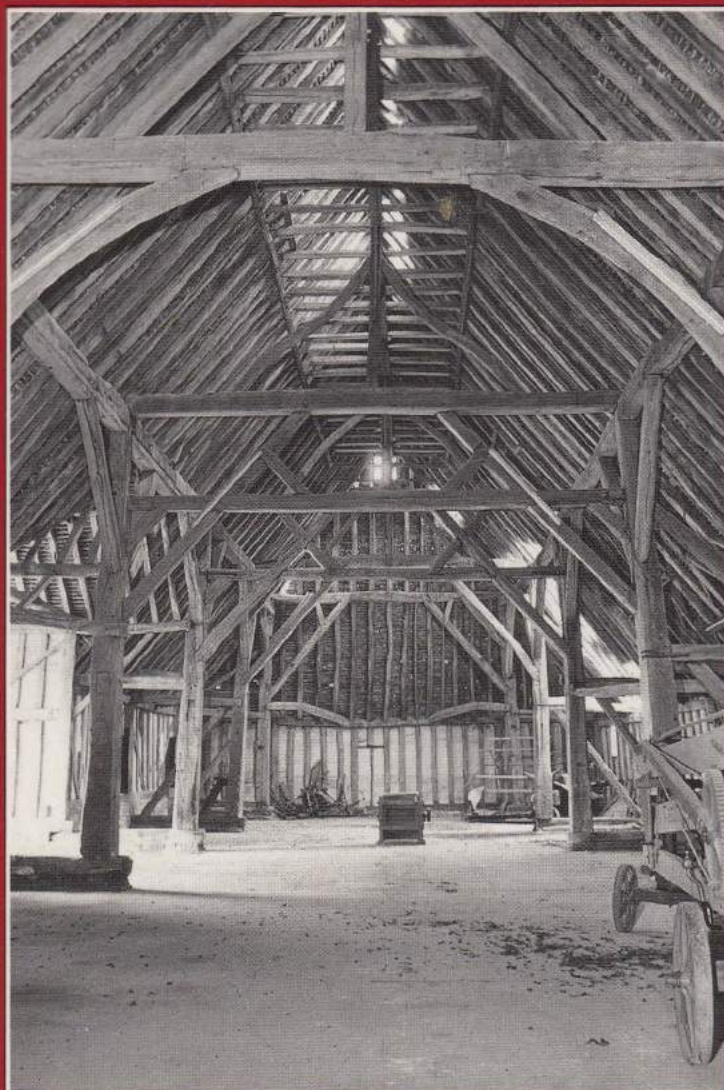


ESSEX



ARCHAEOLOGY AND HISTORY



TRANSACTIONS OF THE ESSEX SOCIETY
FOR ARCHAEOLOGY AND HISTORY

Volume 27

1996

ESSEX

ARCHAEOLOGY AND HISTORY

THE TRANSACTIONS OF
THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

VOLUME 27 (Third series)

1996

Printed by the Society at the Museum in the Castle 1996

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 benefits of members and interested members of the public; to educate the wider community in the archaeological and historical 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 of most recent volumes are available; prices available on application to the Librarian.

Members receive a regular *Newsletter* covering all aspects of the Society's activities, news of current excavations and fieldwork, and items of topical interest.

The Library

The library is housed at the Hollytrees, High Street, Colchester, and is extensive. It aims to include all books on Essex history and has many runs of publications by kindred societies. Members may use the library on any weekday during Museum opening hours on presentation of a signed membership card. The library is occasionally used for meetings and members intending to visit Colchester to use the library should ring in advance to check if this is the case.

Membership

Application should be made to the Hon. Membership Secretary for current rates. (Address inside back cover). A list of officers, with addresses, will be found in this volume.

Subscribing Societies in Essex

Billericay Archaeological and Historical Society; Brain Valley Archaeological Society; Castle Point Archaeological Society; Colchester Archaeological Group; Essex Society for Family History; The Friends of Historic Essex; Great Bardfield Historical Society; Halstead and District Historical Society; Haverhill and District Archaeological Group; Ingatestone and Fryerning Historical and Archaeological Society; Maldon Archaeological Group; Saffron Walden Historical Society; Southend-on-Sea and District Historical Society; Waltham Abbey Historical Society; West Essex Archaeological Group; Woodford and District Historical Society; Chigwell School.

"Reproduced from the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings".
Essex Society for Archaeology and History 1996

ISSN 0308 3462

Cover illustration: the interior of the great medieval Barley Barn at Cressing Temple. The geometrical principles underlying the construction of this barn and the Wheat Barn are discussed in two articles in this volume.

Essex Archaeology and History Volume 27 (1996)

Contents

A small Late Iron Age earthwork enclosure in woodland at Birch Spring, Highwood, Writtle: excavations 1994	STEVE GODBOLD	1
Late Iron Age and Roman occupation at Hatfield Peverel: excavations at Sandford Quarry 1994	JO ECCLESTONE and RICHARD HAVIS	13
A Roman site at the New Source Works, Castle Hedingham: excavations 1992	N.J. LAVENDER	22
Excavations at Angel Yard, High Street, Colchester 1986 and 1989	D. SHIMMIN and G. CARTER	35
A Late Roman and Saxon settlement at Great Waltham	S. TYLER and N.P. WICKENDEN	84
The Vikings in Essex, 871-917	ANN WILLIAMS	92
A medieval farm and its landscape: excavations at Stebbingford Farm, Felsted 1993	MARIA MEDLYCOTT	102
Further light on the design of the Great Barns at Cressing Temple	ADRIAN GIBSON	182
The geometrical designer at Cressing Temple	LAURIE SMITH	188
The counts of St. Pol in Essex and Kent	the late J.H. ROUND, revised and completed by W.R. POWELL	193
The topography and social structure of a small soke in the middle ages: The Sokens, Essex	ROSAMUND FAITH	202
More Maldon Wealdens. The origins and development of the King's Head, Maldon High Street	D.D. ANDREWS and D.F. STENNING	214
'Temporal blessings': poor women's employment in Essex during the French wars 1793-1815	PAMELA SHARPE	226
The enclosure of Old Heath common 1811-18	PATRICK DENNEY	237
Work of the Essex County Council Archaeology Section, 1995	A. BENNETT (ed.)	247
Archaeology in Essex 1995	A. BENNETT and P.J. GILMAN (eds)	261
Historic Buildings Notes and Surveys		277
Church Miscellany		289
Shorter Notes		
Flint axe/adze from Stock Road, Ingatestone	LOUISE AUSTIN	304
Mesolithic flint tranche axe/adze from Chelmsford	LOUISE AUSTIN	305
Cropmark of a possible long mortuary enclosure north of Rose Cottage, Chadwell St. Mary	D. STRACHAN	305
Palstave from Stapleford Abbots	N. BROWN	305
Roman and medieval metal finds from north and west Essex	H. MAJOR	307
A group of finds from the vicinity of the Noah's Ark Roman villa at Brightlingsea, Essex	T.S. MARTIN	311
Some recent finds of late Anglo-Saxon metalwork from Essex	M.J. CUDDEFORD	319
The origins of ancient woodland and a fishpond in Pound Wood, Thundersley, Essex	R.B. DELDERFIELD and S. RIPPON	322
Fragment of mortar from Sun Street, Waltham Abbey	P.M. RYAN	324
Two medieval finger rings from Essex	N.P. WICKENDEN and JOHN CHERRY	325
A 13th/14th-century roof at Bradwell Hall, Bradwell-on-Sea	JOHN WALKER	325
Medieval and post-medieval remains from Thaxted: excavations at the rear of 23 Town Street 1992	MARIA MEDLYCOTT	331
Book Reviews		337
Essex Bibliography		340

A small Late Iron Age earthwork enclosure in woodland at Birch Spring, Highwood, Writtle; excavations 1994

by Steve Godbold

The archaeological evaluation of a 0.56 ha. ditched enclosure at Birch Spring, Highwood, Writtle located several features of first-century AD date, indicating occupation in the Late Iron Age. Later features and finds attest to activity in the area during the medieval and post-medieval periods. Minor prehistoric activity was indicated by residual finds of worked flint.

Introduction

This report describes the results of a small-scale archaeological evaluation carried out on a rectilinear ditched earthwork enclosure in woodland at Birch Spring, Highwood, within the former royal forest of Writtle (Figs 1 and 2). The excavations were carried out by Essex County Council's Field Archaeology Group over two weeks in February 1994 under the direction of the author and followed a detailed contour survey of the earthwork by the Group in January. The work was commissioned by the County Council's Heritage and Countryside Sub-Committee following the discovery of the enclosure in June 1993 by Dr. N. R. Bannister and D. E. Bannister whilst carrying out an historic landscape survey of Writtle forest and park on behalf of John, Lord Petre of Writtle, English Heritage, and the Countryside Commission.

With less than two weeks available for site work the aims of the excavation were restricted to establishing the date and function of the earthwork, and the condition of any surviving archaeology.

The present Writtle forest is the former royal forest of Writtle and still presents a landscape which received its form during the medieval period. It remains largely unaltered since that time and retains many of its early features. In recognition of its historical importance the County Council has designated the area an 'Ancient Landscape', the main criteria of which are 'landscapes comprising an assemblage of features of pre-1600 origin'.

The Site

Geology and Topography

The enclosure at Birch Spring lies 9 km south-west of Chelmsford (Fig. 1), on an area of upland, part of a series of hills in south Essex, composed largely of Claygate Beds and Bagshot Beds capped locally on higher ground by Older Head (Hopson 1981). The actual site of the earthwork lies at the narrow neck of a spur of this high ground on the acid soils and clays of the Bagshot Beds at an elevation of c. 91 m OD (Fig. 2). This spur extends in a northward direction for 0.7 km gradually rising in elevation to c. 94 m OD on Older Head. The terrain to the south of the enclosure progressively inclines for a distance of 0.7 km to a high point of 98 m OD, also on Older Head.

The drainage of the area is largely affected by the geology. Ground water permeates through the sands of the Bagshot Beds, but on reaching the less permeable clays and silts of the Claygate Beds, escapes in the form of springs which drain to a valley to the north-east. The junction of the two soil types and the spring line roughly coincide with the 90 m contour.

Historical and Archaeological Background

Birch Spring lies on the southern boundary of the former royal forest of Writtle. It was part of the manor of Writtle, first mentioned in the Domesday Book of 1086, where it is recorded as a royal estate formerly owned by King Harold and subsequently acquired by William the Conqueror after 1066 (Rumble 1983). At that time Writtle was one of the largest manors in Essex (Rackham *pers. comm.*). The extensive wooded commons, which lay in the south of the manor, together with an assart, greens and deer park were to form the physical extent of this small royal forest.

The forest appears to have been established by the twelfth century, probably no later than c. 1150, by which date King Stephen had made the grant of a hermitage at 'Bedemansberg in my forest of Writtle' (Rackham *pers. comm.*). Early in the thirteenth century, Writtle Park was created which divided the forest into

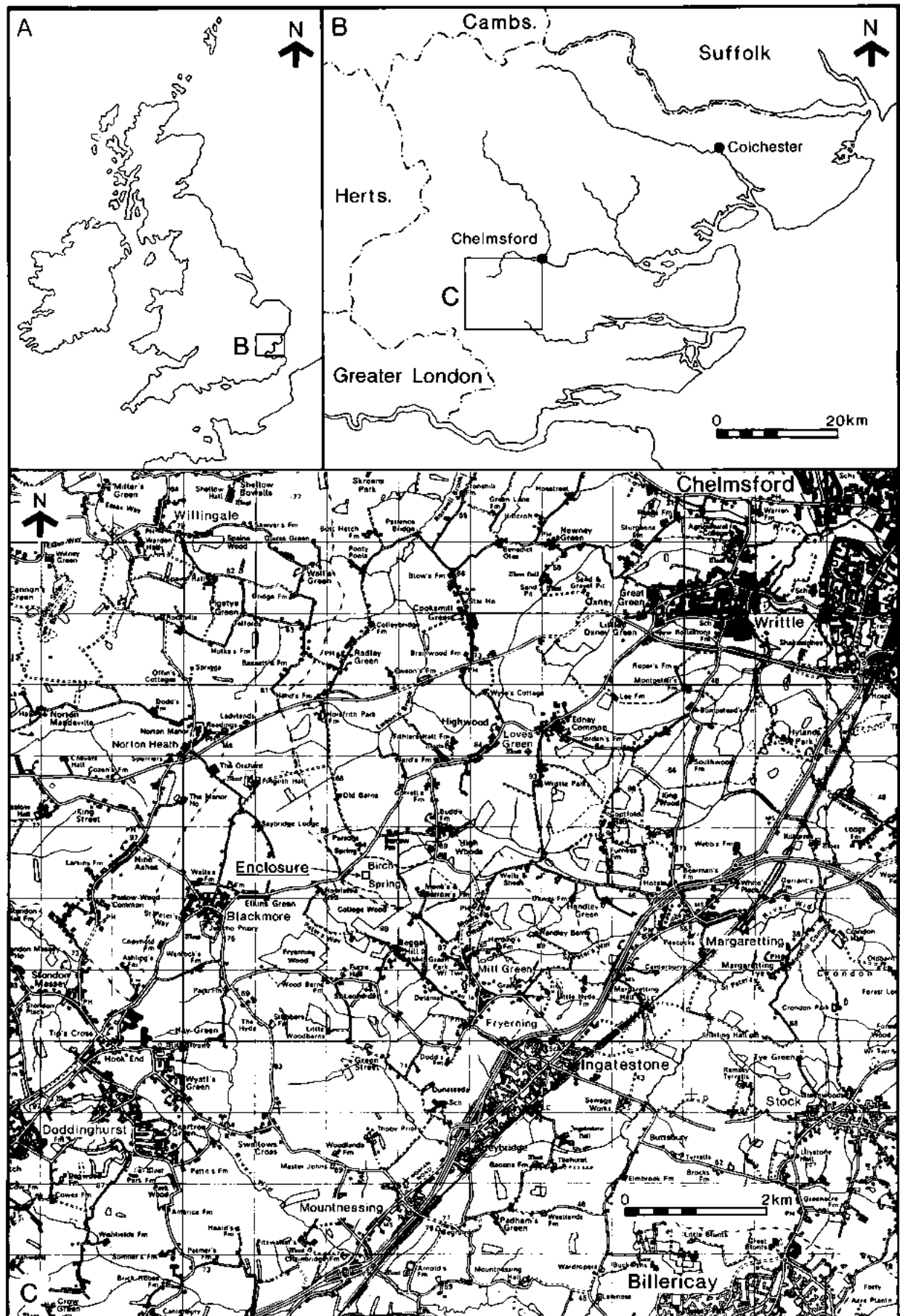


Fig. 1 Birch Spring, Highwood, Writtle: site location map. © Crown copyright.

two parts. In 1211 a complex of royal buildings, known as 'King John's Hunting Lodge' or 'King John's Palace', was built 4 km to the north-east near Writtle village (Hunter 1993). This building is included in a list of 1217 of royal hunting lodges in the care of the chief forester (Rahtz 1969). It was visited periodically by monarchs during the thirteenth and fourteenth centuries.

During the early thirteenth century the manor was granted at farm to a series of persons (Rahtz 1969), but in 1238 Henry III granted the landowning rights (although not the forestal rights) to Isabel de Brus (Rackham *pers. comm.*). It remained in the Brus family until 1306 when the estates of Robert de Brus became forfeit following his coronation as King of Scots. The estate was soon after granted to Humphrey de Bohun, Earl of Hereford and Essex. The de Bohun family retained possession of the manor (apart from a period between 1460 and 1489) until 1521 when the estate reverted to the crown following the execution of the Duke of Buckingham. In 1554 the estate was granted to Sir William Petre, secretary to Henry VIII, Mary and Elizabeth I (Bannister and Bannister 1993) and his descendants have owned the manor until the present day.

Very few archaeological investigations have been conducted in the area of Writtle Forest, although several excavations have been carried out by the Ingatestone and Fryerning Historical and Archaeological Society, mainly around the south-east border of the forest. In 1975 the society excavated a section across Moore's Ditch, a 300 m long linear earthwork on Mill Green Common, with negative results (Essex Sites and Monuments Record No. 0749, hereafter ESMR; Downs 1976). This feature is first mentioned in 1291 in the Forest Pleas (Bannister and Bannister 1993).

Around the eastern margins of Mill Green Common, a series of medieval pottery and post-medieval tile kiln sites have been identified. Pottery originating from these kilns has been recognised on medieval sites throughout Essex, London and the home counties and is typologically known as 'Mill Green ware'. Several of these sites have been investigated. These include a possible fourteenth-century site at TL 6414 0142, excavated in 1914 (ESMR 0842; Christy and Reader 1918); a site producing both medieval and post-medieval wares at White Gates, TL 643 022 (ESMR 0765 and 0766; Sellers and Sellers 1968a and 1968b); and a kiln producing roof tiles in the late sixteenth/early seventeenth centuries was excavated in Stoneymore wood at TL 6380 0180 in 1980 (ESMR 0866; Downs 1980).

Evidence of Roman activity in the area comes mainly from the southern fringes of the forest. The course of a possible Roman road, Mapletree Lane (Fig. 2), has been traced running part way along the southern border of the forest (ESMR 0764). The road lies close to the remains of the twelfth-century hermitage at

Bedemansberg (see above), the fabric of which contained Roman brick and tile (ESMR 0751). Roman building debris found a little north of Mill Green at TL 6460 0182 (ESMR 0660) suggests the site of a possible villa. Further evidence for Roman activity exists in the form of stray finds. Two of these are finds of coins also from the Mill Green area, one in a garden in the village (ESMR 0734) and another a little north of the village at TL 6410 0088 (ESMR 0810). In Writtle village, tile and brick has been found in the fabric of All Saints Church and in the churchyard, indicating a Roman building in the area (ESMR 0705), and burial urns have been discovered under what is now the green of Writtle Bowling Club (ESMR 0711). Finally, Romano-British pottery and building debris has also been found further to the west in Blackmore village (ESMR 0850).

The Earthwork

The earthwork's features were exposed following removal of a large part of the woodland cover during recent coppicing operations. It was revealed as a slight, but fairly well preserved sub-rectangular enclosure, its extent largely defined by a surrounding ditch, still apparent as a wide silted-up hollow 5-9 m across, enclosing an area of approximately 0.56 ha. (Fig. 3). The contour survey allows the earthwork to be described in some detail.

The longest side of the enclosure is to the north-west, where it is 96 m in length. At either end of this extent it turns abruptly to form the south-west and north-east sides which both extend in a south-east direction equally for a little under 80 m, converging in a slightly curving fashion, to meet either end of the south-east side, where it is about 60 m wide. This side of the enclosure curves slightly throughout its length into the interior of the monument. In the centre of this side there is an apparent entrance, identified by a narrow hollow-way which penetrates the interior in a north-west direction for about 12 m. It continues as a very slight depression which can be traced discontinuously across the enclosure to the centre of the north-west side whereupon it becomes a little more prominent as a broad faint hollow-way forming an entrance through this side also.

The ditch surrounds most of the enclosure, except for a 50 m long stretch on the north-west side near the north corner. The extent of the monument is not well defined here, and is rendered more indistinct by damage caused by wheeled vehicles during the extraction of timber across this area. However, the limit of the enclosure appears to lie at a point where the terrain falls away relatively steeply for a distance of 25 m to a wide hollow containing a stream, which drains away to a valley to the east.

The interior of the enclosure presents a relatively flat platform sloping from about c. 92 m OD in the

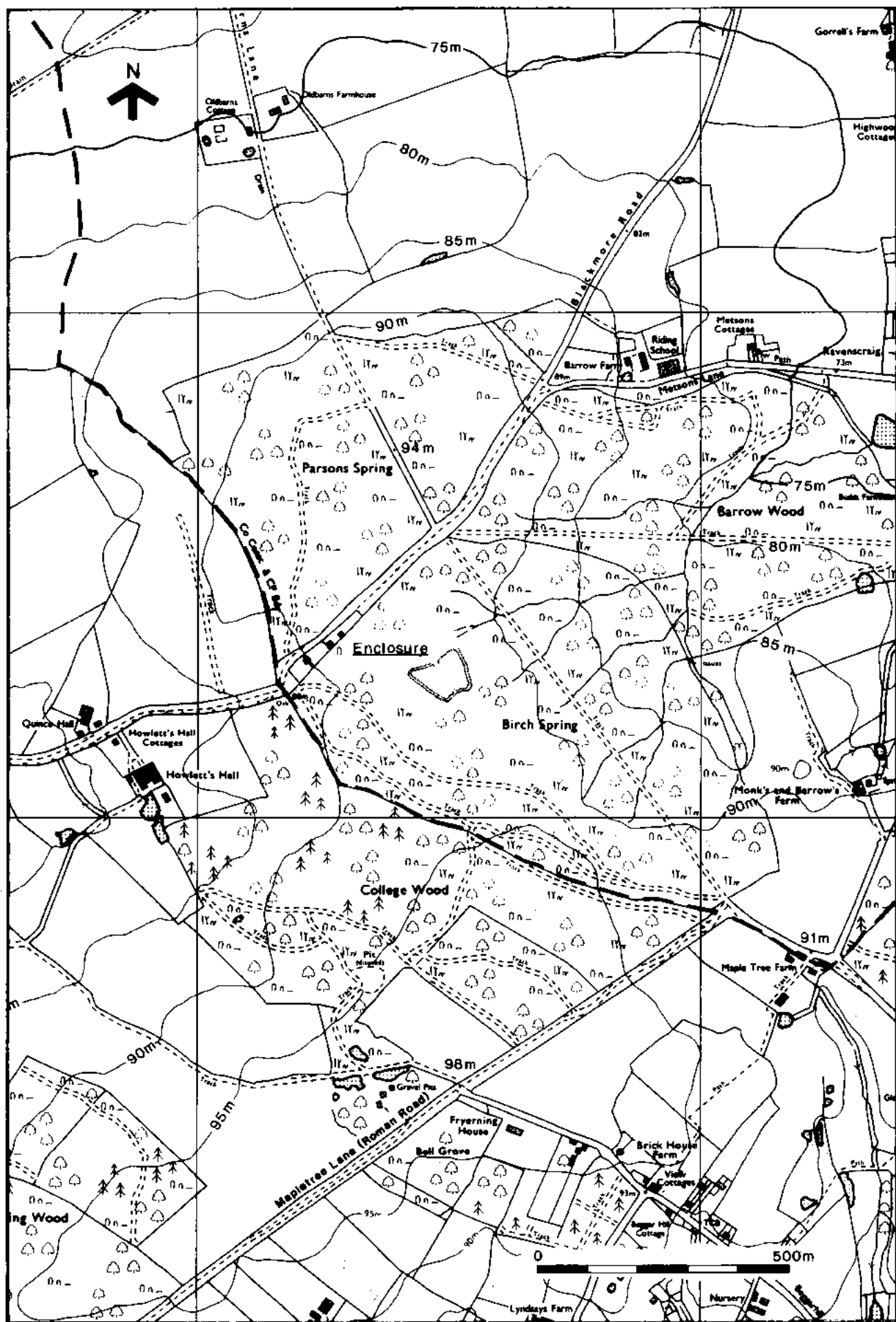


Fig. 2 Birch Spring, Highwood, Writtle: location of enclosure in Birch Spring. © Crown copyright.

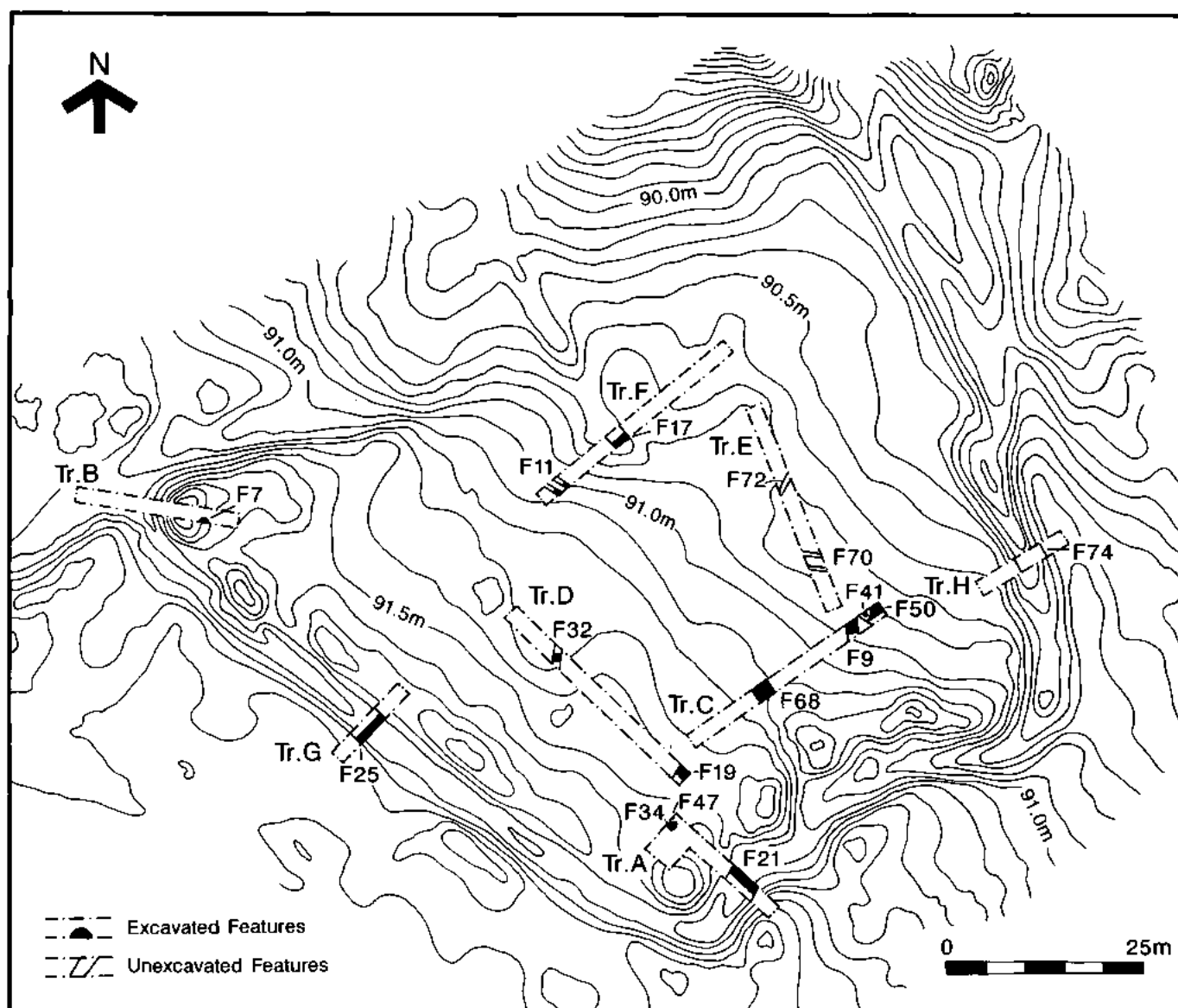


Fig. 3 Birch Spring, Highwood, Writtle: enclosure showing location of trenches.

south-west to c. 90 m OD in the north-east. At the west and south corners there are small knolls of relatively higher ground which stand about 0.40 m above their surroundings (Fig. 3).

Excavation

The contour survey of the earthwork allowed (potentially) an ideal system of investigative trenches to be considered. Six trenches were planned. Two were to investigate the ditch and four the interior of the enclosure. However, in practice, the presence within the earthwork of oak standard trees and recently coppiced hornbeam stools, all of which were to be preserved, dictated the placing of the trenches in a less than ideal fashion. This problem was overcome to a certain extent

by shortening the length of some trenches and increasing the length of others.

A further complication was prolonged heavy rain which immediately preceded the excavation and which continued, along with two bouts of snowfall, during the period of site work. This resulted in seasonal waterlogging of the Bagshot Bed strata (see Geology and Topography, above) causing the Beds to behave as an aquifer. The excavation of the topsoil and subsoil by machine was followed by the immediate flooding of some low-lying trenches to such a degree that some areas were abandoned and the proposed number of trenches increased from six to eight. Standing water inside the enclosure was found only 0.30–0.40 m below the modern ground surface, and archaeological features exceeding this depth had to be continually pumped free of water.

The topsoil was extremely shallow, as little as 0.05 m in places, and archaeological features were apparent after the removal of only c. 0.25 m of topsoil and subsoil combined. The shallow depth of topsoil formation is likely to be due to acidity of the Bagshot Bed sands and gravels and the seasonally high water table.

The topsoil was removed by machine. The trenches were then cleaned manually to determine the limits of archaeological features. The machining operation was carried out by a mini-digger to avoid damage to the earthwork. Within the trenches archaeological features were found to be in a fairly good state of preservation. However, it is reasonable to assume that elsewhere in the enclosure damage may have been caused by the roots of large trees such as oaks.

All trenches are discussed in detail below.

Trench A

This trench was placed to investigate the ditch on the south side of the enclosure and part of the interior and was positioned as close to the presumed entrance as the presence of trees would allow, in order to have the best chance of recovering dating material (Fig. 3). It was 17m long and was aligned south-east to north-west. It was 2 m wide throughout most of its length but was widened by a further 4 m inside the enclosure.

At the south-east end of the trench, the ditch, context F21, was exposed beneath only about 0.15 m of leaf litter and topsoil. It was investigated through a 1 m wide segment on the north-east side of the trench. This revealed a broad shallow cut, 4.2 m wide, with gradual sloping sides and a wide rounded base, 0.50 m in depth (Fig. 4. 2). The fills of this feature appeared to have formed as a result of natural silting. They were mainly composed of a sticky silty-clay ranging in colour from dark grey-brown at the surface of the feature to a yellowish-brown at the bottom. A large, crudely worked flint core was recovered from the primary fill, context 31, but this is likely to be residual. In addition, a couple of burnt flints were recovered from fill 24. The fills in the centre of F21 had been damaged by a recut, context F27 (Fig. 4. 2). This feature was a much narrower (1.3 m) and steeper-sided cut than F21, although of similar depth. It too, had silted up progressively. No finds were recovered from the lower fills of F27, but the surface fill context 28, yielded a sherd of Mill Green-type ware, suggesting this feature had silted up by the sixteenth century.

Two further features lay at the north-west end of trench A. The larger of these was a circular cut, context F34, close to the north-west side of the trench. It was c. 1.85 m in diameter, although the north-west side was slightly obscured by the limits of excavation. Remains of fired clay in the surface of this feature indicated it may have been a hearth and it was decided to excavate the feature using the quadrant method. However, F34 proved in fact to be a cut 0.64 m in depth with fairly

steeply sloping sides which became vertical in the lower part of the cut (Fig. 4. 8). It had several fills, all of which contained varying amounts of charcoal and baked clay (except for fill 76 which was slumping from the east side of the cut). The lower fills in particular, contexts 40, 43 and 44 (44 not illustrated), contained considerable amounts of charcoal and 43 was almost completely composed of this material. The sides of this feature had not been burnt, therefore it would seem the fills represent the burnt waste from either domestic or industrial activity nearby. The upper fills, contexts 35 and 38, contained many fragments of baked clay. The surface fill 35, yielded several pieces of clay, burnt after breakage (see miscellaneous finds) possibly from 'Belgic Bricks' or triangular loomweights. Two sherds of first-century pottery including a pedestal foot (Fig. 5. D), were also recovered from this fill indicating a Late Iron Age date for this feature. The profile of the layers within the cut suggests that each layer had settled before a further layer was deposited above, indicating the cut was progressively filled over a period. Its function was probably that of a rubbish pit.

The upper fill of pit F34, context 35, was just cut on its northern edge by feature F47. The main extent of this feature lay beyond the limits of excavation near the north corner of trench A and only extended into the trench in a curving fashion for about 0.05 m (Fig. 3). At this point F47 was a broad shallow cut, 1 m wide at the top where it survived at the base of the subsoil, and 0.27 m in depth (Fig. 4. 7). On the east side the cut was almost vertical, but the west side had a gradual slope with a slight step.

With so little of this feature available for investigation, interpretation is obviously conjectural. It may have been the south-east end of a gully or slot, but could equally be the south-east extremity of a larger, deeper feature, similar to pit F34. The fill of F47, context 48, yielded a fragment of clay loomweight similar to that found in fill 35 of feature F34 which F47 just cut to the south. Whilst the possibility remains that all of this material came from fill 35, two sherds of pottery recovered from well within fill 48 suggests a first-century AD date for this feature also.

Trench B

This trench was 21 m long and was placed to investigate the ditch and bank at the western corner of the enclosure (Fig. 3).

The area above the ditch was immediately flooded following the removal of the topsoil by machine and the inflow of water was such that further excavation in this area had to be abandoned. Investigation was then restricted to the east end of the trench (about 12 m long). To save time a strip 1 m wide was excavated to the natural strata by machine along the south side of the trench. Lying immediately above the ditch on the inside of the enclosure was a layer of slightly sandy yellow-brown clay, context 62, 4.5 m long by about 0.40m

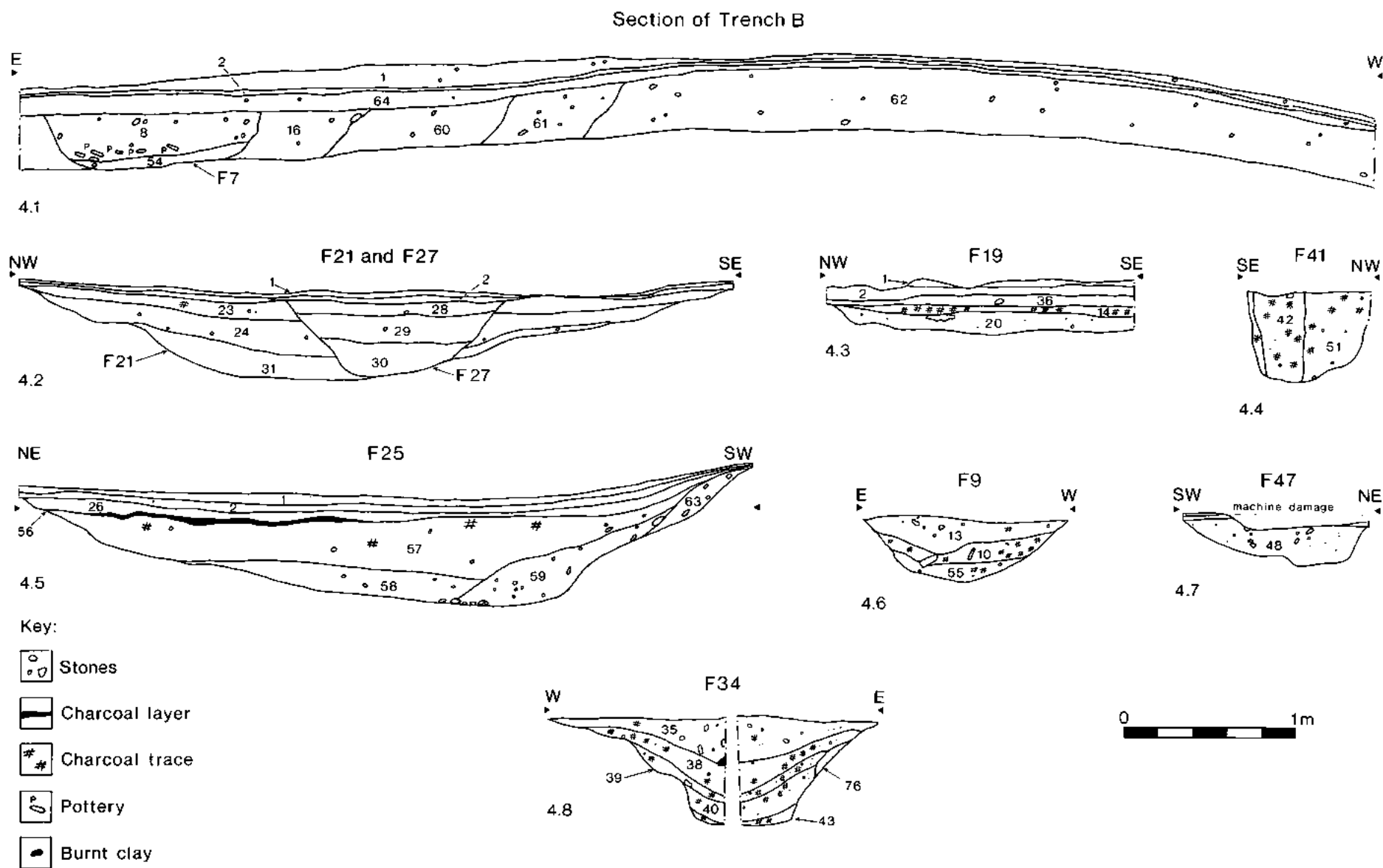


Fig. 4 Birch Spring, Highwood, Writtle: archaeological sections.

deep (Fig. 4. 1). This material had been dumped, most likely to form a bank, and is probably upcast from the ditch (to the west). To the rear (east) of 62 were a series of layers composed of similar material, 61, 60 and 16, possibly also dumped, or erosion from the east side of 62. Layer 16 was cut by a shallow steep-sided feature, context F7. During machining the north side of this feature was observed to extend into the trench for about 0.30m. The south side lay beyond the limits of excavation. Seen in section (Fig. 4. 1), F7 was 1.3m wide by 0.32m in depth. A thin layer of sandy-clay, context 54, lay across the bottom of the cut, and probably formed soon after the cut was made. The main body of the feature was filled by a darker layer of sandy-clay, context 8. Spread across the base of this fill were several sherds of pottery including storage jar rims (Fig. 5. A, B and C), all of first-century AD date. The date of this feature, which cut the ditch upcast, provides a *terminus ante quem* for the construction of the ditch.

Trench C

This trench was placed within the enclosure 15m from the south-east side running parallel to that side for 30m (Fig. 3).

Several features were located at the north-east end of this trench. These included context F9, a linear cut lying 3.5m from the north-east end of the trench, which crossed trench C at a slight angle from north to south. It gradually narrowed in width from the north, where it was 1.5m wide, to the south where it was 1.3m in width. It was cut from immediately below the topsoil and survived in height for about 0.40m (Fig. 4. 6) The sides of the cut sloped gradually to a concave shaped base. The east side of the cut had been damaged by tree roots at its north end. Three fills were identified in this feature. The bottom of the cut was filled by context 55, a layer of orange-brown slightly sandy-clay. This layer varied in thickness from 0.05-0.1m. Its matrix was similar to the surrounding natural clay, although slightly siltier, and probably formed through silting or erosion from the sides soon after the feature had been dug. Above this was a layer of silty-clay containing an abundant quantity of small fragments of charcoal, context 10. This fill spanned the full width of the cut and was 0.12-0.16m thick. There was no evidence of burning on the sides of the feature, so this layer had probably been dumped. The upper part of the cut was filled by a layer of brown silty-clay 0.12-0.16m thick, context 13, and appeared to have formed through natural silting. Eighteen pottery sherds of first-century AD date were recovered from fill 10 along with a possible fragment of Roman tile, indicating a Late Iron Age/early Roman date for this feature.

Only 0.70m north-east of F9 lay two more cut features, contexts F41 and F50 (Fig. 3). Context F41 was a large posthole, which contained the silted cavity left by a decayed post (post-pipe) (Fig. 4. 4). The north side of this oval feature lay a little beyond the limits of

excavation. However, most of it lay in the trench, where it measured c. 0.90 by 0.77 m. The cut survived from the base of the topsoil and was 0.68 m in depth. It was vertical-sided with a rounded base. There were two fills, contexts 42 and 51. Context 42 was the fill of the cavity left by a decayed post. It was a very dark grey-brown silty-clay and contained a fair amount of charcoal and some small fragments of daub. This fill was also vertical-sided and equalled the height of the cut. It was oval in plan, measuring about 0.33 m by 0.45 m, and lay off-centre, close against the south side of the cut. Fill 51 was the packing of the posthole filling the rest of F41 and surrounding fill 42. It was a yellow-brown silty-clay and, apart from containing some charcoal and daub fragments, also yielded fifteen sherds of first-century AD pottery, including a small pedestal foot and an everted beaker rim, suggesting a Late Iron Age date for this posthole.

Context F41 had been cut through the fills on the south-west side of a shallow cut feature F50. This side only of F50 lay within the excavation area, where it curved across the trench in a south-east to north-west direction 2.6 m from the north-east end of trench C (Fig. 3). It was investigated by excavating a 1 m wide segment on the north side of the trench. This showed F50 to be a very shallow-sided, flat-bottomed cut with a maximum depth of 0.30 m. There were two fills, contexts 37 and 49. Fill 49 was a thin layer of primary silting which lay across the bottom of the cut. The main body of the cut was filled by 37, a layer of light grey-brown silty-clay. Both fills contained a common amount of charcoal. This feature is likely to be a shallow pit, or perhaps a working hollow. The only find from this feature was a struck flake in fill 49 which is likely to be residual. Therefore it was not possible to date this feature, except that it was obviously earlier than context 41.

Ten metres from the south-west end of trench C lay a 2.5 m wide shallow hollow, context 68, which crossed the trench from north-west to south-east. This feature had been largely truncated by machine and very little of it survived in plan except for a shallow linear hollow on the south-west side of the feature. However, it was seen in the trench section to be a shallow-sided cut about 0.10 m in depth. Context 68 was very like context F17 in trench F, with which it shared a similar alignment. Both of these features were identified as the silted-up hollow of the track which traverses the centre of the enclosure from north-west to south-east. No finds were recovered from this feature and so it cannot be dated.

Trench D

This trench was 31 m long and was excavated 18 m inside the enclosure, parallel to the south-west side (Fig. 3).

Context F19 was a cut feature located at the south-east end of this trench. Only the north-west side

of this feature lay within the area of excavation and lay across the width of the trench in a south-west to north-east direction. It extended to the south-east end of the trench for 1.8m and continued beyond the limits of excavation. A 1 m wide segment was excavated on the west side of the feature. It was a very shallow cut with a maximum depth of only 0.17m. It sloped gradually on the north-west side to a generally flat, but slightly irregular base (Fig. 4. 3). There were two fills. The surface of the cut was covered by a thin layer of charcoal-rich silty-clay, 0.05 m thick, context 14. The primary fill, context 20, filled the main bulk of the cut and was a yellow-brown, very silty-clay. Context 20 appeared to have formed as a result of natural accumulation. Fill 14 however, appeared to be the waste from burning activity nearby, either domestic or industrial, and may have been deliberately spread over the area. This feature could possibly have been a shallow pit or working hollow, but judging by its irregular base, could equally have been caused by continual trampling. Two sherds of first-century AD pottery along with some small fragment of baked clay were recovered from the primary fill 20, indicating a Late Iron Age date for this feature.

Near the west end of trench D, a narrow linear feature, context F32, crossed the width of the trench from north to south. This feature was about 0.80m wide with a shallow concave profile, 0.08-0.10m in depth. A piece of metal chain-link was recovered from this feature suggesting a post-medieval date. It was probably the remains of a footpath connected with earlier management of the forest.

Trench E

This was 20 m inside the enclosure, parallel to the north-east side (Fig. 3). It was 28 m long. Two features were identified in this trench, contexts F70 and F72.

Context F70 was located 5 m from the south-east end. It consisted of two parallel slots or hollows, spaced 1.6 m apart, crossing the width of the trench in a north-west to south-east direction. Each slot was about 0.15 m wide and was filled by a very humic silty-clay. The area between them was a dark discoloured subsoil. This feature was not excavated, but was very similar to context F11 in trench F (see below). The linear nature and narrow widths of the hollows suggests they were caused by wheeled vehicles and this feature, together with F11, is interpreted as the wheel ruts of a cart-track. However, there is a 0.30m difference in the spacing of the ruts between the two features, and therefore F70 and F11 are likely to represent two separate tracks. A large oak tree, estimated to be 70-80 years old, stood immediately to the east of the trench, in the centre of the projected course of F70. This feature must therefore pre-date the tree.

Context F72 lay in the middle of the trench and was a 0.6m wide linear cut crossing the trench from south-west to north-east. This feature was on a similar alignment to a narrow faint hollow-way extending

either side of the trench and was the remains of a comparatively modern footpath.

Trench F

This was 31m long, placed 20m inside the enclosure parallel to the north-west side (Fig. 3).

Two metres from the south-west end was a 2m wide linear feature crossing the trench from north-west to south-east, context F11. This feature consisted of two pairs of ill-defined linear slots spaced 1.3 m apart, running parallel to each other across the width of the trench in a north-west to south-east direction. The slots were filled with a very dark grey humic silty-clay and the area between them was a discoloured subsoil. The slots were each steep sided and flat-bottomed. They varied from 0.15 to 0.26m in width and from 0.05 to 0.18m in depth. Their regular line and narrow width suggest they were ruts caused by wheeled vehicles and this feature is interpreted as a cart-track. There were no finds and so it was undated. This feature was similar to context F70 in trench E, which was also a cart-track. However, they are likely to be two separate tracks (see above).

Six metres to the north-east of F11 lay a further cut feature context F17. This was a 2.4m wide cut which also ran across the width of the trench from north-west to south-east. There was continual flooding on the north side of the trench and this feature could only be investigated within a narrow 0.50m wide segment on the south side. This exposed a cut with gradual sloping sides and a flat, but slightly irregular base. It was cut from the bottom of the subsoil and its depth varied from 0.10-0.20m. It had a fairly uniform fill of grey-brown very silty clay which appeared to have formed through natural accumulation. The slope and irregular character of this feature, together with its shallow depth suggests it was a hollow caused by trampling and was probably a trackway.

Trench G

This was a trench 12m long placed to investigate the ditch on the south-west side of the enclosure (Fig. 3).

The cut for the ditch lay below a thin covering of topsoil and subsoil (about 0.10 m in depth), where it was revealed as a cut 4.3m wide running across the trench from south-east to north-west. This feature, context F25, was a broad, shallow cut a little over 0.60m in depth (Fig 4. 5). To the north-east, the side of the cut sloped fairly gently to a wide, slightly sloping base. To the south-west, the cut was a little steeper, with a slight step in its profile. The initial silting appeared to have occurred from the south-west side of the feature (the outside of the enclosure). Fills 63 and 59 lay on this side of the cut and possibly represent slumping of the ditch upcast which may have been deposited close to the edge. Fills 57 and 58 had formed through natural silting, whilst fill 56, a thin layer of

dark silt and charcoal, represents burning activity in the hollow above the ditch after this feature had gone out of use. No finds were recovered from this feature.

Trench H

This was laid out across the ditch on the north-east side of the earthwork (Fig. 3) as a contingency should excavation of the ditch in trenches A, B and G be prevented by the ground water problems already mentioned. Excavation in two of these trenches was completed, albeit with difficulty, taking longer than expected. Therefore lack of time together with the fact that trench H flooded after removal of the topsoil, prevented investigation in this trench other than to plan the unexcavated ditch, context 74, which lay only 0.12 m beneath the modern ground surface.

The Finds

Late Iron Age and Roman pottery

by K. Horsley

Very little of the pottery recovered was diagnostic; it consisted mainly of crude storage-jar rims and pedestal-type feet (Fig. 5). The material was almost entirely in grog-tempered or grog and sand-tempered fabrics suggesting a first-century date; the presence of sandy grey wares in some of the features suggests that activity may have continued into the late first century; however, the site is in essence late Iron Age in date. The presence of two grog-tempered fabrics on the site reflects its position in the north-west of the county where it borders Thompson's area 7. The ceramic assemblage therefore contains vessels in the grog-tempered fabric more common to the south and east of the county and also in the sand and grog-tempered fabric which occurs in the north-west of Essex as well as Hertfordshire and the Chilterns.

Miscellaneous Finds

by H. Major

Iron

Two iron objects were found, one a possible chain link from a post-medieval context. The other, a small bar fragment which was a surface find, could be Iron Age or Roman, but is intrinsically undatable.

Baked Clay

Fragments of baked clay came from eight contexts (total weight 791g). Most of it consisted of small fragments in fine or fairly sandy fabrics with no surfaces surviving. Fills 35 in F34 and 48 in F47 contained fragments which may have derived from 'Belgic Bricks' or triangular loomweights, both typical Late Iron Age artefacts. Context F47 cuts fill 35, and these fragments may all have been in 35 originally. The rest of the baked clay from the site is likely to be accidentally burnt daub.

Fired Clay

Two possible tile fragments were found. One, from context 10, may be Roman, although the fabric is by no means typical for Roman tile.

Flintwork

by O. Bedwin

There were 8 pieces of worked flint from 7 different contexts. These were 6 flakes, one nodule with 4 or 5 flakes struck off and a large, crude core. Two flakes were made on good quality glossy grey flint, the remainder on mottled mid-grey material of poorer quality. The assemblage is too small and undiagnostic to offer much scope for dating. Two of the more neatly made flakes might be Neolithic/Bronze Age and thus pre-date the construction of the enclosure.

Discussion

The limited excavations of the ditched enclosure at Birch Spring confirmed a Late Iron Age date for this monument. Finds of prehistoric worked flint indicated minor Neolithic/Bronze Age activity in the area. A few

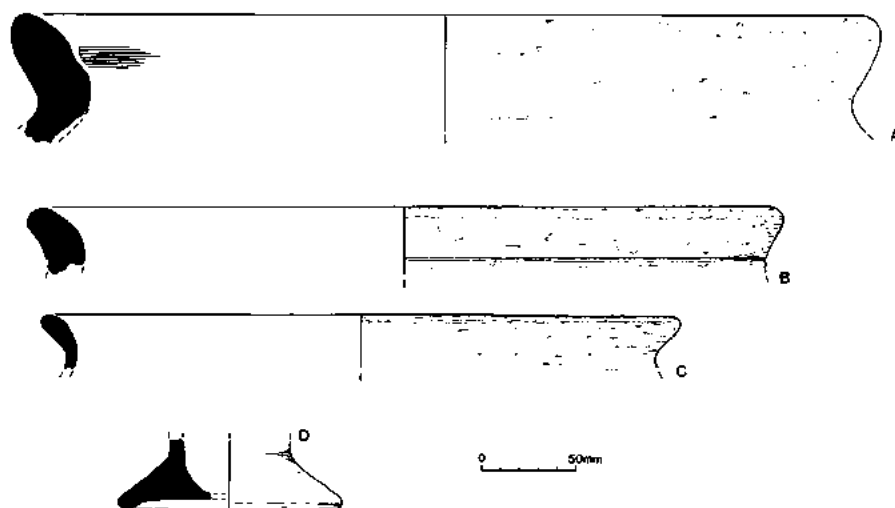


Fig. 5 Birch Spring, Highwood, Writtle: Late Iron Age pottery. A, B and C, storage-jar rims from pit F7. D, base of pedestal urn from pit F34.

medieval and post-medieval finds and features attested to more recent activity, probably associated with the management of the forest.

The dating evidence for the occupation of the enclosure, mainly in the form of pottery, was recovered from a number of unrelated features located within the interior, all of which indicated a first-century AD date with some elements suggesting continuation of activity into the late first century.

Principally these features were pit F34 and post-hole F47 in trench A; pit F7 in trench B; gully/ditch F9 and posthole F41 with its post-pipe in trench C; and hollow F19 in trench D, all of which yielded pottery of first-century date. Several sherds of similar date were found during surface cleaning of these trenches.

No internal structures were identified, although it is unlikely that such limited trenching would have revealed these. However, posthole F41 may have been part of a structure near the eastern corner of the enclosure and similarly posthole F47 may have belonged to a structure at its southern corner. The presence of baked clay in most features including fragments identified as deriving from either Belgic Bricks or triangular loomweights, and fragments of Roman tile, suggests that structures were present. Total excavation of the enclosure might reveal the existence of one or more buildings, perhaps associated with a small agricultural settlement.

The segments excavated across the enclosure ditch in trenches A and G exposed a broad, shallow-sided ditch up to 0.60 m in depth. In trench A there was an indication that the ditch had been recut with a much narrower and steeper-sided profile than before. The fills had formed as a result of natural silting:

No finds of Iron Age date were retrieved from the ditch fills. Only a single flint core was recovered in trench A and this was likely to be residual. However, pit 7 in trench B which contained first-century pottery and which cut the upcast from the ditch, provided a *terminus ante quem* for the construction of this feature.

Evidence for an internal bank was uncovered in trench B at the west corner of the enclosure. There were also areas of relatively higher ground at the south corner and also flanking the narrow entrance in the centre of the south-east side. These areas too are possibly surviving traces of a bank. The entrance in the centre of the south-east side of the enclosure was possibly original. The excavation proved the existence of a hollow-way bisecting the interior of the enclosure from the rear of this entrance to emerge in the centre of the north-west side, although this could not be dated. However, this second entrance may not be contemporary.

No comment can be made on either the economic basis of the enclosure or its contemporary environment. Bone did not survive in the highly acid soil conditions and no charred grain was found. Similarly, there were no deposits suitable for sampling for pollen analysis.

That there was activity within the enclosure is attested by the deposition in most of the excavated fea-

tures of quantities of charcoal and other burnt debris. Whether this activity was domestic or industrial it is not possible to say, but the identification of fragments of possible loomweights in some fills suggests the former possibility at least.

The enclosure at Birch Spring can be added to the growing number of excavated enclosures in Essex and the steadily increasing number of sites recognised as cropmarks from aerial photographs recorded in the County Sites and Monuments Record. Excavated enclosures and cropmark sites were the subject of a recent assessment by Priddy and Buckley (1987), in which enclosures were arranged in a broad morphological groups based on shape and size. Birch Spring falls in a group of rectilinear enclosures under 1 ha., which include three other excavated single ditched enclosures which are vaguely similar in shape to Birch Spring. These are Twitty Fee, Danbury c. 0.36 ha.; Mucking, Thurrock c. 0.47 ha.; and Gun Hill, Thurrock c. 0.3 ha. The two former sites are dated to the Late Iron Age and the latter to the Roman period, comparing well with the first-century date for Birch Spring. A domestic or agricultural function is suggested for Birch Spring and similar functions seem likely for Twitty Fee and Mucking, although a defensive role is claimed for Gun Hill.

Although a rectilinear enclosure, Birch Spring is of a relatively unusual form and is the only one of its type so far known in Essex.

The majority of enclosure cropmarks and excavated enclosures lie in the north of the county, north of the Chelmer-Blackwater valley and also along the southern boundary of the county on the river Thames gravels. Very few have been identified on the London Clay in the southern half of the county, probably due to the inability of clay to produce the differential crop growth necessary to reflect cropmarks.

The Birch Spring enclosure lies on Bagshot Sands on the northern border of these southern claylands and has lain undetected in an area which is known to have been wooded grazing commons or woodland since medieval times. Its survival as a slight, but still recognisable earthwork, is no doubt largely due to the protection afforded by the forest cover, thus preventing its destruction by centuries of ploughing.

The discovery of the enclosure by Dr. Bannister in 1993 raises the possibility that other earthworks may lie unrecognised in other areas of ancient woodland in Essex. If so, these must await discovery either by surveys similar to that of Dr. Bannister or, preferably, must be the subject of a more systematic programme of field survey of these areas with the object of resolving this question.

Acknowledgements

The excavations were funded by the Essex County Council's Heritage and Countryside Sub-Committee. The field team comprised Dave Smith, Rachel Clarke,

Mike Edwards, Mark Ingram. Surveying was carried out by Woon-Wah Foo. The finds were identified by Owen Bedwin (flint); Katherine Horsley (late Iron Age and Roman pottery); Hilary Major (miscellaneous finds); Helen Walker (medieval and post-medieval pottery). Finds processing was by Phil McMichael. The illustrations for Figs 1, 2, and 4 were prepared by the author. The pottery illustrations (Fig. 5) were by Nick Nethercoat, and Fig. 3 by Iain Bell.

Particular thanks are extended to John, Lord Petre of Writtle, for allowing access to Birch Spring during the course of the excavations.

Author: Steve Godbold, Essex County Council Planning Department, County Hall, Chelmsford CM1 1LF.

Bibliography

- Bannister, N. R.
and Bannister, D. E.
1993
Christy, M.
and Reader, F. W.
1918
Downs J.
1976

Downs, J.
1980

Going, C. J.
1982

Hopson, P. M.
1981

Hunter, J.M.
1993
- Historic Landscape
Survey of Writtle Forest and Park,
Chelmsford, Essex.
'The Excavation of the site of a Medieval
Kiln at Mill Green Ingatestone', *Trans.
Essex Archaeol. Soc.*, **14**, 49-64.
'Report on the Society's Dig in the woods
at Mill Green', *Trans. Ingatestone and
Fryerning Hist. and Archaeol. Soc.*, **14**,
16-17.
'Roof Tile Kiln in Stonemore Wood,
Mill Green', *Trans. Ingatestone and
Fryerning Hist. and Archaeol. Soc.*, **18**,
Research Supp., 1-11.
*The Mansio and other sites in the south-
eastern sector of Caesariomagus: the
Roman pottery*, CBA Res. Rep., 62.
'The sand and gravel resources of the
country west of Chelmsford, Essex.
Description of 1:25 000 resource sheet
TL 60', *Miner. Assess. Rep. Inst. Geol.
Sci.*, No. 66.
'King John's hunting-lodge at Writtle',
Essex Archaeol. Hist., **24**, 122-4.
- Priddy, D.
and Buckley, D. G.
1987

Rahtz, P. A.
1969

Rumble, A. (ed.).
1983
Sellers, E.
and Sellers J.
1968a
Sellers, E.
and Sellers J.
1968b
Thompson, I.
1982
- 'An Assessment of Excavated Enclosures
in Essex Together with a Selection of
Cropmark Sites', in Buckley, D. G.,
Hedges, J. D., Priddy, D., *Excavation of
a Cropmark Enclosure Complex at
Woodham Walter, 1976 and An
Assessment of Excavated Enclosures in
Essex together with a selection of Cropmark
Sites*, East Anglian Archaeol. Rep.,
No. 33.
'Excavations at King John's Hunting
Lodge Writtle, Essex, 1955-57',
Medieval Archaeol., mono. series 3.
Domesday Book, 32 (Essex).
Chichester: Phillimore.
'Excavations at Mill Green, Ingatestone.
Int. Rpt., no. 1', *Trans. Ingatestone and
Fryerning Hist. and Archaeol. Soc.*, 5, 8-13.
'Excavations at Mill Green, Ingatestone.
Int. Rpt., no. 2', *Trans. Ingatestone and
Fryerning Hist. and Archaeol. Soc.*, 6, 9-14.
*Grog-tempered 'Belgic' Pottery of South-
eastern England*, BAR Brit. Ser., 108,
Vol. i-iii.

The Society is extremely grateful to Essex County Council for a generous grant towards the cost of publishing this article.

Late Iron Age and Roman occupation at Hatfield Peverel: excavations at Sandford Quarry 1994

by Jo Ecclestone and Richard Havis

A watching brief at Sandford Quarry, Hatfield Peverel, revealed two areas of archaeological interest. Site A was an enclosure or structure of Roman date measuring 24 by 13m, which showed intensive use from the 2nd century AD to the 4th century AD. This Roman feature is discussed in conjunction with three other similar examples from Essex. A provisional case is made for the identification of a specific type of enclosure or structure; rectangular with one semi-circular end, and with a single internal division near the curved end. Evidence was also found of a later rectangular post-built structure with associated linear ditches. Site B was a Roman brickearth quarry within a later enclosure, with associated fire-pits. An evaluation funded by Essex County Council on site A identified the importance of the site, with the result it has been preserved in situ by the mineral operator.

Introduction

A watching brief maintained on extraction work by Redland Aggregates Ltd at Sandford Quarry, Hatfield Peverel identified two areas of surviving archaeological deposits (Fig. 1). Area A was carefully stripped under archaeological supervision after which an evaluation was undertaken to establish the nature and date of the site. Area B had a series of strips cleaned by machine, following top-soil removal, to assess the extent and complexity of the archaeological deposits.

Although there was no crop-mark evidence for the existence of archaeological deposits within the boundaries of Sandford Quarry, other sites in the locality point to the importance of this area as a settlement location. Only 1.5km to the north lies the site of Ivy Chimneys (TL 811 136), a large, multi-period site with religious elements, in use from the Early - Middle Iron Age (the mid 1st millennium BC) through to the late Roman period (early 5th century AD; Turner, forthcoming).

A complex of crop-marks, located to the north-west of Site B, but outside the quarry limits, indicate a series of field boundaries and a trackway.

of a north-east facing slope overlooking a shallow valley. The surface geology of this area is brickearth overlying glacial gravels. Much of the surrounding land has been quarried for gravel in recent years, with the sites located on the north-eastern limit of extraction.

SITE A: A ROMAN ENCLOSURE by Jo Ecclestone

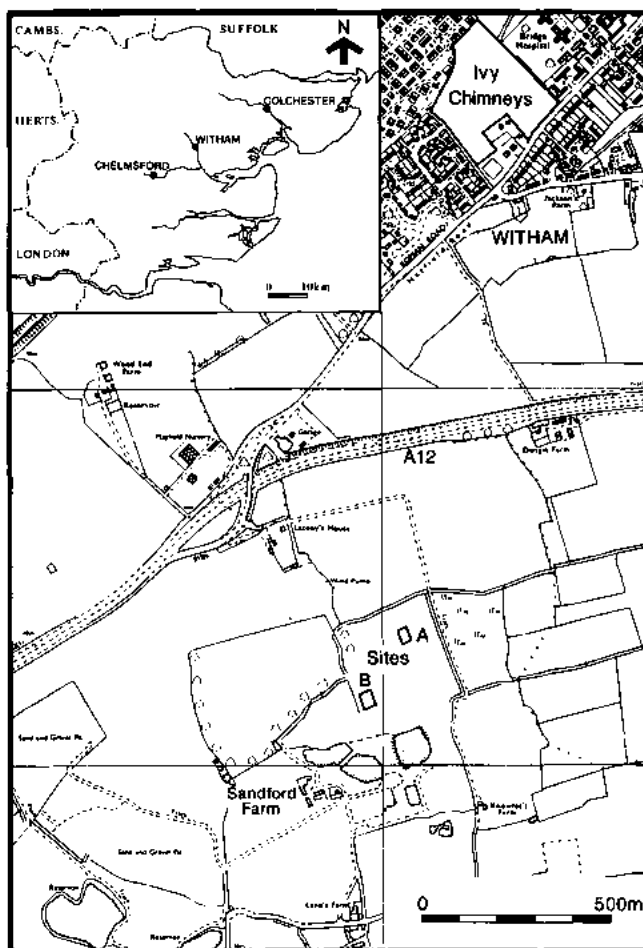


Fig 1 Sandford Quarry: Location Plan.
© Crown copyright.

Location and Geology

Sandford Quarry is located towards the top (30m OD)

Excavation

Site A was located in the north-eastern corner of the quarry area (TL 8107 1235; Fig. 1). It was identified following topsoil stripping by the mineral operators, and was cleaned under archaeological supervision. A highly selective programme of sampling was carried out in order to provide a better understanding of the site. After planning and recording the remains within the 625 m² stripped area (Fig. 2), eight sections were

excavated through major features on site with the aim of establishing the basic chronology. The sequence was as follows:

Phase 1 (Roman) The rectangular structure or enclosure, including recut gullies 105, 129, 131, 121, 126, 125, and possible internal features, 19, 130, 83.

Phase 2 (Roman) The linear E-W ditch 3, and the

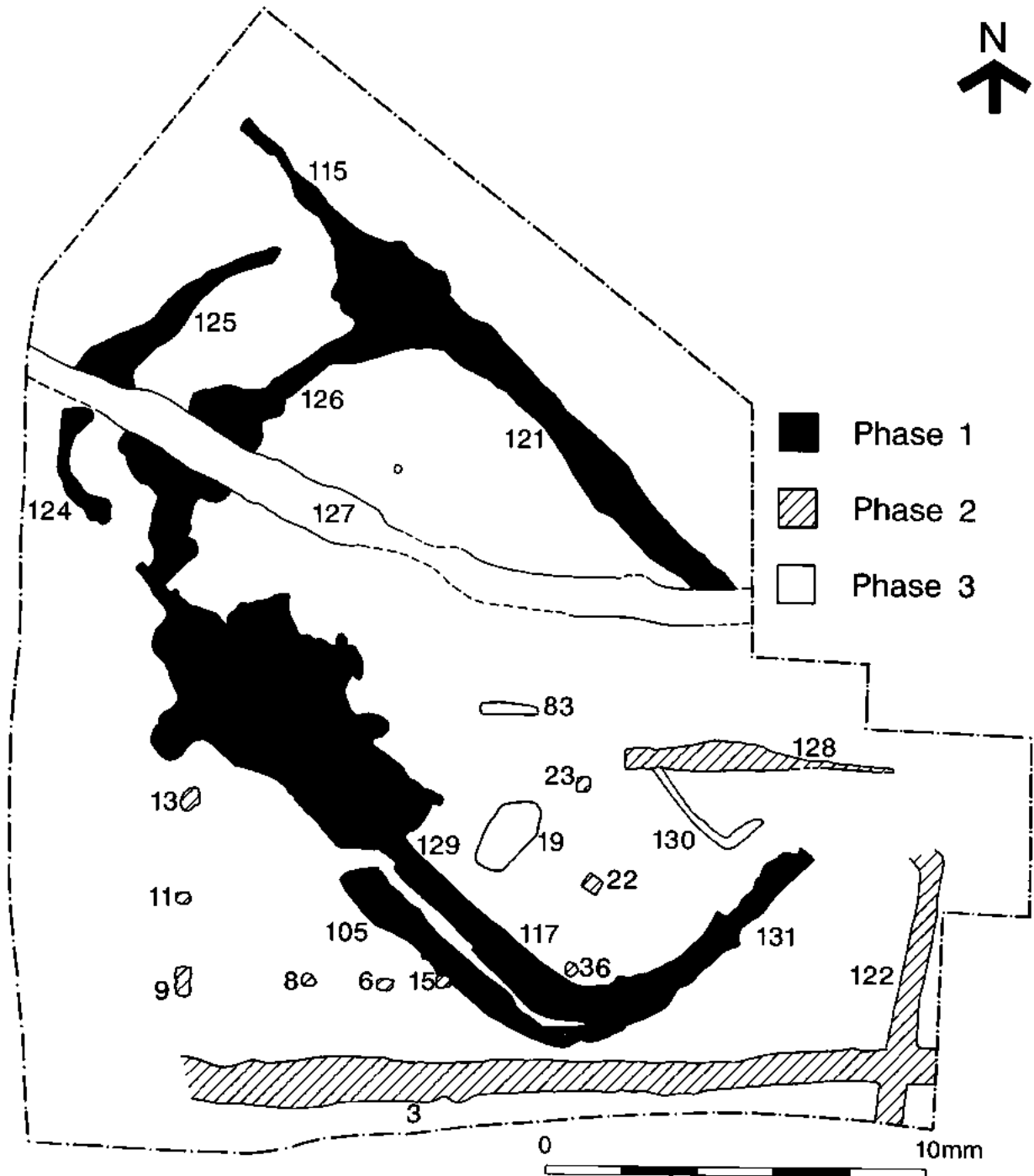


Fig. 2 Sandford Quarry. Plan of Site A.

intersecting feature 122, south and east of Phase 1. A post-hole structure cutting Phase 1, aligned on 122 and 3.

Phase 3. (Post Roman, date unknown) Ditch 127 cutting Phase 1.

Because of minimal excavation, no full and wholly reliable assemblage of pottery for dating was recovered; likewise only a few stratigraphic relationships were defined. There are some key relationships on which the phasing of the site is reliant, which are supported to some extent by the pottery dating. Further interpretation rests on the layout and alignment of the features. Within the phasing, the only certainties are that the post-built structure (Phase 2) was later than the structure/enclosure (Phase 1), and that ditch 127 (Phase 3) was the latest feature on the site (Fig. 2).

Discussion

Pre-Roman activity is indicated by residual Late Bronze Age/ Early Iron Age pottery. The focus however is not clear: a sunken pot base, dated to the Late Iron Age, implies some activity in the area.

Phase 1 The structure/enclosure (Fig. 2) appears to have had a life span of at least 200 years, dated by pottery from the 2nd century AD onwards. It was formed by linear gullies 131, 117, 121, 126, 125 (Fig. 2), with an earlier phase represented only by 105. The position of an entrance is suggested at the north-western end of gullies 105 and 117. In the case of gully 105 this terminates in a butt end, whereas gully 117 becomes much thinner, continuing as gully 129. One of the most noticeable aspects of the site is the density of charcoal in most of the fills, in particular features 131, 117 and 122. There are three possible interpretations for the rectangular feature. It could be a simple enclosure defined by gullies with no internal features; alternatively it could be an eaves drip gully around a building which left no sub-soil structural features; or finally it could be a structure with the gullies corresponding directly to ground walls. The latter interpretation is the authors preferred option for a number of reasons. Firstly the presence of the apsidal feature is not readily explained by either of the enclosure options, but it could well be structural in nature, representing a small room at the north-west end. Although only a single section was excavated across each of the gullies, they all produced quantities of charcoal and structural daub, with a line of structural daub being visible on the surface of part of the unexcavated portion of the gullies. It is therefore suggested that the gullies originally contained a wattle and daub wall which was destroyed by fire.

Phase 2 The post-hole structure and rectilinear ditches are phased together because of their similar orientation (Fig. 2). One post hole cut the earliest enclosure ditch, 105, and therefore this phase is the later. The associated rectilinear ditch system, comprises 3, 122 and also 128, the last incorporated because of its

orientation and spatial relationship with both the structure and ditches 3 and 122.

Phase 3 The last feature to be mentioned is ditch 127 (Fig. 2). The material filling it show no sign of the dense charcoal present in most of the earlier fills. The further change in orientation implies that this feature is unrelated to any other on the site, and is likely to be much later, certainly post Roman.

Finds Reports

The Roman pottery

by C. Wallace

The material from the Sandford Quarry site was classified using the fabric and form series introduced by the Chelmsford Archaeological Trust (Going 1987). The pottery has been studied to provide dating-evidence. What can be said is that there were contexts of Early Roman (here, 2nd century) and Late Roman (4th century) date, along with some Latest Roman (late 4th/5th centuries). The most reliably dated contexts are Early Roman 14 (ditch 105), Early Roman 99 (ditch 117), Late Roman 53, Latest Roman 16 (ditch 117) and Latest Roman 110 (ditch 125). There was some residual prehistoric pottery in the form of sherds of Late Bronze Age/Early Iron Age flint-tempered ware. Those contexts that cannot be confidently dated may well belong to the earlier of the two main Roman date-ranges, but the amounts of pottery are so small that it is impossible to be certain of this.

Miscellaneous Finds

by H. Major

Metalwork

The metalwork from the site comprised four iron nails and a copper alloy fragment, possibly a stud. None of the metalwork can be dated.

Stone

There were two pieces of millstone grit, one of them definitely from a quern. The date is likely to be later second century or later.

Tile

A small amount of Roman tile was collected. A total of 25 fragments was examined, weighing 2586g, with no more than six sherds from a single context. The identifiable tile comprised eleven *tegula* fragments, two *imbrex* fragments and four pieces of non-roof tile. There was no box flue tile.

Burnt Clay

Fifty small fragments of baked clay were found, weighing 237g. By comparison with other sites, some of the material in a chalky fabric may be structural daub. Other fragments may be from baked clay objects, but none of the fragments have any distinctive features.

Faunal Remains

by A. Wade

The assemblage consisted of 286 animal bone fragments weighing 2034.4g. Species identified were cow, pig, sheep/goat and deer, with cow forming the highest percentage.

SITE B

by Richard Havis

Excavation

This site was visible as a dispersed scatter of features

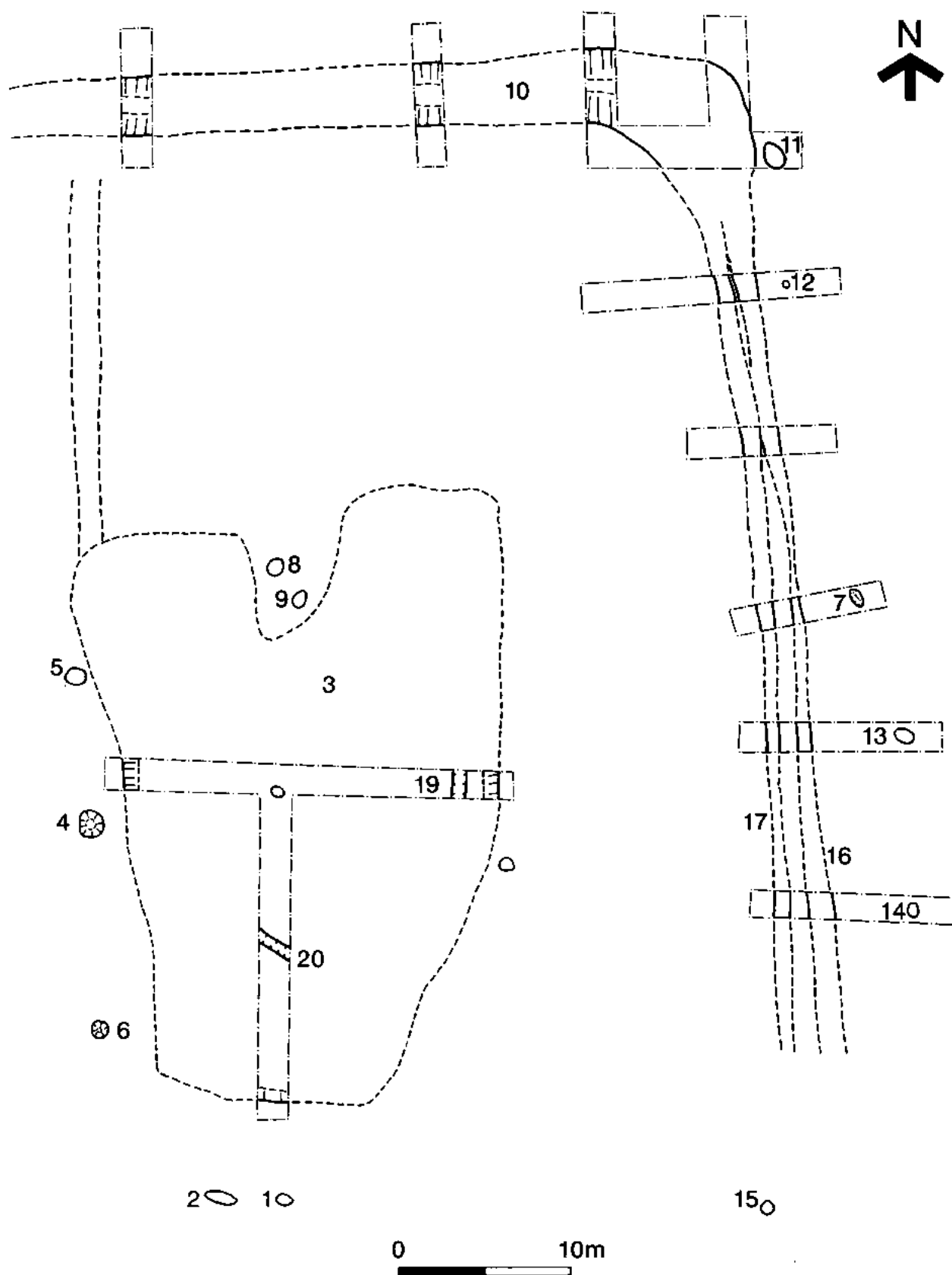


Fig. 3 Sandford Quarry: Plan of Site B

visible to the south-west of the above enclosure (Figs 1 and 3).

Redland Aggregates funded the use of a machine to clean areas of the site to try and identify its function. A policy of cleaning machine bucket-width strips across the area resulted in relatively good identification of many of the features. Once these areas had been cleaned, a plan was made of the site (Fig. 3) and dating evidence was obtained where possible.

Sections across the large central spread and the ditch were excavated by machine. Hand excavation was undertaken on some of the pits, which resulted in a large quantity of first-century pottery being recovered from pit 4.

The largest feature (3) on the site was located in the centre of the stripped area consisting of an irregular spread of slightly darker material compared to the natural. Machine excavation showed it to be relatively shallow (0.35m). Two features (19, 20) were identified in the base of the feature. Both 19 and 20 were shallow gullies containing no finds.

A total of 8 small pits (1, 2, 4, 5, 6, 8, 9, 18; Fig. 3) was identified spread around the outer edge of the above large feature. Only features 4 and 6 were excavated, both proving to be small pits, with pit 4 containing a large amount of pottery.

A ditch (10) was identified at the northern end of the site running east-west from the field boundary on the western side of the site turning at right angles at its eastern end. Three sections were excavated by machine. The ditch divides into two separate ditches/gullies (16, 17), running directly south that were traced as far as possible by the use of machine stripping.

On the eastern side of the gullies 5 pits (7, 11, 12, 13, 14; Fig. 3) were identified all spaced within 6 metres of the double gully. Each pit contained substantial evidence of burning, consisting mainly of charcoal and daub. One pit, 7, when cleaned showed as a black fill with a red band between the black fill and the natural. Careful excavation showed this to be a small hearth, with the band formed by highly burnt clay. The other pits were similar although no evidence of the daub band was visible on the surface. These were only partially excavated.

Late Iron Age and Roman Pottery by S. Martin

Introduction

454 sherds (21,506g) of Late Iron Age and Roman pottery from eight contexts were examined.

The pottery was classified using the Chelmsford typology published by Going (1987; 2-54) which is standard for all Essex County Council sites. Where appropriate, this is supplemented with reference the *Camulodunum* type series (Hawkes and Hull 1947) and where appropriate, to Thompson's 1982 corpus of Grog-tempered pottery. The analysis was concerned with identifying the variety of fabrics and forms, and providing dating evidence. All pottery was quantified by sherd count and weight by fabric.

Fabrics: The following fabrics were recognised (numbers after Going 1987 in bold):

TSG	(60)	Samian
RED	(21)	Misc. oxidised red wares
CLB	(27)	Colchester buff ware
NKG	(32)	?North Kent grey wares
GRF	(39)	Fine grey wares
STOR	(44)	Storage jar fabrics
ROM	(45)	Romanising grey wares
GRS	(47)	Sandy grey wares
RET	(48)	Retendon ware
GROG	(53)	Grog-tempered fabrics

The following fabric is not found in Going:-

?TR ?Terra Rubra (dull orange fabric with yellow-buff margins and grey core). The exterior is coated with a fine red-orange slip, often in poor condition. There are a few large inclusions of ?red grog visible, although these are fairly sparse. Otherwise the fabric is very fine. King Harry Lane fabric TR1(C) is a possible parallel, although the form is untypical of this ware. The fabric is, however, likely to be Gallo-Belgic north Gaulish fine ware import rather than a local product.

Dating

Only one context (context 4) produced a large assemblage; all the other groups were small by comparison. However, all contexts contained enough material to suggest a reasonably reliable date range. The bulk are 'early' Roman with considerable emphasis on the mid to later 1st century A.D. Only two groups (contexts 3 and 10) had later Roman pottery. The pottery may be placed into two periods, perhaps representing two phases of distinct activity: Period 1 as represented by a series of pits, and Period 2 as represented by a brick-earth quarry (context 3) and a linear ditch (context 10).

Period 1

Context 1. *Misc. Pottery:* jar G16.2 (ROM). Fabric STOR. The jar form belongs to the mid to late 1st century A.D.

Context 2. *Misc. Pottery:* flagon J3.3 (CLB). Fabrics NKG, ROM and GRS.

The flagon dates to the Flavian to Trajanic. None of the other fabrics would be out of place in this date bracket.

Context 4. *Misc. Pottery:* bowl Thompson type E1-1 [CAM 215] (GROG); jars G44 (GROG), B5-1 (GROG), B3-1/B3-8 (GROG), B3-6 (GROG), Thompson B3-4 (ROM); butt-beaker (?TR). Fabrics RED and GRS.

All of the datable pieces in this mid 1st century A.D. group are illustrated below. The figure captions should be consulted for the range of forms present. The group is also discussed in detail below.

Context 5. *Samian:* f18 - South Gaulish. *Misc. Pottery:* jar G unclass (ROM). Fabric STOR.

The range of fabrics present would not be out of place in 'early' Roman contexts.

Context 6. *Misc. Pottery:* jars Thompson types B3-8, B2-1 & B5-1 (GROG). Fabric STOR.

This group probably belongs to the mid 1st century A.D.

Period 2

Context 3. *Samian:* ?f30 & ?f18/31. *Misc. Pottery:* bowl C1.2 (GRF); jars G unclass. (ROM and GRF), G24 (GRS), G35/36 (GRS). Fabrics STOR and RET.

Although containing some earlier pottery the group has a number of pieces which suggest a date from the 3rd century onwards.

Context 10. *Misc. Pottery:* dish B6.2 (GRS); jar G unclass (GRF). Fabrics ROM and RET.

A small group with a late 3rd to 4th-century dish form.

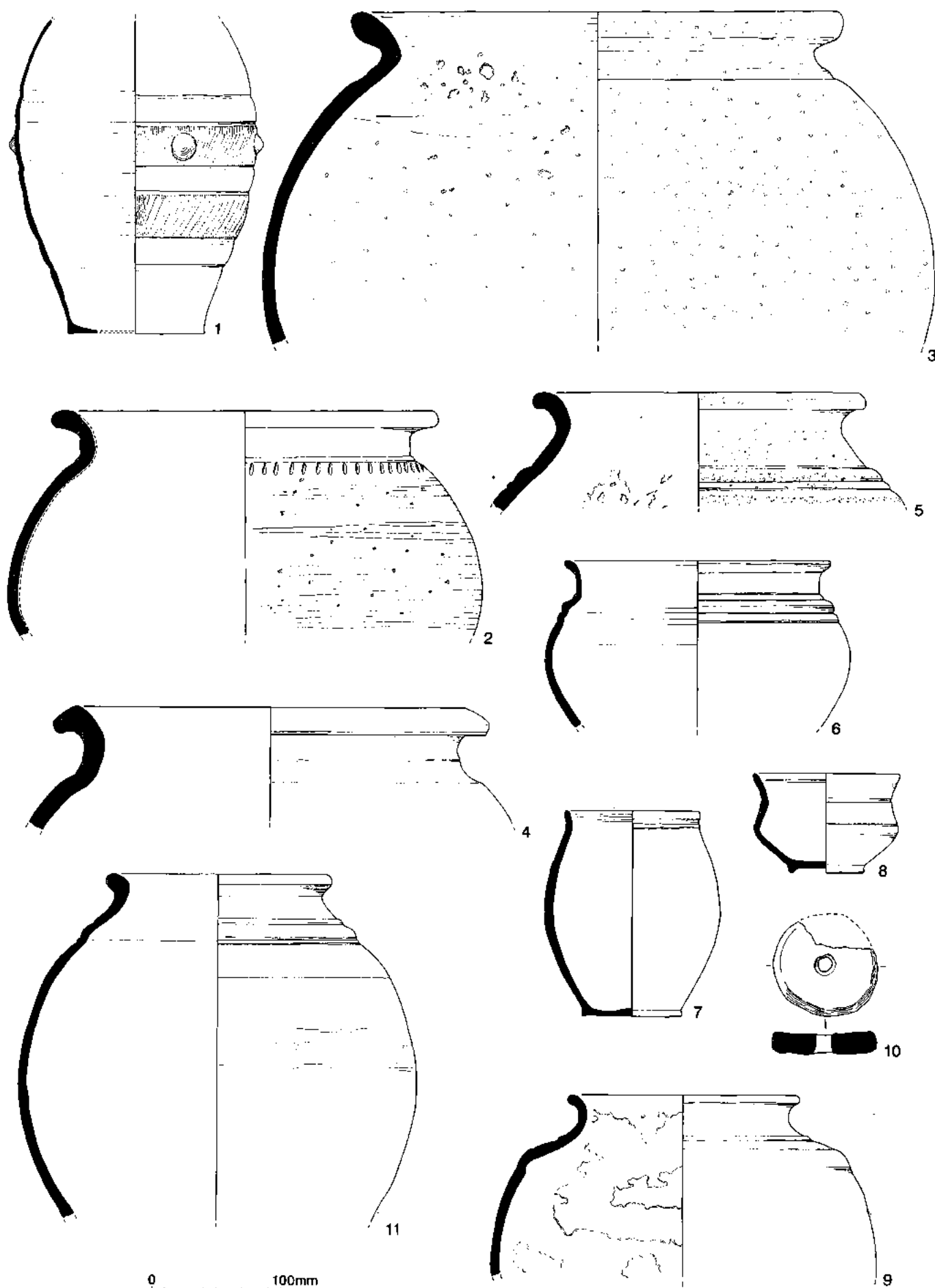


Fig. 4 Sandford Quarry: Roman pottery from Site B

The catalogue (Fig. 4)

All vessels are from context 4 and wheel-thrown.

?Terra Rubra:

- 1: Base and lower half of a butt beaker with band of rouletting and occasional pointed boss applied *en barbotine*. The vessel is in a fragmentary condition.

Grog-tempered wares (53):

- 2: Rim and bodysherds of a large necked storage jar with single line of incised shoulder decoration. Several large bodysherds and part of a base may be from the same vessel (not illustrated). The form falls within Going's G44 group. CAM 270. The type appears with the first grog-tempered vessels and continues throughout the Roman period in fabric 44.
- 3: Large necked storage jar typologically comparable to Going's G44 group. Undecorated.
- 4: Large necked storage jar with hooked rim. Undecorated
- 5: Large necked jar with hooked rim and multiple cordons at the neck base. This is probably a larger version of No. 11 below.
- 6: Large necked-bowl with multiple shoulder cordons delineating the shoulder from the neck. CAM 220Bb. Early to mid 1st century AD.
- 7: Tall, plain, neckless barrel jar with slightly out-turned foot and small everted rim. A small cordon on the rim. Burnished exterior. Almost barrel-beaker like in appearance. Thompson B5-2. Thompson notes that the form has an Essex-Hertfordshire distribution.
- 8: Concave-sided cup with everted rim. CAM 215. The form dates from the late 1st century BC to the mid 1st century AD.
- 9: Necked jar with sharply carinated shoulder and cordon defining the base of the neck. This form probably belongs to the late 1st century BC to the mid 1st century AD.
- 10: Loom-weight or spindle-whorl. Base of a pot, cut into a disk with a hole drilled through the centre.

Romanising grey ware (45):

- 11: Necked jar with ovoid profile and multiple cordons at the neck base. CAM 232Aa. The fabric suggests a post-conquest date.

Discussion

The pottery exhibits a wide date-range of early/mid 1st to late 3rd/4th century A.D., although there is a marked emphasis on material of early/mid 1st to late 1st/early 2nd century. Indeed, the lion's share of sampled features can be assigned to this period. In contrast, pottery of a 3rd century A.D.+ date is relatively meagre, and none of the pottery was exclusively late 4th century.

The bulk of the pottery was recovered from Pit 4. All identifiable forms are illustrated in Fig. 4. As a group, there are a number of interesting features that warrant detailed discussion: first, it consists for the most part of large unabraded sherds, secondly, it is dominated by large grog-tempered ware jars, thirdly, it contains a single imported butt-beaker decorated with applied bosses, and fourthly, there is an absence of copies of Gallo-Belgic forms in 'native' wares.

That large unabraded sherds are present in some quantity implies that the pottery was not lying around for any length of time prior to its final deposition in the pit. This implies a narrow date-range for the group and a correspondingly small residual element. The presence of large amounts of grog-tempered or 'Belgic' pottery (at Chelmsford this is Going's fabric 53) is not unexpected, considering the site lies within Thompson's Zone 1 (Thompson 1982, 8-9). Analysis of this pottery has shown that it is common to Essex and Hertfordshire from the later 1st century B.C. to the mid 1st century A.D., although different regional styles can be discerned, perhaps reflecting socio-economic and political contrasts between the Catuvellauni and the Trinovantes. At the end of this period, grog-tempered pottery becomes increasingly Romanised, particularly in Essex, where it continues as Going's fabrics 34 (Fine Romanising ware) and 45 (Romanising grey wares). Both of these fabrics are characterised by the presence of small particles of red or grey grog (Going 1987, 7 and 9). In the case of the storage jars, these contin-

ue throughout the Roman period in fabric 44. The presence of a vessel in fabric 45 (Fig. 4) would suggest that the group belongs to the post-conquest period and not before. This dating is also supported by presence of a small amount of sandy grey ware (Going's fabric 47).

The variety of forms represented pottery is noteworthy. Leaving aside the butt beaker which is discussed in detail below, of the ten grog-tempered vessels illustrated, there are single examples each of a cup (No. 8) and a bowl (No. 6) and seven jars (Nos 2-5, 7, 9 and 11). Of these, all but no. 7 are large vessels. This suggests that storage was the primary function. Although close dating is problematical, none of the forms would be out of place in early to mid 1st century A.D. contexts in Essex.

The ?terra rubra butt beaker (no. 1), a variant of the CAM 113 theme, is the only Gallo-Belgic form in the group. Butt beakers, ultimately of Mediterranean origin, are a long-lived form, defined by a barrel-shaped body, and rim which may be convex externally and flat or concave in the case of the early examples on the interior (Greene 1979, 9-10). The addition of applied bosses, although not common, is known elsewhere, particularly in Hertfordshire, where examples are recorded at Verulamium (2) and Skeleton Green. At the King Harry Lane cemetery, a vessel was found in Grave 312 in a sand-tempered red ware. It was dated to the late Augustan-Tiberian period and may have been imported from northern Gaul (Stead and Rigby 1989, 139). The other example from Verulamium was found in Period IIA contexts which were dated c.85-105 A.D., but was considered residual. This was in a soft orange-buff ware with a grey core (Wilson 1972, Fig. 107, 252). The Skeleton Green example, with yellow-buff surfaces and a blue/grey, fine-grained sandy core, came from a post-conquest layer with much residual material and was thought to have originated to the north and west of Puckeridge, between Baldock (Herts.) and Northampton on fabric grounds (Rigby 1981, 163/183). No other examples with applied bosses in this fabric had previously been recorded. This style of decoration is not unknown on the continent; Holwerda (1941, pl III, 104) records a vessel in an orange-red ware from Nijmegen, Netherlands. Although the dating of embossed butt beakers is not particularly strong, the evidence available suggests that it is not out of place in early to mid 1st century A.D. horizons.

General discussion

The watching brief at Sandford Quarry, Hatfield Peverel revealed two areas of archaeological interest (A, B). The earlier of the two sites was Site B which dated from the Late Iron Age through to the early Roman period. On Site B, the large feature (3) in the centre of the site has been interpreted as a brickearth quarry, which was back filled in the early Roman period after extraction during the Late Iron Age. The sequence of pits on the eastern side of ditch 10 all contained large quantities of charcoal indicating the features as fire pits. The excavation of pit 7 showed the burnt clay lining of the feature. The position of the fire pits along the eastern side of the ditch relative to each other suggests they are of a similar date. A possible interpretation is that these were used for local industrial purposes, possibly associated with the brickearth quarry.

The next phase of activity was some 200m to the north-east at site A, where a rectangular feature with an apse at its north-western end was constructed in the second century AD. The authors' preferred interpretation is that this represents a building/structure rather than an enclosure. It measures 24 x 13m, and the pres-

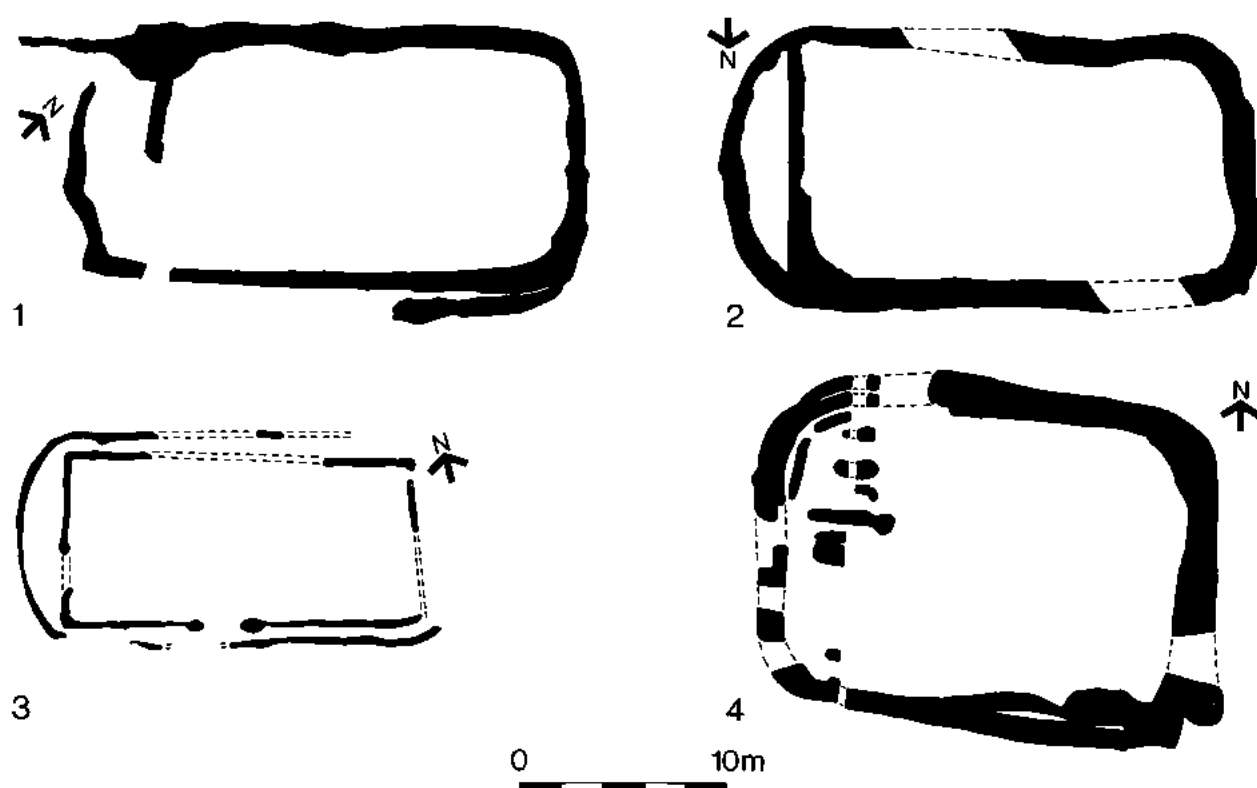


Fig. 5 Comparative plans of Roman structures/enclosures in Essex:
1: Sandford Quarry 2: Ivy Chimneys, Witham 3: Mucking 4: Wendens Ambo

ence of quantities of *in situ* daub found both in the excavated section through the gullies and visible in the surface of the unexcavated areas suggests wattle and daub construction. The size of the feature would represent a small enclosure, but is very similar in size to buildings recently excavated at Boreham, Essex (15x28m and 12 x 22m, Germany 1995). If it is a structure then the lack of Roman tile on the site would indicate either a thatched or timber shingled roof.

Three other examples of a similar type of enclosure/structure are known in Essex. A remarkably exact parallel to the Sandford Quarry example is provided by the 'apsidal ditch' feature (F3203) at Ivy Chimneys (Fig. 5, No. 2), dating to the early 4th century (Turner forthcoming). This measured 12.5 x 24m, and had a curved end with a straight internal division separating the 'apse' from the remaining rectangular structure. The Ivy Chimneys structure has been interpreted as a temple compound, with internal post holes representing a building measuring 20 x 10m as the temple (Turner forthcoming). Many votive offerings were associated with the depressions located close to the compound, including hoards of coins, bone, and Palaeolithic handaxes, as well as objects of bronze and chalk (Turner 1982, 16-17). No evidence of such ritual items were identified at Sandford Quarry; though of course excavation was minimal.

A third example of a similar structure was identified at Mucking (Going 1993). This was 20 m long by

10m in width (Fig. 5, no. 3), consisting of a rectangular structure surrounded by a possible oval-ended eaves-drip gully (Going 1993; Going, pers. comm.). This structure was dated to the second to third centuries AD. Finally a slightly larger example was identified at Wendens Ambo (Hodder 1982). This is 22m long by 16m wide (Fig. 5, no. 4), dating to the early to middle 2nd century. At the time, it was interpreted as an enclosure as it was thought to be too large for a timber building (Hodder 1982). The similarities between Ivy Chimneys and the Sandford Quarry site however, are remarkable, but there was nothing from the minimal 1994 excavation to suggest any kind of ritual interpretation for the Sandford Quarry site. Such a close similarity of size and shape and location may indicate that the same builder is responsible for both structures.

Acknowledgements

This project was funded largely by Essex County Council. The project was set up and facilitated by Richard Havis. The fieldwork on Site A was supervised by Jo Ecclestone, assisted by M. Edwards, D. Gadd and E. Heppell. The fieldwork at Site B was undertaken by R. Havis and S. Wallis. The finds specialists were H. Major, S. Martin, A. Wade and C. Wallace. Thanks are due to Redland Aggregates Ltd for their practical assistance, and co-operation throughout the project.

Authors; Jo Ecclestone (formerly) and Richard Havis (currently), Essex County Council Planning Department, County Hall, Chelmsford CM1 1LF.

References

Germany, M. 1995	'Boreham, Great Holts Farm Phase II', in Gilman, P.J. and Bennett, A., (eds), 'Archaeology in Essex 1994', <i>Essex Archaeol. Hist.</i> 26, 247	Priddy, D. and Buckley, D.G. 1987	<i>An assessment of Excavated Enclosures in Essex</i> , East Anglian Archaeology, 33
Going, C.J. 1987	<i>The Mansio and other sites in the south-eastern sector of Caesaromagus; the Roman pottery</i> , <i>Counc. Brit. Archaeol. Res. Rep.</i> 61	Rigby, V. 1981	'The Gallo-Belgic wares' in Partridge, C. <i>Skeleton Green, A late Iron Age and Romano-British site</i> , <i>Britannia Monograph Ser.</i> 2, 159-95.
Going, C.J. 1993	in Clark, A. (ed.), <i>Excavations at Mucking: the site plans</i> , 1	Stead, I.M. and Rigby, V. 1989	<i>Verulamium, The King Harry Lane site</i> , <i>English Heritage Archaeol. Rep.</i> 12.
Greene, K. 1979	<i>The Pre-Flavian Fine Wares: Report on the excavations at Usk 1965-1976</i> , Cardiff	Thompson, I. 1982	<i>Grog-tempered 'Belgic' Pottery of South-eastern England</i> , <i>Brit. Archaeol. Rep.</i> 108, Oxford.
Hawkes, C.F.C., and Hull, M.R., 1947	<i>Camulodunum; first report on the excavations at Colchester 1930-1939</i> , <i>Rep. Res. Comm. Soc. Antiq. Lond.</i> 14. Oxford.	Turner, B.R.G. forthcoming	<i>Excavations of an Iron Age settlement and Roman religious complex at Ivy Chimneys, Witham, Essex, 1978-1983</i> , East Anglian Archaeology.
Holwerda, J.H., 1941	<i>De Belgische waar in Nijmegen</i> , The Hague	Turner, B.R.G. 1982	<i>Ivy Chimneys, Witham: an Interim Report</i> , Essex County Council Occasional Paper No. 2.
		Wilson, M.G. 1972	'Catalogue of the pottery' in Frere, S.S. 1972 <i>Verulamium Excavations I</i> , <i>Rep. Res. Comm. Soc. Antiq. Lond.</i> 27, 265-364.

The Society is extremely grateful to Essex County Council for a generous grant towards the cost of publishing this article.

A Roman site at the New Source Works, Castle Hedingham: excavations 1992

by N.J. Lavender

with contributions by K. Horsley, H. Major, W.J. Rodwell, Alec Wade and C.R. Wallace

Excavations to the north of Maiden Ley Farm, Castle Hedingham revealed ditches and hearths of Roman date, ranging from the later 2nd to the late 4th century. The ditches are interpreted as evidence of stock-keeping; the hearths present problems of interpretation. It is suggested that these Roman features were probably peripheral to a settlement lying uphill from the area examined.

Introduction

During February 1992 an archaeological evaluation was conducted at Sheepcot Road, Castle Hedingham, to the north of Maiden Ley Farm (TL 7860 3475, Figs 1 and 2), by Essex County Council Field Archaeology Group, in response to a planning application by Anglian Water Ltd. for a new source works. Initially four trenches (Fig. 3, A-D) were excavated. These located a number of Roman features and identified a thick build-up of colluvial deposits over the south-western part of the site.

As a result of the evaluation, further excavations were undertaken under the direction of the author between July and September 1992. The results of both the evaluation and the main excavation are presented and discussed together below. All field and post-excavation work was fully funded by Anglian Water Ltd.

The site archive and finds will be deposited in Braintree Museum under the site code SH92.

The site and its environs

Castle Hedingham lies on the dissected boulder clay plateau of northern Essex, on the north-east slope of the Colne valley. The subsoil is a silty clay-brickearth with some sand banding below its surface. In the immediate area of the site there is a heavy build-up of colluvial material.

The site lay on the south-west side of Sheepcot Road to the north of Maiden Ley Farm, 0.5km east of Sible Hedingham (Fig. 1). There is a general north-south slope to the ground which increases in steepness

to the north of the site. In particular a low knoll to the north-west should be noted; it is too slight to be shown by the contours on the Ordnance Survey maps, but can be clearly seen in Plate 1.

To the south of the site ran a hedge, beyond which was a drop of over a metre to the paddock below. This drop decreased towards Sheepcot Road, and increased in the direction of the river. This hedge was on the same alignment as the Roman features on site, and may conceivably be ancient in origin. If so, it could have been instrumental in preventing colluvial deposits from travelling beyond its line and creating the very deep build-up which was encountered during excavation. Further south a small stream runs down from the hill to the north-east of the road and joins the river Colne, which flows south through marshes c. 300m west of the site.

Other evidence for Roman activity in the vicinity is fairly sparse. Roman tile was found close to this stream (Essex Sites and Monuments Record (ESMR) No. 6838) in 1970, and a possible settlement site is known immediately to the east (ESMR 6888; Hull 1963, 145; Lindsay 1958, 231-8), and various finds have come from both Sible and Castle Hedingham.

The evaluation

The four evaluation trenches (Fig. 3, A-D; Fig. 4) were machine-excavated within the proposed development area and positioned to give the optimum coverage of archaeological deposits. Removal of topsoil from trenches A and B revealed natural clay-brickearth subsoil into which Roman features were cut. In trenches C and D, however, topsoil removal revealed a uniform layer identified as hill wash. These deposits had evidently come down from the low knoll to the north-west of the site, and were later found to cover much of the south and west parts of the development area.

In trench A lay ditch 1 and a number of features filled with charcoal and other burnt material (features F4, F6, F9 and F10), all of which were re-examined during the main phase of excavation. Trench B contained an

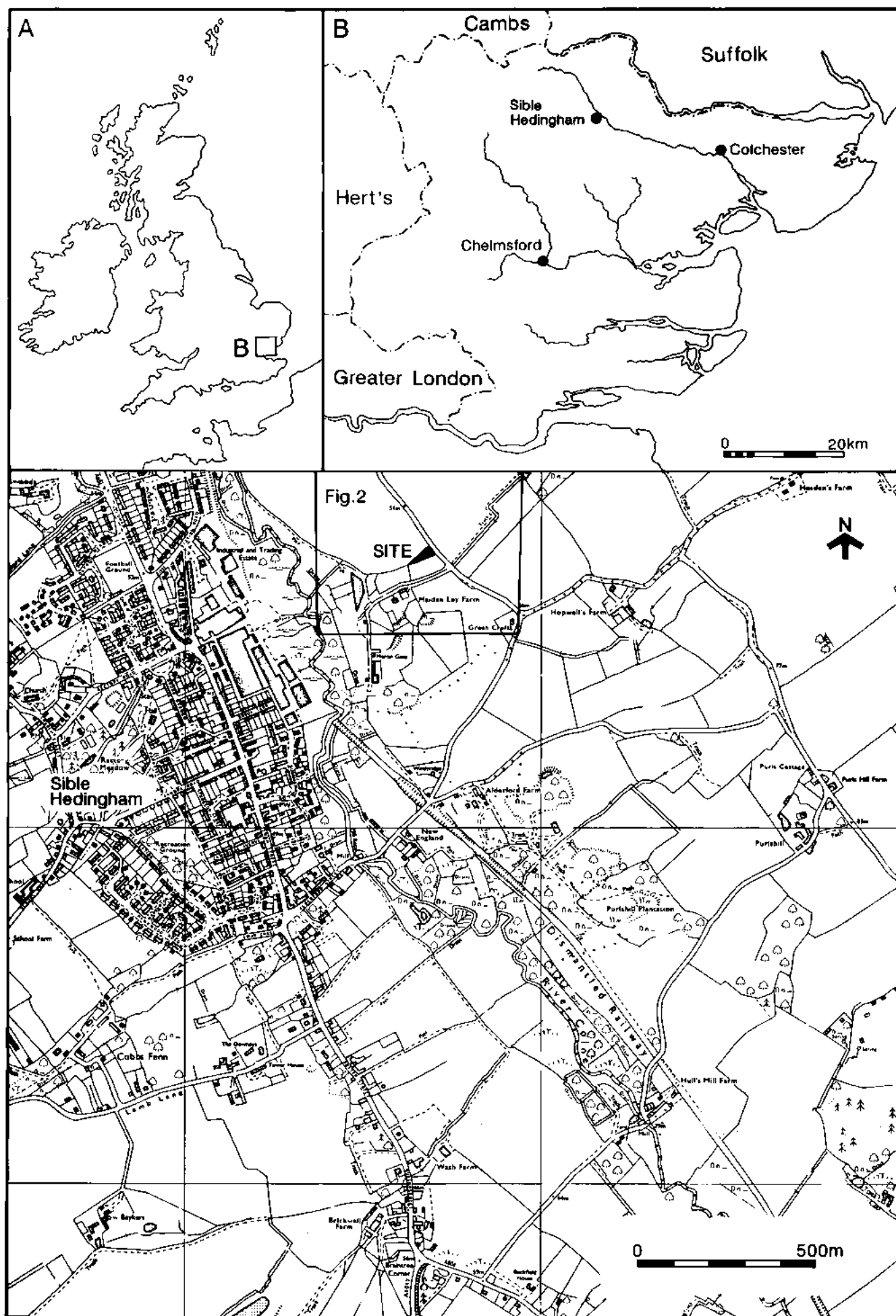


Fig. 1 Site location. © Crown copyright.



Plate 1. View towards the low knoll to the west of the site. It is from this feature that the hillwash was derived. The main focus of Roman activity seems to lie here.

east/west ditch (F105) and another feature believed at the time to be a large pit (F102), but which was subsequently found to be the terminal of ditch F411.

Trenches C and D had no features visible on the surface of the hill wash. It was therefore decided to investigate these by means of box-sections (labelled BS on Figs 3-4). In the case of trench C these were placed at the north-west and south-east ends. In the north-western box-section (BS209), natural was located at 0.60m, and in the south-eastern (BS201) at 1.50m. Features cutting the natural in both these box-sections appear to have been caused by tree roots. A final box-section was excavated at the south-east end of trench D (BS309). Natural was not encountered, but the remains of a gravel surface (304) were recorded at a depth of 1.46m.

As a result of the data recovered from the evaluation, it was decided by the Essex County Council Archaeological Advisory Group that a full excavation was necessary as a condition on the planning consent.

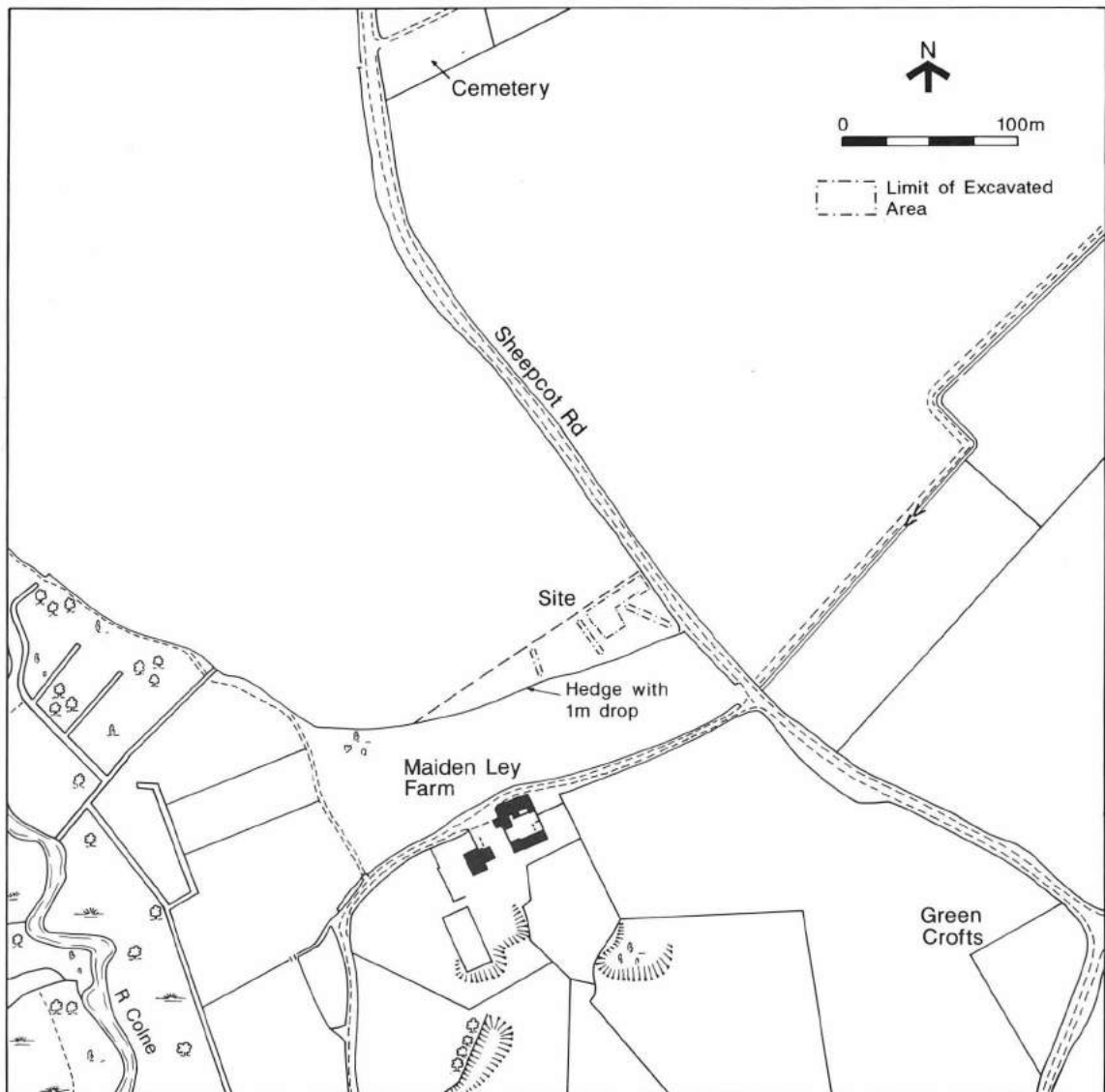


Fig. 2 Trench location. © Crown copyright.

The excavation

The main excavation area, covering c. 500m² was to the north-west of evaluation trench B, and incorporated trench A in order to investigate the cluster of features containing burnt material (Fig. 4). It was intended to adopt a strategy of box-sectioning within the stripped area if deposits of hill wash were encountered. Following topsoil stripping with a toothless ditching bucket, it was found that hill wash did indeed cover much of the area, and that within it no features were visible.

The colluvium

A yellowish-brown friable sandy silt with rare pebbles and charcoal, generally containing Roman and later finds, was identified on site by Anglian Water engineers as a colluvial deposit.

The colluvium, washing down from the knoll to the north-west, had largely levelled-off the natural slope in this area. The combined depth of the topsoil and colluvial overburden was c. 0.45m in BS417 in the north, and c. 0.9m in BS442 in the south.

It was considered probable that features did cut this colluvium, so a machine-trench was dug through it to the natural sub-soil (Fig. 7, BS430; Fig. 3). Two features (F433 and F435) were observed in section, cutting through from the top of the second colluvial layer. These barely penetrated the natural subsoil and were only really visible in section (Fig. 10, S9).

Because of these conditions the site was largely

excavated by means of further box-sections, dug by hand, in which it was hoped that features might become apparent at a lower level. These box-sections were placed in order to obtain as representative a sample as possible across the whole of the excavation area, and their location is shown in Fig. 3. It was found, however, that whilst they were visible in section, no features could be discerned in plan until natural sub-soil had been reached.

Generally two quite distinct layers of hill-wash could be seen in section. The upper appears to have been forming throughout the later Roman, Saxon and medieval periods, whilst the lower had already formed by the time the Roman features were cut, and they could usually be seen penetrating through it into natural. It appears that the build up of colluvium was arrested by an episode of Roman activity commencing during the 2nd century, and continuing into the 4th century. Following the apparent abandonment of the site, the hill wash began to accumulate again, a process which was uninterrupted until the development of the modern ploughsoil.

In two box sections, however, there appear to have been three layers. These, as might be expected, were at the southern side of site where the build-up was deepest: BS201 and BS442. BS201, in evaluation trench C, may indicate a variation in the development of the colluvium where the formation of layers was less certain and cannot be trusted as well-defined horizons, since Saxon pottery was located in a context comparable to

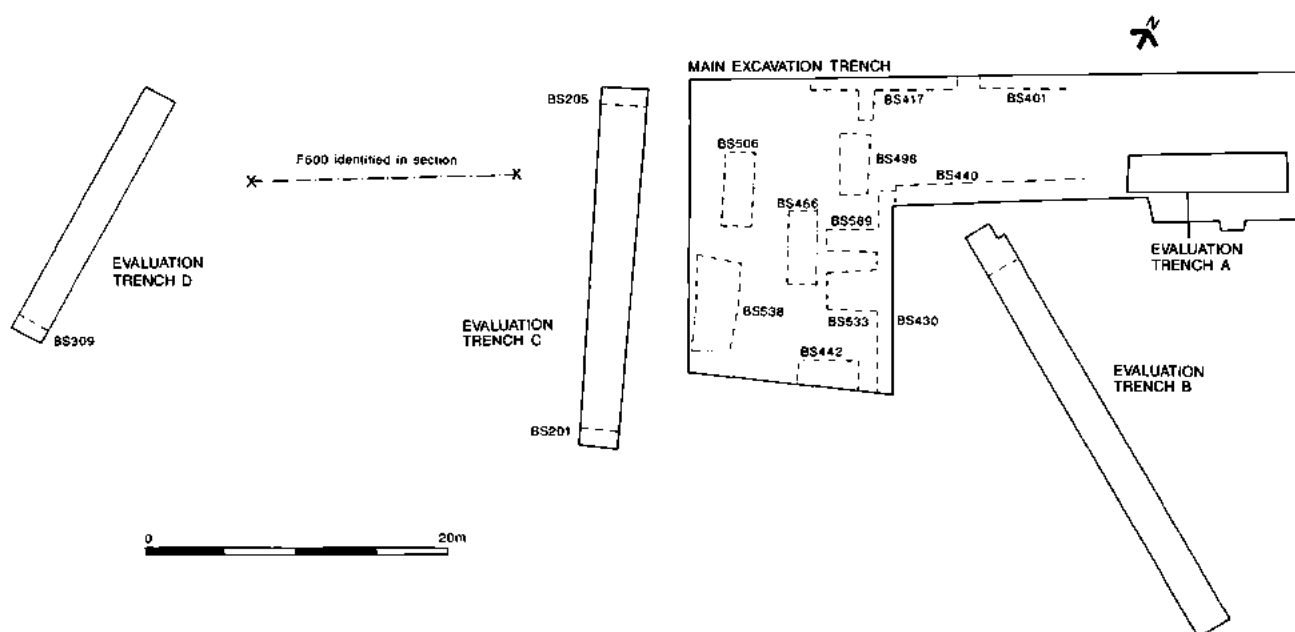


Fig. 3 Trenches and box-sections.

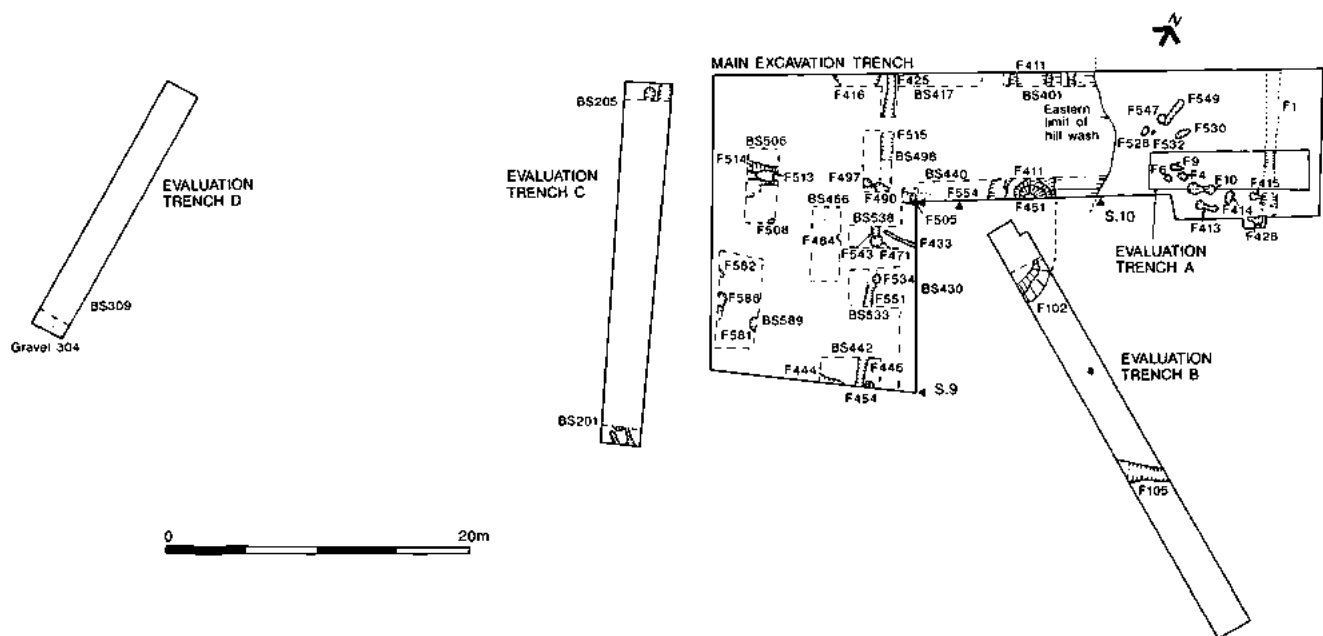


Fig. 4 Plan showing all features.

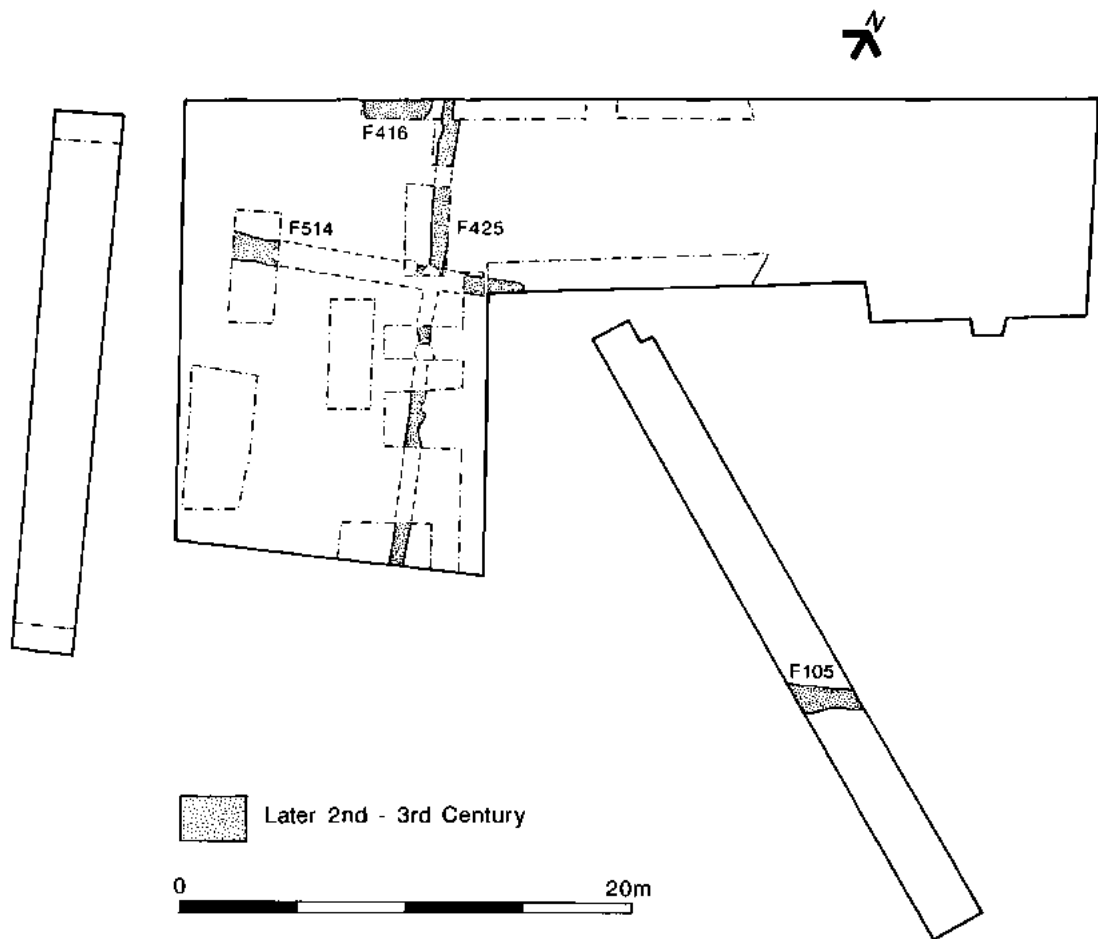


Fig. 5 2nd-3rd century features.

that through which the Roman features were cut in the main excavation area.

The upper colluvium sealed all features identified as being of Roman date. As noted above, features F433 and F435 were cut from directly below topsoil. These contained residual Roman pottery, but are probably medieval or later in date. Scanning by metal-detector located few artefacts, but among these are a clipped silver penny of Henry II, and a 16th-century token. The medieval feature F435 certainly cut into the upper colluvium directly above Roman ditch F551.

Later 2nd to 3rd century (Fig. 5)

Two shallow ditches in the main excavation area, and possibly one in trench B, belonged to the later 2nd or 3rd century (Fig. 5). These possibly represented part of a system of small fields or paddocks. One of these ditches (F514/554, afterwards referred to as F514) ran from west to east, whilst another ditch of similar size (F425/515/542/543/551/446, afterwards referred to as F425) ran perpendicular to it with a junction at the south-east end of BS498, and terminated at the south-west end of BS440.

Ditch F105 in trench B appeared to run on an alignment parallel to that of F514, and may have been a part of the same ditch system. The finds, however, were slightly earlier (2nd century), though these may be residual. In the west F416, a large pit excavated in BS417, was also of late 2nd to 3rd-century date.

4th century (Fig. 6)

At some point during the fourth century, prior to the accumulation of the second deposit of colluvium, the silted-up ditches of the 3rd century were replaced by fences along the same alignment as the earlier ditches (Fig. 6). A large post (F490) was placed at the junction of the former ditches F425 and F514, and further posts were positioned along the line of F425 to the south east of this point (F471, 534, 454), gradually diverging from its line. Posts (F497, 513, 554) were also placed along the whole length of F514, the easternmost (F554) lying c. 1.5m from the terminal.

There is a possibility that two undated features, F484 and F508, which appeared to be postholes, formed part of a line of posts with F471 running parallel to ditch

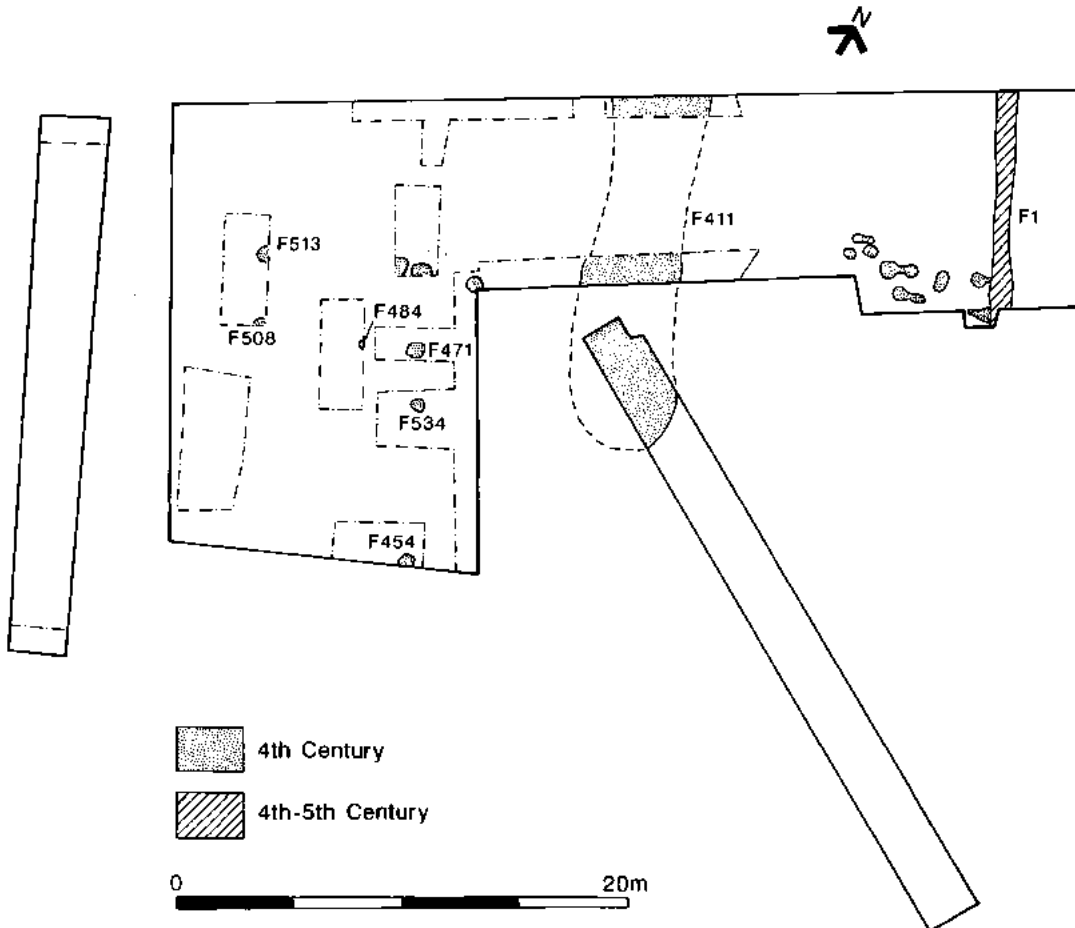


Fig. 6 Late Roman features.

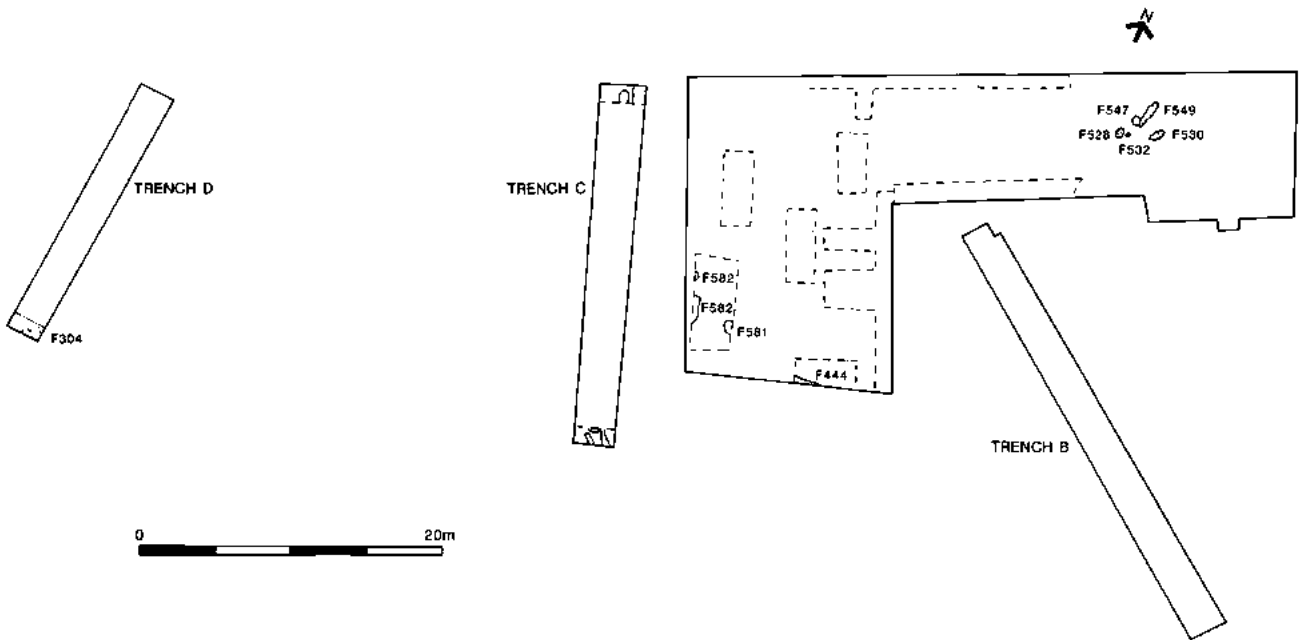


Fig. 7 Undated and natural features.

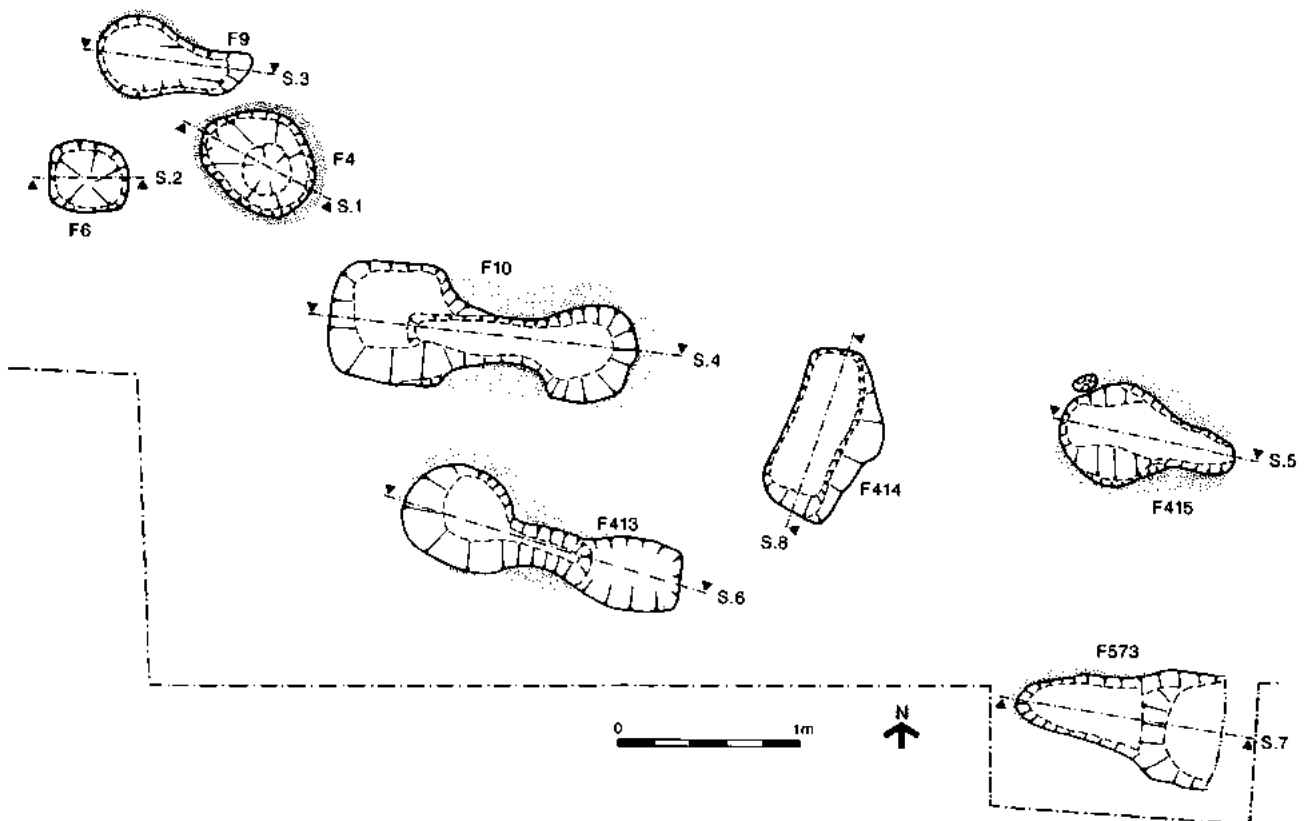


Fig. 8 The hearths and associated features: burnt areas indicated by stippling.

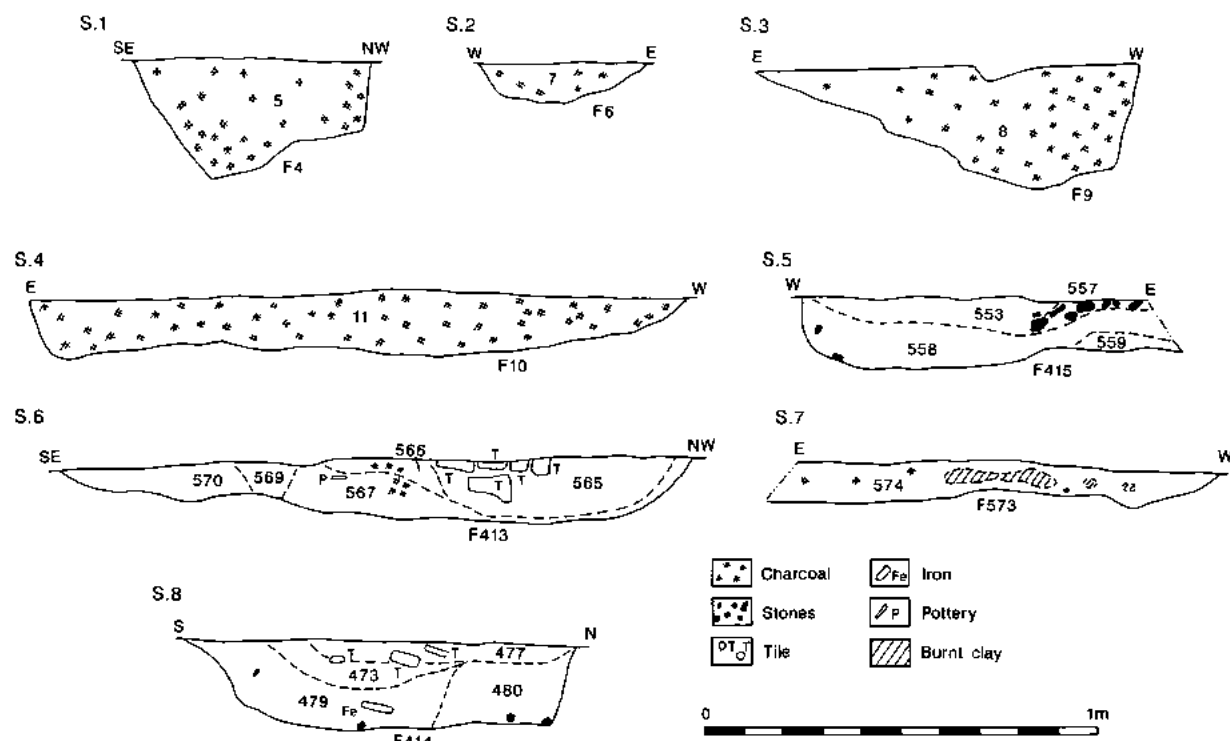


Fig. 9 Sections of the hearths and associated features.

F514 and the postholes on the line of ditch F514. These did not cut a ditch, and appeared much slighter than the majority of postholes on site. They clearly cut through the lower layer of colluvium and just penetrated the brickearth below. They did not seem to be substantial enough to form part of a building.

Also belonging to the 4th century were a number of hearths and associated features at the north-eastern end of the main trench (Figs 8 and 9), which were first observed in Trench A. Four bowl-hearths were arranged in two pairs (F10 and F413; F415 and F428); each hearth comprised a bowl-shaped pit with a short length of flue leading to a shallow sub-rectangular flat-bottomed depression. These lay in a group around a rectangular pit (F414) filled with hearth debris. There was no sign of a lining to any of the hearths, but the natural brickearth was scorched to a reddish orange colour around the edges, indicating burning within the features, and they were all filled with a charcoal-rich soil. A large number of soil samples was taken from the hearths, but an assessment by P. Murphy showed that there was no evidence of cereal remains.

Three smaller features (F4, F6 and F9) lay to the west of these hearths. All had the same scorched natural edges and charcoal-rich fills. Features F4 and F6 were probably simple bowl hearths, whilst F9 may have been another of the longer hearths, but smaller and

more severely truncated by ploughing than the other four. Pottery from F9 indicates a late 4th-century date, whilst finds from pit F414 suggest that at the earliest it was late 3rd century. This entire group is, therefore, tentatively dated to the late 4th century.

A fairly deep, wide ditch (F411, Fig. 10), ran from north-west to south-east at the edge of the hill wash, and apparently terminated as F102 in Trench B (Fig. 6). This was excavated in BS401 and BS440 as well as in Trench B, and proved to be of 4th-century date. Within BS440, the ditch truncated and sealed the lower fills of a deep pit which yielded no dating evidence. On the south-east side the ditch fill merged with the colluvium, and no edge was apparent above the surface of the natural. This would be consistent with its being a drainage ditch preventing material coming down the slope from proceeding further north-east.

A watching brief, held in December 1993, in the area between trenches C and D observed a large feature (F600) in south-facing section X-X (Fig. 3). This was a 17m wide, fairly shallow (c. 1m at its deepest point) hollow with gradually sloping sides. A black organic silt filled this feature, which unfortunately was impossible to sample. Roman pottery, tile, bone and a fragment of copper alloy as well as several iron nails were recovered from the base of this feature, which is interpreted as a pond.

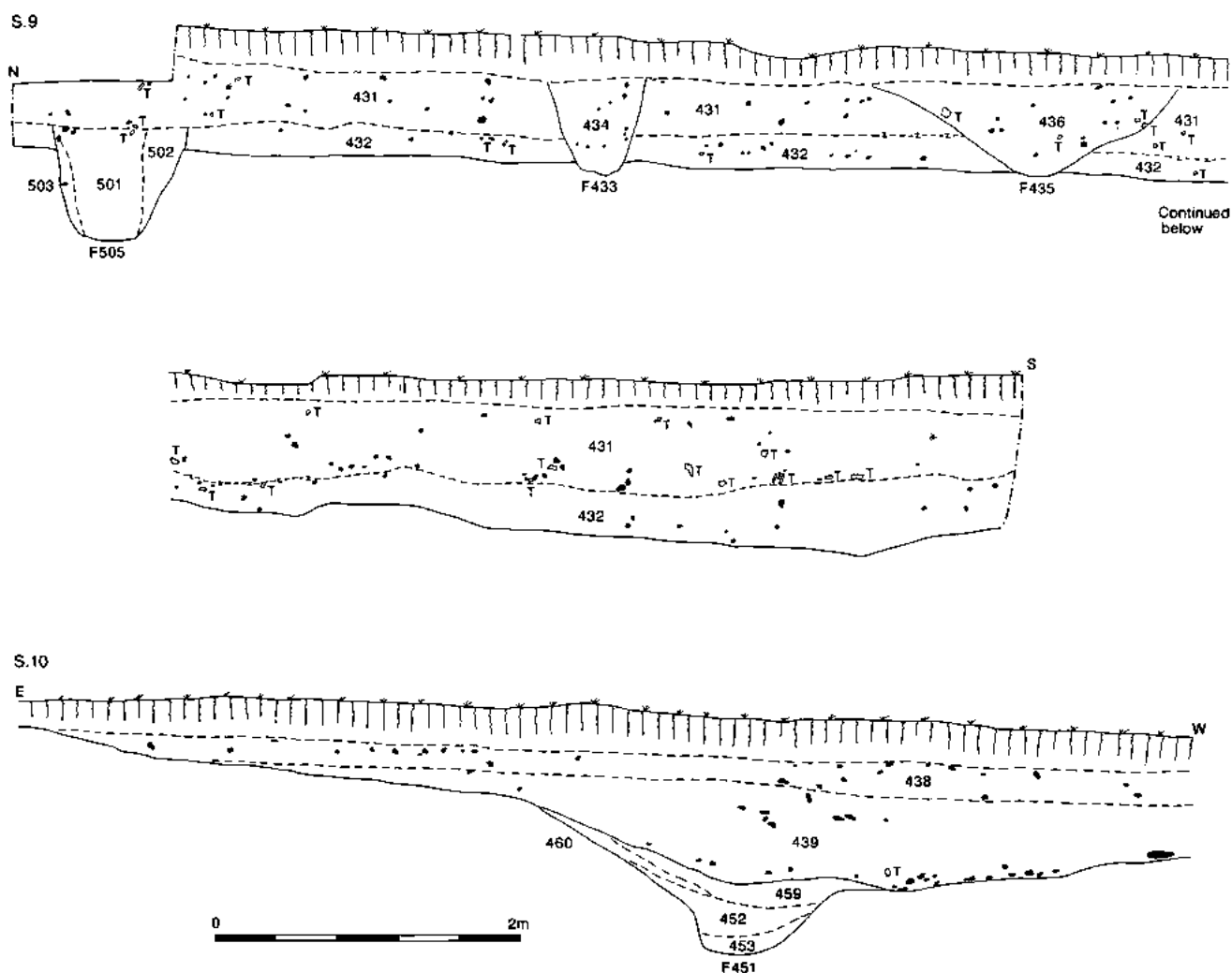


Fig. 10 Sections of box-section 430 and feature 451. Refer to Fig. 4 for positions.

Later Features

Ditch F1, running north-west/south-east (the same alignment as the earlier ditches F411 and F425) contained Roman pottery, none of which was sufficiently diagnostic to assign it a date. It cut the north end of two of the 4th-century hearths, and so must be regarded as late 4th century or later.

Saxon pottery was recovered from the lower colluvium in trench C. There was no evidence in BS201 for an intrusive feature which could account for this. The pottery was broadly contemporary with the latest Roman pottery found on site, but seemed to lie within the same horizon into which the 2nd to 3rd-century features were cut. It is possible that the sequence of colluvial deposition over the southern part of the area was different from that in the area of the main trench, the reliability of the developing soil horizon being inconsistent in areas of different activities. Other features located beneath the colluvium in Trench C were consistent with tree-root disturbance.

Directly below the lowest layer of colluvium in

Trench D was a worn, patchy gravel surface (304), which could only be observed in a small box-section at the south-eastern end of the trench. A further deposit of material lay below this gravel, which could not be excavated due to depth restrictions. No date can safely be assigned to the gravel surface, especially in view of the uncertain sequence of ground build-up over this part of the site.

The finds

The full catalogues for all finds categories are available in the archive.

Roman Pottery

by K. Horsley, with C.R. Wallace and W.J. Rodwell

Introduction

The excavation yielded over 12kg (1192 sherds) of Roman pottery, the bulk of which was 4th century in date, with some late second to mid third century and late third to early fourth-century material being present also.

The material was catalogued using the form and fabric series developed in Going's Chelmsford Mansio report (1986), which is now standard for all excavations undertaken by ECC Field Archaeology Group, supplemented here by Drury and Wickenden (1982) and Peacock and Williams (1986). Quantification by weight and sherd number is included in the archive, but detailed quantification of forms and fabrics was not considered worthwhile.

Fabrics Present

The mid 2nd- to mid 3rd-century pottery included:

Nene Valley colour-coat (2), miscellaneous oxidised red ware (21), Colchester buff ware (27), miscellaneous buff ware (31), Hadham/fine grey ware (36/39), storage jar fabrics (44), romanising grey ware (45), sandy grey ware (47) and samian (60).

The late 3rd- to early 4th-century material included:

Nene Valley colour-coat (2), Hadham oxidised red ware (4), Nene Valley mortaria (24), Hadham/fine grey ware (36/39), storage jar fabric (44), late black-surfaced ware, sandy grey ware (47), Rettendon ware (48) and North African amphorae.

The 4th-century pottery included:

Oxfordshire red colour-coat (3), Hadham oxidised red ware (4), Nene Valley 'self-coloured' ware (24), Hadham black-surfaced ware (35), Black-Burnished 1 (40), storage jar fabrics (44), sandy grey wares (47) and late shell-tempered ware (51). Some sherds of early Saxon pottery were found in the evaluation trenches but none was recovered from the main excavation.

The samian

by W.J. Rodwell

Listed according to context number.

412. Body frag., poss. of f.18/31R or 31R. EG. Mid 2nd cent.?

419. f.37. EG. Late 2nd-early 3rd cent. Decorated frag. showing a large animal, probably a lion, walking to right. This is likely to be from a Rheinzabern freestyle bowl.
422. f.31. CG. Late Antonine.
438. Platter base, prob. f.31. EG. Late Antonine.
f.31R EG. Late Antonine.
f.37. EG. Late Antonine. Shows part of an animal running to left; also the edge of an unidentifiable mould stamp.
f.38. EG. Late Antonine.
535. Tiny chip, unident. form. CG ?. 2nd cent.

Discussion

The Roman pottery from the site appears to fall into three date ranges:

- late 2nd to mid 3rd centuries
- late 3rd to early 4th centuries
- late 4th century

The ceramic evidence suggests that activity on the site started in the late 2nd century and continued into the 4th century. However, activity during the 2nd and 3rd centuries seems to have been minimal and consisted of a ditch (F425) in BS417 and layers 467 and 470 in BS466; 467 and 470 are layers of probable colluvial deposit and therefore any material from them may not relate to activity within the excavated area.

The material from the late 3rd to early 4th centuries comes from a variety of features; pit F102, ditch F416 and layer 571. Layer 571 is probably a colluvial deposit, and as with layers 467 and 470 may not relate to activity within the excavated area.

The majority of material was 4th century, and was present in colluvial deposits right across the site. Activity on the site continued on much the same small scale into the late 4th century with a hearth or oven (F9) containing Oxfordshire red colour-coat present in the west end of evaluation trench A.

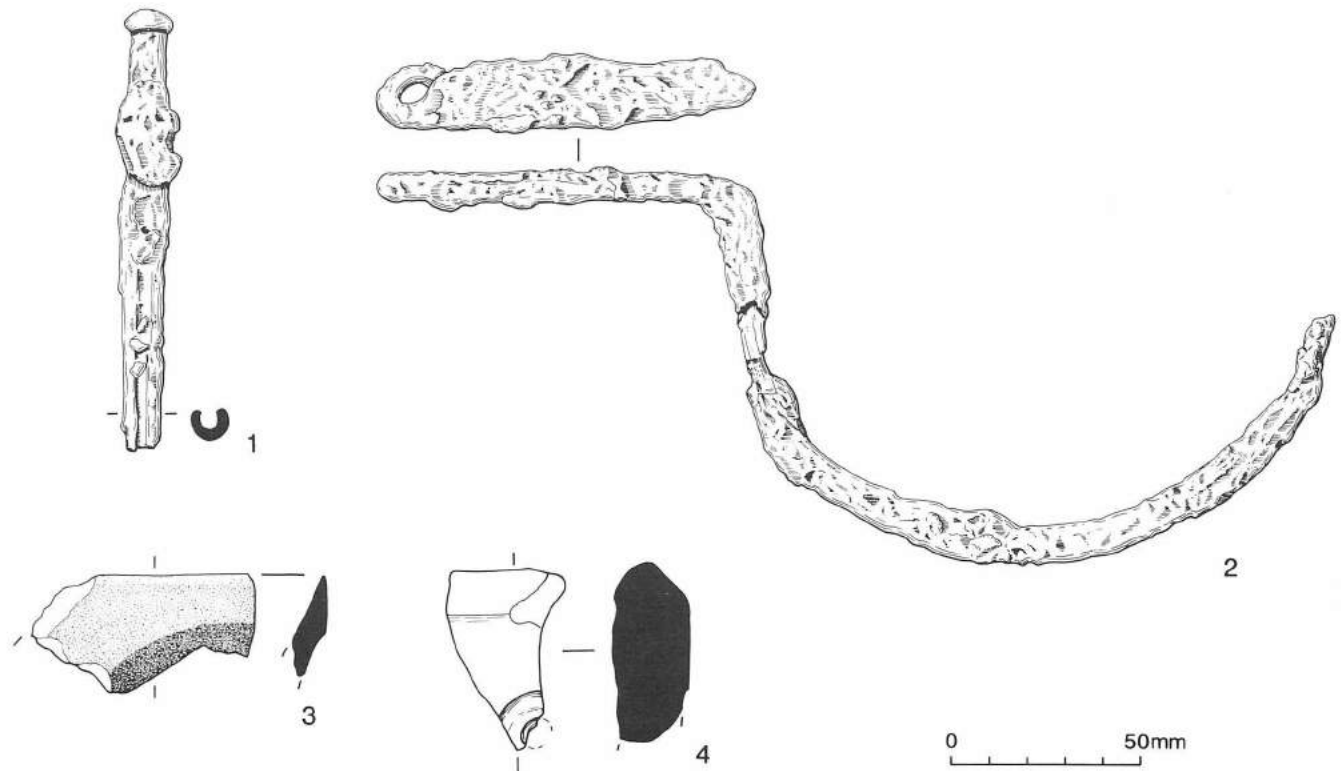


Fig. 11 Artefacts. 1,2 Iron objects; 3 Shale; 4 Tile.

The 4th-century material contained the usual mix of non-local wares, such as Oxfordshire red colour-coat, Nene Valley mortaria, Black-Burnished 1 and late shell-tempered ware, as well as the more local Hadham products, typical of 4th-century Essex. The wide range of fabrics present does suggest local settlement in the 4th century.

Apart from the presence of 2nd and 3rd-century samian ware, only two imports were recovered. The first being two bodysherds of an amphora of North African origin, which dates between the 3rd and 4th centuries; the second was a bodysherd of a beaker in East Gaulish Rhenish ware. This mid 2nd to 3rd-century fabric was present in a colluvial layer (499) containing 4th-century material and is presumed to be residual.

Roman brick and tile

by H. Major

89.91kg (1577 pieces) of tile was recovered from trench A and the main trench, 6.15kg (168 pieces) from trench B, 2.18kg (71 pieces) from C and 1.83kg (33 pieces) from D. The tile was catalogued using standard E.C.C. pro formas. Most of the tile was discarded, but all box flue tile was kept, samples of the fabrics and other pieces of intrinsic interest. A fuller report is available in the archive.

This is a surprisingly large group for a small site with no buildings present. Nearly half of the tile (over 40kg) came from the hill wash layers over the features, and it is probable that it derived from a building further up the hill. The group includes all the main types of tile, including box flue tile in quantities which suggest that the building had a hypocaust. There was a single example of a *tessera*. One feature on the site, oven F413, probably utilised tile in its construction. The pieces of *tegula* from it were probably from a single tile.

Fabrics – Five fabrics were distinguished macroscopically, although most of the tile was in one of two similar fabrics, fairly fine in texture, with very sparse to fairly sparse sand, and with no chalk inclusions. Most of the tile was in the normal range of colours for the area, orange to red, with a single example of a buff-coloured tile.

The tile from the main trench

None of the tile had measurable dimensions apart from thickness. The forms appear to be standard. For the *tegulae*, most of the flange types previously noted from the county were represented. Five *tegulae* had nail holes. Two (from 565 and 568, both in F413) were made at an angle, and were so similar that they must have been made by the same person. Angled nail holes are unusual on Roman tiles. One probable *tegula* fragment from 509 had a chamfered edge and part of a neatly made hole, with a cleanly imprinted groove round the top edge (Fig. 11, 4). This could have been made by the handle of the tool used to make the hole.

The 'brick' ranged in thickness from 25mm to 70mm, suggesting that we have all the main types of structural tile represented. The thinnest examples are probably from *bessales*, and the thickest from *bipedales*, both types of tile often associated with hypocaust systems.

Box flue tiles with both combing and cut lattices were present. The combing patterns were predominantly linear, with only a single curvilinear example. There were no extensive areas of combing surviving, but the elements present suggested that the main patterns present were saltire crosses with or without lines along the top and sides (but with no evidence for complete frames), or with a central line, and crosshatching, either parallel to or at an angle to the edges.

A few of the *tegulae* had 'signatures' of the usual forms, either single or multiple arcs or straight lines. Only one 'brick' had a 'signature', of two straight grooves. Two *imbrices* had marks on the surface. One had part of an incised cross, or similar mark, and the other had a single straight line, possibly deliberately made.

Five animal prints were noted, only one of them complete. One was probably a kitten and there were two definite, and one probable, dog prints. The complete print was deer, probably a roe deer. Identifications were made using Bouchner (1982).

Miscellaneous finds

by H. Major

Non-ferrous metals (not illustrated)

Only seven pieces of non-ferrous metal were found. A copper-alloy bar fragment from the hill wash is probably post-medieval. There were also six pieces of lead. Three were unstratified, and comprised two irregular fragments and a crudely moulded plano-convex disc, with a hole set off centre. The latter is possibly a Roman weight. The other three pieces of lead came from ditch F411; two were irregular lumps, and the third was a small fragment of sheet.

Iron objects

Thirty iron objects were found (excluding nails), of which the majority was unidentifiable scraps and fragments. The remainder was utilitarian ironwork, mostly structural, but there were also three possible knife fragments and a complete punch.

1. Punch, probably for leather working, with a rounded head and a long blade with semi-circular section. For a close parallel see Manning 1985, 42, E32. L 116mm. 404, BS401. (Fig.11, 1).
2. Latchlifter, complete bar slight damage. The end of the flat handle is bent into a loop. L 257mm. 409, F410. (Fig.11, 2).
3. (Not illustrated) Strapping, bent at right angles at each end. One end is definitely broken across a perforation, and the other end probably is. Section 21x2.5mm, L 104mm, L of bent portions 25mm. 409, F410.
4. (Not illustrated) Curved strip fragment, with T-shaped section, edges damaged. This looks like part of a small ribbed collar, of the type associated with water pipes, but the curve is not regular. W 16mm. 412, BS401.
5. (Not illustrated) Collar; section 27x2mm, internal diam. 45mm. 2, Ditch F1.
6. (Not illustrated) Blade fragment, parallel sided. W 23mm, L c 105mm. 421, Ditch/pit F416. Possible knife tang fragments came from contexts 400 (U/S) and 450.
7. (Not illustrated) Loop hinge, both parts broken, with no sign of nail holes for attachment. This is probably from a box. A hinge of similar size and form came from a wooden box in a grave at the Butt Road cemetery, Colchester (Crummy 1983, 85, no. 2199) L 96mm, W of each strip 30mm. 2, Ditch F1.
8. (Not illustrated) Strap hinge, bent in the middle, with bifurcated end. There are no visible perforations. 95x34mm. 439, Ditch F411.
9. (Not illustrated) Two fragments, probably from small clamps. L. 29mm and 46mm. 439, Ditch F411.
10. (Not illustrated) Solid block, tapering across its width. It is not clear whether the ends are broken. At least one face and one edge have mineralised wood on them, and the structure of the wood suggests that the iron object was directly associated with the wood, i.e. set into it. 71x43mm, 11-18mm thick. 479, Pit F414

Iron Nails (Not illustrated)

A total of 82 nails and 80 nail shaft fragments was found. Forty-nine (60%) had round, flat heads, the most common type of Roman nail. This type was, however, in use until the beginning of this century, and some examples from the hill wash layers may therefore be post-Roman. There were also 15 hobnails, 14 of which came from context 439 (ditch F411). Overall, almost half of the nails came from context 439. A catalogue of the nails is available in the archive, but since there were only 19 complete nails in the assemblage, it was not considered worthwhile undertaking further analysis of this group.

Baked Clay (not illustrated)

A very small amount of very fragmentary baked clay was recovered, a total of 343g from all trenches. There is no indication of the type of structure that the baked clay derived from. It is curious, however, that there was not more baked clay from the vicinity of the 'hearth'. It might be expected that an oven of this type might have had some sort of clay superstructure which would have become at least partly fired.

The Stone

Shale Object

11. Fragment of shale or similar stone, probably from the corner of a slab or palette with a tapered edge. The shape was probably hexagonal (the corner has an angle of c 130°), with an oval depression in the centre. The back is flat, with an angled corner. This is from a layer, and it is therefore possible that this is not Roman, although a Roman date seems most likely. 404, BS401. (Fig. 11, 3).

Querns (Not illustrated)

Small fragments of lava quern, probably residual, came from five contexts, and a piece of a millstone grit quern from BS533.

Coins

All the coins came from hill wash layers. The Roman coins were identified by P. McMichael.

- SF1 Copper alloy, Roman, very worn, 13mm diam.
Obv. Head R. Rev. obscured
- SF2 Silver denarius, Septimius Severus (AD 191-211). 15mm diam., fair condition.
Obv. Head R. ...SEPT SEVP..
Rev. Figure standing L., r. arm raised. (Jupiter Victor)
..M TR P II... (= AD 194)
- SF3 A quarter of a silver penny; cross-and-crosslets type, Henry II, issued 1158-1180. Obverse probably poorly struck rather than worn.
- SF5 Copper alloy radiate, Roman, poor/fair condition, diam. 9mm.
Obv. Head R. Rev. Very worn/obscured
- SF6 Copper alloy, token, probably Nuremberg token, in good condition. Garbled Lombardic inscription. 16th cent.

Glass

by N.J. Lavender

A very small quantity of glass was recovered from the site. Two fragments came from the upper fill of ditch F411, the rest was all either from the colluvium or unstratified.

A tiny body sherd of a thin-walled vessel came from the upper colluvium in BS466. This was very pale green, almost colourless with three narrow ridges visible on the exterior.

The remainder was all window glass, and was cast. It had one glossy and one matte surface, and was of variable thickness. Two of these fragments were from the upper fill of F411 and were darkish green in colour. Tiny grains of sand from the casting process were visible adhering to the matte surface of one sherd. Three very small sherds of greenish-colourless window glass were recovered from the colluvium in BS201, and the final piece was greenish-blue and unstratified.

At least two, possibly three panes of glass are represented here, but their origin is unknown. No buildings were located during the excavation, and the presence of these fragments in the colluvium and top fill of a large ditch suggest that their original provenance lies on the knoll above the site.

Animal bone

by Alec Wade

The assemblage consisted of 57 pieces of bone derived from eight contexts, weighing a total of 433g. The general condition of the bone was poor and fragmented, the only exception being context 601 which contained a more sizeable and identifiable deposit.

Twenty two bones were identified to species level (38.6% of the sample by number but 81.6% by weight). These consist of *Bos* (cattle, 80.9% of the identifiable sample by weight), *Equus* (horse, 16.4% by weight) and *Ovis/Capra* (no distinction being made between sheep and goat, 2.6% by weight).

No diagnostic features regarding the sexing of bones or butchery marks were noted.

Discussion

Whilst worked flint was recovered, this was all residual, deriving from the Roman features and both upper and lower colluvial deposits. No features were located which indicate any activity on the site prior to the first colluvial episode and therefore no commencement date for the accumulation of this deposit can be suggested. It appears that colluvium was moving into the excavated area subsequent to the beginning of Roman activity upon the knoll to the north-west, since sparse undated Roman material was recovered from the lower hill wash which had formed prior to the first appearance of archaeological activity during the 2nd century.

The earliest Roman activity on site, dating to the later 2nd - 3rd century, was represented by the shallow ditches F425 and F514, and was probably part of a series of small fields or paddocks. These have been observed on several rural Roman sites, most recently in Essex at Great Holts Farm, Boreham (Germany 1995 and in prep.) and Buildings Farm, Great Dunmow (Lavender forthcoming). The replacement of these ditches by fences during the 4th century demonstrates continued use of the basic layout, but possibly a change in actual function.

Colluvial deposition appears to have been halted temporarily by the presence of the paddocks, which may indicate that fairly substantial hedges accompanied them, or that deliberate action was taken further up-hill to prevent the ground movement. All Roman features, including those of the 4th century, cut the lower colluvium and were sealed by the upper. The subsequent history of the site is of seemingly continuous ploughing from the medieval period, would have levelled any build-up behind these barriers and contributed to the general accumulation of the upper colluvium.

The group of 4th-century hearths is of unknown purpose. No structure was found associated with them, and no other evidence for their use, such as slag or carbonised grain was identified.

It has been suggested elsewhere that this type of bowl-hearth might be a corn drier (Morris 1979), but the size of the features appears inadequate for this purpose, whilst the almost complete absence of cereal grains makes it clear that whatever their function, these hearths were not used in cereal processing (P. Murphy pers. comm.).

Most comparable hearths (in so far as being of the same general shape and size) are lined in either stone or tile. Tile was found within some of the Castle Hedingham examples, but no longer *in situ* and possibly represents a collapsed or robbed superstructure. Comparable features include a pair of keyhole shaped hearths at Owslebury, Hants (Collis 1968), which were lined with stone and cob and had "chimneys" made from imbrices; they were c. 2m long. The villa at Star, Somerset (Barton 1964; Branigan 1977) had at least two hearths of similar appearance, but lined with tile and in one case associated with burnt barley. Dumb-

bell shaped hearths at Wendens Ambo, Essex were also tile-lined (Hodder 1975). At Baldock, Herts (Stead and Rigby 1986) three (possibly four) similar ovens were identified and interpreted as domestic. One of these was clay-lined, but the others merely exhibited burning of the surrounding natural strata.

Corn-driers require a sealed floor above the flue to prevent smoke tainting the grain. The fragments of tile recovered from the Sible Hedingham hearths may represent such a floor, although no evidence of mortar was found. If the floors were either non-existent or unmortared, it is possible that the smoke was needed, possibly for smoking cheese or meat.

Whether for corn-drying or food-smoking, it is probable that the hearths would have needed some sort of superstructure, although no convincing evidence for this was found. Only a small quantity of tile was recovered from the features, and there was no sign of burnt or fired clay. This may represent very efficient dismantling followed by truncation during the recent agricultural history of the site.

Ditch 1 can be interpreted only tentatively as part of a field system, since too little of this feature was observed for any more complete understanding. Ditch F411 may have been for drainage at the foot of the hill-wash; this would possibly explain the absence of a distinct upper edge on its south-eastern side. An alternative possibility is that it formed a division of the site into areas of different activities: the enclosures in the south-west and the hearths in the north-east. It could, however, have combined both these functions.

This site serves as an indication of Roman activity from the 2nd century continuing into the late 4th at a nearby focus. After ploughing, the low knoll in the field to the north-west of the site was observed to be covered with a slightly darker top-soil than the rest of the field, and to have large quantities of Roman tile on its surface. Roman coins have, according to local residents, been found within this area of tile. The colluvium

which covers the site contained higher quantities of tile, including box-flue tile, than were recovered from the features. All of this suggests that the focus of Roman activity was upon this knoll and may have comprised a substantial building (with at least one room heated by a hypocaust) which fell into disuse in the late 4th or 5th century. The accumulation of pottery and building materials within the upper colluvium would appear to be the result of continued slippage of hill wash, assisted by disturbance caused by subsequent ploughing from the medieval period onwards.

The excavated area revealed features most plausibly interpreted as part of the field system associated with the main focus of activity on the hill. The presence of Roman material within the earliest (pre-2nd century) colluvium indicates that this focus was extant before the beginning of activity within the excavated area.

Acknowledgements

The Essex County Council Field Archaeology Group are grateful to Anglian Water Ltd for the funding of the site, and particularly to Mr. Andrew Snelson, Mr. Ian Coles and Mr. Michael Salcombe for their help and co-operation. The evaluation was conducted by J. Ecclestone, A. Parry and A.J. Wade; the excavation by C. Forrest, K. Reidy, D. Smith, R. Wardill and A.J. Wade. Box-Section 589 was examined with the assistance of M. Germany and the watching brief with that of D. Gadd. Topsoil stripping and backfilling was by David Driver of D. Driver and Son, Hatfield Peverel. The illustrations were prepared for publication by I. Bell.

Author: N.J. Lavender, Essex County Council Planning Dept., County Hall, Chelmsford CM1 1LF.

Bibliography

Drury, P.J. and Wickenden, N.P. 1982	'An Early Saxon Settlement within the Romano-British Small Town at Heybridge, Essex, <i>Med. Archaeol.</i> 26, 1-40	Hull, M.R. 1963	pottery, <i>Counc. Brit. Archaeol. Res. Rep.</i> 62
Barton, K. 1964	'Star Roman Villa, Shipham, Soms', <i>Proc. Som. Archaeol. Nat. Hist. Soc.</i> 108, 45	Lavender, N.J. forthcoming	'Roman Gazetteer', in Powell W.R. (ed) <i>VCH Essex Vol. III Roman Essex</i> , 145
Branigan, K. 1977	<i>The Roman Villa in S. W. England</i> , London	Lindsay, J., 1958	Buildings Farm, Great Dunmow, excavations 1993, <i>Essex Archaeol. Hist.</i>
Bouchner, M. 1982	<i>Animal tracks and traces</i> , London	Manning, W.H. 1985	<i>The Discovery of Roman Britain</i> , London
Collis, J. 1968	'Excavations at Owslebury, Hants', <i>Antiq. J.</i> 48.1, 18-31		<i>Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum</i> , London
Crummy, N. 1983	<i>The Roman small finds from excavations in Colchester 1971-9</i> Colchester Archaeol. Rep. 3	Morris, P. 1979	<i>Agricultural Buildings in Roman Britain</i> , Brit. Archaeol. Rep. 70, 84-86
Germany, M. 1995	<i>Great Holts Farms, Boreham, Essex. Assessment Report, Stage II.</i> Essex County Council report	Peacock, D.P.S. and Williams, D.F. 1986	<i>Amphorae and the Roman economy: an introductory guide</i> , Longman Archaeol. Ser.
Going, C.J. 1987	<i>The mansio and other sites in the south-eastern sector of Caesariomagus: the Roman</i>	Powell, W.R. 1963	<i>VCH Essex Vol. III. Roman Essex</i>
		Stead, I.M. and Rigby, V 1986	<i>Baldock The Excavation of a Roman and Pre-Roman Settlement, 1968-72</i> , Britannia Monogr. Ser. 7, 42-43

The Society is grateful to Essex County Council for a generous grant towards the cost of publishing this article.

Excavations at Angel Yard, High Street, Colchester, 1986 and 1989

by D. Shimmin and G. Carter

with contributions by N. Crummy, J.A. Davies, C.J. Going, M. Heyworth, J. Hind, and P. Murphy

Rescue excavation north of 133-6 High Street revealed parts of two substantial Roman houses which shared a party wall and dated from the mid 2nd century. A probable late 3rd-century dispersed coin hoard was recovered from post-Roman topsoil or 'dark earth' immediately above demolition levels from the more northerly house. The dark earth was subsequently cut by pits of mainly 11th- to 14th-century date.

Evidence indicated a rapid expansion of building back-wards from both the High Street and West Stockwell Street frontages in the 14th century. This included foundations, ovens and hearths from several wings, which faced onto narrow alleyways and enclosed gravel yards. By c 1500 the western part of the site had largely been cleared and the area cobbled over, while the eastern ranges continued in use and were in part rebuilt, and the yard was regravelled. In the first half of the 17th century the frontage of 133-4 High Street was rebuilt as a three-storey timber-framed structure divided into two shops.

Introduction (Figs 1-2)

A rescue excavation was carried out in 1986 at Angel Yard (TL99622525; Fig 1) to the rear of the High Street and West Stockwell Street frontages, in advance of the redevelopment of the site for Council offices. Further excavation was possible in 1989 following the demolition of 133-4 High Street.

The site is located in the western half of Insula 20, where previous archaeological discoveries were sparse, although subsequently the remains of a large Roman public building, possibly a baths, have been uncovered in the eastern part of the insula (Benfield & Garrod 1992, 25-33, esp figs 1-2). A series of foundations observed in service trenches towards the southern end of the insula (Hull 1958, 159; CAR 1, 48-9; CAR 6, 3/75b, 810) are now considered to be medieval or post-medieval rather than Roman in date (below). The site lies on a north-facing slope with the natural sand level

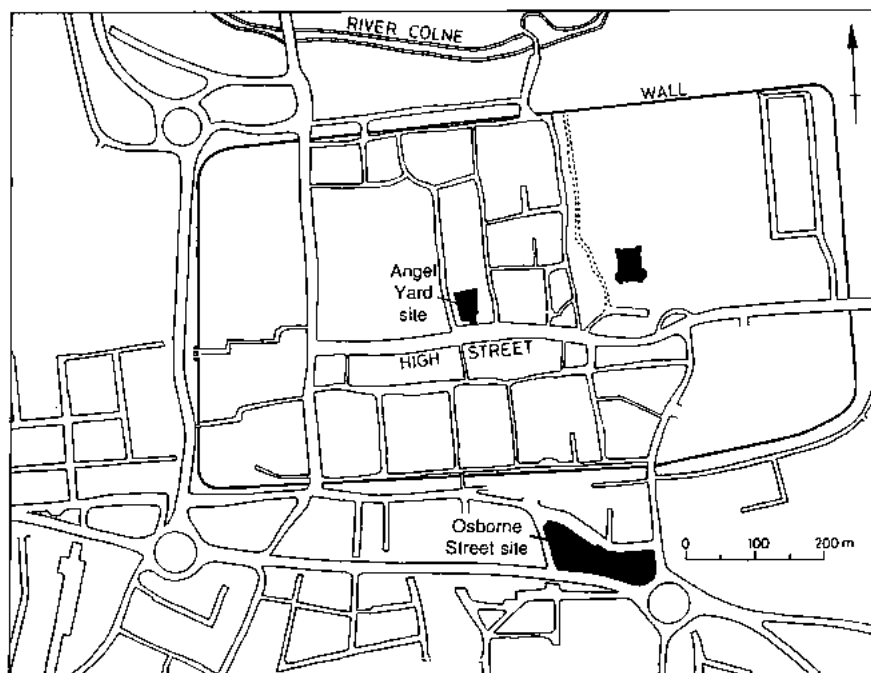


Fig. 1 Colchester, showing the Angel Yard site.

of approximately 26.25 metres OD at the High Street frontage, where it was sealed by three metres of deposit, shelving to 25.35 metres OD at the northern end of the site, at which point it dropped away more steeply.

The first phase of excavation (Fig 2, Site A; CM 40.86) took place from June to November 1986, with limited constraints on area excavation imposed by live services and by safety considerations. Modern deposits only were stripped by machine. Recording of standing timber-framed remains and of medieval and later cellars was possible at the rear of 136 High Street. Following a structural survey and the subsequent demolition of 133-4 High Street, there was a second phase of excavation (Fig 2, Site B; CM 37.89) in June 1989. A limited programme of environmental sampling was carried out.

The sequence of periods for Sites A and B is as follows:

1	Roman
1a	c 44-c 49 (military)
1b	c 49-60/1
1c	60/1-c 125/50
1d	c 125/50-c 200
1e	c 200-c 300/50
1f	c 300/50-400+
2	Anglo-Saxon-c 1300/50
2a	Anglo-Saxon
2b	c 1100-c 1300/50
3	c 1300/50-c 1750/1800
3a	c 1300/50-c 1500
3b	c 1500-c 1600/50
3c	c 1600/50-c 1750/1800
4a	c 1750/1800-c 1850
4b	c 1850-c 1986/9.

The primary site records, including the building surveys, together with the pottery spot-dates and other

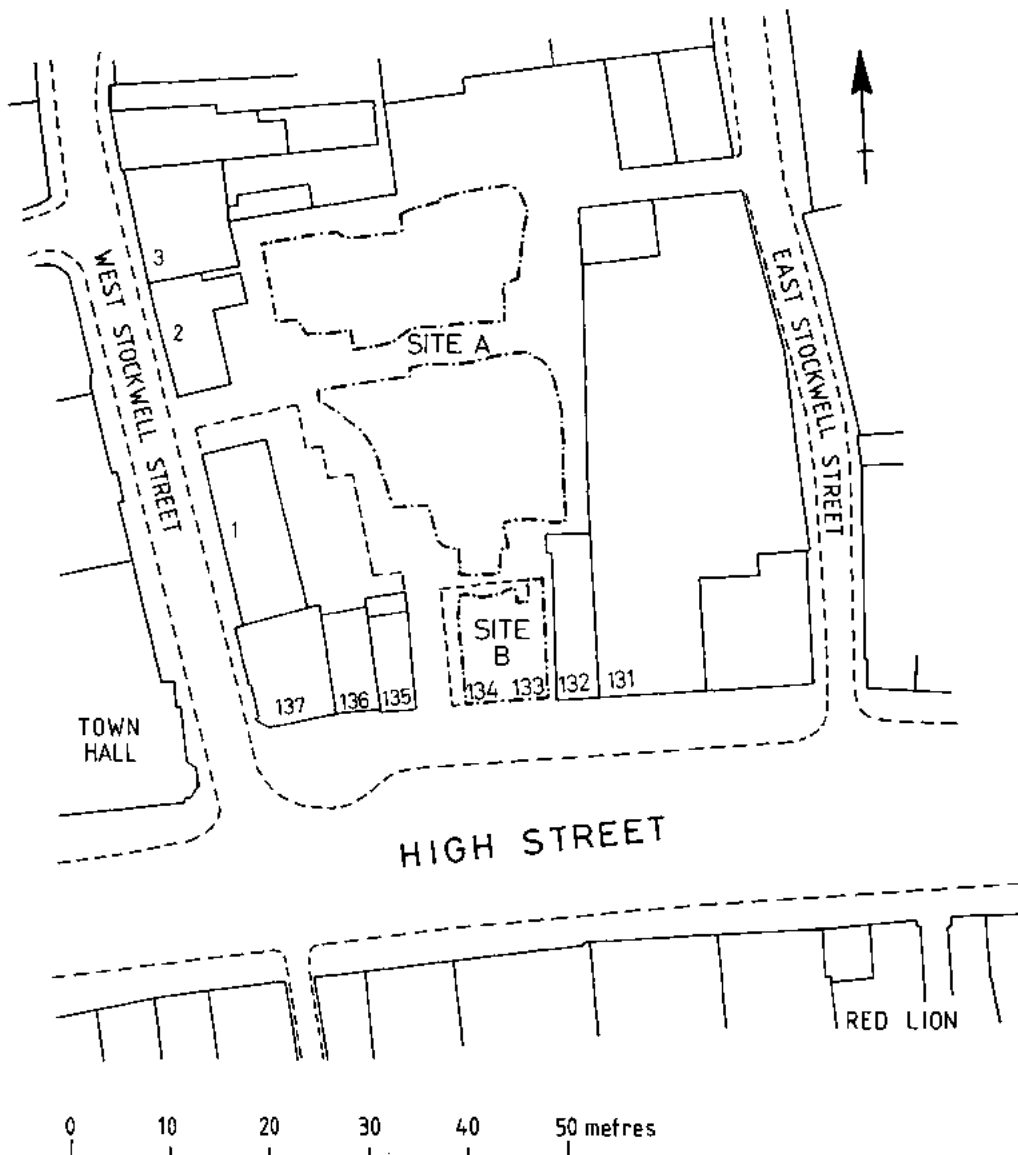


Fig. 2 Excavated areas at Angel Yard, Colchester.

dating evidence not given here, can be consulted in the site archive in Colchester Museums where all retained finds are also kept. Detailed work on the pottery, glass, and animal bone may form part of future projects. The building numbers continue the series for the town summarised in CAR 6, 394-5.

North-south Roman street (Period 1; Fig 3)

It was not possible to excavate below the latest Roman levels over most of the site, as a depth restriction relating to the level of the basement car park was imposed by the developers. In the north-west corner of the site, however, limited excavation did reveal a short stretch of street metalling (Fig 3; AL105), 0.3 metres thick, which was probably of pre-Boudican date and perhaps belonged to a north-south military street. Evidence for the eastern footway of the colonial street had apparently been terraced away.

Building 171 (Period 1, c 150-c 300; Figs 4-5)

A range of rooms from a substantial building was excavated in the south-eastern part of Site A. Building 171 (Fig 4) probably fronted onto the north-south street along the western side of Insula 20 and perhaps formed a courtyard house. However, the limited extent of excavation, which usually stopped at the latest well-defined floors, and the proximity to the newly-discovered ?baths buildings to the east all suggest that caution is required in the interpretation of the building plan.

The wall foundations, although partially robbed, were constructed largely of mortared gravel. The well-preserved northern foundation (AF348) had an unusual facing formed of neatly-laid tegulae fragments with the flanges outermost (Fig 5). The northern face of AF348 was also rendered in such a way as to suggest that it initially formed an external wall, predating the construction of Building 172.

In Room 1 were the remains of an oven (AF300), constructed of tile fragments set in daub, with a sunken central area (AF295), and this perhaps indicates use of the room as a kitchen. A layer of make-up, up to 0.6 metres thick, which was necessary as elsewhere in Building 171 in order to counteract the effects of the natural slope, was sealed by a daub floor (AL254), which was subsequently replaced (AL253/AL248). Room 2 was badly disturbed by later pits, but, from the quantity of tesserae present in the fill, may have had a tessellated floor. A coarse grey ware jar (AF357; p71) with a tile lid, probably a votive deposit, was recovered from the south-west corner of the room.

Rooms 3 and 4 were separated by a slot (AF362), presumably for a timber-framed partition wall. There was a mortar floor (AL243/AL244) in Room 3, and two phases of daub floor (AL274/AL273 & AL272/AL271) in Room 4, which also contained two coarse grey ware jars set in small pits (AF210, AF398; p70-1). One, AF398, appears to have been covered by

part(s) of a BB2 dish (p71). Observed in the small part of Room 5 available for excavation was a sunken area or cellar (AF370), backfilled with demolition debris (AL218) which included a quantity of painted wall-plaster fragments (p82).

In the ?yard area to the east of Room 5 there was a north-south gully (AF363) leading into a small pit (AF377), possibly forming a drain, perhaps originally timber-lined. Nearby was a series of post-holes (AF376, AF378/9). A coarse grey ware jar (AF279; p71) had been buried in the north-east corner of the area. The location of a foundation (AF467) in a trench to the south of Room 5 suggests that Building 171 extended further south, although all traces of Roman remains in a trench near the frontage had been destroyed by later disturbance. However, the depth of the Roman deposits encountered on the site suggest that it is unlikely that the foundations observed only a foot or so below the modern surface in service trenches below the High Street and its northern pavement are of Roman date (Hull 1958, 159; CAR 1, 48-9; CAR 6, 3/75b; also below).

Building 172 (Period 1, c 150/175-c 300; Fig 4)

A further range of rooms (Building 172; Fig 4) butted up against, but was secondary to, the north wall of Building 171 (and may thus represent an extension of the latter). The surviving foundations were again constructed of mortared gravel, with an upper course of septaria sealed by a tile course, visible in the well-preserved example AF319. To the east of AF319 internal partitions were apparently housed in shallow slots (AF382, AF395, AF396). Whole pots, presumably intended as offerings, were again numerous, with eight examples being buried within the rooms of Building 172.

Room 1 had a mortar floor (AL250) with a quarter-round moulding (AF385) along the southern side of the room placed against a layer of daub which lay against the party-wall foundation (AF348). A group of tiles (AF383), probably a hearth, had been set into the floor and sealed a whole coarse grey ware pot (AF390, p71). Further pots had been set along the south side of the room: a micaceous grey ware jar capped by a large fragment of the base of a BB2 dish (AF308; p70-1); a coarse grey ware jar covered by a tile lid (AF387; p71); and fragments of two other jars (AF360, AF366; p71). A grey ware folded beaker covered by the inverted base of a Colchester colour-coated ware rouletted beaker (AF391; p70-1) had been inserted into the floor and may post-date the use of the building. The mortar floor was much worn and on at least one occasion had been repaired or replaced in daub (AL249/AL236), associated with which was a patch of burning (AF359), perhaps from a hearth.

Room 2 also had a mortar floor (AL263) with traces of a quarter-round moulding (AF404) along the southern side. The floor was subsequently replaced

twice in daub (AL261/AL242, AL241/AL240). Two whole pots had been set into the mortar floor: AF310, a grey ware jar with a stamped lid in a coarse oxidised fabric (p70-2); and AF361, a coarse grey ware jar (p72). Room 3 had two phases of daub floor (AL265/AL264 and AL258/AL257), while Rooms 4 and 5 each had a mortar floor (AL260 and AL268 respectively).

Over two hundred late Roman coins were recovered from a small area of dark earth/topsoil (AF313/AF317/AL160/AL205) in the south-east corner of Room 3. Many almost certainly belong to a dispersed late 3rd-century hoard (p64-70) dating approximately to the period of demolition of Building 172, but the number of 4th-century coins mixed with them, even at the base of the dark earth, indicates the extent to which the soil was turned over from the late Roman period onwards.

No unequivocal Roman structural features were revealed further north, although in an area to the north-west of Building 172 some Roman features survived later terracing. Here a layer of Boudican destruction debris (AL93/163), cut by pits (AF171, AF196) and stakeholes (AF176), was sealed by a late 1st-century midden deposit (AL107) also cut by pits (AF162, AF165, AF167), a gravel-filled trench (AF207), and a hearth (AF98). The pit AF167 contained a whole Colchester colour-coated ware beaker (p70-2).

Post-Roman robber trenches and pits (Period 2; Figs 6-8)
There was no definite evidence for Anglo-Saxon occu-

pation on the site (Figs 6-7), with the possible exception of a shallow pit (AF311) which contained only Anglo-Saxon grass-tempered sherds. Later contexts produced a scatter of residual grass-tempered Anglo-Saxon pottery and also one or two sherds of probable Ipswich-type ware. Sherds of Thetford-type ware were more common, again mostly residual but also in possible late Saxon pits (AF358, AF364). There was, however, rather less Thetford-type ware than from the nearby Cups Hotel site (CAR 1, 33-40), probably because the main area of excavation was further away from the High Street frontage.

The Roman foundations were largely robbed for their stone between the 11th and 13th centuries. A layer of topsoil or dark earth up to 2 m thick accumulated on the site during the post-Roman period. A quantity of tap slag, ?forging slag and furnace lining, together with fragments of charcoal and burnt daub was recovered from a trench through the dark earth near the High Street frontage (Fig 8), especially from upper dump levels, suggesting that metal working took place near the street frontage probably during the 12th or 13th centuries. The trench may cut one or more medieval pits.

Away from the frontage the dark earth was cut by a large number of pits, most of which were of late 12th or 13th century date. They represent activity at the rear of buildings which have not survived, but fronted onto the High Street and West Stockwell Street. The larger pits (AF166, AF186, AF199, AF219, AF228, AF252, AF285, AF288, AF289, AF310, AF318, AF327, AF364 with recut AF304, AF374, and AF380), some

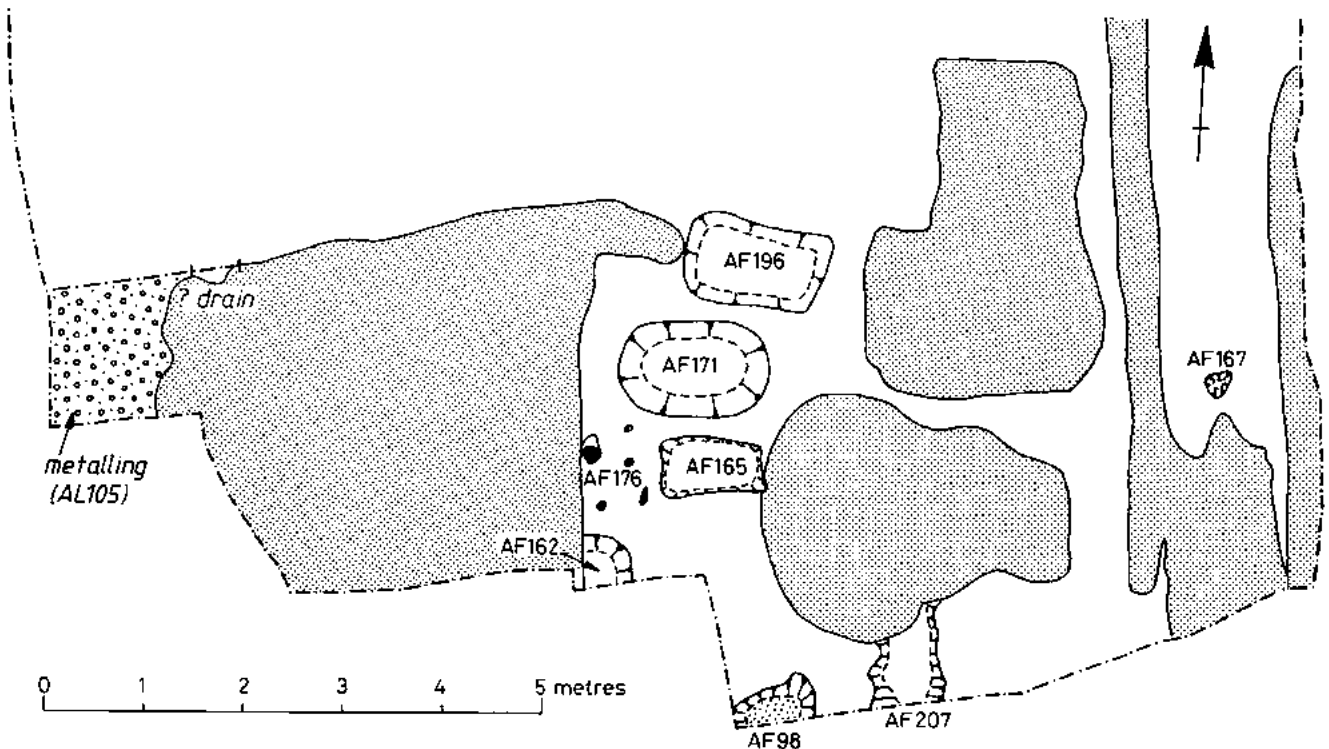


Fig. 3 North-west corner of Site A, Period 1.

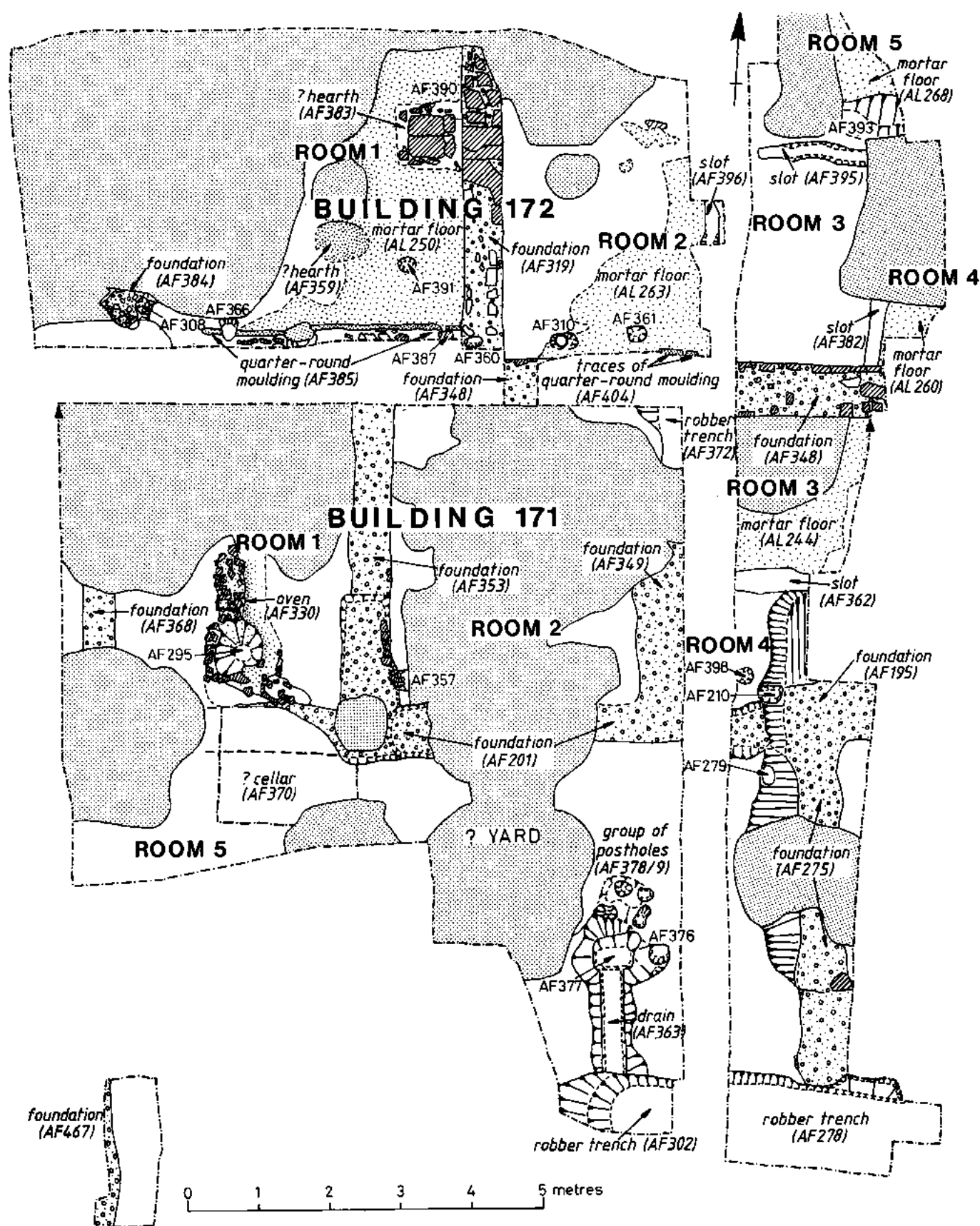
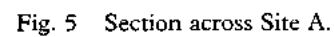


Fig. 4 Buildings 171 and 172, Period 1.



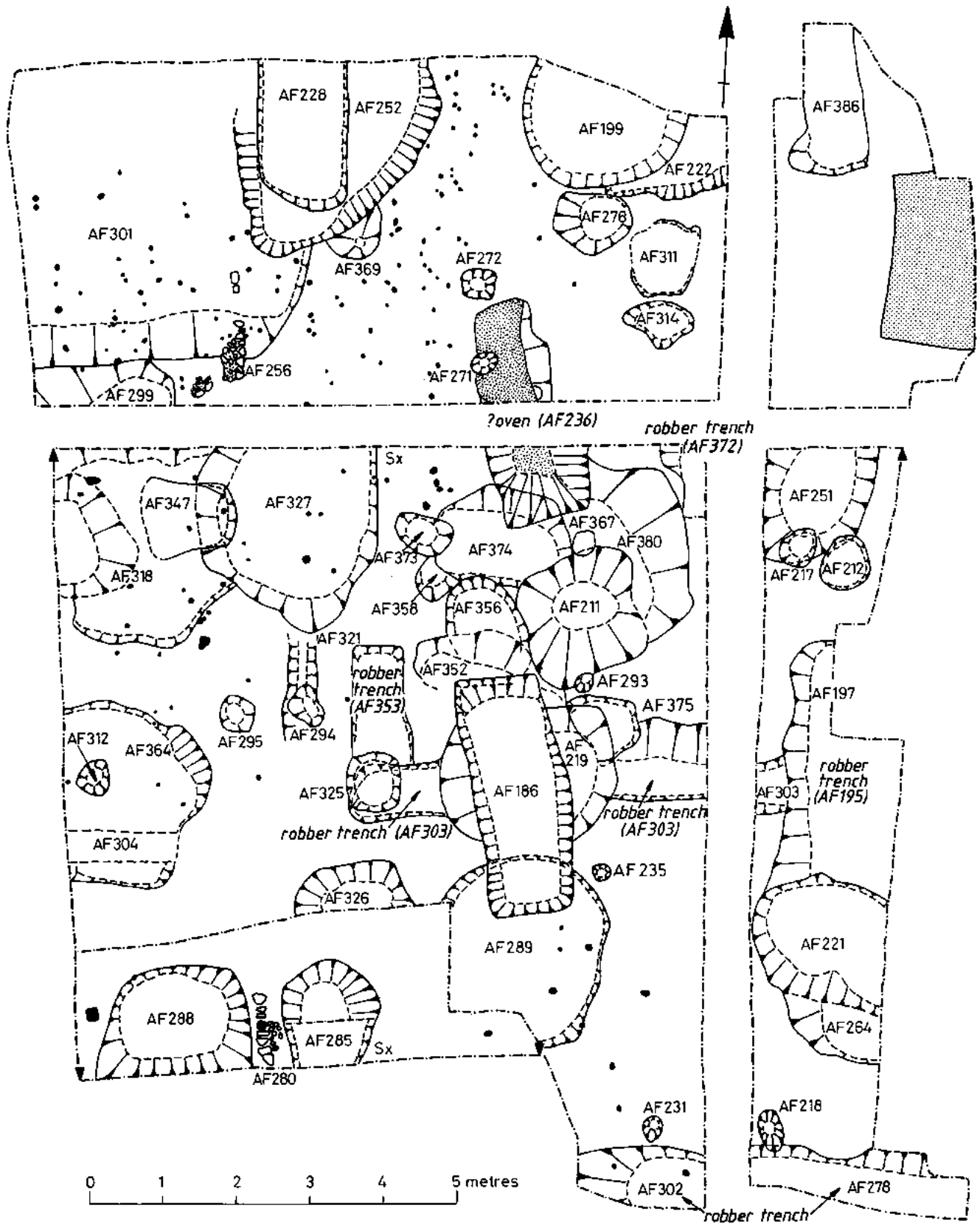


Fig. 6 Period 2, Site A.

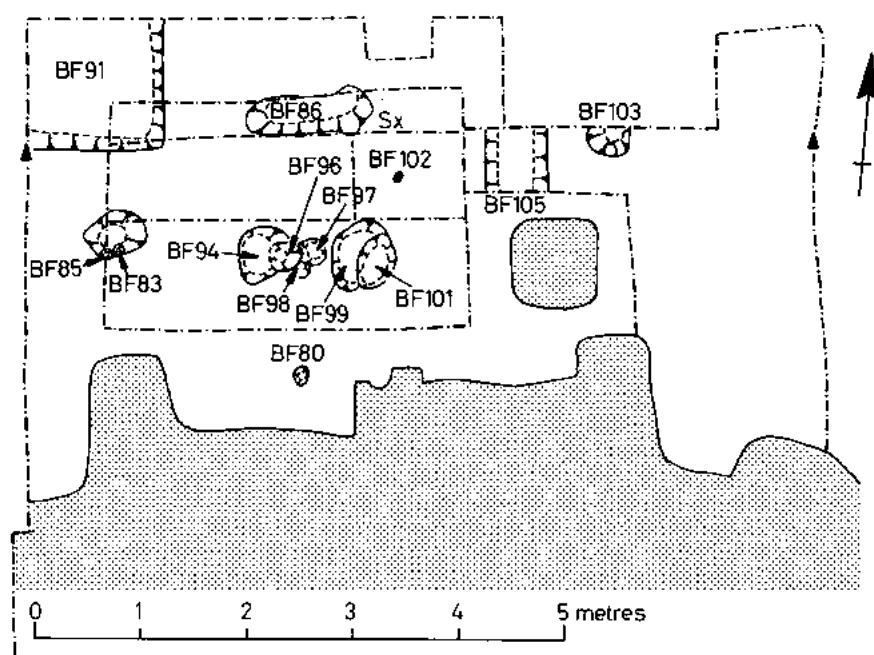


Fig. 7 Period 2, Site B.

of which it was not possible to excavate fully, included latrine pits (eg AF364/AF304, p82) and more mixed refuse pits (eg AF289, AF318, p82). A hearth (AF236), gullies (AF 321, BF105) and numerous small pits were also excavated. Two stretches of ?foundation (AF256, AF280) were uncovered, and a large number of stakeholes cut the top of the dark earth, particularly in the north-west corner of the area. These features may indicate ephemeral structures of probable 13th- to 14th-century date predating Building 174. Several of the pits which occur late in the sequence, notably AF186 and AF199, were possibly contemporary with the earliest excavated phase of Building 174.

Building 173 (Period 3a; Figs 9-10)

In the south-west corner of Site A (Fig 9) parts of two rooms were uncovered (Fig 10). They probably lay at the northern end of a wing which extended back from a building fronting onto the High Street (later No 135).

The foundations of both the external (AF225, AF343, ?AF344) and internal (AF320) walls were of septaria, with some flint and tile fragments, set in mortar, and presumably supported a timber-framed structure. There were two phases of daub floor (AL224, AL216/AL221) in Room 1, the later of which was associated with a ?hearth (AF323). Room 2 was probably a service room or kitchen as it housed a series of hearths and ovens, characterised by floors of closely-packed peg-tiles set on edge. At the north end of the room were large rectangular (AF329) and circular (AF330) ovens with sides of peg-tile fragments set in daub, next to which lay a peg-tile floor area (AF350). Further south, two much disturbed hearths or ovens (AF322,

AF355) were associated with patches of burnt cobbles and tile. The room also had two phases of daub floor (AL227, AL225/6).

Between Buildings 173 and 174 was a narrow passage, under 1.5 m wide, with a gravel surface (AL214). This allowed access from the High Street to the rear of the properties, and was probably a characteristic feature of High Street plots at this time. However, unlike the long-lived Building 174, the rear wing of Building 173 was demolished by the early 16th century. Following clearance and some pit digging (AF227, AF263, AF270; p82), the area was gravelled over (AL198).

Building 174 (Periods 3-4; Figs 9, 11-22)

It was possible to excavate Building 174 nearly totally (Fig 9). It consisted of a north-south wing extending some 35 m back from a structure fronting onto the High Street, although the early phases of the latter had been largely destroyed by a later cellar. Four main building phases (Periods 3a-c, 4) were identified, with the later phases of timber-framed construction surviving until demolition during redevelopment. The timber frames rested on foundations or plinths, initially of stone and mortar with increasing use of peg-tile and brick, and finally wholly of brick. The extensive wing of Building 174 backed onto the alleyway to the west and also faced eastwards onto a yard area.

Several shallow foundations (Fig 9) were observed to the south of the site, both beneath the High Street pavement in service trenches (Hull 1958, 159) and more recently under the High Street itself (CAR 6, 3/75b, 810). They were of stone-and-mortar construction and showed a marked coincidence with modern property boundaries. Although previously interpreted

Fig. 8 Section across Site B.

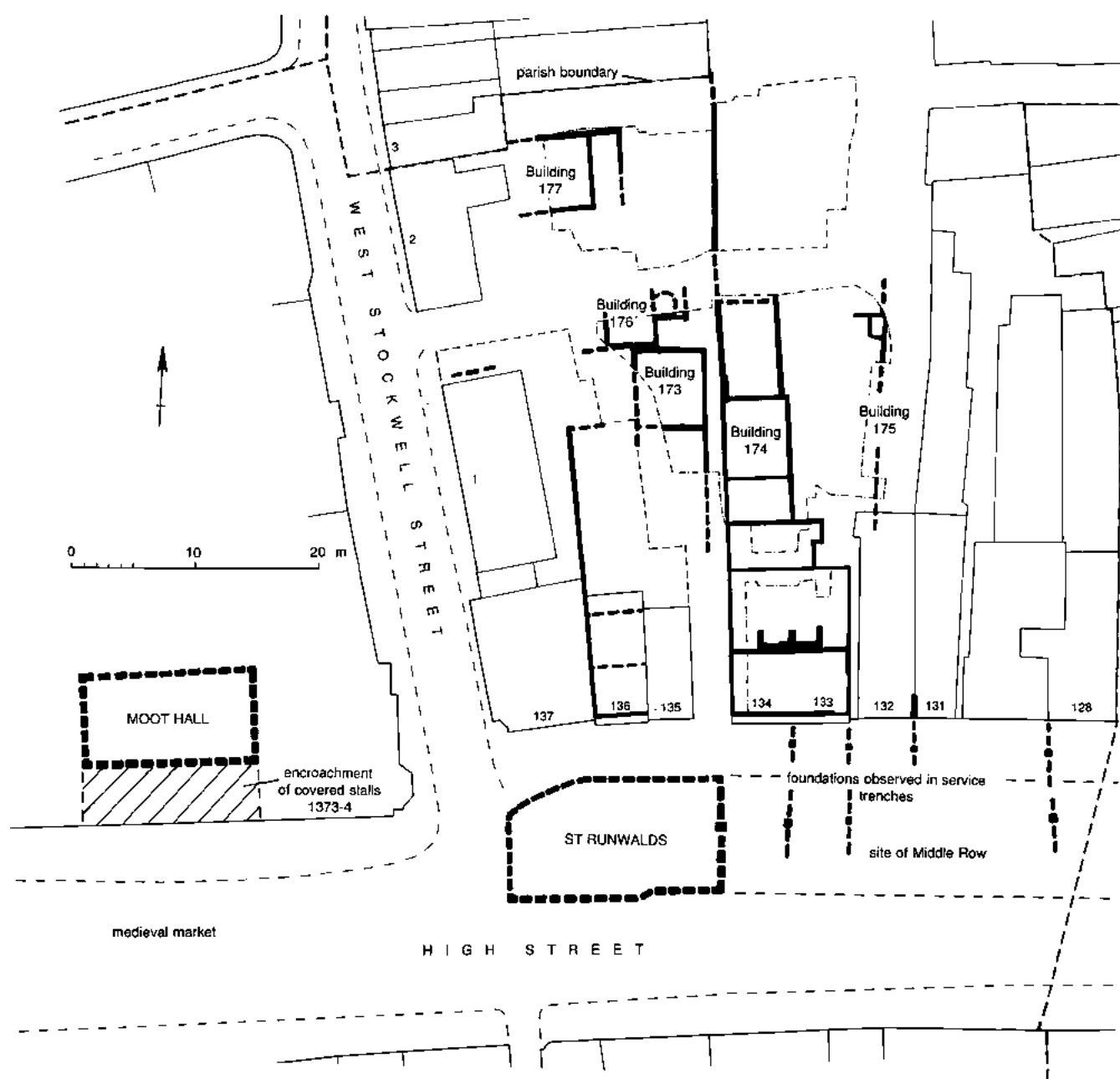


Fig. 9 Period 3 outline plan.

as Roman, they must now be viewed on stratigraphical grounds as medieval or later (p63-4).

Period 3a (Figs 11-13). There was little structural evidence for the early phase of Building 174 near the street frontage (Fig 11), although it presumably consisted of a hall-block set lengthways to the street, perhaps with a passage to the east leading back to the yard. Two lines of rubble (BF69, BF70) at the northern end of Site B may have been the remains of plinths from the southern room (Room 3) of the rear wing. This was associated in Period 3a with a patchy daub floor (BL32) sealed by an occupation layer (BL30) containing a penny of Edward I (1272-1307). A pit (BF71)

was sealed by the floor, which was cut by pits (BF63, BF64). The burnt remains of an oven floor (BF72), constructed of peg-tile fragments set on edge in daub, were associated with a ?daub floor (BL54/51) and some pits (BF77, BF82, BF92, BF93) in a room or possible outbuilding (Room 4) to the east.

Further north (Fig 12), two stone-and-mortar foundations (AF457, AF466) probably indicated the northern end of Room 5. The much disturbed external foundations of Room 6 included the stone-and-mortar foundations AF39, which had in places an upper course of slate, the first phase of AF40, which stood 0.5 m high and contained some peg-tile fragments, and probably AF462.

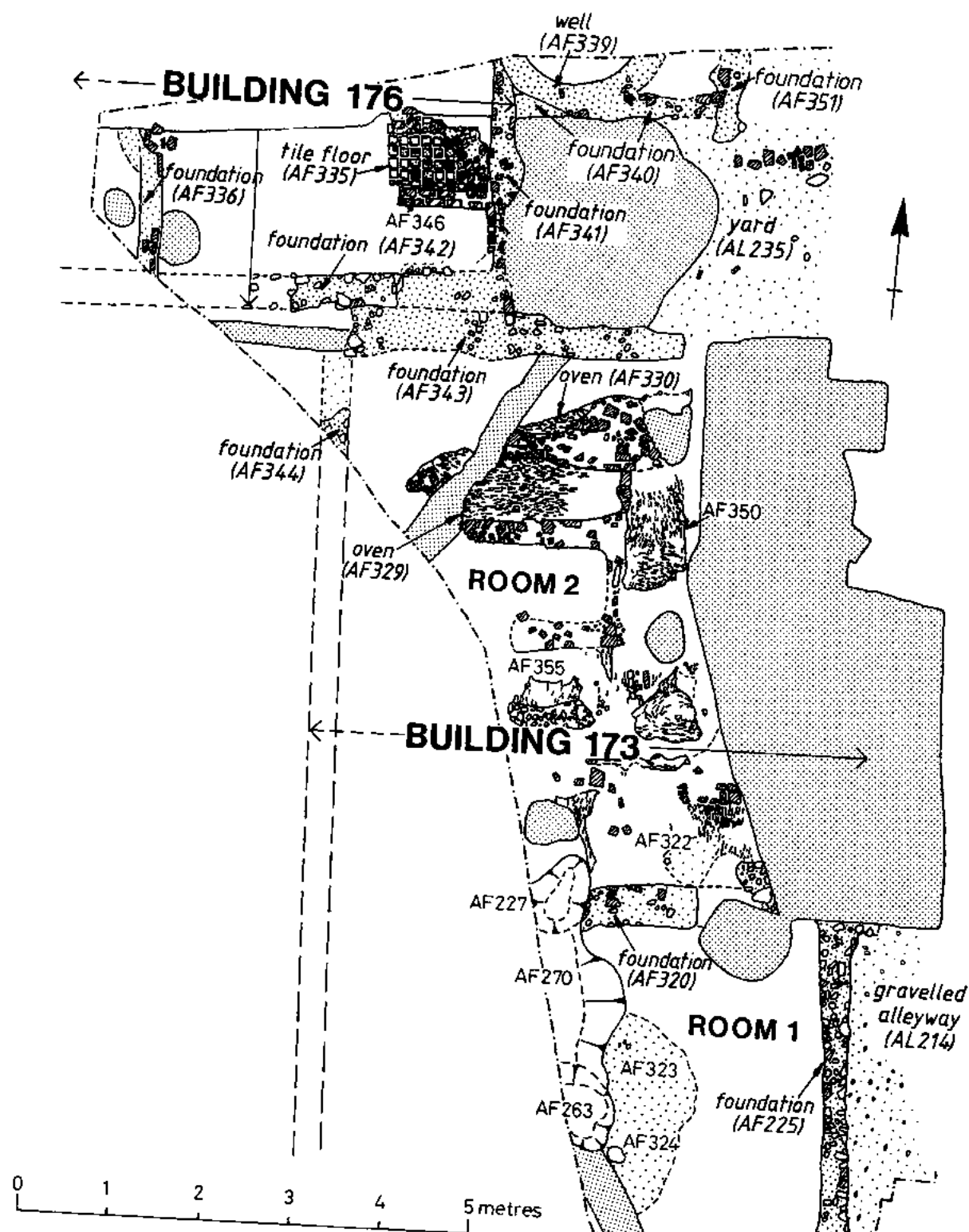


Fig. 10 Buildings 173 and 176, Period 3a.

There was no evidence for an internal partition within Room 6, although it was not possible to excavate fully the early levels in the southern half of the room. A large, south-facing, circular oven (AF203) had a floor of peg-tiles set on edge and part of its superstructure, consisting of peg-tile set in daub, survived on the eastern side (Fig 13). All the remains were intensely burnt. The oven was associated with an extensive area of peg-tile floor (AF188), lined with a narrow kerb (AF208/209) of septaria fragments set in mortar. To the east of AF203 lay the remains of a tile and daub superstructure, and both this and the adjacent area of floor were again intensely burnt, possibly indicating the presence of a small subsidiary oven.

Traces of a further peg-tile floor or oven (AF463), also probably from Period 3a, were observed in a trench further south in Room 6. Elsewhere a substantial layer of make-up (AL176/AL193) was sealed by a daub floor (AL124/AL174). The oven (AF203) was the first of a series in Room 6 and conforms to a type known elsewhere in Colchester (eg CAR 3, 194), which were probably used for baking (p82). The extent of the remains in Room 6 perhaps suggests use on a commercial scale. Although it seems likely that the wing was two-storeyed nearer the frontage, the number of large ovens in Room 6, and also in the excavated parts of Buildings 173 and 177, suggests that these rooms were open to the roof.

The north-south foundation (AF42) along the

western side of Building 174 north of Room 6 perhaps originally supported a free-standing boundary wall extending further north (AF150, Fig 25), which formed part of a long-standing property division (p63). The northern side of foundation AF39 had been neatly faced, but the southern side left rough, which, together with the fact that the eastern foundation (AF140) of Room 7 was of different construction, including brick, to AF42, suggests that Room 7 was a secondary addition later in Period 3a. In Room 7 a series of post-holes (AF137, AF159, AF160, AF170, AF172, AF259, AF261, AF262, AF267), up to 0.45 m deep, also indicated a different type of construction involving earth-fast posts. The north wall of Room 7 lay beyond the section, although toward the north end of the room there was a short east-west plinth (AF145), consisting of peg-tile fragments set in daub, and a secondary north-south brick pier, surviving up to six courses high, with traces of another possible brick pier 2 m to the east, features which may indicate a doorway in this area. Room 7 had a daub floor (AL119), sealing an extensive gravel make-up layer (AL131/AL175), with no internal features apart from some small pits (AF153, AF157, AF177, AF185, AF189, AF190), suggesting that the room was perhaps used primarily for storage and also may have been single-storeyed. There were two shallow peaves-drip gullies (AF198, AF205) immediately east of AF140.

The yard area to the east of Building 174 was grav-

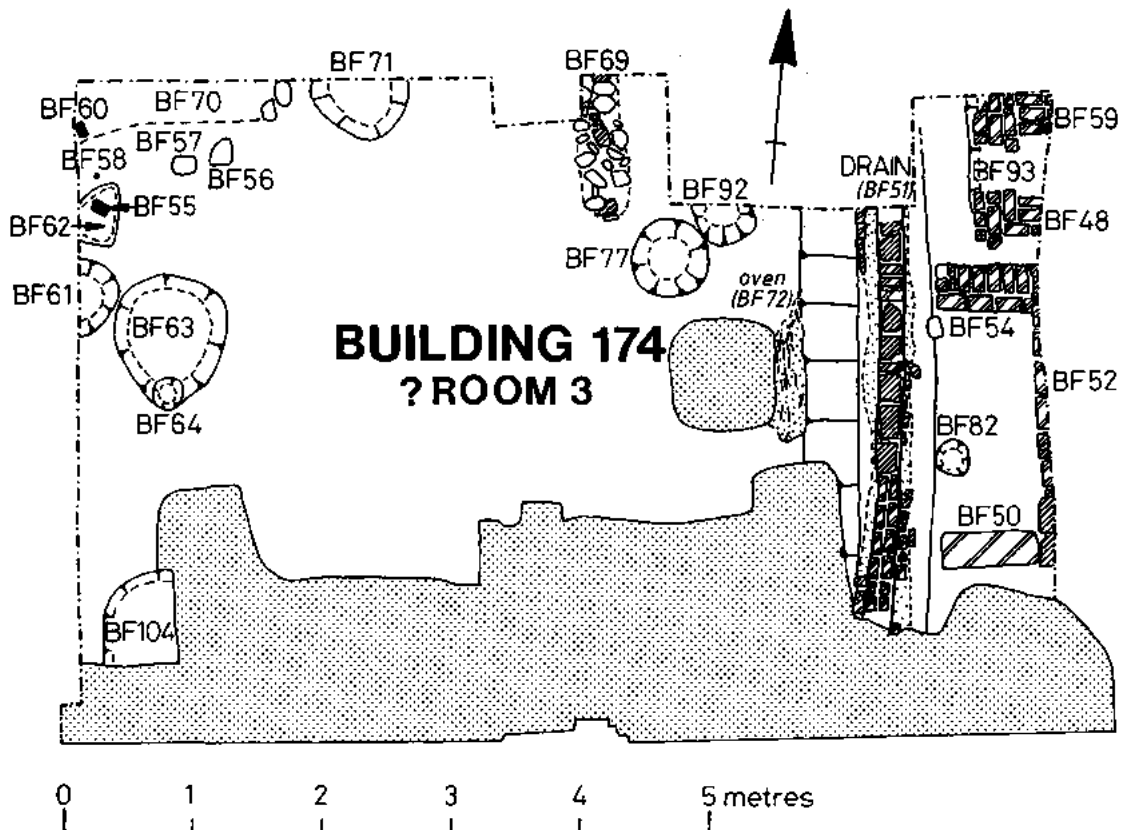


Fig. 11 Building 174, Period 3a-b, Site B.

EXCAVATIONS AT ANGEL YARD, COLCHESTER

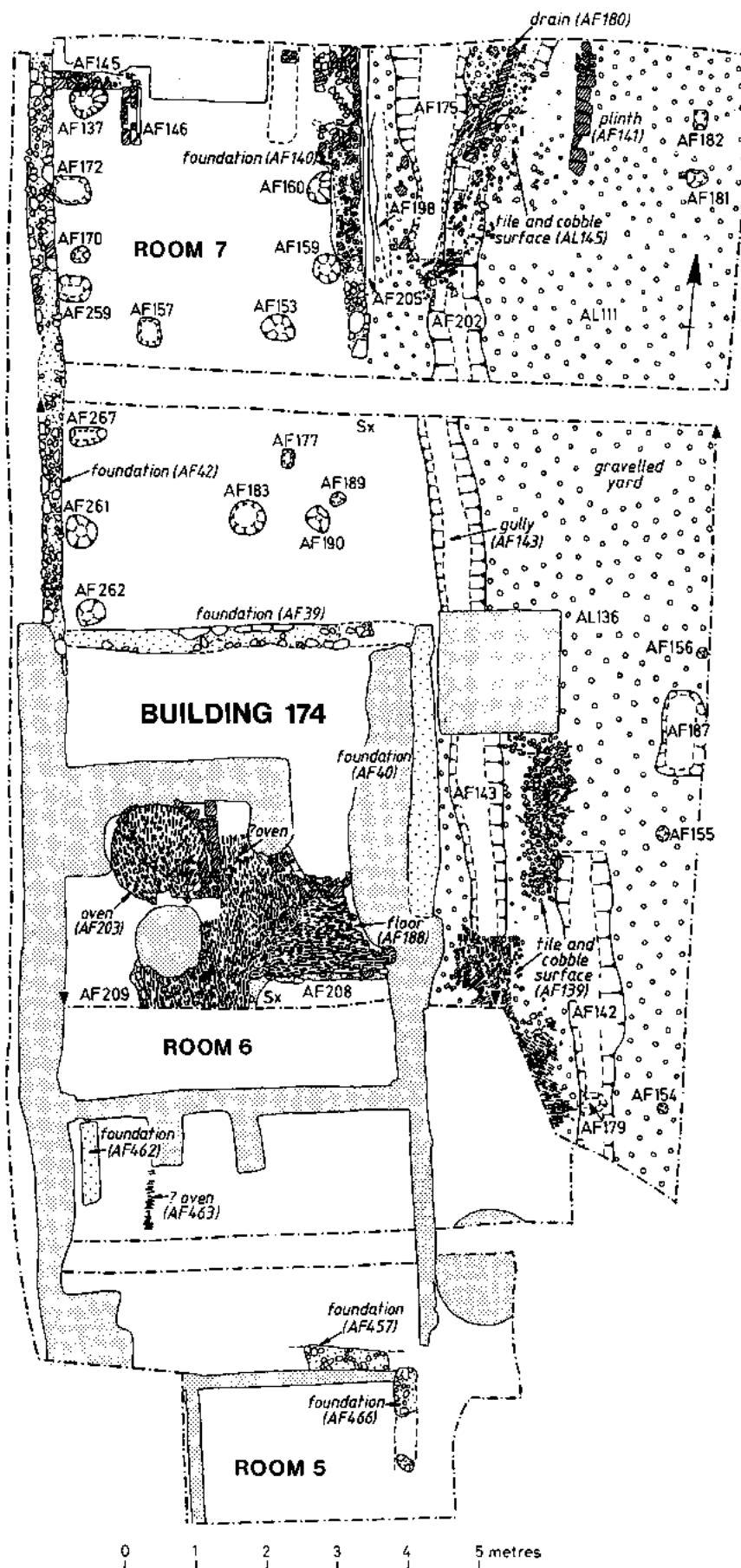


Fig. 12 Building 174, Period 3a, Site A.



Fig. 13 The Period 3a oven, AF203, Building 174, Room 6.

elled over in Period 3a (AL111, AL113, AL136). The yard was cut by a drainage gully (AF143/AF202) and several small pits (AF179, AF181, AF182, AF187). The yard surface was subsequently raised with make-up (AL86, AL112, AL115, AL121), in places sealed by layers of cobbles interspersed with bands of peg-tile fragments set on edge (AF139, AL145), as well as some regravelling (AL85, AL87, AL122). These later levels were associated with further drainage gullies (AF142, AF175) a brick-lined drain (AF180) and some post-holes (AF154, AF155 & AF156). Later in Period 3a a thick make-up layer of daub and peg-tile fragments (AL81) was dumped to the east of AF140. It was associated with a tile 'plinth' (AF141), which perhaps supported a small wooden outbuilding.

Period 3b (Figs 8, 11, 14-15). Evidence from the area of the street frontage was again sparse (Fig 11). In Room 3 a daub reflooring layer (BL29/BL26) was cut by some pits (BF61, BF62) and post-holes (BF55/BF58, BF60). A north-south drain (BF51; Fig 8) of brick and tile extended across the eastern part of Site B, perhaps through a passage from the High Street frontage. By the east section the remains of two east-west brick piers (BF50 & BF54) were apparently associated with a north-south brick foundation (BF52), presumably from an adjacent property. There was a fragmentary

brick floor (BF48/BF59) to the north of BF54.

Part of a hearth or oven floor (AF451) of peg-tiles set on edge was observed at the northern end of Room 5 (Fig 14). A replacement foundation (AF465) immediately north of AF451 and AF457 was constructed of up to seven courses of peg-tile fragments set in daub, and was associated with a small oven (AF464) also constructed of peg-tile. The eastern foundation (AF40) of Room 6 was raised by 0.45 m, with a rebuild including peg-tiles laid in a herring-bone pattern and the inner face had mortar rendering. In addition to AF464, further ovens built of peg-tile in Room 6 included: in the centre of the room AF125, which replaced AF203; immediately to the east a rectangular hearth or oven (AF126) associated with an ash-filled scoop (AF127); in the southern part of the room a large oven (AF455) with sides surviving up to twelve courses high; and a well-preserved oven (AF50) surviving up to seventeen courses or 0.35 m high in the north-east corner of the room, with an elongated secondary peg-tile wall (AF53/AF133) extending to the south (Fig 15). Elsewhere Room 6 had a daub floor (AL52/AL157).

Room 7 was rebuilt in Period 3b with the western foundation being reinforced (AF42b) and the eastern foundation replaced (AF80). The brick pier (AF146) and possibly the plinth AF145 were apparently re-

EXCAVATIONS AT ANGEL YARD, COLCHESTER

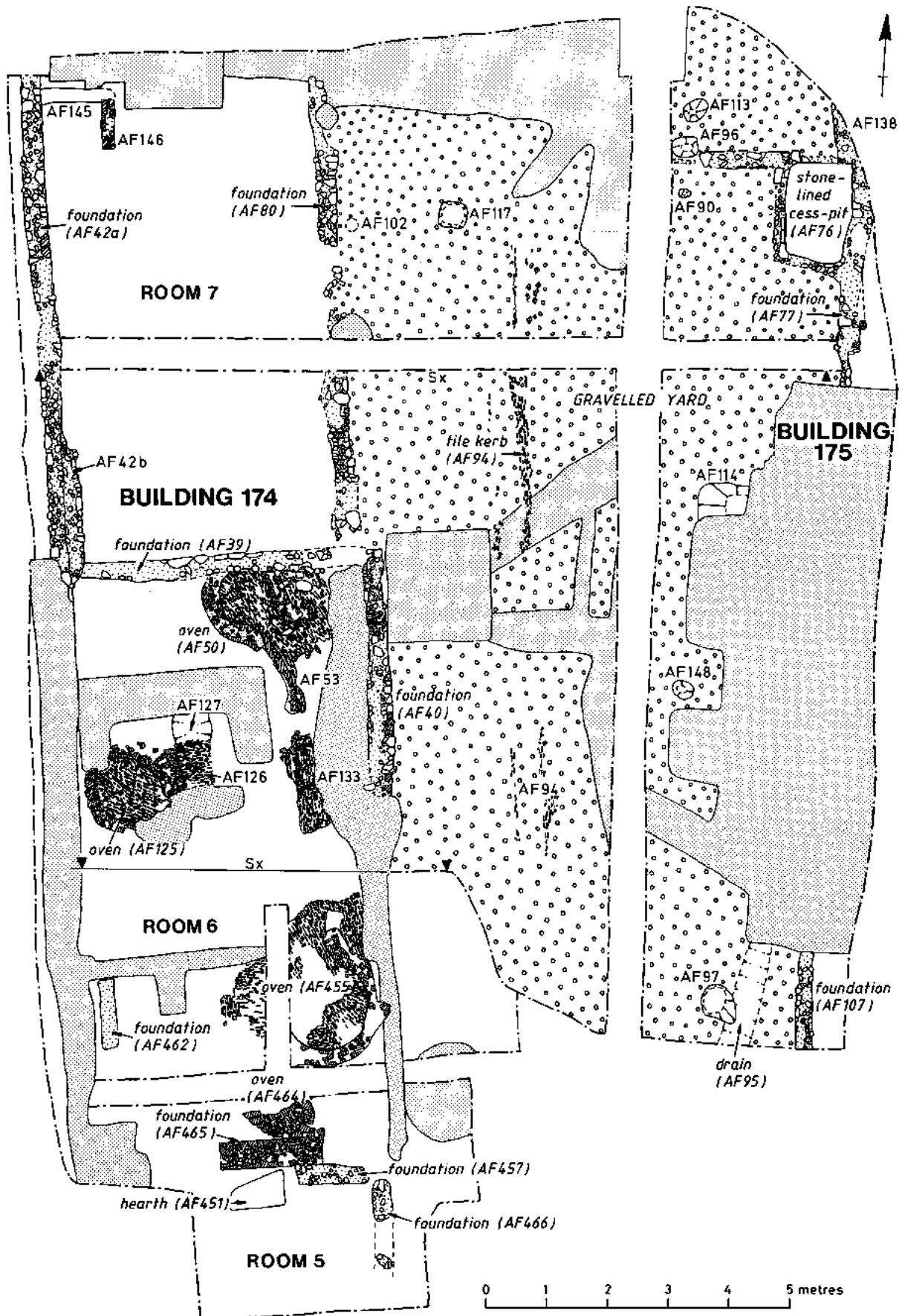


Fig. 14 Buildings 174 and 175, Period 3b, Site A.



Fig. 15 The Period 3b oven, AF203, Building 174, Room 6.

used, and the room refloored (AL90/AL100) in daub.

A large quantity of peg-tile fragments (AL44/AL74) were spread over the western part of the adjacent yard, while the eastern part was regravelled (AL51/AL58) and subsequently patched, mainly with peg-tile fragments, in an area of sinkage by the north section (AL55, AL62/AL64, AL80). Later in Period 3b, the yard was subdivided by two narrow lines of peg-tile set on edge (AF94), which perhaps delineated a drain or path, but possibly defined separate properties (Buildings 174 and 175). The area to the west had a patchy gravelled resurfacing (AL43/6), while a substantial gravel layer (AL32/8) was applied to the eastern part. Associated features included pits (AF90, AF96, AF97, AF113, AF114, AF117, AF148) and a shallow drainage gully (AF95).

Period 3c (Figs 16-20). A large rectangular block, 9.5 m x 12 m, was built on the High Street frontage in Period 3c, and this survived largely intact until 1989 when as much as possible of it was surveyed as the demolition of the building proceeded (Figs 16-17; site archive). Not only were original elements of the frame recorded but so too was the wide range of joints used to construct it. Though some timbers were missing, it proved possible to reconstruct most on paper by using

the information provided by empty mortices in adjacent timbers. The types of joints present, the plan, the type of roof and various other details point to the building having been constructed between 1600-50.

It was built as two separate three-storeyed dwellings each with a shop at ground-floor level on the street frontage and a brick cellar for storage directly below. The front of each shop contained three wide, round-headed windows and a doorway. Unlike the other windows in the building, those in the shops would not have been glazed (with either glass or a substitute material). However, when the shops were closed they would have been covered by shutters hinged to the wall just below them.

The two dwellings shared a common chimney-stack which probably provided each unit with three fireplaces, one on each floor. The roof was of the side-purlin type, the purlins being morticed into the principal rafters; the roof was tiled. The first floor was jettied over the ground-floor on the street frontage. The east wall of the east unit at first- and second-floor level was provided by the adjacent building, the bridging joists of its floors being lodged on north-south members of the wall next door. A passage at ground-floor level within the plot of the east dwelling separated it from the adjacent building and provided access to the rear.

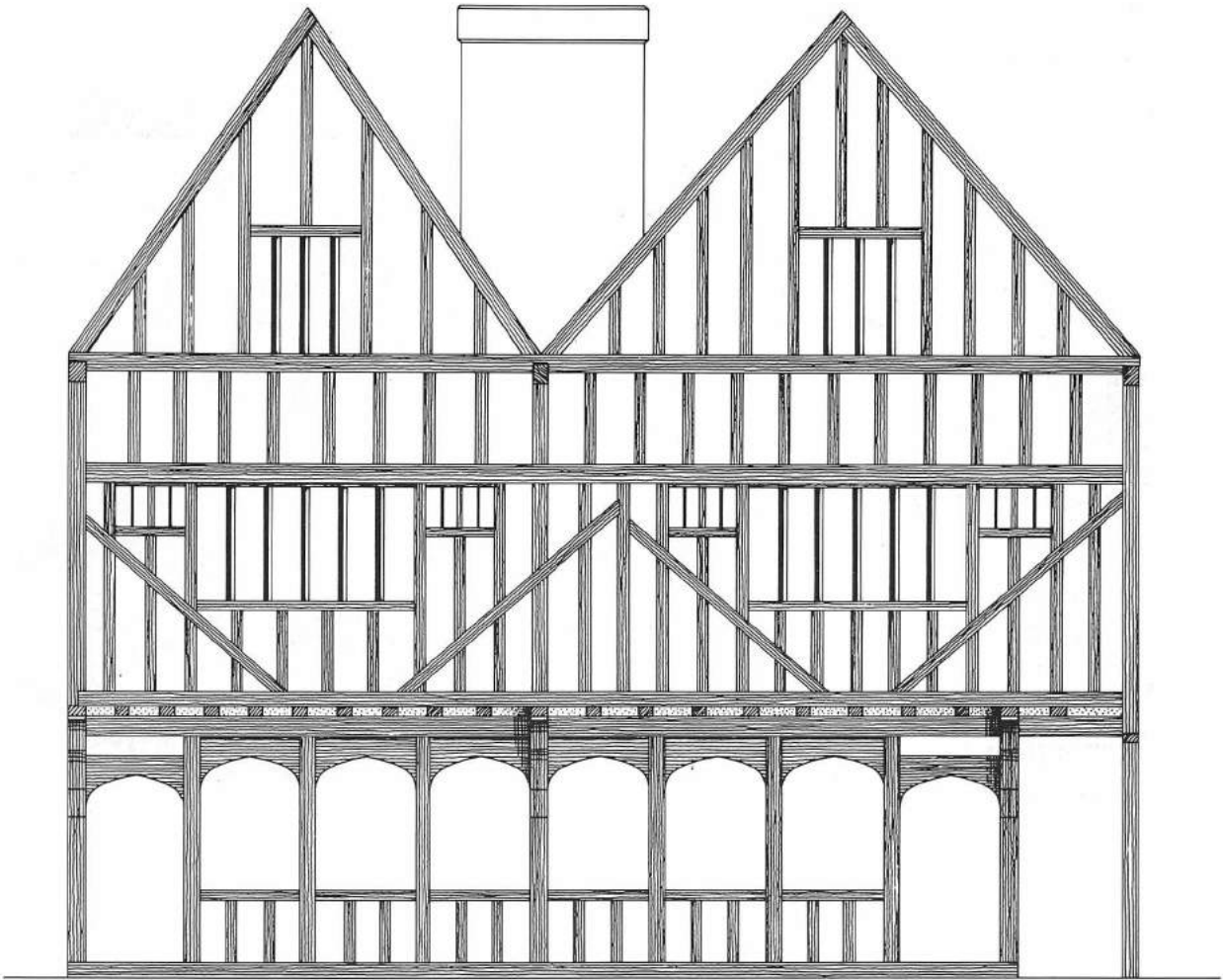


Fig. 16 Front elevation of Building 174, Period 3c.

Substantial brick foundations, 0.7-0.75 m deep, set in construction trenches, supported the timber-frame (Fig 18). A penny of Charles I (1625-49) was recovered from one of the trenches. The base for the double chimney-stack (BF2, BF11, BF44) was incorporated into the east-west foundation across the centre of the block, with a ladder staircase to either side of the stack. A stairwell (BF1), possibly a secondary feature, perhaps formed an entrance via a wooden staircase into the north-east corner of the cellar under Room 2.

A series of shallow beam-slots (BF35-BF41) in Room 3 contained decayed wood probably from joists for a wooden floor.

The rear wing continued in use into Period 3c. A large Purbeck marble mortar (Fig 19; AF456) was set in daub (AL303) in the southern end of Room 6. An area of brick floor (AF430) lay in the south-east corner of the room, perhaps by a doorway. The ovens in Room 6 went out of use, and a chimney-stack (AF56), 0.7 m deep, was inserted towards the northern end of the room. This was subsequently robbed, although the

remains of the base of a fireplace survived immediately to the south. It consisted of two L-shaped plinths (AF57/AF60, AF58/AF59) constructed of peg-tile fragments set in daub up to six courses high. The floor of an earlier hearth (AF126) was re-utilised to form the floor of the fireplace, the area of which was subsequently shortened with the refacing of AF59. There was a shallow raking-out pit (AF82) immediately to the south. The floor was of daub (AL29) associated with a thick occupation layer (AL27/AL28), and was subsequently replaced (Fig 20; AL6/AL7).

Initially Room 7 continued in use, and was refloored in daub (AL49/AL56). An east-west brick and tile plinth (AF79) to the east of AF146 suggests that the position of the north wall was moved southwards. An area of cobbles (AL69) to the west of the brick pier AF146 may indicate a doorway. Other internal features included small pits (AF135, AF136) and a drainage gully (AF134) leading out through the foundation AF80. Room 7 was subsequently demolished, probably in the late 17th century, and the area sealed

by demolition debris (AL35), including a sheet of white wall-plaster (AL26), measuring 0.8 sq m, collapsed close to the foundation AF42.

The western part of the yard had a resurfacing of well-laid cobbles (AL10, AL11), from which were recovered a threepence of Elizabeth I (1561), a token of Hans Krauwinkel (1580-1610), a Royal farthing token of and James I/Charles I (1614-36), and three illegible local trade tokens of the mid 17th century. A line of three post-holes (AF61, AF62, AF63) cut AL10, while further east, beyond a stone-lined drain (AF64), there was a less substantial gravelled surface (AL14/AL15). To the south this had been much patched, mainly with tile fragments (AL22), associated with which were a Royal farthing token of Charles I (1634-6) and a local trade token of William Ferris (1665), and further north (AL17) it was associated with a narrow timber drain (AF55).

Period 4 (Figs 21-22). A brick facade was added to the frontage in Period 4a, incorporating four sash windows at first-floor level and two replacement attic windows. Otherwise there were only minor alterations to the block on the street frontage during Period 4 (Fig 21). Access was gained from the High Street pavement into the front of the cellar (BF13/BF14, BF16, BF17), the more easterly entrance of which was subsequently blocked (BF18). The stairwell (BF1) went out of use and was blocked, and several brick partition walls were added to the western part of the cellar. A north-south brick foundation (BF10) between Rooms 3 and 4 was subsequently replaced by a large concrete foundation (BF8), and the floor level was raised (BL7, BL9, BL10).

The wing to the north was demolished during Period 4, probably in the late 18th century (Fig 22). The chimney-stack base (AF56) in Room 6 was robbed and the room sealed with demolition debris (AL8/AL9). A small, two-storey rectangular brick structure was subsequently added to the frontage block, and survived until demolition in 1986. Excavated remains from this structure included partition walls (AF425, AF440), the entrance to a small cellar, and the remains of a brick chimney-stack (AF420, AF426, AF432, AF445) against the north wall (AF423), with a cobbled surface (AF428) being replaced by a daub floor (AL285). The west wall of the property continued in use as a boundary wall and was rebuilt in brick (AF70/AF83), as was AF150 further north. Dump layers (AL4/AL12) accumulated north of Room 6, and were associated with a brick oven (AF34), a brick tank (AF45), a brick setting (AF32) and some pits. This area was covered by brick out-buildings in the late 19th century until demolition in the 1960s. To the east of Room 6 a brick well-cap (AF427) was uncovered, with a cobbled surface (AL306) immediately to the south. Although the later surfaces had been destroyed, the yard area continued in use and was cut by numerous service trenches.

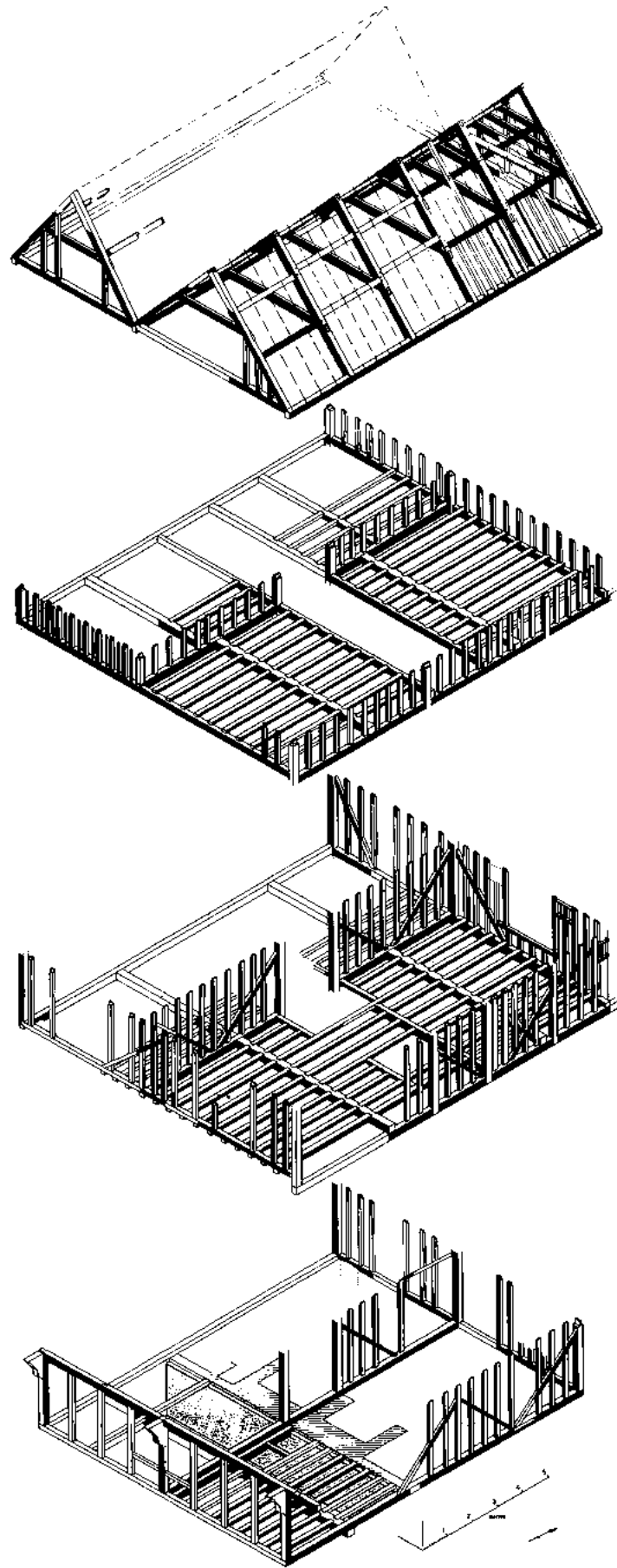


Fig. 17 Isometric plan of Building 174, Site B.

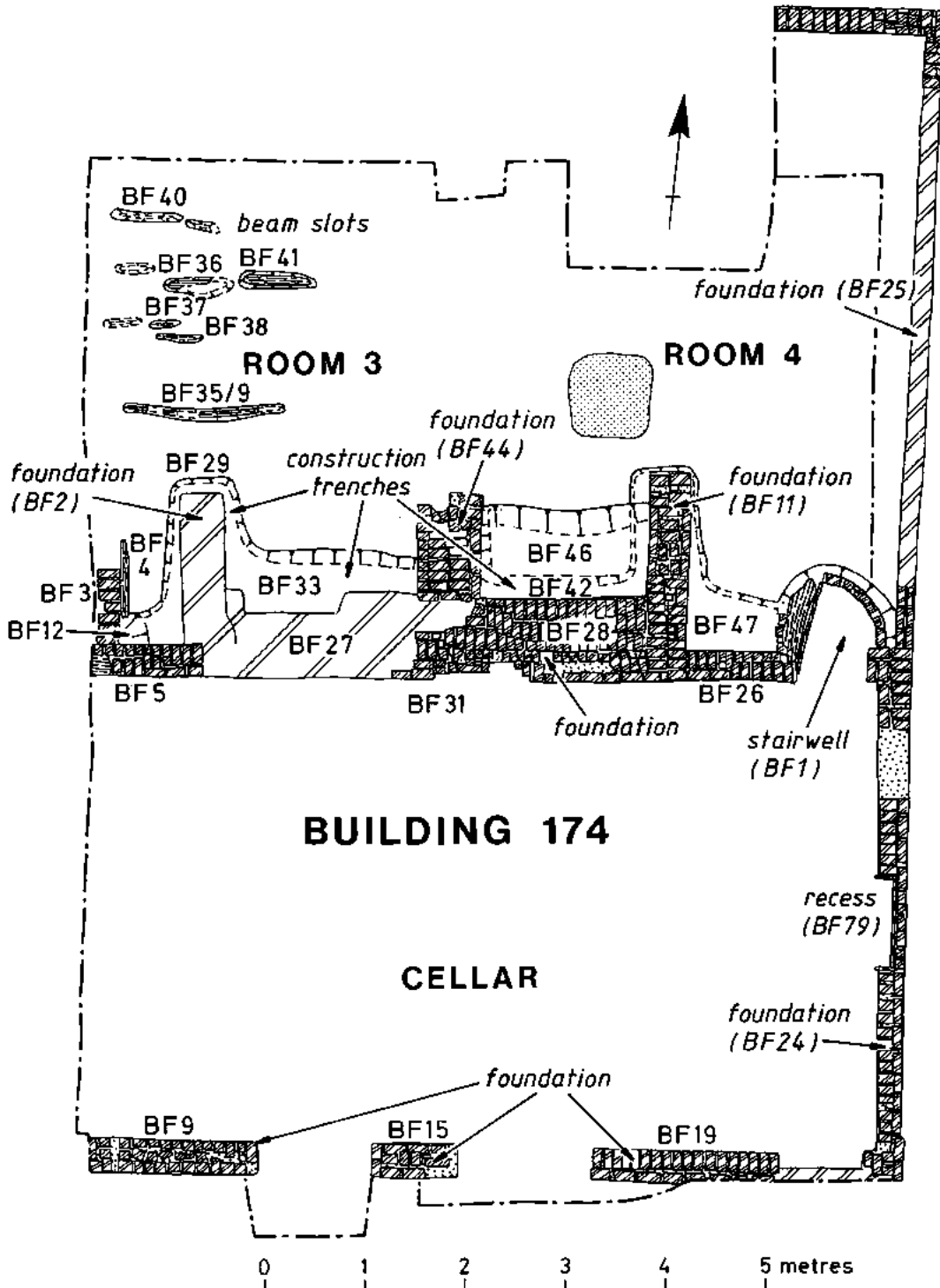


Fig. 18 Building 174, Period 3c, Site B.

Building 175 (Periods 3-4; Figs 9, 14, 23)

The edge of a building extending from the east section of the site was excavated (Fig 9). It probably formed the much disturbed remains of a wing extending from the High Street frontage at the rear of 132 High Street, and included lengths of stone-and-mortar foundation

(AF77, AF107, AF138), which presumably supported a timber-framed superstructure. The foundations were in use at least by early Period 3b (Fig 14).

Immediately west of and contemporary with AF77 was a stone-lined pit (AF76) 1.5 m deep, constructed of irregular courses of septaria, peg-tile and some brick

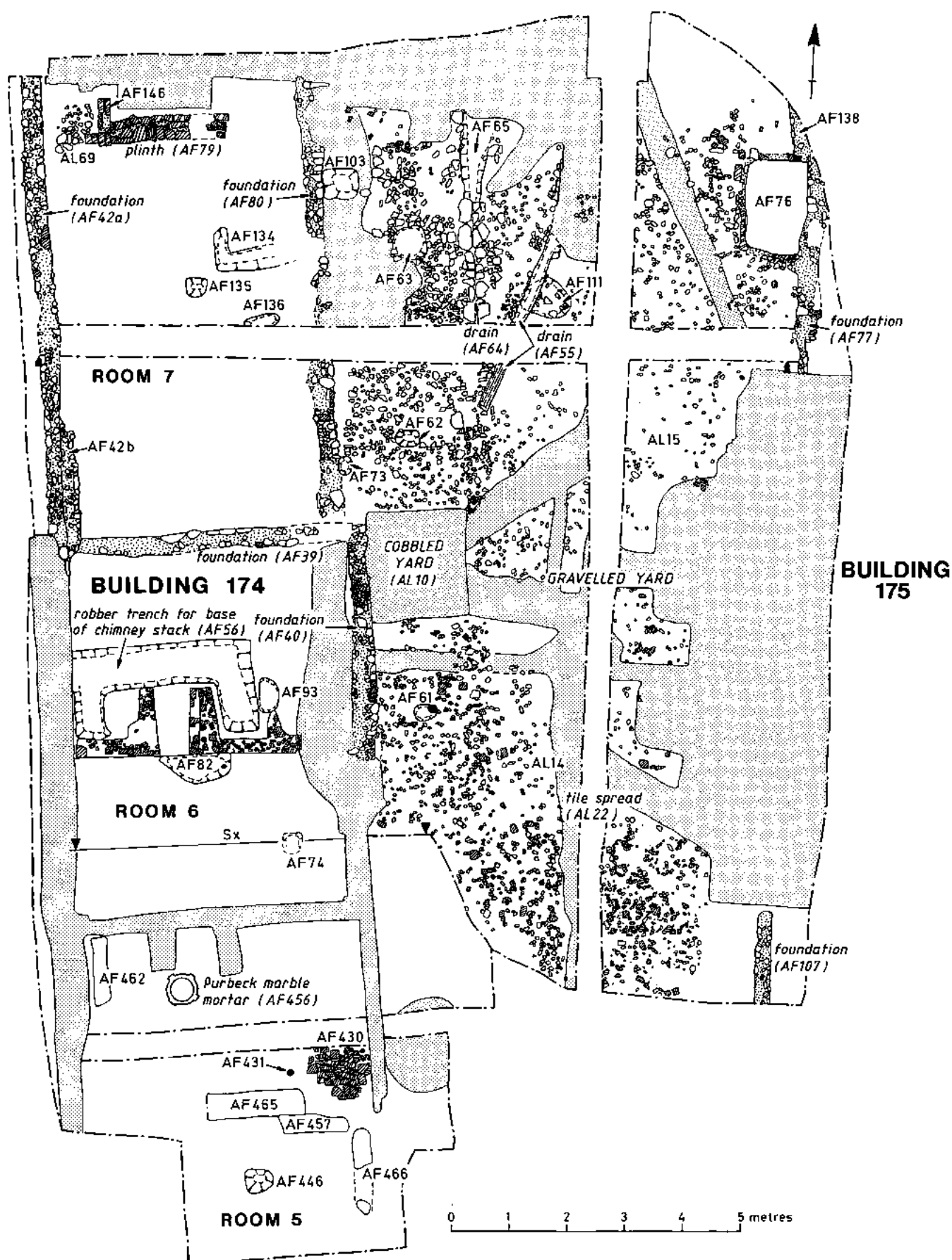


Fig. 19 Buildings 174 and 175, Period 3c, Site A.

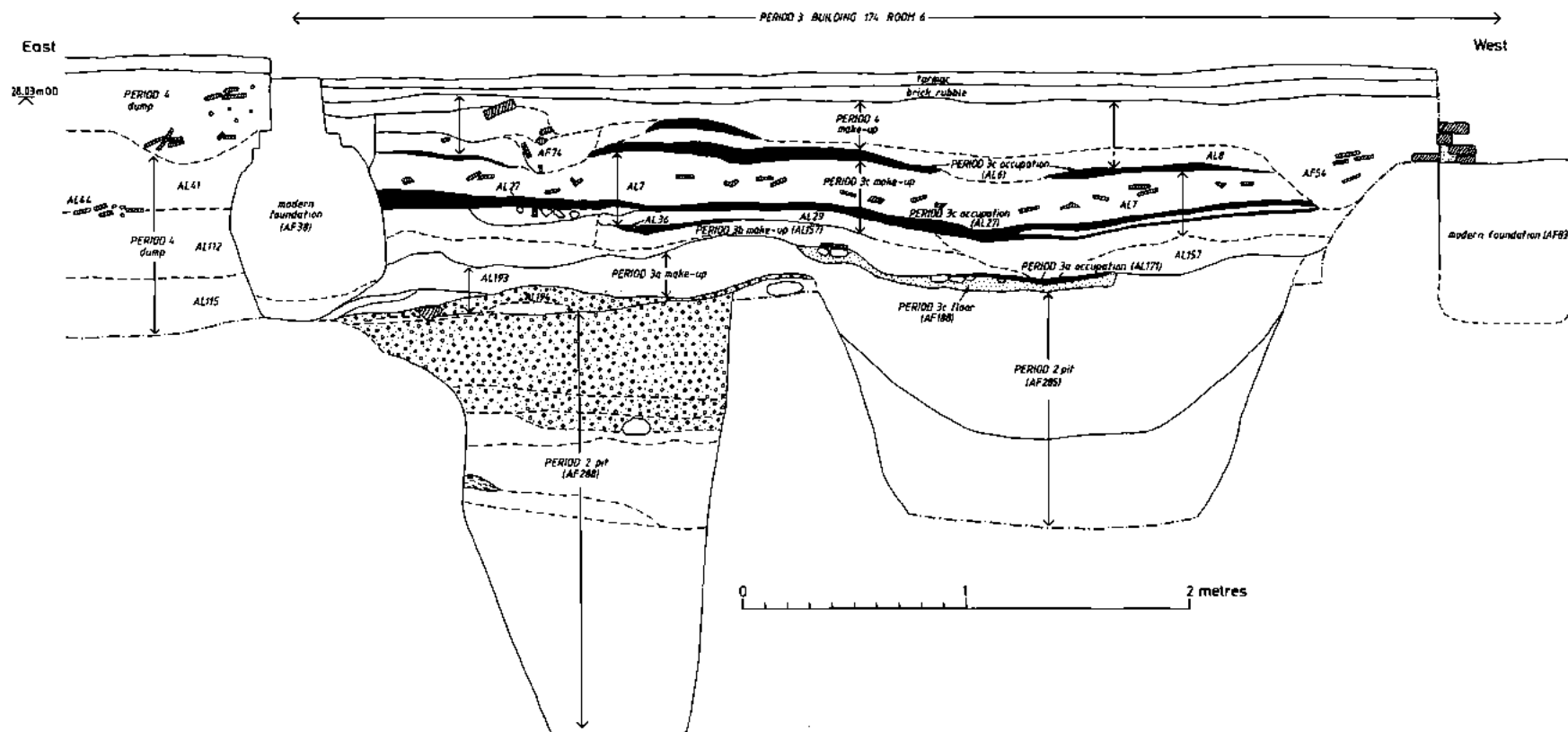


Fig. 20 Section across Room 6, Building 174, Site A.

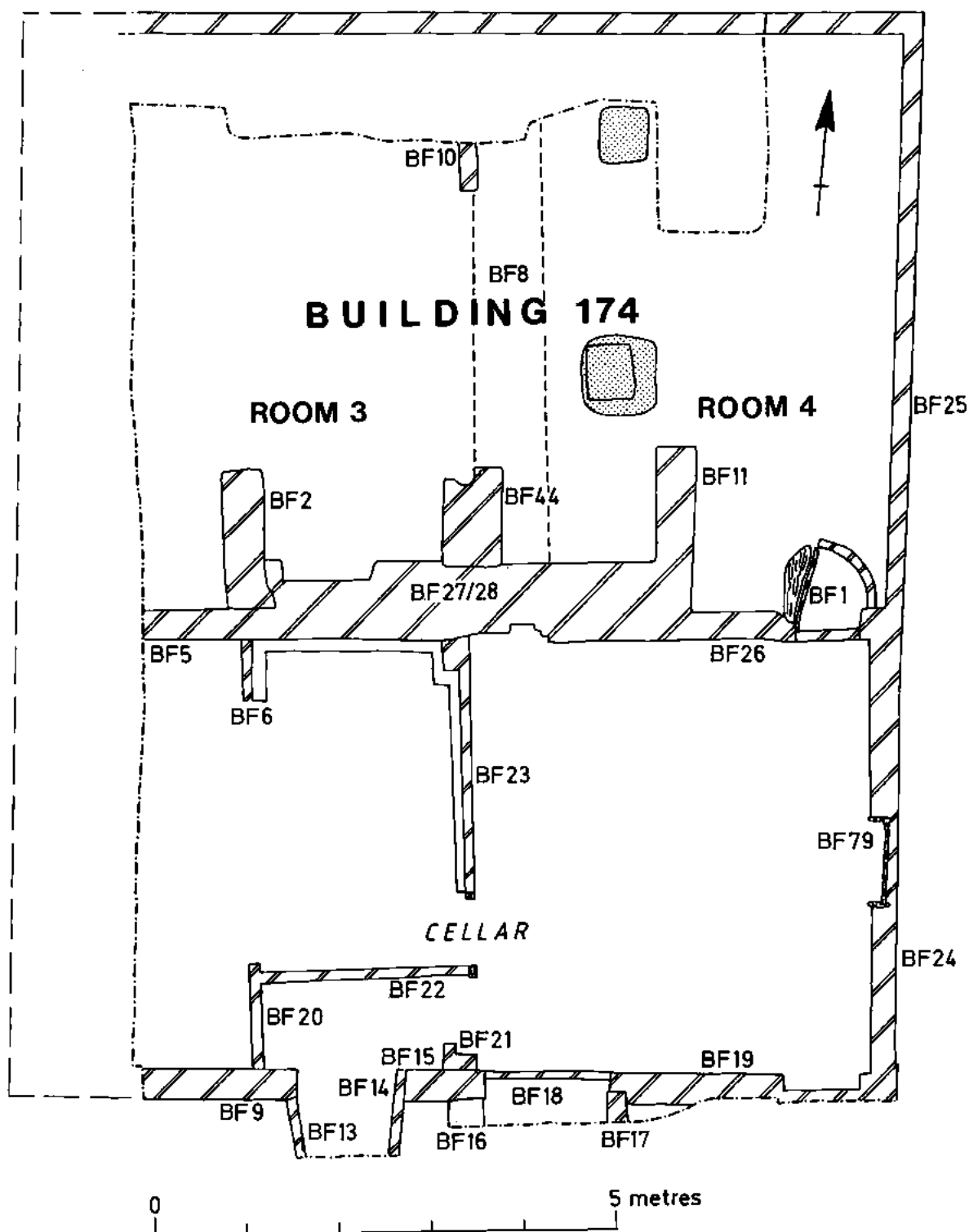


Fig. 21 Building 174, Period 4, Site B.

with a rough mortar rendering, and a floor of compacted daub. This probably functioned as a cess-pit, periodically cleaned out. The backfill contained a fine collection of late 16th century pottery and glass (p73), indicating that AF76 had gone out of use before the end of Period 3b. A short stretch of foundation

(AF104), extending westwards from AF138 and the northern edge of AF76, survived to a height of 0.3 m. It was constructed of septaria fragments in a hard whitish mortar faced with large peg-tile fragments set vertically.

The wing was probably demolished in Period 4

EXCAVATIONS AT ANGEL YARD, COLCHESTER

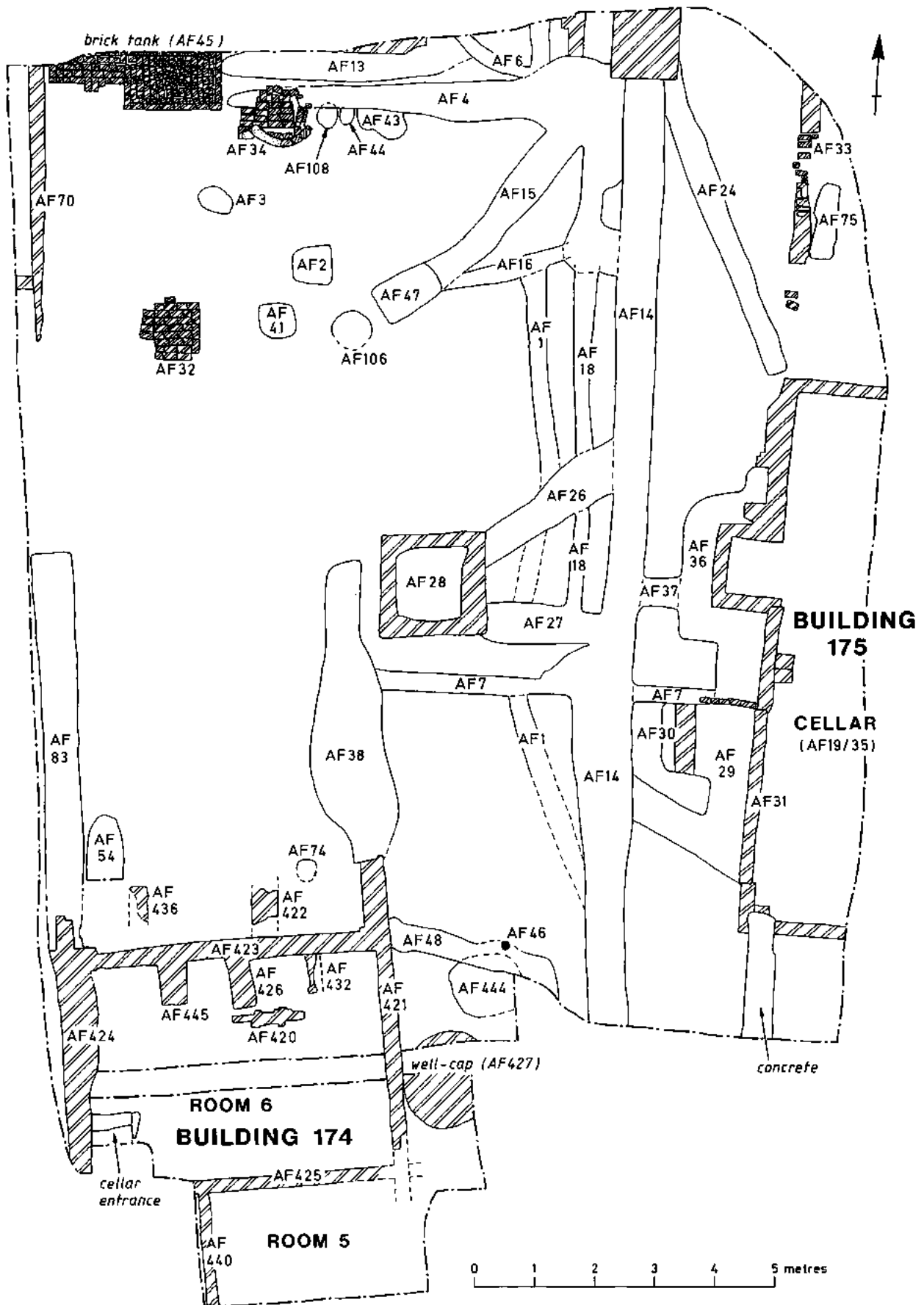


Fig. 22 Building 174, Period 4, Site A.

and rebuilt in the late 19th century with the construction of a range of cellars (AF19/AF35) and a brick foundation (AF33).

In the north-east corner of the site, limited excavation revealed a brick-lined drain and tank (AF10, AF12) and traces of foundations probably from the

northern end of Building 175 (Fig 23). Further west were some pits (including AF9, AF11, AF17, AF22, AF23), one of which contained a pig skeleton, probably associated with a slaughter-house on the site in the early years of this century. The animal had been coated in lime on burial and may have been a victim of disease.

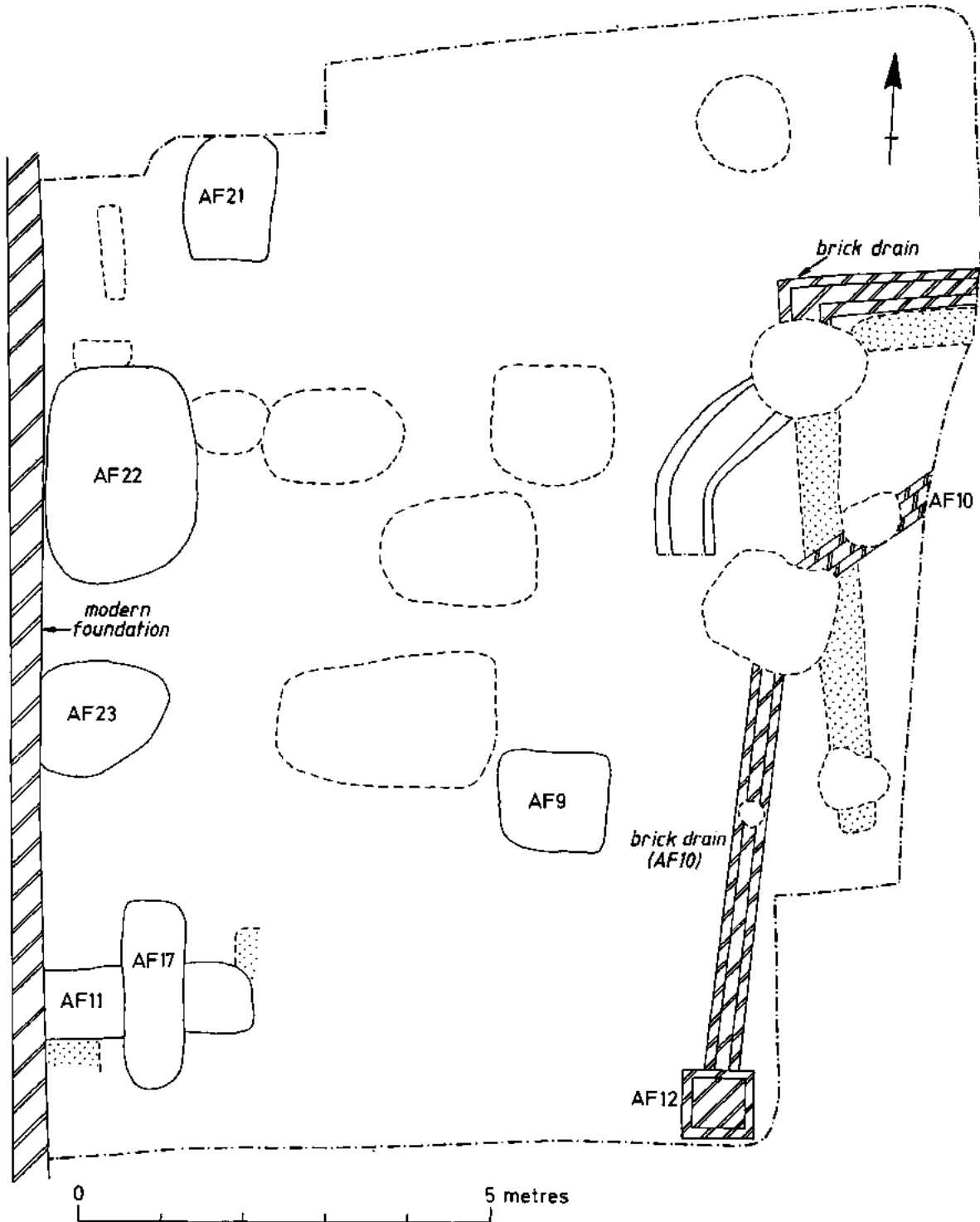


Fig. 23 North-east corner of Site A, Period 4.

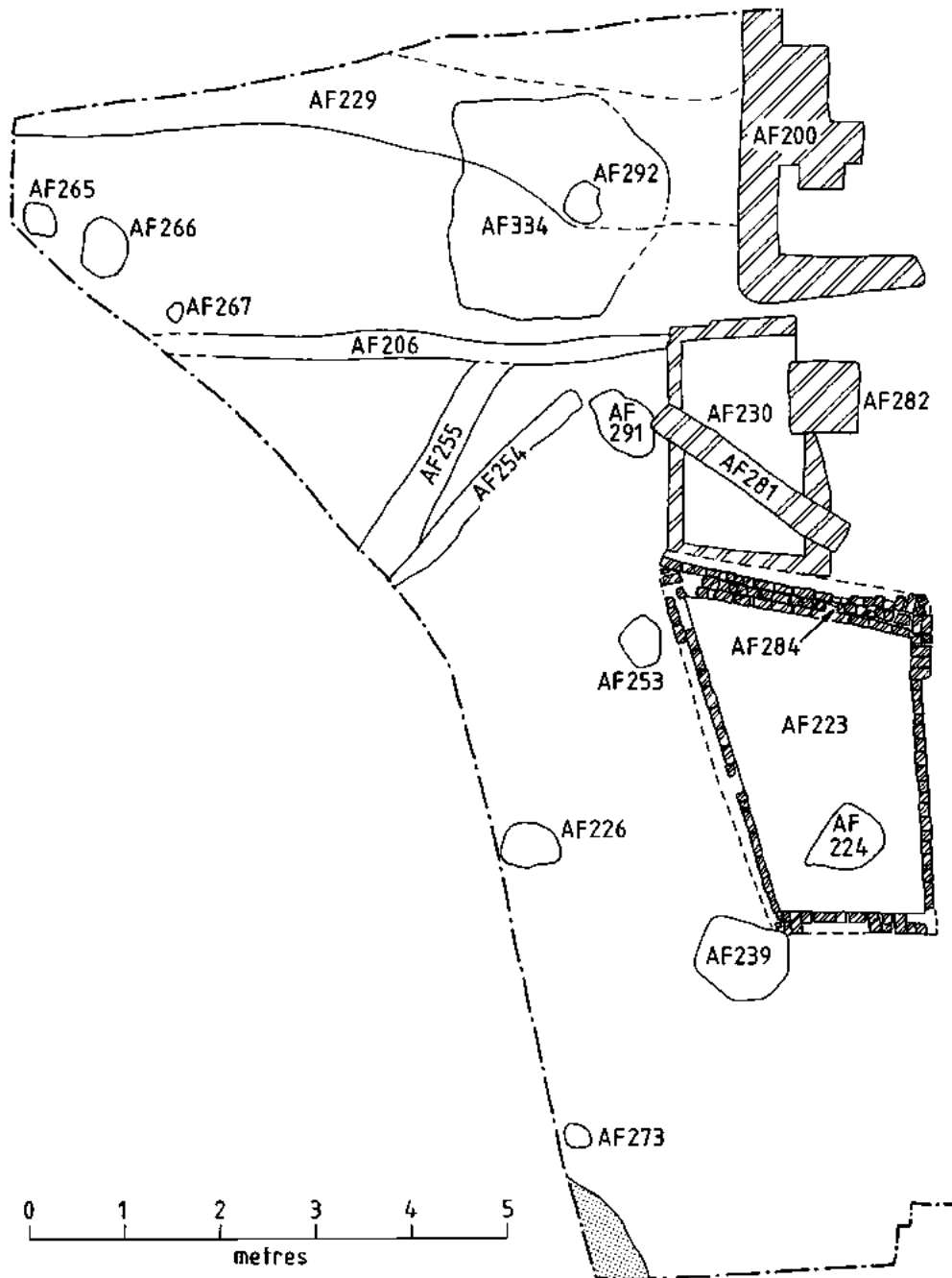


Fig. 24 Yard area, Period 4, Site A.

Building 176 (Period 3a; Figs 9-10, 24)

The edge of a further building was excavated immediately north of Building 173 (Figs 9-10) and probably formed part of an east-west wing extending back from the West Stockwell Street frontage. The external foundations (AF341, AF342) were of stone-and-mortar construction, with a narrow internal foundation (AF336) built largely of peg-tile fragments set in mortar. All presumably supported a timber-framed, probably two-storeyed, superstructure.

A short length of a secondary east-west brick foun-

dation (AF346), surviving two courses high, extended into the room from AF341. An area of tile floor (AF335), consisting of glazed dark green/black, brown, and yellow Flemish tiles set on a mortar base (p82), lay to the north of AF346, sealing an earlier daub floor (AL232/AL233). Several further glazed tiles were noted to the south of AF346 against AF341. The tile floor was sealed by a curving brick foundation (AF338), which also survived two courses high in the north-east corner of the room.

Further structural remains were observed east of

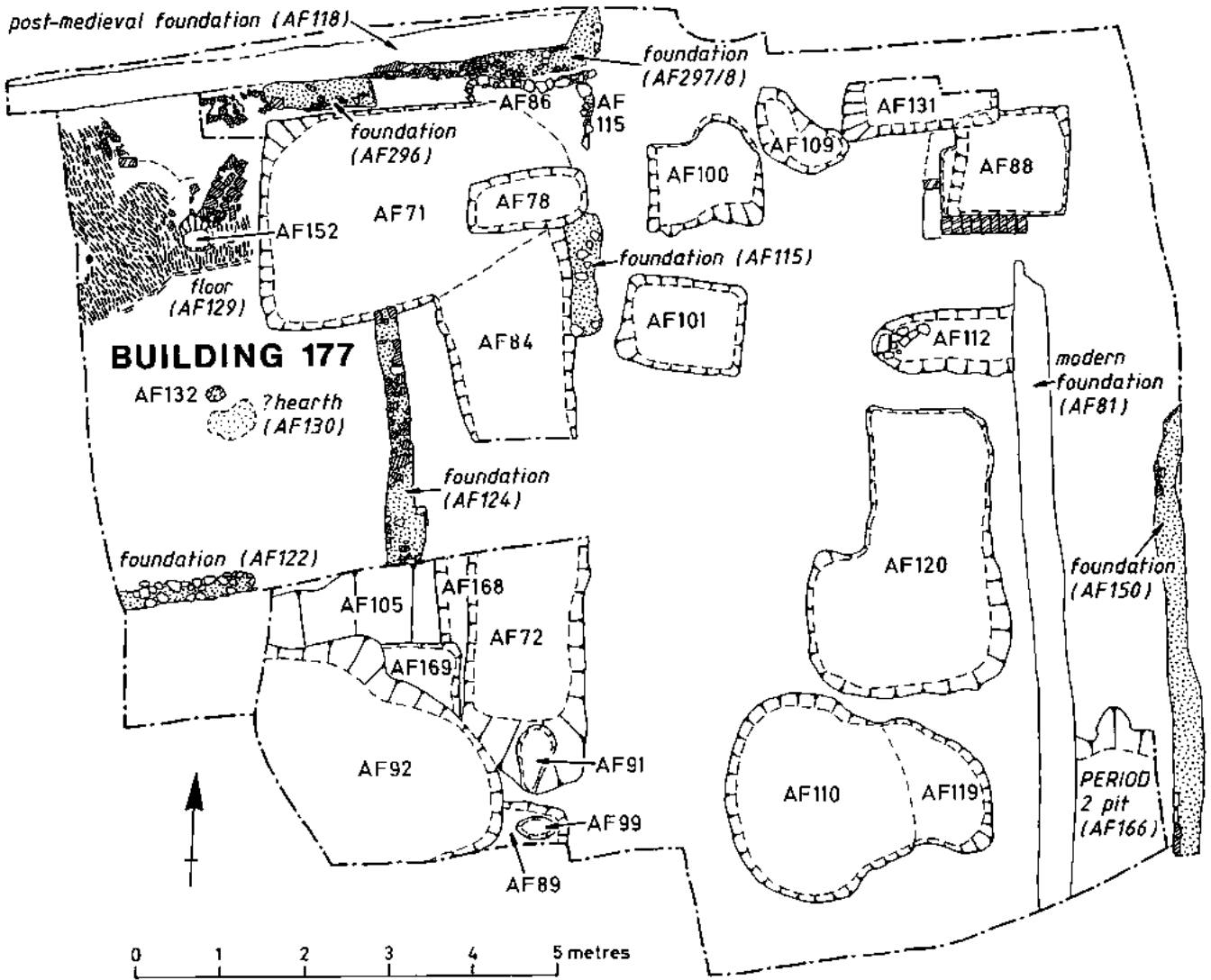


Fig. 25 Building 177, Period 3a.

AF341, including foundations (AF340, AF351) and part of a well (AF339) associated with a gravelled surface (AL235). An east-west foundation (AF400) was observed in a trench 10 m west of Building 176 (Fig 9) and may be associated with it.

Following the demolition of Buildings 173 and 176 the area to the rear of the High Street frontage in the western part of the site was gravelled over (AL198), and reverted to a yard area at the rear of the Angel Inn. The yard was resurfaced with large cobbles (AL184) during Period 4. The brick foundations of several small structures (AF200, AF230, AF223/AF284), probably outbuildings, were subsequently built along the eastern side of the yard (Fig 24).

Building 177 (Period 3a) (Figs 9, 25)

Limited excavation was possible of part of a building

in the north-west corner of the site (Fig 9), consisting of the remains of a rectangular block or wing to the rear of the street frontage of what is now 2 West Stockwell Street. The external foundations (Fig 25; AF122, AF124, AF296) were constructed of septaria and tile set in mortar. The northern foundation (AF296) had apparently been demolished and sealed by a later daub floor (AL212). A replacement wall may have been destroyed by a later foundation (AF118), although a foundation (AF297/AF298), which perhaps belonged to a building to the north, may have been utilised.

There was an extensive area (AF129) of peg-tiles set on edge in the northern part of the room. It had a tile kerb to the south and had been much burnt. Clearly of more than one phase, it incorporated the floor of at least one demolished oven. The peg-tiles were set into an extensive daub floor (AL212) associat-

EXCAVATIONS AT ANGEL YARD, COLCHESTER

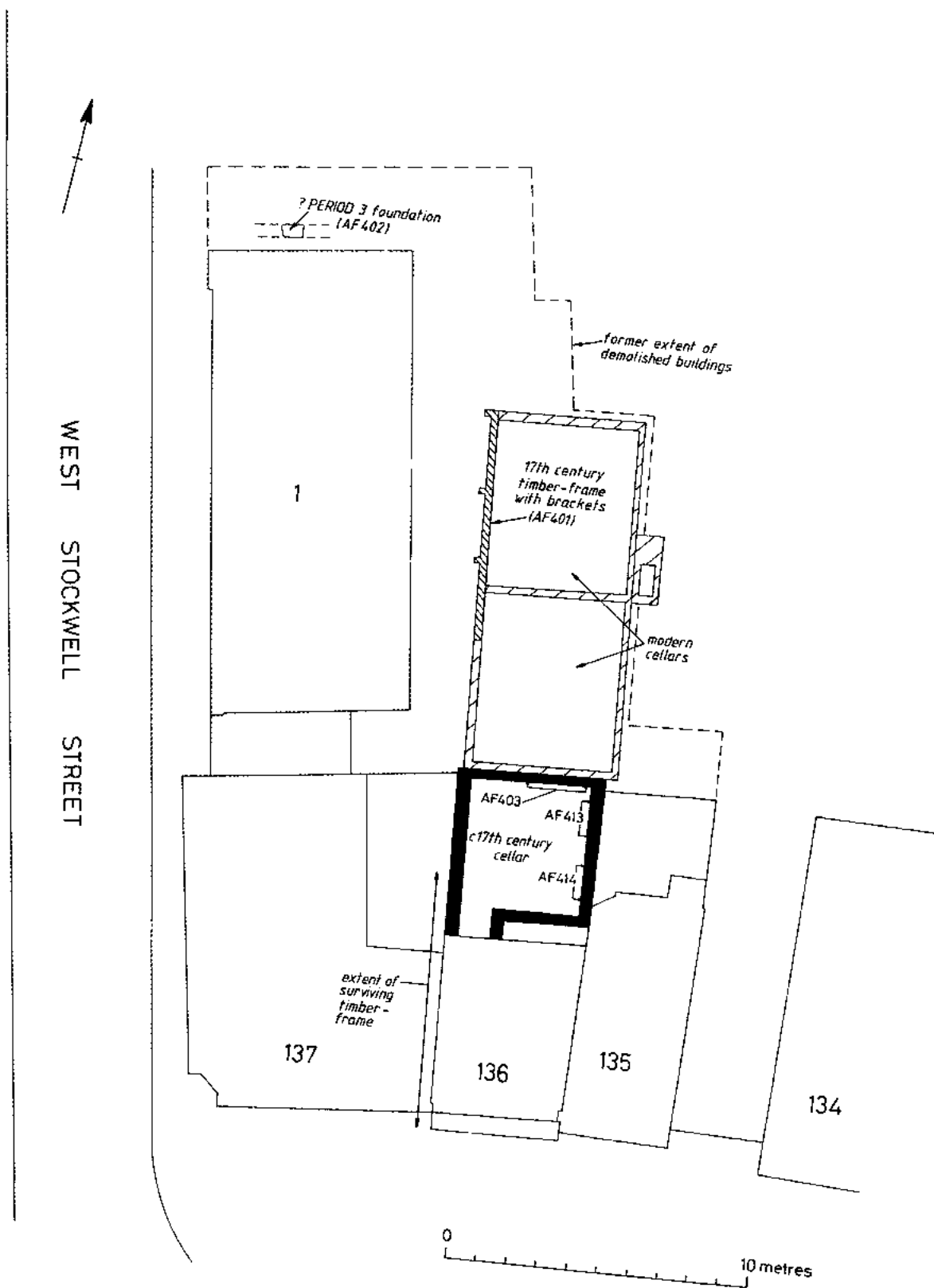


Fig. 26 The rear of 136 High Street, Angel Yard, Colchester.

ed with a small pit (AF132) and a ?hearth (AF130). Finds from the demolition debris (AL54/AL66) sealing the floor suggested that Building 177, like Buildings 173 and 176, was relatively short-lived and had been demolished by c 1500.

Immediately to the east of Building 177 were frag-

mentary rubble foundations (AF86, AF115), perhaps forming an outbuilding to the rear or possibly the remains of an earlier structure. Pit-digging took place to the east both before (AF72, AF84, AF100, AF101, AF109, AF168, AF169) and after (AF71, AF78, AF88, AF110, AF119, AF120, AF131) the demolition

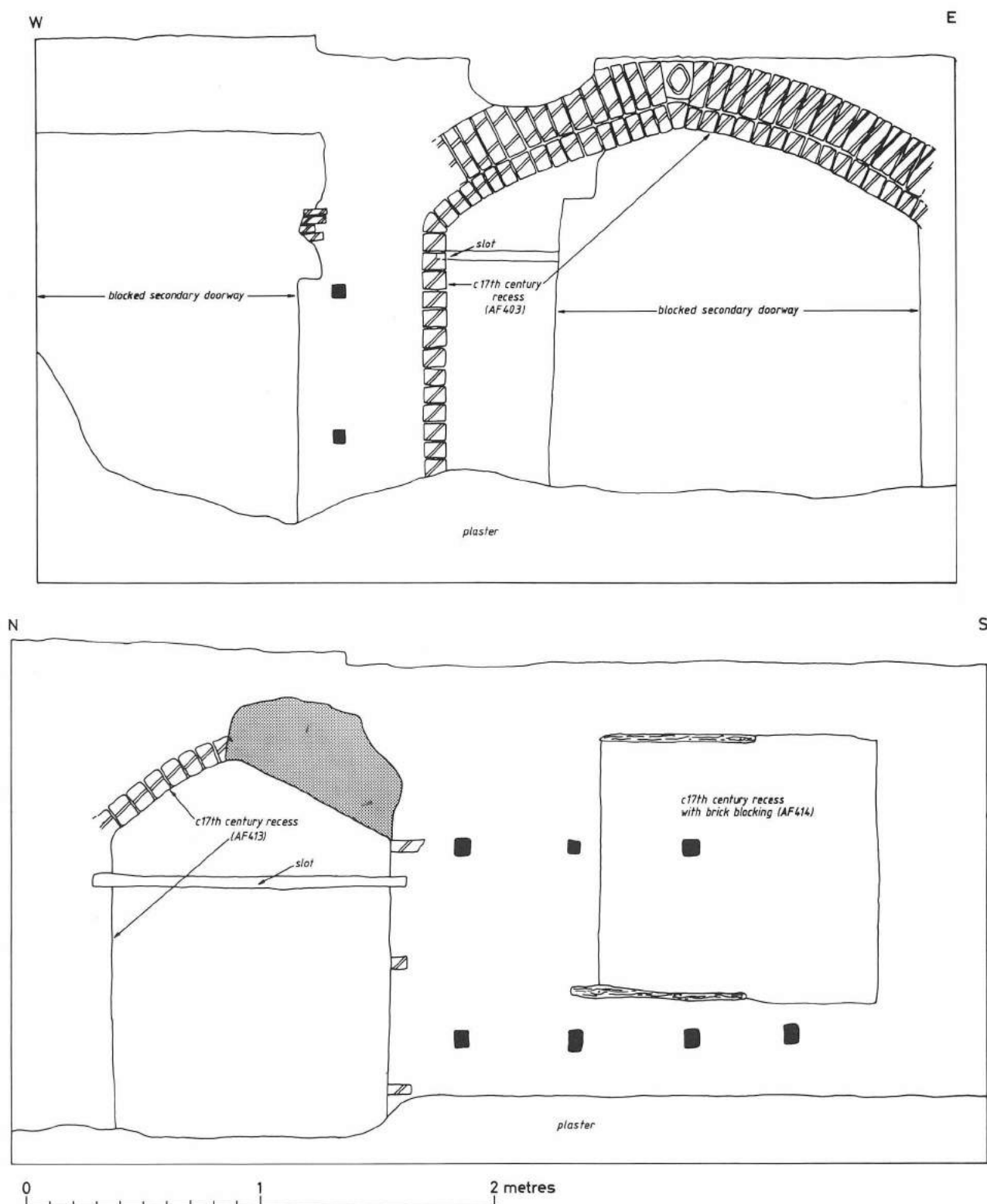


Fig. 27 Cellar elevations at the rear of 136 High Street, Angel Yard, Colchester.

of Building 177. The pits AF110, AF119 and AF120 were sealed by a series of dump layers (AL20, AL23, AL24, AL25, AL50) of probable late 17th-century date.

Rear of 136 High Street (Figs 9, 26-7)

Demolition in the south-west corner of the redevelopment area revealed further post-medieval remains, including cellars and part of a timber-framed jettied wing (Figs 9, 26). The surviving timber-frame nearer the frontage was incorporated into the redevelopment (Shackle 1988, 27-30; site archive).

Under the southern end of the wing lay a cellar constructed largely of septaria, with several brick features including recesses with four-centred arches (Fig 27; AF403, AF413), and a wood-lined recess (AF414) which suggest a 17th-century date. The cellar was entered from the south through cellars of earlier date, and two entrances had been knocked through the north wall to give access to later wholly brick-built cellars, which had subsequently been backfilled and the entrances blocked.

At the northern end of the range, after the removal of later brickwork, a section of timber-framed wall (AF401; site archive) was exposed. The southern half of the wall included a window-frame 2.23 m long, partially replaced and enlarged, but still with one diamond and three ovolo mullions surviving at the south end. The northern half of the timber frame had a wind-brace which broke the studs and had been cut through by a secondary doorway at the north end.

Three brackets projected from the west side of the frame and would have supported a first-floor jetty. The carved decoration on the most northerly bracket and other constructional features suggest a mid 17th-century date for this section of the wing, which probably belonged to an early phase of the Angel Inn.

A note on the development of the High Street area between West and East Stockwell Streets (Fig 28) by D Shimmin

The foundations observed in service trenches on the north side of the High Street (Fig 28; Hull 1958, 159; CAR 1, 48-50; CAR 6, 3/75b, 810), although no longer considered to be Roman in date and thus discounted as evidence for continuity between Roman and medieval building alignments, still raise interesting questions of interpretation. They could, for instance, lend credence to the suggestion that the medieval High Street frontage originally extended in line with the south side of the nave of St Runwald's Church but was subsequently cut back to form a market place (CAR 1, 53). Such an hypothesis cannot be proved or disproved solely on the basis of limited field observations, and it is therefore necessary to consider supplementary sources, not only to tackle this problem, but also to provide insight into the development of a wider area, including the excavated sites described in this report.

Within the layout of the street system of the post-Roman walled town there are marked indications of replanning based on modules of 4 poles, with 12-pole units in particular being detectable north of the High Street (Crummy 1979, 149-51). Further study of the High Street area, based on the 1875-6 1:500 OS maps, reveals not only a

12-pole unit along the frontage, but also similar units extending back from it: notably northwards from both the south-west corner of St Runwald's Church and the frontage line immediately to the east of the church (Fig 28). These measurements are reflected in significant property and parish boundaries as well as the street system, and are in some cases reinforced by results from excavation.

Boundaries can, of course, change, even those of an ancient parish like St Runwald's, and the assumption that all are necessarily medieval or earlier in origin, like the streets, is open to question. However, consideration of the 12-pole units raises the possibility that the area was conceived as a 12-pole block, offset to accommodate St Runwald's Church. This implies that the foundations mentioned above do not belong to the block, but are secondary.

Further elements in the regular layout of this area can also be put forward. For example, the 'primary' property boundary (CAR 1, 48-9) along the west side of Building 174 appears to subdivide the frontage into two lengths of 4 and 8 poles. This boundary has been shown by excavation to date back at least to c 1300. Although the 4-pole unit to the west is slightly short (by 3 ft), this seems likely to be the result of distortion caused by St Runwald's Church, or from the widening of a 'pinched end' (ibid, 50) at the south end of West Stockwell Street.

The 8-pole unit can be convincingly subdivided into one 2-pole and two 3-pole sections (although sections based on 2 and 4 poles cannot be ruled out). The 2-pole section is a strip along the west side of East Stockwell Street, defined by a parish boundary. The unit incorporating 132-4 High Street forms part of an L-shaped block, 3-poles wide, which extends round onto East Stockwell Street, where it is demarcated by the meandering parish boundary. The adjacent unit (128-31 High Street) forms a rectangular block and is admittedly slightly too large (by 3 ft).

The use of 3-pole units has historical parallels, notably in 1219 for the new town of Salisbury, where it was stipulated that the standard plots were to measure 3 by 7 poles (Crummy 1979, 150).

Of particular interest in this part of Colchester is the way the characteristic settlement pattern of crowded frontages, off which ran long straggling buildings reached by narrow alleyways and enclosing gravelled yards, developed largely within the framework laid down when the area was divided up. This pattern has been shown above by excavation to date from at least the 14th century, possibly earlier, and persisted into the 19th century and beyond.

There are of course problems inherent in this subjective approach to detecting planned dimensions (ibid, 151-3), especially in view of the dearth of comparative studies elsewhere. This is clearly evident in any attempt to work out the individual plot sizes, given the wide variation likely and the subsequent amalgamation and fragmentation of plots. In addition, much of the significant archaeological information has been destroyed by later activity, particularly the digging of cellars, while the occasional detailed documentary references to plot size do not appear to relate to the High Street area.

More informative are the references relating to property transactions in this area, particularly in providing an historical context for the foundations mentioned earlier, even if the references sometimes lack topographical precision: for example, 'Wm. de Brome surrendered a shop in the market, by the shop of Philip Chapman, under the wall of St Runwald's Church, to the use of Wm. Cole, merchant' (Court Rolls, 1339-40). This surely implies encroachments in this area, and such developments may stem from the charter of 1321, whereby the burgesses acquired the right from Edward II to develop and raise rents for the commonalty from 'waste spaces' or vacant areas in the town (Britnell 1986, 116); infilling could however have begun earlier (VCHE, 41).

Included in Colchester's medieval Oath Book is a list of rentals, some of which clearly relate to the area in question: for example, '... shop (selda) under the wall at the south corner of the church of St Runwald's ...', '... shop under the north wall of the said church ...', and '... for his stall in front of his tenement in the market ...' (Oath Book, 1387-8). By the late 14th century there were at least five shops in this area (VCHE, 44). These descriptions suggest not simply temporary stalls or booths, but permanent covered stalls or shops, simi-

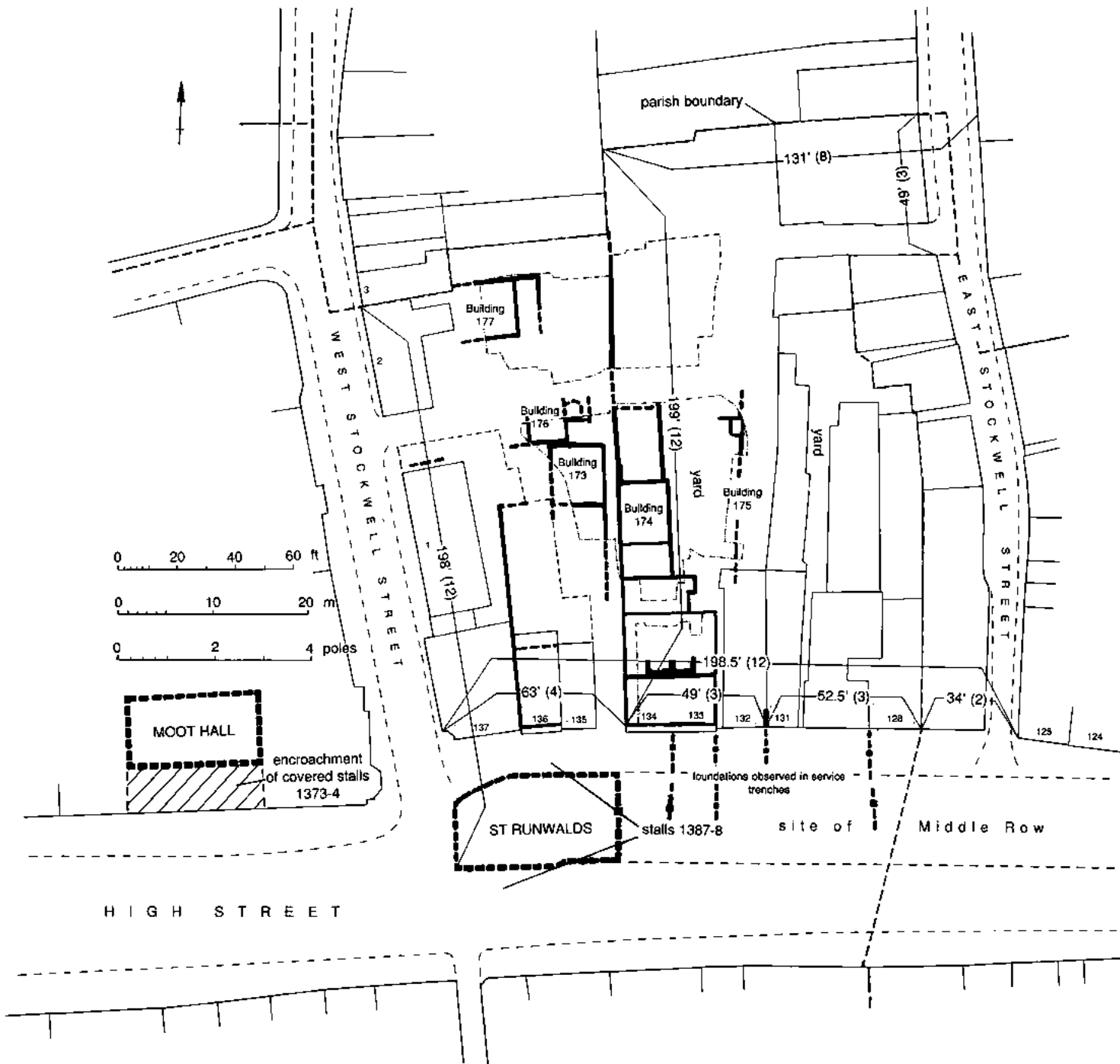


Fig. 28 The High Street area between West and East Stockwell Streets.

lar to the covered stalls constructed nearby at the entrance to the Moot Hall in 1373-4 (CAR 1, 53; Britnell 1986, 120-1). Such structures, presumably of wattle-and-daub, could well require footings or foundations such as those observed in the High Street.

The vacant ground around St Runwald's Church thus became cluttered with shops and stalls, although the infilling of this lucrative High Street area was, in effect, grafted on to an earlier, long-lasting settlement pattern, whose development is well illustrated by the Angel Yard excavations. The encroachments appear to have been largely cleared away by the time of Speed's/Norton's map of 1610; the development of Middle Row (VCHE, 44, 104) however carried on the medieval tradition.

The coins (Table 1) by John A Davies

A total of 529 coins and tokens were recovered from both phases of the Angel Yard excavations, which is a large site assemblage and comparable in size with previous Colchester collections from Butt Road and Lion Walk. Four hundred and thirty-six of the coins are Roman, with the remainder dating from the 11th century and later. Just six coins belong to the years from the 11th to the 14th century, while 80 items date from the 16th to the 19th century. The most stratigraphically significant coins are listed on p70-1.

EXCAVATIONS AT ANGEL YARD, COLCHESTER

Table 1 Chronological summary of the coins, Angel Yard, Colchester.

Period	No	% (of well-dated Roman)
I to 43	—	—
IIa 43-54	—	—
IIb 54-69	2	0.6
III 69-96	4	1.2
IV 96-117	1	0.3
V 117-38	3	0.9
VI 138-61	6	1.8
VIIa 161-80	3	0.9
VIIb 180-93	3	0.9
VIII 193-222	9	2.7
IXa 222-38	5	1.5
IXb 238-59	2	0.6
X 259-75	61	18.3
XI 275-94	151	45.3
XII 294-317	1	0.3
XIIIa 317-30	6	1.8
XIIIb 330-48	50	15.0
XIV 348-64	18	5.4
XVa 364-78	3	0.9
XVb 378-88	1	0.3
XVI 388-402	5	1.5
Total	333	
1st-2nd century	4	
3rd-4th century	98	
illegible Roman	1	
11th-14th century	6	
16th century-modern	80	
completely illegible	7	
Grand total	529	

The Roman coins range in date from two Claudian imitations of the immediate post-invasion years, through to the final years of the 4th century, without any break. A very high proportion of the coins are badly worn and illegible, defying close identification. In contrast there are also well-preserved denarii and silvered antoniniani of the 2nd and 3rd centuries, noticeable because they include types and emperors rarely found as site finds in Britain. The presence of a number of these more unusual types within a single collection is a strong indication that a hoard, of indeterminate size, has become mixed in with ordinary site finds.

The precise composition of such a dispersed hoard is impossible to reconstruct, but the chronological range and approximate size of such a deposit can be determined and a nucleus of hoard coins can be identified. The chronological distribution of all of the Angel Yard coins indicates, even when the lack of excavation of 1st-century levels is taken into account, an over-representation of issues from the mid 2nd century onwards, with a particular predominance from the start of the 3rd century and a highly pronounced peak between 260-96 (Table 2; compare with CAR 4, Table 7). Thus, the hoard would appear to embrace coinage of the years from the Antonine period to the end of the 3rd century. The number of different contexts involved shows that the hoard has been well dispersed.

The composition of the hoard can be said to include a number of specific coins. First, of the 38 coins which date from 69-260 (including otherwise illegible pieces), 23 are denarii (61 per cent). This is a very high percentage of silver coins. At Canterbury, just 30 per cent of the coins of the same period were denarii, with just 20 per cent from Cirencester excavations and 28 per cent from Verulamium excavations (source Reece 1972, table 1). Nine denarii date just from the years 193-222; a period of low coin loss on sites.

Table 2 Number of barbarous coins analysed, divided by empire and emperor, Angel Yard and Culver Street, Colchester.

Gallic Empire		Central Empire		Unidentified
Victorinus	19	Gallienus	7	
Tetricus I	54	Claudius II	4	
Tetricus I/II	2	Divo Claudio	17	
Tetricus II	17			
Probus	1			
Totals	93	28		51

These early denarii are too numerous all to be site finds and it is likely that most, if not all, originated in the hoard. This is supported by their good condition. The earliest hoard coin may be the denarius of Vespasian, struck 69-79. The two silvered antoniniani of Valerian I may be hoard coins, while the three of Aurelian and one of Postumus also in fine condition and silvered, must certainly be so. It would be unusual to find so many antoniniani of either emperor within a site collection of this size; just one of Aurelian and thirteen of Postumus came from the entire 1971-9 Colchester excavations (CAR 4, 84, 86, 90). Other hoard coins must include the five antoniniani of Tacitus, five of Probus and one of Carinus. Issues of these emperors are very rare as site finds, with just six examples in total coming from the 1971-9 excavations (ibid, 84, 87, 89, 91). A further unusual site find from Angel Yard is a Greek Imperial bronze issue of the 3rd century. This coin is unfortunately too worn for close identification but it is possible that this exotic type came from the hoard.

The exact size of the hoard is impossible to determine. Many of the more common antoniniani of the years 260-94 would have belonged to the deposit, judging from their over-representation on the site. The coins most likely to belong to the hoard, which have been discussed above, are well-preserved issues, of silver or silver in appearance and of good module. It is therefore probable that other issues present which are of good size, shape and appearance are also hoard coins. For example, those which retain some surface silvering, such as SF 40.86 974 (Victorinus, Elmer 682) and 1106 (Claudius II, as RIC 5, 44).

The 132 barbarous radiates are far too numerous to represent site finds alone. Those of larger module, in keeping with regular antoniniani, and closest in appearance to the official coins would be expected to have come from the hoard. Well over half of the barbarous radiates are of 17 mm or above, which is a much higher percentage of large types than would be found within a typical site assemblage. It is also noticeable that an unusually high proportion, reaching nearly one quarter of the copies, imitate Central Empire types. The proportion among site finds is more commonly about 10 per cent and confirms that at Angel Yard some selection of types has been made and that the barbarous radiates are not merely the result of casual loss. The better-engraved copies include SF 40.86 1432 (obverse Victorinus), 874, 1383 and 1513 (obverse Tetricus I), and 645 (obverse Gallienus). SF 40.86 1442 (illegible) and 1428 (obverse Tetricus I) have remnants of silvering.

The association of coins identified as hoard coins with others from the same context suggests that some forty to fifty others could belong to the hoard. The over-representation of specific issues, determined by comparison with other British sites, can also give an approximation of the size of the hoard (see the typical British site range in Reece 1972, 272). It is possible that the hoard could have numbered from about 80 coins, with perhaps as many as 170 in total. The latest coin which can be associated with the hoard is either the single antoninianus of Carinus (AD 283-5; SF 40.86 743), from a Period 2b pit (AF166) or the issue of Maximian I (AD 286-305; SF 40.86 1023), from the same context (Period 2 dark earth A1556 L205) as a Proban coin.

The remaining Angel Yard site finds show an underlying pattern of coin loss covering the duration of Roman Britain. There is a typical peak of Constantinian bronzes of the period 330-48, followed by appreciable coin loss until 364, with Fel Temp Reparatio fallen horseman imitations prominent at this time. Valentinianic coinage of 364-78 is surprisingly scarce, in comparison with the preceding Constantinian issues, but coin loss is represented through to the end of the 4th century.

Following the Roman period, there were no Anglo-Saxon coins present. Anglo-Saxon coins are scarce in Colchester generally and none were discovered from the 1971-9 excavations (CAR 4, 68). The earliest post-Roman coin is a silver quatrefoil of Cnut, dating from 1018-24. There are four other coins and an Anglo-Gallic jetton which cover the 13th-14th centuries. These include an Anglo-Gallic hardi d'argent issued during the 15th century (identification by M A S Blackburn; site archive).

Coins representing the 16th to 19th centuries are more profuse. Their number reflects their copper/copper-alloy metal, in contrast to the more precious silver coins of preceding years (CAR 4, 68). They do include two silver issues of Elizabeth I. Tokens are prominent among these later types and include four Nuremberg tokens of Hans Krauwinkel, of the late 16th to early 17th century. Royal and Rose farthing tokens of James I and Charles I number 26. There are also nineteen trade tokens of the mid 17th century, of which most are local Colchester types, along with two from Suffolk. Later coins, of the 17th to 19th centuries, are less common and include issues of William III, George III, William IV and Victoria.

Analysis of 3rd-century coins

by M Heyworth

Introduction

Barbarous radiates are irregular antoniniani which are dated to the 270s and early 280s AD and are copies of the regular radiates of both the Central Empire and the breakaway Gallic Empire of this period (CAR 4, 44-9). A large group of such irregular coins were found at Angel Yard. Some were part of a dispersed hoard (p65), though there were few stratigraphical pointers to assist in identifying which coins belonged to the hoard and which did not. It was hoped that compositional analysis might identify groups within the collection which would allow the hoard to be reassembled. Consequently almost all the coins (128) were analysed, together with a comparative group of 44 similar coins from the Culver Street site, Colchester. Several regular radiate coins from Angel Yard were also analysed to check the compositional differences between coins from the two empires suggested in the analysis of the barbarous radiates.

Analytical method

All the coins were analysed qualitatively by energy-dispersive X-ray fluorescence (EDXRF) using a Link Systems Meca 10-42 machine. The primary radiation source was an X-ray tube with a rhodium target run at 35 kv and the fluorescent X-rays were detected by a Si (Li) detector. The elements recorded were copper (Cu), zinc (Zn), lead (Pb), silver (Ag), and tin (Sn).

The method of analysis used looks only at the surface of the coin and, as no surface preparation was carried out on the objects, the results will have been affected by surface contamination, corrosion and the depletion of elements from the surface this can produce, as well as any variations in surface topography. However, the area analysed is an average across the whole coin surface and should give a reasonable indication of the alloys used in the production of the objects.

A number of coins from Angel Yard were analysed on both sides to assess the variations in results. However, no major compositional differences were noted between the two sides of any single coin and it was assumed that the analysis of a single side of each coin could be taken as representative of the surface of the coin as a whole.

It is particularly difficult with this type of analysis to identify surface platings unless they are obvious visually. The plating of coins is undertaken using noble metals such as gold or silver in order to

enhance the value of the coin. The majority of coins from Colchester had no visible surface platings. Only one barbarous coin (SF 40.86 1344) and one regular coin (SF 40.86 1186) were obviously plated and this was confirmed by analysis. It is possible that other techniques such as pickling were carried out on these coins which would have altered the composition of the coin surfaces, but there is no definite evidence of this from the analyses.

There were a number of methods of surface treatments which could have been applied to the coins, though it is often difficult to be certain whether any analytically distinct surface was originally intended or whether it is the result of 'selective chemical corrosive and surface enrichment processes' which have taken place since the object was buried (Cope 1972, 261). The coin surface treatments known to have been used in the Roman period include plating, where a copper-alloy core was surrounded with sheet-metal silver, silver washing, where, after striking, the coins were covered with a thin applied wash of silver, and blanching, where low-purity silver coins were boiled in a citrus fruit acid or vinegar which caused the leaching of copper from the alloy on the surface giving a whiter (more silvery) appearance (*ibid*).

Three of the Angel Yard barbarous radiates (SF 40.86 1188, 1344, 1372) were analysed, after cleaning the edge of the coin down to bright metal, using a Link Systems AN10000 energy-dispersive X-ray analyser attached to a scanning electron microscope (this work was carried out by Dr J G McDonnell in the AML). It was hoped that this would show any differences in composition between the coin surface and core which might indicate the presence of surface platings or other surface treatments.

Results

Interpretation of Tables 4 and 7. The results of the X-ray fluorescence analysis of the barbarous radiates from Colchester are given in Table 4, and of the regular radiates in Table 7. XRF peak heights were recorded for the following lines in the spectrum: Cu K_α, Cu K_β, Zn K_α, Pb L_α, Ag K_α, and Sn K_α. It was assumed that the copper contents of the coins were approximately constant and the figures given in the table are therefore ratios to copper which were calculated as follows:

$$\begin{aligned}\text{zinc} &= (\text{Zn K}_{\alpha} / \text{Cu K}_{\beta}) \times 100 \\ \text{lead} &= (\text{Pb L}_{\alpha} / \text{Cu K}_{\beta}) \times 100 \\ \text{silver} &= (\text{Ag K}_{\alpha} / \text{Cu K}_{\alpha}) \times 1000 \\ \text{tin} &= (\text{Sn K}_{\alpha} / \text{Cu K}_{\alpha}) \times 1000\end{aligned}$$

The peak heights for each element cannot be directly compared between elements as the height bears little relation to the proportion of that element present. Different elements are excited with varying efficiencies by the primary X-rays, eg tin is excited far less than zinc so the peak height will be a lot lower even when the amounts involved are similar. The use of ratios is an attempt to make the data more meaningfully comparable so that it is possible to roughly compare the proportion of each element present. This is achieved by using copper, which is assumed to be present at about the same level in each analysis, as an internal standard and by using a different multiplication factor for the lower energy elements (zinc and lead) to that for the higher energy elements (silver and tin).

Barbarous radiates (Tables 2-4)

Table 3 Average element ratios for each empire group for Angel Yard and Culver Street barbarous radiates, Colchester. Ag, silver; Pb, lead; Sn, tin; Zn, zinc.

	Zn	Pb	Ag	Sn
Angel Yard				
Central Empire	16	115	4	13
Gallic Empire	18	48	2	6
Culver Street				
Central Empire	6	91	4	10
Gallic Empire	21	43	1	4

EXCAVATIONS AT ANGEL YARD, COLCHESTER

Table 4 Analytical results for barbarous radiates from Angel Yard and Culver Street, Colchester. Where both sides of the coins were analysed but obverse and reverse not noted the two readings are referred to as 'a' and 'b'. Ag. silver; g. gramme; Pb. lead; SF. small find number; Sn. tin; Zn. zinc.

Emperor	SF no		Zn	Pb	Ag	Sn	Weight (g)
Angel Yard							
Central Empire							
Gallienus	645		5	33	8	8	2.14
Gallienus	1045		49	65	6	11	2.07
Gallienus	1165		5	12	—	—	0.42
Gallienus	1188		4	8	29	4	3.63
Gallienus	1225		4	83	2	11	2.65
Gallienus	1264		6	56	6	11	2.64
Claudius II	1052		5	139	5	9	2.39
Claudius II	1224	obverse	6	94	6	20	2.03
		reverse	5	94	4	16	
Claudius II	1239		103	97	—	12	1.71
Divo Claudio	1109		18	271	—	21	2.15
Divo Claudio	1137		8	83	—	17	1.34
Divo Claudio	1141	a	20	7	4	12	0.37
		b	7	3	—	2	
Divo Claudio	1189		39	366	2	32	2.72
Divo Claudio	1191		16	158	—	20	1.74
Divo Claudio	1211		12	135	—	10	1.85
Divo Claudio	1243		3	97	11	8	2.53
Divo Claudio	1246		49	53	—	8	2.11
Divo Claudio	1254		30	101	—	16	1.30
Divo Claudio	1279		3	24	—	14	2.65
Divo Claudio	1330		5	88	—	13	1.89
Divo Claudio	1416	a	6	355	—	23	2.22
		b	9	315	5	25	
Divo Claudio	1420		4	114	—	15	2.39
Divo Claudio	1425		5	29	8	7	1.78
Gallic Empire							
Victorinus	667		7	34	8	4	0.69
Victorinus	672		3	4	3	—	1.54
Victorinus	843	obverse	7	12	6	4	2.39
		reverse	8	15	7	6	
Victorinus	920	obverse	7	124	—	5	2.42
		reverse	7	192	—	8	
Victorinus	1021	obverse	4	13	4	—	2.45
		reverse	4	16	7	—	
Victorinus	1187		11	22	4	6	3.62
Victorinus	1210		48	28	—	14	1.09
Victorinus	1212		79	339	2	45	1.69
Victorinus	1340	obverse	65	81	—	13	2.00
		reverse	71	84	—	15	
Victorinus	1342	obverse	4	25	5	—	2.48
		reverse	3	27	5	—	
Victorinus	1372		3	7	10	—	0.57
Victorinus	1380		4	43	2	3	2.48
Victorinus	1432		3	3	—	—	1.70
Victorinus	1443	a	6	26	2	5	0.51c
		b	6	23	—	6	
Victorinus	1468	obverse	3	2	—	—	1.49
		reverse	3	2	—	—	
Tetricus I	35		8	41	2	6	.93
Tetricus I	522		4	4	6	—	1.02
Tetricus I	669		5	21	3	—	1.60
Tetricus I	771		103	34	—	6	2.32
Tetricus I	797	obverse	4	37	—	2	2.38
		reverse	3	46	—	2	
Tetricus I	852		15	529	2	43	0.26
Tetricus I	874		3	30	2	—	2.50
Tetricus I	905		29	38	—	3	1.58

Emperor	SF no		Zn	Pb	Ag	Sn	Weight (g)
Tetricus I	1018		4	18	-	-	2.15
Tetricus I	1024		52	34	-	3	1.59
Tetricus I	1030		4	26	-	-	1.47
Tetricus I	1046		13	92	-	13	1.52
Tetricus I	1144		13	10	-	-	1.41
Tetricus I	1171		32	88	-	20	1.25
Tetricus I	1214	obverse	6	47	-	9	2.67
		reverse	5	75	-	9	
Tetricus I	1215	obverse	31	22	-	4	.85
		reverse	27	22	-	4	
Tetricus I	1219	obverse	5	14	-	7	1.97
		reverse	3	14	-	6	
Tetricus I	1221		5	77	-	11	2.72
Tetricus I	1232		4	12	3	-	2.10
Tetricus I	1234		4	56	4	-	2.59
Tetricus I	1244		4	7	2	-	3.18
Tetricus I	1247	obverse	89	60	-	16	1.79
		reverse	93	63	-	15	
Tetricus I	1253		4	6	2	-	2.81
Tetricus I	1262		3	4	-	-	0.91
Tetricus I	1272		8	142	4	6	2.24
Tetricus I	1345		5	-	-	6	0.69
Tetricus I	1364	obverse	12	40	-	7	2.27
		reverse	13	38	-	8	
Tetricus I	1383		4	5	-	-	2.68
Tetricus I	1407		9	23	-	3	2.43
Tetricus I	1428		37	150	-	27	1.21
Tetricus I	1434	4	4	2	-	1.83	
Tetricus I	1435		63	-	-	-	1.48
Tetricus I	1438	4	8	4	2	0.64	
Tetricus I	1454		48	312	14	25	1.50
Tetricus I	1500		27	12	-	3	1.58
Tetricus I	1513	3	6	3	2	2.35	
Tetricus I	1621	obverse	4	24	-	9	2.25
		reverse	3	17	-	9	
Tetricus I/II	729		4	7	2	-	1.94
Tetricus I/II	1204		3	12	4	-	0.45
Tetricus II	175		4	5	2	-	2.60
Tetricus II	665		4	8	2	-	1.68
Tetricus II	1025		27	191	9	9	0.43
Tetricus II	1048		70	5	-	-	0.71
Tetricus II	128		3	18	-	-	1.41
Tetricus II	1129		4	29	-	-	2.44
Tetricus II	1145		6	3	-	4	1.92
Tetricus II	1148	5	22	-	14	1.82	
Tetricus II	1151		93	5	-	-	0.97
Tetricus II	1213	obverse	23	4	-	-	2.32
		reverse	27	5	-	-	
Tetricus II	1223		21	50	-	4	3.02
Tetricus II	1317		5	26	3	-	1.79
Tetricus II	1411		3	18	2	-	1.84
Tetricus II	1418		16	115	5	8	2.83
Empire/emperor unidentified							
-	169		4	68	-	5	1.69
-	228		46	116	5	15	0.58
-	370		4	-	-	20	2.52
-	575	a	32	22	-	22	0.63
		b	40	21	-	21	
-	748		5	7	-	11	1.59
-	767		8	114	-	15	1.02
-	795		37	4	-	-	1.11
-	798	a	37	-	-	8	1.21
		b	30	3	-	7	
-	840	a	57	163	2	28	0.57
		b	71	163	-	33	
-	925		21	48	-	7	0.97
-	926		59	-	-	-	1.54

Emperor	SF no	Zn	Pb	Ag	Sn	Weight (g)	
-	929	4	7	-	-	0.43	
-	1005	5	146	-	34	0.65	
-	1009	23	15	-	2	2.50	
-	1019	4	-	-	-	1.85	
-	1034	9	202	-	55	0.72	
-	1113	7	496	4	38	1.19	
-	1114	obverse	9	64	4	2	1.06
		reverse	11	74	5	4	
-	1115	a	4	33	4	-	0.58
		b	4	27	4	-	
-	1125	a	9	3	-	13	0.63
		b	10	3	-	10	
-	1126	a	30	91	10	13	0.29
		b	39	114	8	14	
-	1152		3	28	3	-	1.75
-	1174	a	5	5	3	-	0.52
		b	4	4	6	-	
-	1195		14	11	-	-	0.23
-	1199		6	4	2	2	0.40
-	1222		4	16	-	9	0.71
-	1281		6	13	-	-	0.57
-	1299		10	44	-	17	1.01
-	1332	a	4	3	11	-	0.65
		b		4	11	21	-
-	1341	obverse	7	112	-	12	1.75
		reverse	5	110	-	2	
-	1344		5	18	10	5	1.02
-	1358		9	234	3	11	0.54
-	1386		19	241	-	39	1.34
-	1440		10	15	-	12	0.55
-	1442	a	4	-	15	4	0.49
		b	4	-	23	4	
-	1444	a	16	49	5	9	0.39
		b	13	36	2	4	
-	1502		72	-	-	-	1.16

Culver Street

Central Empire

Gallienus	3021	3	3	17	5	1.91
Claudius II	2746	4	14	-	6	2.23
Divo Claudio	3029	4	8	-	4	1.97
Divo Claudio	3079	13	299	4	19	0.49
Divo Claudio	4140	5	129	-	15	2.77

Gallic Empire

Victorinus	2738	6	36	3	2	0.53
Victorinus	3214	60	113	-	7	2.81
Victorinus	3605	42	33	-	4	1.31
Victorinus	3751	82	151	3	16	2.66
Tetricus I	2734	5	3	-	-	1.37
Tetricus I	2747	4	6	3	-	0.98
Tetricus I	2751	5	139	-	6	2.62
Tetricus I	2816	3	13	3	-	2.24
Tetricus I	2867	9	25	-	2	1.78
Tetricus I	2926	26	11	-	2	2.43
Tetricus I	2968	36	57	-	6	1.55
Tetricus I	3002	19	13	-	3	2.17
Tetricus I	3022	3	13	-	-	2.28
Tetricus I	3048	27	2	-	7	1.00
Tetricus I	3059	3	9	2	-	1.62
Tetricus I	3104	4	10	2	-	1.57
Tetricus I	3106	12	19	-	4	1.04
Tetricus I	3129	107	12	-	5	1.50
Tetricus I	3142	4	36	-	5	1.47
Tetricus I	3206	4	287	-	9	2.36
Tetricus I	3270	8	13	-	6	3.59

Emperor	SF no	Zn	Pb	Ag	Sn	Weight (g)
Tetricus II	2880	37	48	-	3	0.97
Tetricus II	3278	18	8	-	6	1.67
Tetricus II	3279	5	13	4	-	2.05
Probus	3014	4	8	2	-	0.67

Empire/emperor unidentified

-	2754	4	4	-	2	2.35
-	2755	4	64	10	6	0.65
-	2760	4	3	2	-	1.41
-	2856	4	20	-	14	0.85
-	2874	5	62	-	11	2.04
-	2965	4	-	18	-	0.73
-	2984	15	37	-	4	0.51
-	3030	11	32	-	5	1.76
-	3126	9	15	-	6	1.22
-	3156	4	2	-	14	1.71
-	3191	12	8	-	2	2.13
-	3213	33	33	-	7	2.29
-	4143	4	17	-	8	0.53
-	4308	40	3	-	-	.56

A number of different groups could be identified within the coin compositions. However, there was no compositional distinction between the coins from the two Colchester sites, with both sites producing coins which fitted into each of the identified compositional groups. Some of the coins from Angel Yard were part of a dispersed hoard but again there was a wide variety of compositions within these coins which meant they could not be distinguished compositionally from the other coins from the site.

A significant proportion of the coins could be linked with a specific emperor associated either with the Central Empire or the break-away Gallic Empire (Table 2). The majority of the identifiable coins were copied from the Gallic Empire types, particularly those of the Tetrici.

There seem to be some differences in composition between the coins of the two empires, though there is not a distinct pattern (Tables 3-4). The coins from the Central Empire in general contain higher levels of lead and tin, the two elements being highly correlated, which would suggest that they were added to the metal melt together. However, there is a great deal of variation in the composition of coins in each empire group (and also within each emperor group) which makes any more patterns in the data hard to detect.

There is also a group of coins which has a much higher zinc content, and these coins rarely have a detectable level of silver. However, they are not distinguishable by empire or emperor type. These compositions may be due to the use of 1st- and 2nd-century dupondii coins which were usually made of brass (a copper-zinc alloy) and which could have been remelted and used in the production of barbarous radiates (J A Davies pers comm).

Some of the coins had significant levels of silver detectable and three of these coins were examined by the X-ray analyser attached to the scanning electron microscope in an attempt to identify whether the silver was a surface plating or whether it was contained in the bulk metal. In the case of two coins (SF 40.86 1188, 1372) there was definite evidence that the silver was contained in the bulk metal, and there was no evidence of any surface plating. The other coin (SF 40.86 1344) was more problematic in that the analysis showed a lead/tin rich surface layer but no silver in the surface layer or in the core. It is possible that the silver was very localised and therefore not included in the small area analysed by the SEM, and this would be likely in cases where a coin was worn and a surface layer of silver would only remain in depressions in the coin surface and not necessarily the edges. There appeared to be no pattern of the coins containing significant silver levels relating to a specific empire or emperor(s).

Very few comparable analyses of barbarous radiates are known and it is obvious that a greater number of analyses from a wider group of sites will be needed before any clear patterns are likely to

EXCAVATIONS AT ANGEL YARD, COLCHESTER

emerge, though the large number of coins analysed here may indicate that there is no clear pattern to find. An attempt to link the analysis of the coins with the coin weight was also unsuccessful.

Regular radiates (Tables 5-7)

A selection of radiates from Angel Yard were chosen for analysis from both the Central and Gallic Empires. The coins chosen could all be identified with specific emperors (Table 5).

Table 5 Number of regular coins analysed divided by empire and emperor, Angel Yard, Colchester.

Gallic Empire		Central Empire	
Postumus	3	Gallienus	8
Victorinus	9	Claudius II	10
Tetricus I	9	Divo Claudio	3
Tetricus II	4		
Totals	25		21

Table 6 Average element ratios for each empire and emperor group of regular radiates, Angel Yard, Colchester. Ag..silver; Pb..lead; Sn..tin; Zn..zinc.

	Zn	Pb	Ag	Sn
<i>Central Empire</i>				
Gallienus	5.5	56.9	17.1	10.6
Claudius II	6.7	69.8	8.1	13.7
Divo Claudio	6.0	79.3	8.7	12.0
Average	6.1	68.7	11.3	12.1
<i>Gallic Empire</i>				
Postumus	3.3	3.0	61.3	2.3
Victorinus	3.8	19.6	5.1	0.0
Tetricus I	3.8	14.0	3.3	0.0
Tetricus II	3.8	14.0	2.0	0.3
Average (excluding Postumus)	3.8	16.3	3.8	0.0

Table 7 Analytical results for regular radiates, Angel Yard, Colchester. Ag..silver; Pb..lead; SF..small find number; Sn..tin; Zn..zinc.

Emperor	SF no	Zn	Pb	Ag	Sn
<i>Central Empire</i>					
Gallienus	983	5	152	9	8
Gallienus	1051	3	6	12	4
Gallienus	1086	8	5	80	8
Gallienus	1139	11	61	6	15
Gallienus	1167	4	107	12	14
Gallienus	1352	4	50	5	10
Gallienus	1417	4	21	9	8
Gallienus	1437	5	53	4	18
Claudius II	1227	4	30	11	7
Claudius II	736	6	116	18	24
Claudius II	1008	6	20	5	6
Claudius II	1044	8	193	-	35
Claudius II	1050	11	79	-	13
Claudius II	1106	5	39	9	8
Claudius II	1140	10	80	3	12
Claudius II	1363	9	70	14	17
Claudius II	1379	4	33	15	4
Claudius II	1408	4	38	6	11
Divo Claudio	903	5	46	1	4
Divo Claudio	1235	8	111	13	19
Divo Claudio	1424	5	81	12	13

Emperor	SF no	Zn	Pb	Ag	Sn
<i>Gallic Empire</i>					
Postumus	567	3	4	66	3
Postumus	1228	4	1	64	2
Postumus	1360	3	4	54	2
Victorinus	974	5	24	9	-
Victorinus	1032	4	20	8	-
Victorinus	1107	5	12	3	-
Victorinus	1147	4	5	3	-
Victorinus	1186 obverse	6	26	3	-
	reverse	8	39	104	4
Victorinus	1200	4	13	3	-
Victorinus	1242	3	55	7	-
Victorinus	1414	3	18	6	-
Victorinus	1508	-	3	4	-
Tetricus I	745	6	21	4	-
Tetricus I	1150	4	8	1	-
Tetricus I	1185	4	16	4	-
Tetricus I	1226	4	19	2	-
Tetricus I	1233	3	9	3	-
Tetricus I	1238	3	24	5	-
Tetricus I	1240	3	7	3	-
Tetricus I	1241	4	15	5	-
Tetricus I	1413	3	7	3	-
Tetricus II	1110	4	3	1	-
Tetricus II	1143	4	22	2	-
Tetricus II	1201	3	6	3	-
Tetricus II	1252	4	25	2	1

There are clear differences in composition between the coins of the two empires (Tables 6-7), particularly in the tin content which is not detectable in most of the Gallic Empire coins. The exception are the coins of Postumus which have a high silver content and also some tin which is probably an impurity in the silver. The coins from the Central Empire in general contain much higher levels of lead and tin, the two elements being highly correlated, which would suggest that they were added to the metal melt together. The analyses suggest that both tin and lead are present in the Central Empire coins at levels above 5 per cent. However, there is some variation in the composition of coins in each empire group (and also within each emperor group) which makes any further interpretation of the data difficult.

The three coins of Postumus contained higher levels of silver than the other coins of both empires. It is known from earlier analyses that the coins of Postumus contained over 15 per cent silver until about AD 268 when there was a debasement to about 7-8 per cent silver (Besley & Bland 1983, 58). Imitations of the radiates of Postumus contain much lower silver levels. The three Postumus radiates analysed here contain high silver levels, which indicates that they date from before the debasement of 268. This is supported by their numismatic identifications.

Comparison of barbarous and regular radiate analyses

Comparison of the analyses of the regular radiates with those of irregular copies from the same site (p66-9) shows a similar but not identical pattern. The barbarous radiates of the Central Empire contain similarly high levels of lead and tin in comparison to those of the Gallic Empire, but the barbarous radiates have generally higher lead levels than the regular coins. The barbarous radiates of the Gallic Empire have lower lead and tin levels, but these metals are present in the majority of coins, whereas tin is absent in nearly all the regular radiates.

All the regular radiates have very low zinc levels, in contrast to the barbarous versions which generally had higher levels and some of which seemed to have been made from brass.

Conclusions

The analyses of the regular radiates found at Angel Yard suggest that the two empire groups can be distinguished compositionally. The radiates seem to be made from fairly pure alloys with high levels of

lead and tin in the Central Empire coins distinguishing them from the Gallic Empire coins. The barbarous copies show the same broad pattern but had much higher 'background' levels of other metals, such as zinc. This may suggest that the regular radiates were produced using fresh metal sources, whereas the irregular copies were made with a less pure alloy which may have contained scrap metal deliberately added to the alloy.

There was no evidence for the coins of specific emperors having different compositions except for the pre-268 radiates of Postumus which had much higher silver levels. Previous analyses of coins of Postumus have found similar high silver levels.

The most stratigraphically significant coins

by J A Davies & N Crummy

Building 171, Period 1

Occupation?, Room 3: Period 1e. AL243: Vitellius 69, Hadrian 119-21, Commodus 185.

?Demolition: Period 1f. AL238: illegible 275-402. AL239: barbarous radiate 270-84, illegible 275-402. AL245: illegible denarius 200-50.

Robber trench for Building 171: Period 2b. AF302: barbarous radiate 270-84.

Building 172, Period 1

Clay floor/make-up, Room 3: Period 1d or e. AL265: Diva Faustina 141-61.

Occupation, Room 1: Period 1e.

AL236: Marcus Aurelius 140-4, Caracalla 201-6.

Make-up, Room 2: Period 1e. AL261: barbarous radiate, 270-84.

?Demolition, Room 2: Period 1e. AL237: illegible irregular 275-364, illegible 1st-2nd century.

Destruction debris/dump: Period 1e or f. AL213: Faustina II 145-61, barbarous radiate 270-84.

?Votive pot, Room 1: Period 1e or f. AF308: Septimius Severus 198-210.

?Demolition, Room 3: Period 1f. AL256: Gallienus 260-8.

?Coin hoard/dark earth: Period 1f. AF313: Marcus Aurelius 173-4, Commodus 180-92, Gallienus 260-8 x 2, Salonina 260-8, Postumus 260, barbarous radiate x 23 270-84, Carausius 287-93 x 2, Urbs Roma 340-7, Constantinopolis 340-7, Helena 340-7, Constantine II 330-1, Constans 347-8, Constantius II 354-64 x 2, House of Constantine 347-8 x 2, 354-64, Magnentius 350-3, House of Theodosius 387-94, 388-402 x 2. AF317: Hadrian 117-38, Antoninus Pius 148-9, Caracalla 201-6, Severus Alexander 231-5, Gallienus 260-8, Postumus 259-68, Victorinus 268-70 x 4, Tetricus I 270-4 x 6, Claudius II 268-70 x 3, c 270 x 2, Aurelian 270-5, Severina 270-5, Tacitus 275-6, Probus 276-82 x 3, barbarous radiate 270-84 x 19, Carausius 287-93, Constans 340-7, House of Constantine 335-48.

Building 174, Periods 3-4

Occupation/dump, Room 3: Period 3a. BL30: Edward I 1272-1307.

Make-up, Room 3: Period 3c. BL15: John Milbank 1655.

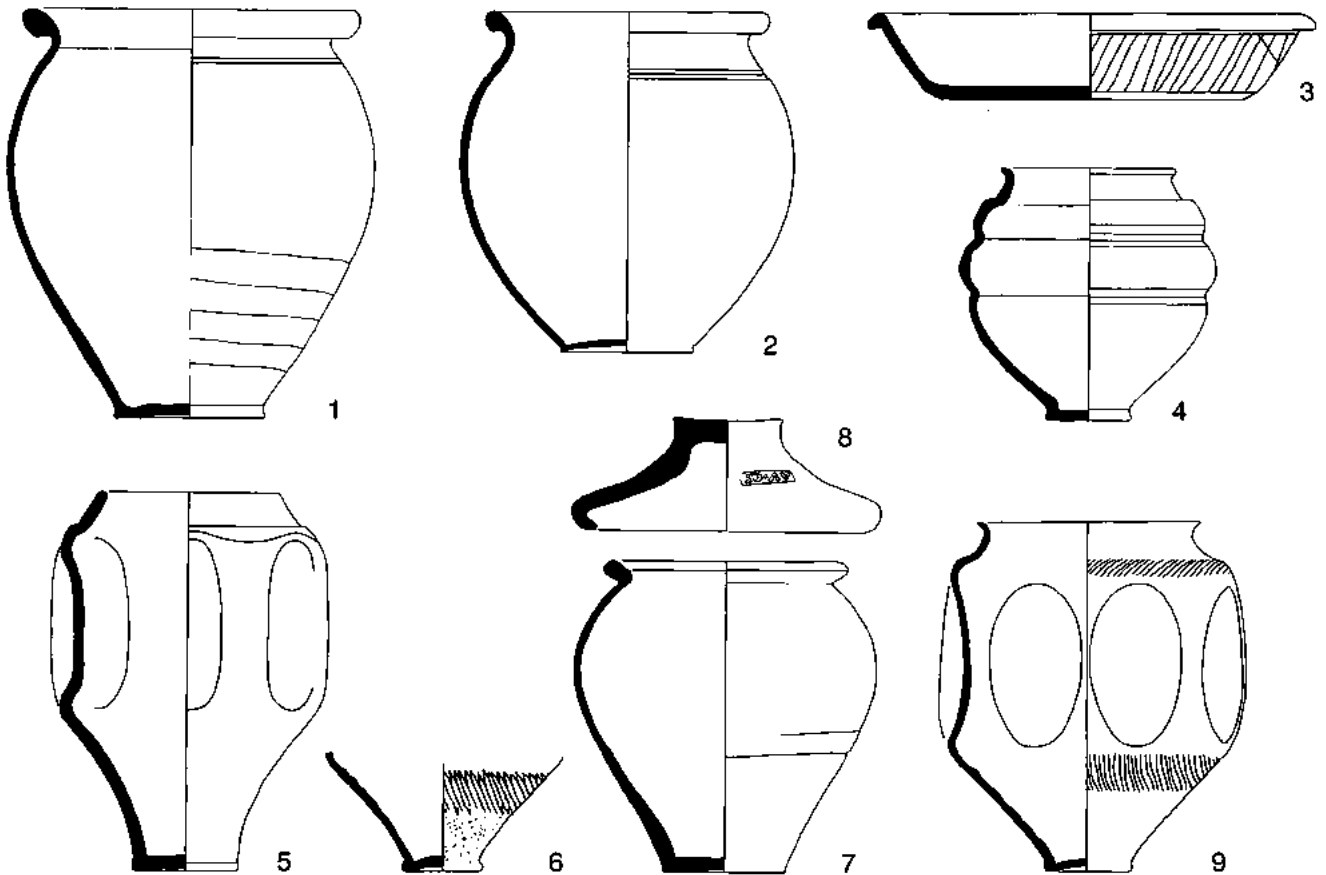


Fig. 29 Votive pots from Buildings 171 and 172, Period 1.

Rubble spread - demolition debris, Room 3: Period 4. BL9: Charles I 1634-6.

Construction trench, Room 4: Period 3c. BF43: Charles I 1625-49.

?Dump, Room 4: Period 3c. BL17: Charles I 1625-34, 1625-44, Charles II 1672-84.

Dump, Room 5: Period 3 or 4. AL282: Edward I 1272-1307, Charles I 1636-44.

Occupation, Room 6: Period 3. AL286: William III 1695-8.

Floor make-up, Room 6: Period 3. AL296: Elizabeth I 1561-82.

Make-up, Room 6: Period 3c or 4. AL8: illegible penny post-medieval.

Occupation build-up: Period 4. AL12: Abraham Voll c 1668.

Brick tank: Period 4. AF45: illegible halfpenny post 1860 x 2.

Dump: Period 4. AL275: Will Anger 1654, Thomas Renolds mid 17th century. AL284: Nathaniell Lawrence 1671-83.

Dump: Period 4a. AL18 Charles I 1636-44 x 3. AL19: impression 1614-44.

Building 175, Periods 3-4

Brick cellar: Period 4. AF19: William IV 1834.

Yard area

Cobbled yard surface: Period 3c. AL10: Elizabeth I 1561, Hans Krauwinkel 1580-1610, illegible mid 17th century x 2.

Title spread: Period 3c. AL22: Charles I 1634-6, William Ferris 1665.

Dump: Period 3c. AL45: medieval German jetton, Hans Krauwinkel 1580-1610, James I 1613-14.

Trample/occupation: Period 3c-4. AL11: James I/Charles I 1614-36, illegible mid 17th century.

Gravel surface: Period 4. AL198 illegible 1860 +.

Other contexts

?Votive pot: Period 1e or 1f. AF167: Marcus Aurelius 161-80.

Pit: Period 2b. AF364: Cnut 1018-24.

Pit: Period 3. AF119: Henry IV-VI 1399-1453.

The Roman pottery

from notes by R P Symonds

Some preliminary work on the Angel Yard Roman pottery (49 x 0.017 cu m boxes) has already been completed. It has been spot-dated by find number, and the material from the first phase of excavation (40.86) has been separated into the 37 fabrics defined in CAR 10 (typescript in CM), and quantified by weight, estimated vessel equivalents, and rough vessel count (site archive).

A little 1st-century pottery is present, but most post-dates the Flavian period, and it is the late Roman material which may prove to be of particular interest. The most important pieces are the votive pots from Buildings 171 and 172, discussed below by C J Going.

The votive pots from Buildings 171 and 172 (Fig 29) by C J Going

Inside the Angel Yard buildings were a number of features which contained pottery vessels, some intact, others crushed but almost certainly intact when deposited. While most of the vessels are not thought to have been foundation offerings, it is nevertheless probable that they contained (or accompanied) votive deposits, and are in general datable to the time when the buildings were in use. There are two exceptions, both in Room 1 in Building 172: the jar in AF390 was sealed by a hearth (AF383) which may be a primary feature and thus date to the construction phase; and the two vessels in AF391 which were inserted into the floor and may thus post-date the building.

The assemblage of seventeen vessels is composed for the most part of locally-made jars of the CAM 268 form (Hull 1958, fig 119)

and closely allied types, and there were also three beakers, probably also manufactured locally. Open forms consisted of a lid and two bead-rimmed dishes in BB2. Considered overall, none of the vessels need predate the Hadrianic-Antonine period, the two high-shouldered jars (AF310 and AF387) being perfectly unexceptional in strata of the Hadrianic-early Antonine period. The date of the latest deposit is harder to estimate. The folded beaker from AF391 (Fig 29, 5) is probably the latest vessel, datable to the mid-late 3rd century. However, the possibility of at least some of these vessels being antique when deposited should be borne in mind (cf grave deposits in the Butt Road cemeteries (CAR 9, 47-9)).

In the following catalogue the site find number, and, where appropriate, fabric, form, and individual vessel number (P) listed in the pottery archive prepared by R P Symonds are given in brackets at the end of each entry.

Building 171

Room 2

AF357 Necked reduced ware jar of CAM 268 type. (A1855; GX)

Room 4

AF210 Fig 29, 1. Reduced ware jar with an out-turned, slightly squared rim, standard for CAM 268A, but an inverted piriform body more characteristic of CAM 268B. Probably later 2nd to 3rd century. (A1176; GX 156; P4436)

AF398 Fig 29, 2. Oval bodied reduced ware CAM 268A jar with an undercut, rounded rim and two grooves on the upper body. Probably Antonine to 3rd century. Covered by the BB2 dish below. (A2218; GX 156; P4433)

Fig 29, 3. Dish in BB2 with a triangular rim, oblique burnish line decoration, and slight basal chamfer. Probably c. 130-70. Used to cover the jar above. (A2219; GB)

?Yard

AF279 Necked reduced ware jar of CAM 266 type. (A1425; GX)

Building 172

Room 1

AF390 Oval bodied reduced ware jar, of form CAM 268A. (A2120; GX)

AF308 Fig 29, 4. Jar with a short everted rim in a pale slightly micaceous grey ware. Burnished overall, including the base exterior. The body has two girth constrictions. Vessels with multiple cordons of this kind are uncommon, cf the similarly-decorated beakers forms CAM 397, 398 (Hull 1958, fig 123). The general shape of the vessel is reminiscent of form CAM 406, but the relationship is not close and the fabric suggests that the pot is not a local product. Probably 2nd century or later. Covered by the fragment of BB2 dish below. (A1605; WA 99; P4437)

Fragment of a large BB2 dish used to cover the jar above. (A1605; GB)

AF360 Wire-trimmed jar base in reduced ware. (A2063; GX)

AF366 Wire-trimmed jar base in reduced ware. (A1997; GX)

AF387 Undecorated high-shouldered jar with an undercut, slightly squared-off rim in a fine Romanising grey ware. (A2104; GX)

AF391 Fig 29, 5. Classic folded beaker of form CAM 411 (ibid) in reduced ware, with a large inturned plain rim, burnished to the top of the folds. Described as common in colour-coated and 'various' wares by Hull (ibid, 290). Probably mid-late 3rd century, and probably the latest of the vessels from the votive features. Covered by the beaker base below. (A2106; GB 156; P4432)

Fig 29, 6. Base and lower wall of a colour-coat roulette-decorated beaker, used to cover the beaker above. (A2106; CZ; P4434).

Room 2

AF310 Fig 29, 7. Undecorated high-shouldered jar in fine Romanising grey ware, with an everted, slightly cupped rim. Probably mid 2nd to mid 3rd century. Covered by the lid below. (A1633; GX 220; P4431)

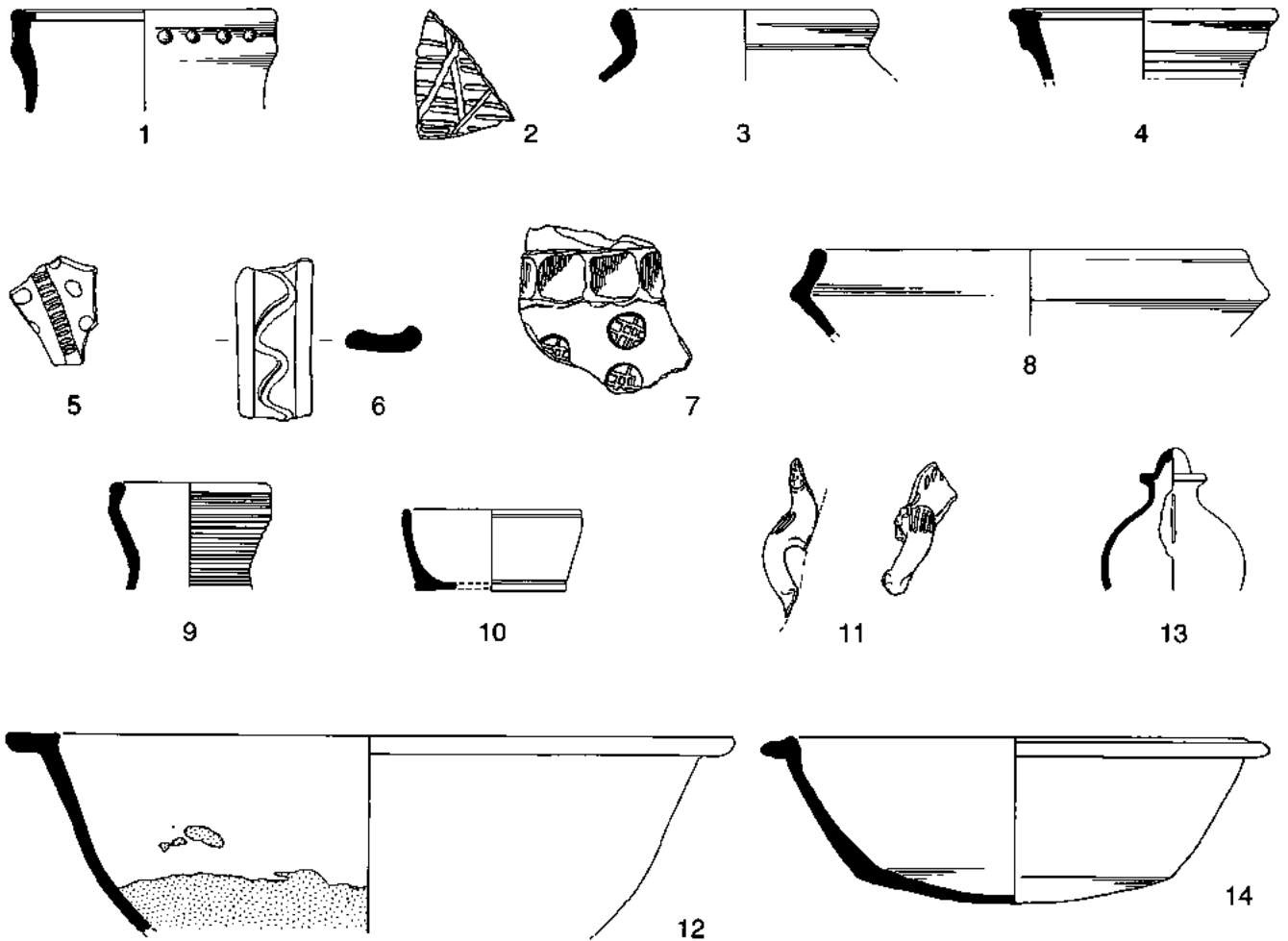


Fig. 30 Medieval and later pottery.

Fig 29, 8. Lid with a terminal grip, campanulate profile, and inturned plain rim in a coarse oxidised fabric, stamped AV.CE. Probably a local product, the form is a characteristic if rare one in Colchester, and the fabric sounds similar to the 'sandy ... red' ware of several found in Kiln 32 (Hull 1963, 172, fig 98, 15). For similar examples, see COLEMC 4012.20 (May 1930, pl 59, 285) and COLEMC 38.38, stamped AV.CF (Hull 1963, 172, footnote 1). Probably later 2nd century or possibly later. Used to cover the jar above. (A1625; CH 91; P4430)

AF361 Large fragments of a CAM 268 with a slightly hollowed rim. (A1879; GX).

North-west of Building 172

AF167 Fig 29, 9. Colour-coated beaker of form CAM 406 (id 1958, fig 123), where it is in grey ware, though many colour-coated examples are also known, eg the numerous examples from Kiln 24 (id 1963, 105). Probably late 2nd to early 3rd century. (A841/936; CZ)

The post-Roman pottery (Fig 30) from notes by John Cotter

The pottery from Site A is stored by features and layers in 30 wooden crates, that from Site B by find number in five cardboard boxes

(each 220 x 415 x 175 mm). The Site A material has been spot-dated by feature or layer, but not quantified in any way. The fabric numbers are those of the Essex typology (Cunningham & Drury 1985, 1-4) used in CAR 7. The Site B material has been spot-dated by find number.

Several good groups are present in the Site A assemblage, chiefly from pits. They range in date from the 12th or 13th century (Period 2b pits) to the 19th century (Period 4 brick ?cellar fill AF230). The groups not only express the different phases of occupation on the site, but in some cases illumine the ceramic chronology for the town for periods not adequately represented in CAR 7.

The most significant pit groups fall into three date ranges: from the 12th or the late 12th/early 13th century (c 1200), pits AF166, AF289, AF318, and AF327 (together with several interesting pieces from other Period 2b pits); AF72 and AF270 from the late 15th or early 16th century; and AF76 and AF88 from the late 16th century or c 1600.

Closer study of the material from AF76, a stone-lined pit in Building 175 (p53-6) would be particularly useful. Though most of the pottery falls within a date range of c 1575-1600, a closing date in the 1590s or c 1600 seems likely given the presence of a stoneware medallion dated 1585. Noteworthy sherds include fragments of three Martincamp flasks, one of which is the only example in white known from excavations in the town. Of particular importance is the pres-

ence of a number of Colchester ware (sandy orange ware; Fabric 21/21A) plain vessels, eg a handled pipkin and small jar, and, though there is a slight possibility that they may be residual, they are almost complete, suggesting that the fabric continued in production (in smaller numbers) until perhaps c 1575, if not later. This group may then be important in refining the end date of Colchester ware (*ibid*).

Some individual sherds, both stratified and unstratified, may also express the range of pottery present on the site, and may be important viewed against the background of the whole assemblage from the town.

The following examples illustrate the potential of individual pieces from the Angel Yard material. To complement the late Colchester ware from AF76, a Period 2b pit, AF276, contained a rare sherd of Fabric 21A in early 13th-century London-Rouen style. A flat base in a very coarse white fabric, probably Middle Saxon, only previously noted in the town as body sherds from Lion Walk Site A (*ibid*), came from the Period 4b construction trench for Building 175, AF29. The Period 2 dark earth contained a single rim sherd of Andennes ware (Fabric 17), the first rim in this fabric yet found in the town (from AL160); part of a large early medieval sandy ware (Fabric 13) jar with thumbled strips, the best profile yet of this particular type (from AL160); and several Fabric 13 wasters (from AL161). Two small Raeren stoneware (Fabric 45c) oil jars (cf Hurst et al 1986), rare in Britain and the only examples from Colchester, came from the Period 3b pit AF71. From AF285 came part of a unique Fabric 20 curfew, sooted internally, in a rare form, the rim probably wheel-made, the body handmade. About 80 fragments of a Fabric 21A louver were recovered from AL20, AL24, and AF119. Of 'waisted' form, it probably had three tiers, with a lower frieze and Gothic apertures similar to those on a louver from East Stockwell Street (CAR 7).

A very limited number of pieces from the Angel Yard have been drawn. Sherds from the pit groups given above, or those of particular interest, are illustrated in Fig 30 and listed below:

Fig 30, 1 AF211 Period 2b pit. Hedingham ware rim with red pellets (Fabric 22).

Fig 30, 2 AF221 Period 2b pit. Early medieval sandy ware sherd with heavily grooved decoration (Fabric 13).

Fig 30, 3 AF301 Period 2b pit. Early medieval sandy ware jar rim (Fabric 13).

Fig 30, 4-6 AF327 Period 2b pit. Hedingham Ware sherds (Fabric 22).

Fig 30, 7 AF364 Period 2b pit. Stamped Thetford-type ware sherd, probably from a Norfolk-Thetford storage jar, rather than Ipswich-Thetford (Fabric 9).

Fig 30, 8 AF278 Period 2b robber trench for Building 171. St Neots ware bowl (Fabric 10).

Fig 30, 9 AL121 Period 3a dump. Medieval sandy grey ware rilled jug (Fabric 20).

Fig 30, 10 AL178 Period 3a dump (subsidence) in Rooms 6/7 of Building 174. Colchester ware ?condiment bowl (Fabric 21).

Fig 30, 11 AL194 Period 3a gravel surface, ?Building 174. Part of a Scarborough ware knight jug (Fabric 24).

Fig 30, 12 AF50 Period 3b oven in Room 6 of Building 174. Late 14th-/ early 15th-century style Colchester ware pancheon (Fabric 21a).

Fig 30, 13 AF88 Period 3 brick-lined pit. Border ware money-box (Fabric 42).

Fig 30, 14 AF270 Period 3? pit. Colchester ware 'hammer-headed' bowl (Fabric 21a).

The Roman and post-Roman glass

by Nina Crummy

The glass is stored in five boxes (four x 0.017 cu m (Site A), one x 0.004 cu m (Site B), and one wooden crate, 0.04 cu m (Site A). The Site A assemblage is separated into general post-Roman material, ordered by find number apart from outside pieces (the crate), sherds from Roman contexts, and sherds from Period 2 dark earth/topsoil. No quantification has been attempted.

The majority of the pieces from Site A Roman and Period 2 dark earth/topsoil contexts are vessel glass, and pieces which would extend the Roman glass typology from Colchester (CAR 8) are present, eg the base of a prismatic bottle with swastika and ?palm branch decoration from AL161, Period 2 dark earth. Roman window glass was noted from Period 1e occupation in Room 3 of Building 172 (AL264), and Period 2 dark earth/topsoil (AL207).

Some of the post-Roman pits producing well-dated groups of pottery also contained vessel glass likely to be of similar value. For example, AF76, the Period 3b/c stone-lined pit in Building 175, the pottery in the lower fill of which dates to c 1575-1600, contained some exceptional pieces. Of particular note is a Venetian handled jug or beaker with bulbous body and flared mouth in colourless glass with applied lattice.

The small finds (Figs 31-36)

by Nina Crummy

The illustrated finds are catalogued below. (C) following a small find number indicates that the object has been conserved, (X) that it has been X-rayed. A catalogue of the unillustrated pieces from Site A is in the site archive. Roman pieces are ordered in the same way as CAR 2 and chapters 5 and 6 in CAR 6, and post-Roman in the same way as CAR 5, that is, for both periods the primary groupings are by function rather than material. The small quantity of material from Site B has been listed but not catalogued in detail.

Roman (Figs 31-32)

About 110 small finds either derived from a Roman context or could be attributed to the Roman period though found residual in later levels, particularly the dark earth/topsoil of Period 2. The functions represented by the assemblage are chiefly domestic in character, such as personal adornment and toilet, sewing, and household furniture and fittings. The absence of pieces of military equipment reflects the limited exploration of the early Roman levels on the site (p37), as does the paucity of items from the pre-Flavian and Flavian periods. Only a Nauheim derivative brooch (SF 40.86 1013), a Colchester BB brooch (SF 40.86 787), a sherd from a picture lamp of Lyon ware (SF 40.86 1703), and a fragment of a plain one-piece bone handle with a waisted end (SF 40.86 1080) are of positive 1st-century date.

The most noteworthy find is the enamelled copper-alloy stand (Fig 31, 5) discussed below, and the decorative wall veneers, though deriving from post-Roman levels, are surprisingly varied for such a small assemblage. Green porphyry, Cipollino marble, and other coloured marbles are present, as well as native Purbeck marble (eg Fig 32, 1).

Catalogue

Fig 31, 1 SF 40.86 445(C), A589 L50. Dump. Period 3. A (lead) gunmetal plate brooch of M R Hull's Type 231 (typescript in the CM). One corner lug has broken off, as has most of the pin. All that remains of the pin projects forward from the moulded and pierced terminal. The catchplate terminal is also moulded. The central enamelled panel contains three dots set in a row. The enamel is decayed and the original colours cannot be identified, but a similar brooch has three dots of red set in a green field (Harratt 1985, fig 64, 554A). Length 35 mm.

Fig 31, 2 SF 40.86 1027(C), A1521 L205. Dark earth/topsoil. Period 2. A bell-shaped copper-alloy stud of Allason-Jones's Type 1 (1985, fig 2), but with curved rather than straight sides to the head. Only a short length of the iron shaft of the stud survives. The concave head is partly filled with iron corrosion products. The central dimpled cone projects slightly above the rim. Diameter 36 mm, length 24 mm.

Fig 31, 3 SF 40.86 93(C), A105 L2. Dump/make-up. Period 4. A copper-alloy stud also similar to bell-shaped studs of Allason-Jones's Type 1, though short for the type. The shaft has a rounded pierced end. The head lacks the 'waist' and 'skirt' of bell-shaped studs, and the countersunk head, though obscured by corrosion, seems to lack the obvious central cone. Instead, it appears to be have

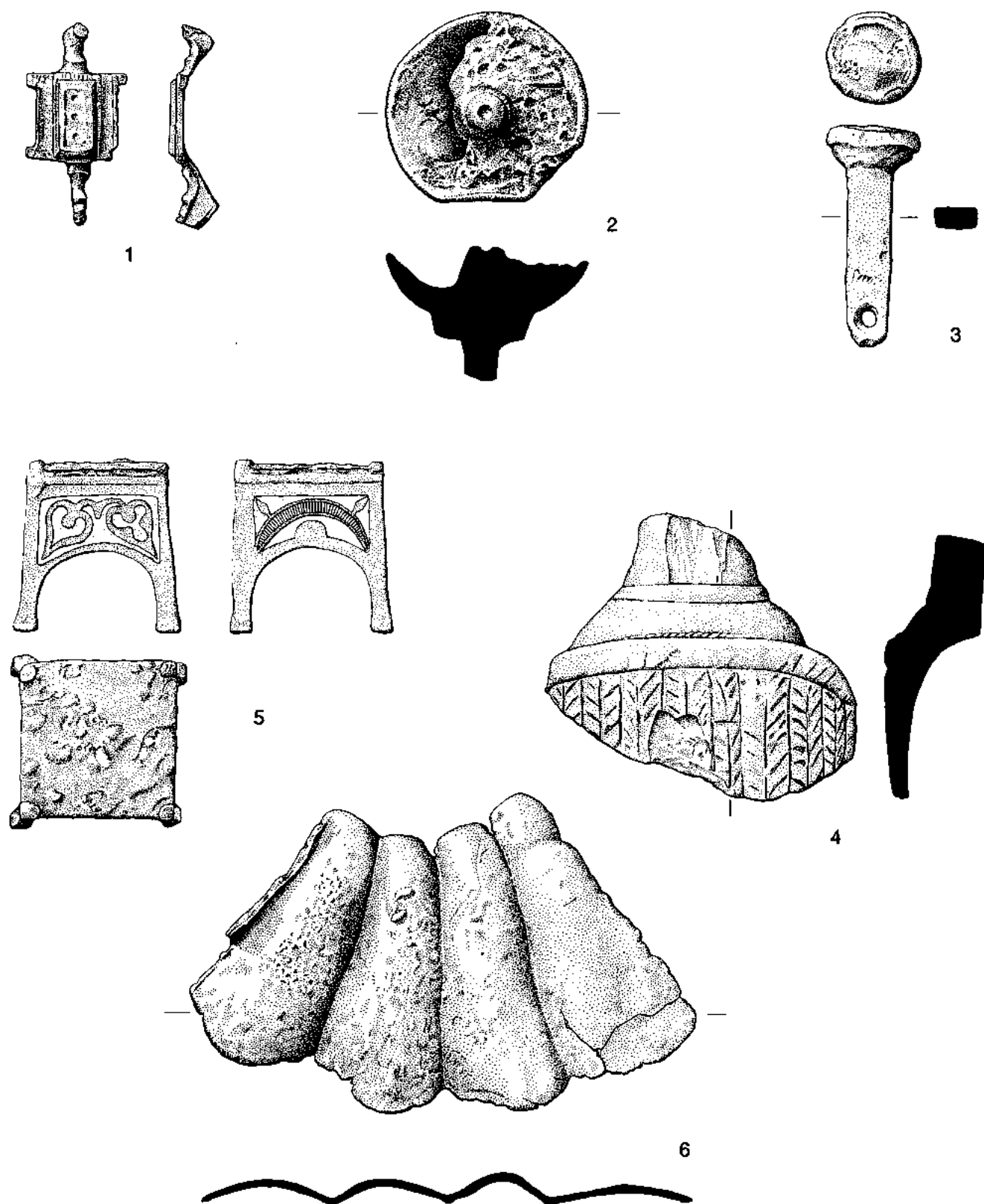


Fig. 31 Roman small finds, Angel Yard, Colchester.
1-3, 5-6...copper-alloy; 4...pipeclay.

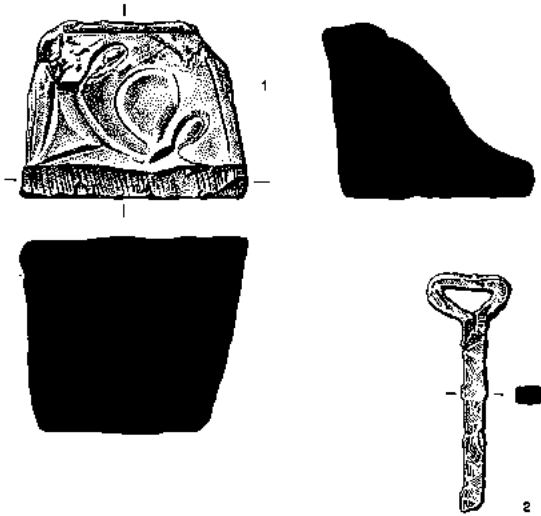


Fig. 32 Roman small finds, Angel Yard, Colchester.
1...Purbeck marble; 2...iron.

a large central raised area. Diameter 17 mm, length 39mm.

Fig 32, 1 SF 40.86 971, A1156 L160. Dark earth. Period 2. Purbeck marble. Plinth or cornice. The face of the piece is carved with a foliate design, partly obscured by iron pan. Maximum length 119 mm, height 94 mm, width 104 mm.

Fig 32, 2 SF 40.86 1613(X), A1570 L205. Dark earth/topsoil. Period 2. An iron loop-headed bar, similar to examples from Culver Street and the Gilbert School which have perforated shafts (CAR 6, fig 5.45, 1606, fig 6.29, 331). Length approximately 122mm.

Fig 31, 4 SF 40.86 1521, A2224 L205. Dark earth/topsoil. Period 2. A fragment of a pipeclay figurine showing a goddess seated in a basket chair. Only the back of the shoulders and neck of the seated figure survive. A moulded line shows the neck edge of a garment. The chair is well made, with parallel rows of herringbone marking the basket-work, and a line of angled cuts showing the bound frame. The identification of the goddess is uncertain, both Minerva and the Mother goddess are shown seated in a basket chair (*ibid*, fig 5.60; Green 1976, pl 15, a). Height 49mm, width 55mm.

Fig 31, 5 SF 40.86 1183(C), A1601 F307. Scoop. Period 2b. A copper-alloy miniature stand with solid top and splayed legs. Each of the four sides carries a panel with a design executed in champlevé enamel, the panels on opposing sides being the same. Two show a pair of heart-shaped leaves linked at the stems, and two show a crescent motif placed with the points down. The original colour(s) of the enamel are now lost. The main part of the stand was cast in one piece, leaving a rectangular hole in the top. Each corner of the main piece rises to a knobbed projection. A rectangle of sheet metal was trimmed at the corners to fit tightly within the knobs and cover the hole. In some places the action of corrosion has forced the top up and away from its resting place on the sides of the stand. Height 31mm, top 27 by 26 mm, maximum dimensions at the feet 29 by 31mm.

From the northern frontier Green lists six stands (1978, 33, pl 126-31) and from the south twelve, many of them associated with shrines (1976, 43, 260). No close dating is offered, though those from Brigstock (Northamptonshire) and Caerwent (Gwent) are from religious sites dated from the mid 3rd to the 4th century.

Miniature stands usually have a large circular hole in the centre of the top, and are often of two tiers, with a hole in the top piece of each tier. The purpose of the hole(s) is uncertain. One of the Silchester stands may have been found with a model pot resting in the hole (*ibid*, 43). That a central hole was not essential to the use of the object is demonstrated by the deliberate covering of the rectan-

gular hole on the Angel Yard example.

Fig 31, 6 SF 40.86 898(C), 1300 L167. Rubble spread. Period 2. A fragment of a copper-alloy object with four convex flutes, or petal-like elements, rising from a hollow centre. Maximum width 92mm.

Post-Roman (Figs 33-36)

The post-Roman small finds are more numerous than the Roman, but are also personal and domestic in character, the exception being a large Purbeck marble mortar (Fig 34, 2) from Room 6 in Building 174, which suggests food preparation on a commercial rather than domestic scale.

None of the finds were typical of the late Saxon or very early medieval period, but some may date to the 13th century, and the late medieval or post-medieval periods are well represented.

Of the 81 Type 1 small copper-alloy pins (CAR 5, 7-8) catalogued, only one comes from a Period 2 context, robber trench AF303 of Building 171, and seven from Period 3a contexts, and of the 180 Type 2 pins one is from AL205, Period 2 dark earth/topsoil, one from Period 2b pit AF211, and none from definite Period 3a contexts. The pin from AL205 may be intrusive, as the layer also contained a mother-of-pearl button of 19th- or 20th-century date. Lace-ends were also numerous at Angel Yard. Twenty-one Type 1 lace-ends, dated c 1375-c 1550/75 (*ibid*, 13), are catalogued, though none derive from a context positively pre-dating c 1500, and 35 of Type 2, dated c 1550/75-c 1700+ (*ibid*). A further ten cannot be assigned to a type.

A range of buckles and other belt- or strap-fittings from the site is illustrated in Fig 33, 5-16. Some date to late in Period 2b, or to Period 3a. The low domed thimble (Fig 33, 17) is probably late 14th- or early 15th-century, while the ring thimble (Fig 33, 19) is unlikely to predate c 1450 (Holmes 1988, 1). The other six thimbles are post-medieval. Though ring thimbles were used for heavy sewing, and in particular by tailors, the fairly high proportion of thimbles from the site as a whole cannot be taken to indicate commercial activity, as they cover a wide date range.

A number of pieces from broken lava quernstones and Purbeck marble mortars were recovered from post-Roman contexts. Some, especially those from Period 2 levels, may be Roman. However, a sandstone bowl fragment and eight quernstone fragments from Room 6 in Building 174 can almost certainly be associated with the Period 3 ovens in Room 6.

Catalogue

Fig 33, 1 SF 40.86 696, A1184 F199. Pit. Period 3a. A small copper-alloy pin of Type 1 (CAR 5, 7-8). Length 80 mm. The small head of this pin, formed by one twist of narrow wire around the top of the long wire shaft, is clearly no more than a rudimentary 'stop-ridge', and as such illustrates the very functional nature of these small copper-alloy pins.

Fig 33, 2 SF 40.86 270, A314. Unstratified. ?Period 3b. A small copper-alloy pin of miscellaneous type. Length 48 mm. It has a polygonal head, formed in similar fashion to those of Type 4 (*ibid*, 8) which has a globular head made of D-sectioned wire with the ends butted together. On this pin a butt joint is clearly visible on the flat underside of the head, on the side, and on the outer part of the top, but cannot be distinguished right up to the apex. The multifaceted nature of the sides and top of the head suggest that it was trimmed to this shape after it was fixed to the shaft. Type 4 pins are dated by Caple to the second half of the 16th century (1985, 48, Type K), and a similar date may be appropriate here.

Fig 33, 3 SF 40.86 799(C), A861 F30. Brick arch: Building 175. Period 4. A bent copper-alloy strip set with beads of black glass, some of which are missing. The beads are globular, with a hemispherical lower half and a faceted upper half. They have been only partly perforated. The metal strip is formed of a series of circles with tiny perforations at the centre. The beads have been fixed to the strip by tiny lengths of wire set in these perforations. The wires have not been cut off flush with the underside of the strip, but still project beyond it. This piece must have been attached to another object, per-

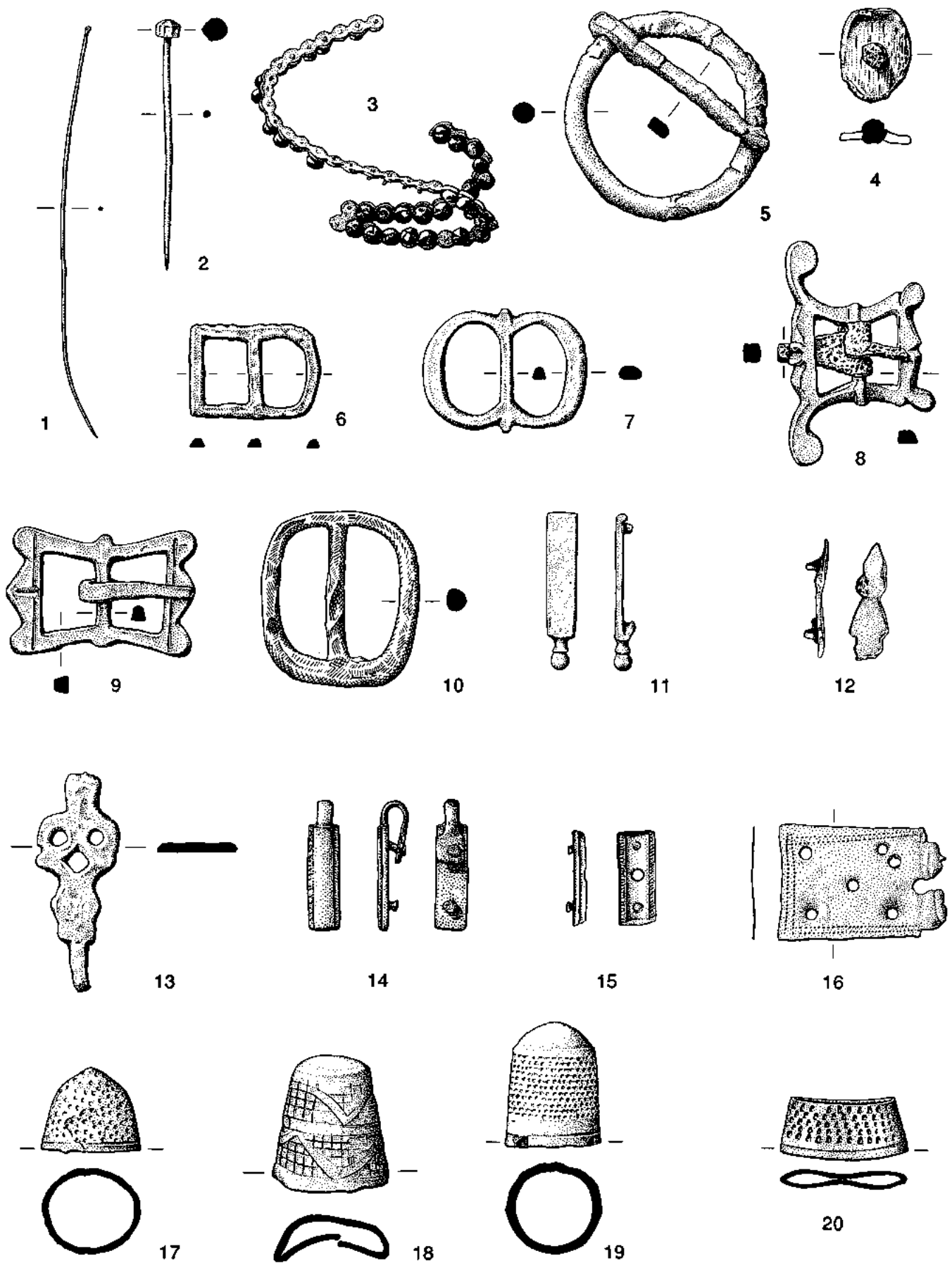


Fig. 33 Post-Roman small finds, Angel Yard, Colchester.
1-3, 5-9, 11-20...copper-alloy; 4...leather and copper-alloy; 10...iron.

haps sewn onto an item of clothing. Length (unfolded) approximately 140 mm.

Fig 33, 4 SF 40.86 239(C), A149 L11. Trample/occupation. Period 3c-4. An oval leather button with a copper-alloy shaft. Maximum diameter 18 mm.

Fig 33, 5 SF 40.86 172(C), A240 F72. Pit. Period 3a or b. A copper-alloy annular buckle of more or less circular section. The pin has a slight projection on its upper side close to the hinged end. Diameter 39 mm.

Fig 33, 6 SF 40.86 1573(C), A2299 L279. Mortar spread: Building 174, Room 6. ?Period 3. A small copper-alloy double buckle with worn mouldings at the junction of the bar and the frame. The tongue is missing. Length 25 mm, width 18 mm.

Fig 33, 7 SF 40.86 1306(C), A1799 L198. Gravel surface. Period 4. A copper-alloy buckle with pronounced points above the bar at the junction of the two rounded elements. The tongue is missing. Length 32 mm, width 24 mm. Possibly 14th century.

Fig 33, 8 SF 40.86 1274(C), A420 L24. Dump. Period 3. A copper-alloy buckle with an iron tongue and narrow iron belt-plate. The corners of the buckle develop into prominent knobs, with the two on the side of the belt-plate particularly prominent. There are decorative mouldings at the centre of the short sides, again more elaborate on the side of the belt-plate. Length 28 mm, maximum width 43 mm.

Fig 33, 9 SF 40.86 507(C), A509 L20. Dump. Period 3. A copper-alloy buckle with part of the leather strap. The tongue is loosely curled round the bar. The frame of the buckle has moulded projections on the short sides and at the junction with the bar. Those on the sides are emphasised by grooves. Length 36 mm, width 24 mm.

Fig 33, 10 SF 40.86 611(X), A508 L20. Dump. Period 3. An oval iron buckle with (part of) a belt-plate and the tongue (frame only illustrated). The frame is flattened slightly where it joins the bar, which probably indicates that the bar is a separate piece slotted into perforations in the frame. Length 30 mm, width 33 mm.

Fig 33, 11 SF 40.86 1274(C), A1748 F304. Pit. Period 2b. A narrow tag with a knobbed end and a projection for attachment near the other end, which is slightly turned under. Length 30 mm, width 6 mm. Possibly residual Roman.

Fig 33, 12 SF 40.86 536(C), A592 F88. Brick-lined pit. Period 3. A mount of debased zoomorphic form, similar to one from Northampton (Oakley 1979, fig 108, 30) and a pair from the Culver Street site, Colchester (CAR 5, fig 20, 1792-3). Length 23 mm, maximum width 8 mm.

Fig 33, 13 SF 40.86 266(C), A138 L10. Cobbled yard surface. Period 3c. A hooked openwork tag with a rivet hole (now filled by corrosion products) at the end opposite the hook providing a means of attachment to a strap. The hook is broken. Length 42 mm, maximum width 16 mm.

Fig 33, 14 SF 40.86 749(C), A1070 F186. Pit. Period 3a. A narrow mount with two riveted projections on the underside for attachment. At one end the plate develops into a loop which widens out again at the back to form a plate into which one of the two rear projections is fixed. The upper surface of the fitting has a low convex centre and sides which have been lightly scored on the edge. Length 25 mm, width 7 mm. Similar mounts came from the Thames Exchange site, London (Egan & Pritchard 1991, fig 138, 1190).

Fig 33, 15 SF 40.86 785(C), A1213 F218. Posthole. Period 2b. A mount similar to SF 40.86 749 above, but lacking the looped end, and with a perforation through the centre. Length 18 mm, width 7 mm.

Fig 33, 16 SF 40.86 1617(C), A3056. Unstratified. A fragment of a belt-plate, probably of folded double-leaf form. Length 31 mm, width 21 mm. The piece is more or less rectangular and broken at one end, apparently where it was folded. There are two parallel lines of fine punched triangles around the other three sides. There are seven perforations in the object. Five are set in a cross, with a sixth close to one of the corners of the cross, presumably representing a repair. The seventh appears to form part of a key-hole-shaped cut-out to accommodate a buckle tongue, as on a similar plate in *ibid*, fig

72, 508, which probably dates to the late 13th or early 14th century.

Fig 33, 17 SF 40.86 721(C), A1022 L124. Dump: Building 174, Room 6. Period 3a. A small brass thimble of domed medieval form (Holmes 1988, 1) covered by small circular indentations apart from a narrow plain band around the base. Height 16 mm, diameter 14-16 mm.

Fig 33, 18 SF 40.86 1484(C), A1500. Unstratified. A large crushed brass thimble, with two bands of incised grid pattern providing an alternative to the usual indentations. There are also curved diagonal grooves crossing both the upper and lower grids. The top appears to be plain. The condition of the thimble does not allow a positive interpretation of the diagonal grooves. They may be an integral part of the thimble's design, but this would mean that not every part of the wall was available as a working surface. Height 25 mm, diameter approximately 19 mm.

Fig 33, 19 SF 40.86 205(C), A248 L18. Dump: Building 174. Period 4a. A crushed brass ring-type thimble with a plain band around the base and five spiralled rows of rectangular indentations. The indentations were made by a knurled wheel. Height 11 mm.

Fig 33, 20 SF 40.86 481, A553 F119. Large pit. Period 3. A large silver-washed brass thimble with a plain band around the base and circular indentations probably applied in concentric circles. The top is plain. Height 24 mm, diameter 15 mm.

Fig 34, 1 SF 40.86 615, A329 F72. Pit. Period 3a or b. Part of a shallow mortar of weathered Purbeck marble with three lugs. The rim is flat. The ribs beneath the lugs are chisel-dressed and chamfered. The walls are also chisel-dressed. The base of the mortar is externally almost rectangular. Height 100 mm, external diameter approximately 200 mm, wall thickness at rim 34 mm.

Fig 34, 2 SF 40.86 1608, A2396 F456. Set in floor, Building 174, Room 6. Period 3c. A complete large Purbeck marble mortar, with four lugs. The rim is flat. The ribs beneath the lugs are chisel-dressed and chamfered. Externally the walls are for the most part pecked, but there is one band of chisel-dressing, 30-35 mm deep, round the top, and another, 40 mm deep, round the bottom. Some chisel-dressing, very worn, is also visible in patches at the maximum girth line. The internal surfaces have nearly been worn smooth, but traces of chisel-dressing remain at the junction of wall and base, in patches on the wall, and at the rim. Height 265 mm, external diameter at rim 622 mm, wall thickness at rim 63 mm.

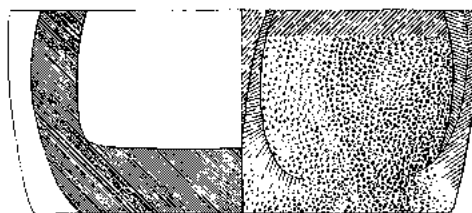


Fig. 34 Post-Roman Purbeck marble mortars, Angel Yard, Colchester.

Though not excessively worn, the mortar was found to have split along the horizontal bedding plane at the top of the base. Similar fractures are common in Purbeck marble mortars as the surfaces at the junction of base and wall are worn down (eg Dunning 1977, 321; CAR 5, fig 43, 1979), but whether in this case the break occurred during its period of use, or after its burial, is uncertain. As

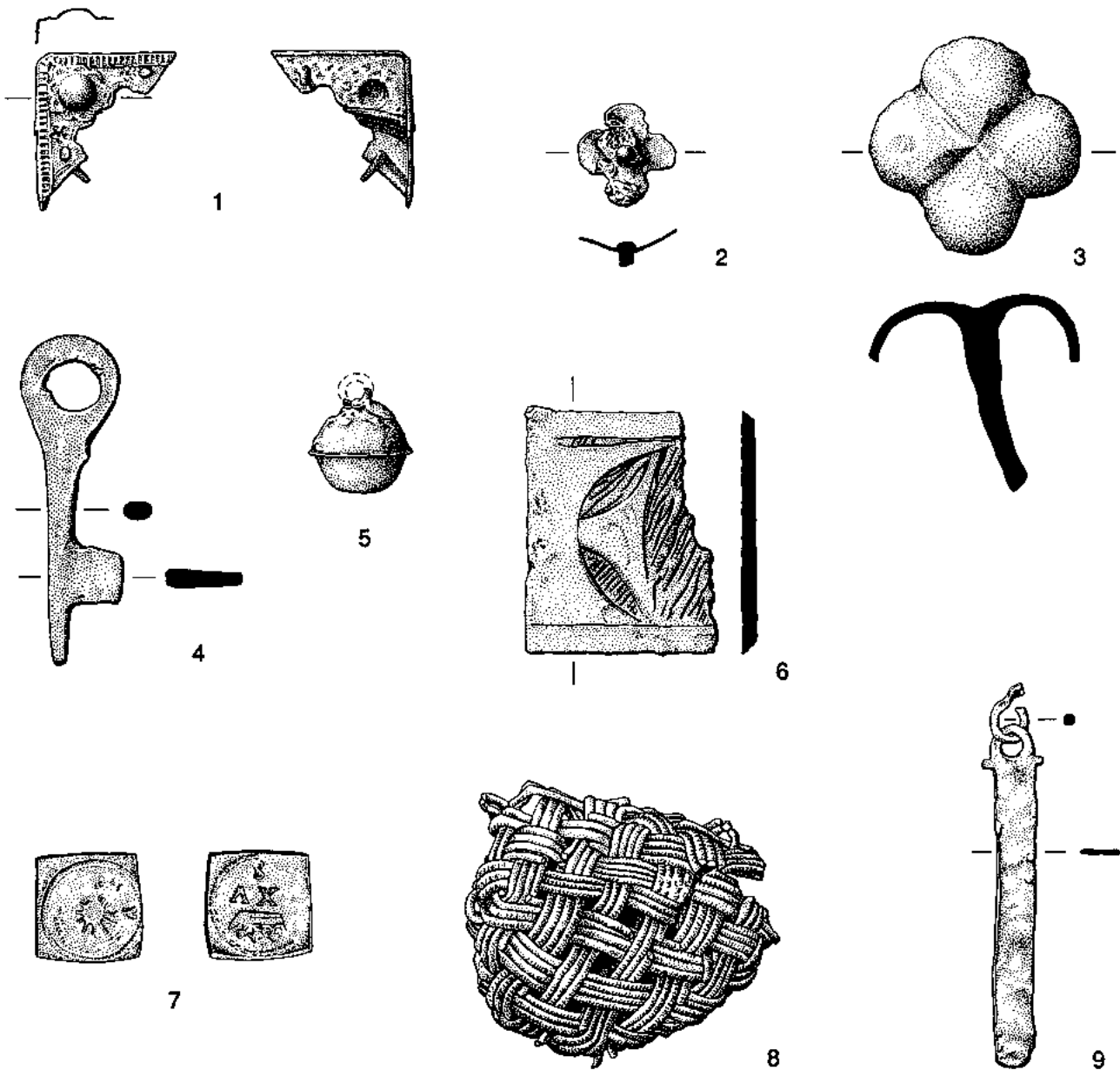


Fig. 35 Post-Roman copper alloy small finds, Angel Yard, Colchester.

the mortar was abandoned *in situ* (Fig 19), rather than lifted for use elsewhere, the former is most likely.

Dunning specifies two types of wear on medieval mortars, a hollowing of the base from vertical pounding, and undercutting the wall from grinding. As chisel-dressing is still visible at the junction of wall and base on this example, the former usage appears most likely. The size of the mortar also implies vertical pounding, probably done by a person standing upright and using a long straight pestle.

This is a very large mortar, similar to one in the Colchester Museums, though not the largest from the county (it is overtopped by an example from Little Baddow; P Ryan pers comm). Its size suggests food preparation on a commercial rather than domestic scale, but it appears to post-date the Period 3a and 3b ovens in Room 6 and cannot be directly associated with them.

Fig 35, 1 SF 40.86 329(C), A340 F76. Stone-lined pit: Building 175. Period 3b/c. A copper-alloy triangular corner fitting probably from a leather-bound book or small box. The face measures

21 by 21 by 30 mm. Its upper edges are knurled and it bears a decorative repoussé floret. Two tacks are set in the inner corners. Their clenched ends give a depth of 3 mm for the object to which the fitting was attached. One of the returned edges of the fitting has broken off. In the other, just under 3mm from the junction with the face, is set a tack with a sharp pointed end which projects up towards the underside of the face. This reinforces the thickness of 3 mm implied by the other two tacks.

Fig 36, 1 SF 40.86 492/499(X), A458/A485 L24. Dump. Period 3. A fragmentary iron snaffle-bit with a cheek-piece. Length of cheek-piece (top to bottom) approximately 95 mm, length of complete bit (side to side; not including the ring of the cheek-piece) approximately 170 mm. A similar bit was found at Sandal Castle, West Yorkshire (Goodall 1983, fig 10, 234), and dated to the Civil War occupation of the castle in 1645.

Fig 36, 2 SF 40.86 935(X), A1270 F211. Pit. Period 2b. An iron prick spur with a long narrow neck beneath the point. The detail

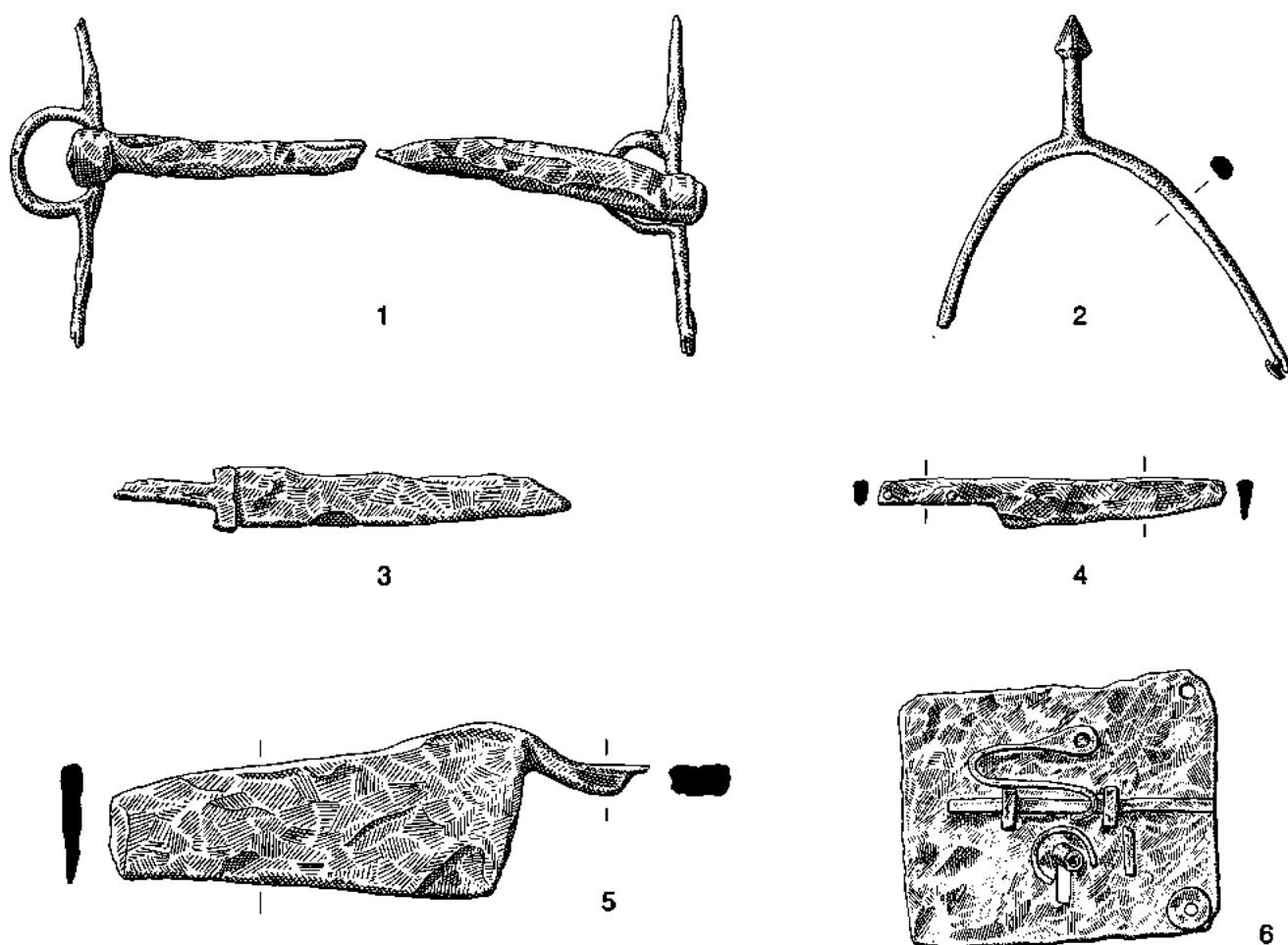


Fig. 36 Post-Roman iron small finds, Angel Yard, Colchester.

of the one surviving terminal is obscure. It appears to be of flattened circular form, with a single perforation in which is set a small fixing stud. It may originally have been of figure-of-eight form, the second, outer part of which is now missing. Length 105 mm, maximum width approximately 104 mm.

Fig 36, 3 SF 40.86 598(X), A482 F103. Small pit. Period 3. An iron blade with part of a whittle tang surviving. The back and edge of the blade are straight and parallel. The tip is gently curved. There appears to be a copper-alloy mount on the stop-ridge at the upper end of the blade. Length including tang approximately 119mm.

Fig 36, 4 SF 40.86 607(X), A515 L32. Gravelled surface. Period 3b. A small iron blade with a scale tang. The back of the blade is straight. The edge is also straight and rises in a continuous line to the tip. The tang continues the line of the back and has two copper-alloy rivets set into it. These would have fixed on a handle, probably of bone, and probably of two-piece form. Length including tang 90mm.

Fig 36, 5 SF 40.86 503(X), A426 L35. Demolition debris: Building 174, Room 7. Period 3c. A large cleaver-like iron blade with part of the tang surviving. The tip of the blade is separate. The back of the blade is straight. The edge is also straight and rises in a continuous line to the tip. The tang is of circular section and dips in a shallow U close to the blade. Length including tang approximately 190 mm.

Fig 35, 2 SF 1036(C), 1528 L207. Dark earth/topsoil. Period

2. A copper-alloy stud with a flat quatrefoil-shaped head (now bent). The short riveted shaft is dome-headed and placed in the centre of the quatrefoil. Approximately 14 by 14 mm. Probably a mount from a belt or strap.

Fig 35, 3 SF 1068(C), 1492 F285. Clay-lined pit. Period 2b. A large copper-alloy stud with a quatrefoil-shaped head where each of the four elements is convex. 28 by 28 mm. The shaft is rectangular in section and 25 mm long. Probably a mount from a belt or strap.

Fig 35, 4 SF 40.86 1092(C), A1491 F285. Clay-lined pit. Period 2b. A simple copper-alloy rotary key with a pierced rounded handle, plain bit and solid stem which projects well beyond the bit. Length 50 mm.

Fig 36, 6 SF 40.86 602(X), A659 F76. Stone-lined pit: Building 175. Period 3b/c. An iron lock-plate with part of the mechanism intact. There is a rivet hole in each of the surviving corners. Part of the key is fixed in the key-hole. Similar to CAR 5, fig 89, 3245.

Fig 35, 5 SF 40.86 621(C), A708 F76. Stone-lined pit: Building 175. Period 3b/c. A small copper-alloy rumbler bell with an iron pea. The bell was made in two halves, and there is a pronounced flange around the bell where the two pieces fit together. There are the remains of a suspension loop on the top of the bell. Diameter 16 mm. In all three rumbler bells, almost certainly of common origin, were recovered from AF76. Such bells were used both on horse trappings (Griffiths 1986, fig 20) and clothing.

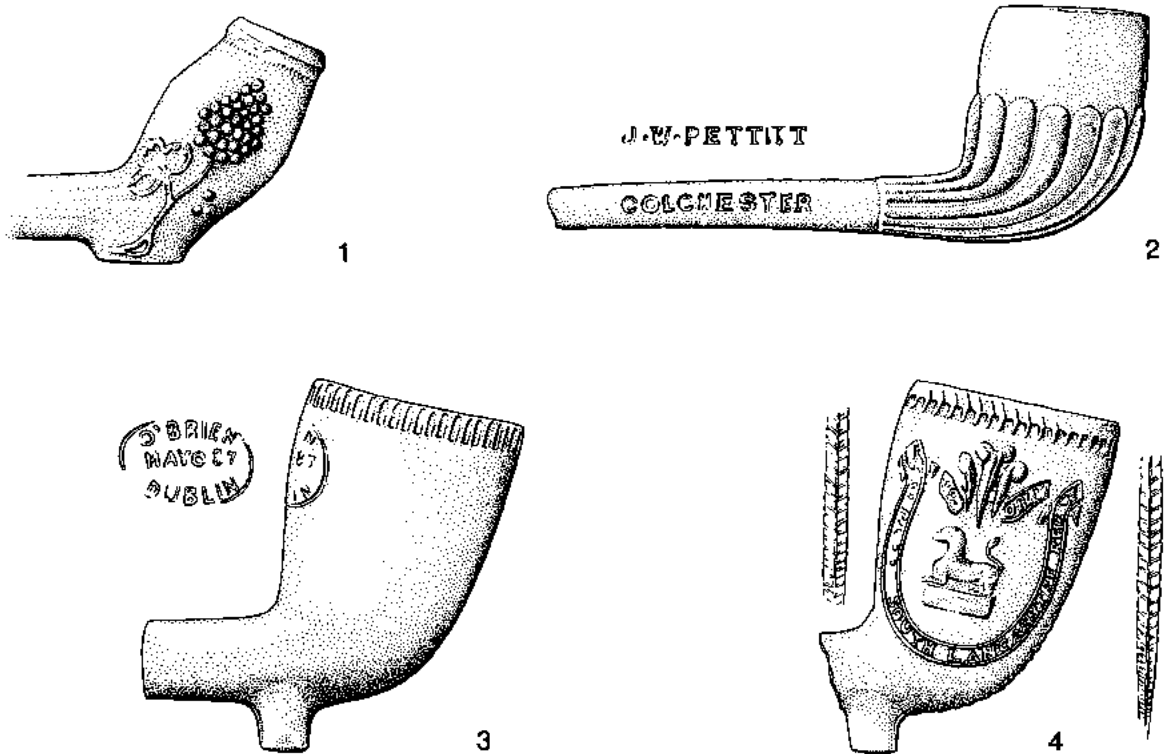


Fig. 37 Clay tobacco pipes, Angel Yard, Colchester.

Fig 35, 6 SF 40.86 848(C), A1461 F270. Pit. Period 3. A fragment of a rectangular copper-alloy plaque with a central circular motif and grooves along two of the sides. The central motif is roughly scored into the metal. The plaque has broken across a perforation, which, if central, would give a length for the object of approximately 54 mm. Width 38 mm.

Fig 35, 7 SF 40.86 146(C), A117 L3. Dump. Period 4. A roughly square copper-alloy object with a stamped design on each face. On one side is a crown above XV (presumably representing the number 15) with below a small X or possibly an angular 8. On the other side is a worn floret or sun motif. 17 mm square, 3 mm thick. Fig 35, 8 SF 40.86 116(C), A118 L3. Dump. Period 4. A crushed hollow sphere woven from threads of coiled copper-alloy wire. The threads have been worked in groups of four to produce the sphere. There is no apparent original break in the surface. Similar to the braid of 17th-century date from the Lion Walk site, Colchester (CAR 5, 20-1). This object from the Angel Yard may, like the braid, have been used for trimming clothing. Maximum width 44 mm.

Fig 35, 9 SF 40.86 982(C), A1526. Unstratified. Post-Roman. A strip with a pierced circular terminal within which is fitted a penannular ring, possibly a chain link. Length 52 mm.

The clay tobacco pipes (Fig 37) by Joy Hind and Nina Crummy

A dated and illustrated typology of clay tobacco pipes for Colchester can be found in CAR 5, 47-66. The types are not all represented among the assemblage from Angel Yard, 18th-century pipes in particular are scarce, but it includes by far the largest sample of 17th-century pipes from a single town-centre excavation. The bowls are fully described in the small find report in the site archive.

It is unfortunate that, given the large number recovered, many of the datable bowls were residual in their contexts, though a notable exception is a group from late 17th-century occupation.

Type 2, dated c 1600-40 (*ibid*, 47) is the earliest form present, with 44 examples listed, each probably residual. Four Type 3 pipes (c 1610-40; *ibid*) were recovered, one more than from all the excavations of 1971-85 together, a reflection of the very high number of 17th-century pipes from the site as a whole. The pottery from the pit AF72 forms a good group dating to the late 15th and early 16th century (p72; site archive), and thus the Type 3 bowl from AF72 must be within its horizon.

Type 4 bowls are usually plain, but one example from this assemblage is decorated with a well-executed grape and vine leaf design (Fig 37, 1). The majority (62 per cent) of the 332 pipes of this type derived from Period 3 dump levels, AL20, AL23, AL24, and AL25. Four Type 5 bowls (c 1640-70; *ibid*) were recovered, like Type 3 a high number of this minor form.

Type 6 (c 1660-80; *ibid*) is the most numerous in the assemblage, 495 bowls being catalogued. Over half (51 per cent) are from Period 3c or 4 occupation (AL12) in Building 174 and are probably not residual, and fifteen bowls associated with the Period 3c demolition (AL35) of Room 7 of Building 174 may also be primary deposits within their context. Most of the remainder are residual.

Most, if not all, of the Type 7 (c 1670-1700), Type 8 (c 1680-1710), and Type 9 (c 1700-40) bowls are residual. Only seven of the latter type have been recovered, and few other later types are represented. The fifteen Type 12 pipes (c 1780-1820; *ibid*, 52) from the brick cellars AF223 and AF230 are an exception, and are probably primary deposits. All seven of the pipe bowls from AF223 are marked SC in relief on the sides of the foot, as is one bowl and three foot fragments from AF230. The remaining seven bowls, and four more feet, from AF230 are marked EL. Also from AF230 is a foot

fragment marked JP. These initials represent well-documented local pipemakers, Stephen Chamberlain (1728-1808), Elizabeth Lowthrop (aged 65 in the 1841 Census), and James Pettitt. There were probably three makers called James Pettitt, the earliest working by 1791, the latest still in operation in 1870 (*ibid*, 64).

The Pettitts are also represented by three other pipes, a unstratified fragment of a fluted bowl with plant-decorated seams, marked JP in relief on the sides of the foot, and two stem fragments with the incuse stamp of James William Pettitt, the youngest of the three (Fig 37, 2).

Marks from other local pipemakers were noted: IA, unidentified, operating in the first half of the 18th century; EB, Elizabeth Bland or her husband Edward, early to mid 18th century; W-crowned and WB, both probably William Battly, late 17th to early 18th century; and JJ, Joseph Jennings senior or junior, mid to late 19th century (*ibid*, 63-4).

A spurred narrow-fluted bowl with plant-decorated seams (c 1820-60; *ibid* 56) bears a previously unrecorded forename initial, O. The surname initial is unfortunately illegible. This maker cannot be identified as local or otherwise.

Not all the pipes were locally made. One bowl of the mid to late 19th century bears on the back an oval stamp of O'Brien of Dublin (Fig 37, 3), and a fluted bowl is marked on the stem GOODWIN/-; -/C/-, almost certainly Goodwin of Ipswich (*ibid*, fig 64, 2978).

One other pipe is illustrated. From the early 20th-century fill of the late 19th-century brick cellar AF19 in Building 175, it bears the arms of the 2nd Battalion of the South Lancashire Regiment (Fig 37, 4). This forms an interesting link to the pottery, for from the same context came a lustre-ware dish with the legend 'The Manchester Regiment 2/10th Bn Egypt' below a sphinx (site archive).

Catalogue

Fig 37, 1 40.86 187. Unstratified. Clearance. Type 4. Stem bore 7/64ths of an inch. Rim rouletted. Grape and vine leaf design on either side of the bowl.

Fig 37, 2 40.86 17. Unstratified. Clearance. 3/64. Marked on the stem J.W.PETTITT; COLCHESTER. There is a band around the stem below the flutes.

Fig 37, 3 40.86 35 F19. Brick cellar: Building 175. Period 4. A large plain bowl with rouletting on the very rim. On the back of the bowl is an oval-shaped stamp reading O'BRIEN MAYO ST DUBLIN. 4/64.

Fig 37, 4 40.86 35 F19. Brick cellar: Building 175. Period 4. A bowl bearing the arms of the 2nd Battalion of the South Lancashire Regiment.

Summary of the Roman and post-Roman tile and brick

by Nina Crummy

Roman

A few fragments of the distinctive buff-coloured tile imported from the area of the Eccles villa, Kent (CAR 6, 259-60) were recovered from both Roman and post-Roman levels on Site A. Apart from a single *tessera* from the dark earth, AL160, all the identifiable pieces were roof tiles, both *tegulae* and *imbrices* being present. Only an *imbrex* fragment from redeposited Boudican destruction debris, AL93, appeared to be in a context contemporary with the importation of Eccles tile in Roman Colchester, the rest being either residual or reused.

Possibly the earliest fragments of tile in Building 171 derived from demolition material in the 2nd century ?cellar, AF370, Room 5, a context which produced an unidentifiable fragment of buff-coloured tile. Pieces of red roof tiles, both *tegulae* and *imbrices*, were also present in Room 5, as were brick fragments, *tesserae*, and one piece of keyed tile. Also 2nd century in date was the oven, AF300, in Room 1. The make-up for the oven floor contained several flat tile and *tegulae* fragments and a single *tessera*.

The majority of tile fragments from Building 171 came from the late Roman demolition of the structure, and from the robbing of

its foundations in Period 2b. This material included fragments of box tiles, voussoirs, roof tiles, bricks and *tesserae*, and more early Roman buff-coloured tile fragments, here identifiable as roof tiles. Of interest was the use of numerous courses of broken *tegula* flanges laid face outwards in the northern foundation (AF348, p37, fig 5).

In Building 172, Room 3 produced two early Roman buff-coloured *imbrex* fragments, one from 2nd- or 3rd-century occupation, AL267, the other from late Roman ?demolition, AL256. A votive pot, AF387, buried in the building in the 3rd or 4th century was capped by a complete roughly-made *bessalis* (190 x 195 x 36mm).

The most noteworthy tile feature in Building 172 was the hearth AF383. It was constructed sometime in the 2nd century from two complete oblong bricks (420 x 277 x 37 mm, 430 x 276 x 34 mm), one signed, and a few broken tile fragments, the latter probably recycled from an earlier building and including a piece of buff-coloured tile. As the bricks were complete they may have been new when the hearth was laid.

Two other complete pieces were recovered: a small brick (112 x 52 x 35 mm) of the type used to lay herringbone floors, *opus spicatum*, derived from the dark earth, AL156, and a complete *bessalis* (206 x 198 x 35 mm) came from Period 1 dump, AL107. Like that used to cap the votive pot, the latter was roughly made. (Brick and tile sizes can be compared with examples from Culver Street, Colchester, listed in CAR 6, table 7.1.)

Two keyed tile fragments differ from those described by Black in CAR 6, 261-72. One is a piece of voussoir, 17 mm thick, from Period 2 dark earth/topsoil AL205, the pattern applied using a three-toothed comb. The other fragment, 19 mm thick, from Period 2b pit AF364 may also be from a voussoir, but is more likely to be part of a flat keyed tile. Its surface is decorated with random squiggles. Both are illustrated in archive.

Twenty-six finger-made signatures or signature fragments were noted, eleven on *tegulae*, six on fragments of unidentified flat tiles, also probably *tegulae*, and nine on bricks. Many are illustrated in archive.

Three tile fragments bear marks other than signatures. From the Period 1f demolition of Room 5 in Building 171 is a piece of *tegula* bearing on the flange an inscribed tally mark 'X'. The piece is broken close to the X, so the mark may original have included more numerals (illustrated in archive). Another 'X' lies close to the edge of a piece of brick from AL160, Period 2 dark earth. The first stroke is short and runs at an angle towards the edge, the second is much longer (one end of it is missing) and lies more or less parallel to the edge (illustrated in archive). The mark is narrower than finger-made signatures, and is similar to those made by smoothing of a wet clay surface with a damp cloth. It may be just random scoring of the surface.

There is a graffito on a corner fragment of a flat tile from a Period 2b pit, AF304. A nail hole, square (8 x 8 mm) on the upper surface and round (4 mm diameter) on the bottom, has been punched through the tile near the corner. The way the letters were cut from top to bottom is clear and gives the reading IXI[-], perhaps the beginning of a personal name (illustrated in archive).

Post-Roman

Many of the hearths or ovens in Buildings 173 and 174 contained tiles in their structure, and many were associated with tile working areas or floors. The majority were fragments of Roman tiles or peg-tiles (eg Room 2 in Building 173, Room 6 in Building 174, p42-50), but some pieces of Flemish glazed floor tiles were also used. For example, the Period 3a ?oven AF322 in Building 173 included pieces of both yellow and black tiles, originally in excess of 157 mm square.

Several fragments of Flemish glazed floor tiles came from contexts in Building 174 (eg Period 3b daub floor/make-up in Room 6; Period 3c BL15 make-up in Room 3; Period 4a dump AL19). A small Period 3a pit in Room 7 (AF183) contained two complete tiles, 115 mm square and 25 mm thick. Both were coated with a green-flecked brown glaze, which in some places was worn away before

deposition. They may have derived from the Period 3a tile floor AF335 in Building 176.

Forty-six complete tiles and 34 fragments were recovered from AF335, all about 115-120 mm square and 25 mm thick. One fragment was scored on the upper surface into two triangles. Most are coloured either yellow and green, but a few are dark greeny-brown to black, and the glaze on some has been completely worn away. If the two tiles in the pit AF183 originally come from the floor in Building 176, which from their appearance seems likely, then the latter may be as early as the later 14th century (Eames 1975, 6-8).

Some bricks or brick fragments from Period 3 and 4 contexts were retained for further study but are not described here.

The painted wall plaster (Table 8)

Table 8 Areas of painted wall plaster from Building 171, Room 5 (cellar), Angel Yard, Colchester.

	Area (sq cm)	% of Area
white	5511.75	58.96
white with black line	271.50	2.90
white with black band	48.00	0.51
white with two black lines	172.00	1.84
white with orange blotches & black line	4.00	0.04
white with yellow line	7.50	0.08
white & pink with black line(s)	57.75	0.62
white with red line	7.50	0.08
white & red	139.00	1.49
red	190.00	2.03
red & yellow	43.75	0.47
red with white line	28.00	0.30
red with black & white lines	28.00	0.30
red & orange with white line	3.00	0.30
orange	404.25	4.32
orange with dark red line	406.00	4.34
orange with white line	11.25	0.12
orange & grey with dark red, white & black lines	301.00	3.22
orange & red with white & red lines, & some yellow 'shoots'	96.00	1.03
miscellaneous orange	35.75	0.38
orange & pink with white lines	65.00	0.70
orange & white	12.25	0.13
green (some painted over red, some bevelled corner pieces)	328.50	3.51
green & white	42.00	0.45
green & white with dark line	124.00	1.33
green & black	7.50	0.08
grey	352.50	3.77
grey & white	63.00	0.67
grey & white with black band(s)	136.00	1.46
pink	4.50	0.05
pink with black line	5.00	0.05
yellow	319.50	3.42
yellow with dark lines	22.50	0.24
yellow & white with dark red line	34.50	0.37
miscellaneous	65.00	0.70
Total	9347.75	100.00

Almost a square metre of Roman painted wall plaster fragments was recovered from demolition debris in the partially-excavated back-filled cellar (AF370) in Room 5 of Building 171. Although white predominated and there was some red, also present were significant amounts of orange, grey, green, and yellow (Table 8), suggesting that the decorative scheme included panels. Samples of the material have been retained in the site archive.

Assessment of environmental remains

by P Murphy

Sampling at this excavation was on a very limited scale. Samples were collected from a single Roman pit (AF171), seven medieval pits (AF219, AF270, AF285, AF289, AF318, AF327, AF364) and six contexts associated with Period 3 ovens and hearths (AL16, AF50, AL317, AF323, AF329, AF464) in an attempt to gain information on the functions of these contexts or the sources of material which they contained. Initially sub-samples, usually about 5 kg in weight, were extracted for assessment. Carbonised and mineralised plant material were then separated by water flotation/washover using a 0.5 mm collecting mesh and the residue was wet-sieved over a 1 mm mesh. Portions of the dried flots and residues were then examined to assess the contents of the samples and to see whether further study would be profitable. Notes on sample contents are given in archive. It should be emphasised that these notes are not intended to be exhaustive, but merely refer to the main components of the samples.

The sample from the Roman pit (AF171) contained an abundance of burnt bone fragments, which appear to have been intentionally crushed. The quantity involved implies some industrial process using bone as a raw material. Fragments from the sample have been given to Dr Rosemary Luff for more detailed examination.

Samples from the medieval pits were rather diverse in composition. Some samples (eg A1949 and A1950 from AF364) contained a high proportion of mineralised plant material and arthropods (fly puparia etc.) with much fragmentary fishbone, clearly indicating that this feature was a latrine pit. Other contexts also included mineralised macrofossils with fishbones, indicating a faecal component, (eg AF327, AF289) but generally the pits contained a mixture of food refuse, presumably kitchen and table waste. The sample from AF270 seems to represent debris from a bonfire on which building demolition and construction debris had been burnt (roundwood, timber and wood chips, with window glass) together with cereal waste, waste hay, bone and shell. This deposit might be related to an episode of site clearance probably following the demolition of Building 173 (p42).

The samples from the Period 3 ovens and hearths mostly included large amounts of charcoal. Besides tree charcoals this included gorse/broom and heather indicating use of heathland plants either as kindling or as a main component of the fuel, perhaps originally in the form of charcoal. Occasional cereal grains are present but there is no clear evidence for the use of these features for drying malt. Some of the food debris from the samples could be secondary dumped refuse unrelated to the original functions of the ovens, but burnt mollusc shell and bone fragments imply use of these ovens for roasting and baking.

On the basis of this assessment it seemed unlikely that detailed quantitative study of this small collection of samples would add much further information. However, the flots and residues were retained and are available for incorporation into any future study.

Acknowledgements

We would like to thank the digging teams, including a Manpower Services Commission scheme in 1986, and in particular the following: Carl Crossan, who directed the 1989 excavation, S Benfield, R Ellis, M Fox, S Garrod, T Powell, and tour guide A Hailes; also Bob Moyes for the building surveys, and Philip Crummy for help with these and in numerous other ways. We much appreciate the contributions of those who assisted in post-excavation work, M A S Blackburn, J Cotter, N Crummy, J A Davis, C J Going, M Heyworth, J Hind, R Ling, P Murphy, R Symonds, and S Wade.

Particular thanks are due to A-M Bojko of Colchester Museums and J Lister of Passmore Edwards Museum, Newham, for their conservation work. We would also like to thank Eleanor Clarke for her administrative and clerical skills, Alison Colchester for photographic work, Richard Britnell and Nina Crummy for advice and assistance with documentary references, and the illustrators, Bob Moyes, Terry Cook, and Dr P R Sealey of Colchester Museums, who very kindly drew some of the votive pots. The editorial expertise of Nina

Crummy has much enhanced this final report.

We also gratefully acknowledge the assistance, financial and otherwise, of the developers, Colchester Borough Council, and also the help received during the excavations from the contractors, Lovells, and Sextons. English Heritage generously helped provide funding for post-excavation work.

Authors: D. Shimmin and G. Carter, Colchester Archaeological Trust, 12 Lexden Road, Colchester.

Bibliography

Abbreviations

AML	Ancient Monuments Laboratory of English Heritage
B	F Barnard, <i>The casting-counter and the counting board</i> (1916 reprinted 1981)
BAR	British Archaeological Report
BMC	British Museum Catalogue
CAR	Colchester Archaeological Report
CAR 1	P Crummy, <i>Aspects of Anglo-Saxon and Norman Colchester</i> , CBA Research Report, 39 (1981)
CAR 2	N Crummy, <i>The Roman small finds from excavations in Colchester 1971-9</i> (1983)
CAR 4	N Crummy (editor), <i>The coins from excavations in Colchester 1971-9</i> (1987)
CAR 5	N Crummy, <i>The post-Roman small finds from excavations in Colchester 1971-85</i> (1988)
CAR 6	P Crummy, <i>Excavations at Culver Street, the Gylberd School, and other sites in Colchester 1971-85</i> (1992)
CAR 7	J Cotter & C Cunningham, <i>Post-Roman pottery from excavations in Colchester 1971-85</i> (forthcoming)
CAR 8	H E M Cool & J Price, <i>Roman glass from excavations in Colchester 1971-85</i> (1995)
CAR 9	N Crummy, P Crummy, & C Crossan, <i>Excavations of Roman and later cemeteries, churches and monastic sites in Colchester, 1971-88</i> (1993)
CAR 10	R Symonds & S Wade, <i>The Roman pottery from excavations in Colchester 1971-85</i> (forthcoming)
CBA	Council for British Archaeology
RIC	Roman Imperial Coinage
SF	small find
VCHE	<i>A History of the County of Essex</i> , IX, 1994
W	G C Williamson, <i>Boyne's trade tokens issued in the 17th century 1</i> (1967)

References

Allason-Jones, L, 1985	'Bell-shaped studs?', in <i>The production and distribution of Roman military equipment</i> (ed M C Bishop), 95-108, BAR, 275
Benfield, S, & Garrod, S, 1992	'Two recently-discovered Roman buildings at Colchester', <i>Essex Archaeol. & Hist.</i> , 23, 25-38
Besley, B, & Bland, R, 1983	<i>The Cunetio treasure</i>
Britnell, R H, 1986	<i>Growth and decline in Colchester, 1300-1525</i>
Caple, C, 1985	'The pins and wires from site S', in Cunningham & Drury 1985
Cope, L H, 1972	'Surface-silvered ancient coins' in <i>Methods of chemical and metallurgical investigation of ancient coinage</i> , edited by E T Hall & D M Metcalfe, Royal Numismatic Society Special Publication 8

Court Rolls Col	I H Jeayes (translator), <i>Court Rolls of the borough of Colchester 1: 1310-52</i> (1921)
Crummy, P, 1979	'The system of measurement used in town planning from the 9th to the 13th centuries' in <i>Anglo-Saxon studies in archaeology and history</i> , 1, BAR 72, 149-64
Cunningham, C M & Drury, P J, 1985	<i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> , CBA Research Report, 54
Dunning, G C, 1977	'Mortars', in <i>Excavations in King's Lynn 1963-70</i> by H Clarke & A Carter, Society for Medieval Archaeology Monograph Series, 7
Eames, E S, 1975	'Decorated tile pavements in English medieval houses', in <i>Rotterdam papers II: a contribution to medieval archaeology</i> , 5-15
Egan, G, & Pritchard, F, 1991	<i>Dress accessories, Medieval finds from excavations in London: 3</i>
Elian, E R Duncan, 1984	<i>The Anglo-Gallic coins</i>
Elmer, G, 1941	'Die munzprägung der Gallischen Kaiser in Köln, Trier und Mailand' <i>Bonner Jahrb.</i> , 146, 1-106
Goodall, I, 1983	'Iron objects', in <i>Sandal Castle excavations 1964-73</i> , by P Mayes & L A S Butler
Green, M J, 1976	<i>The religions of civilian Roman Britain</i> , BAR, 24
—, 1978	<i>Small cult-objects from the military areas of Roman Britain</i> , BAR, 52
Griffiths, N, 1986	<i>Horse harness pendants</i> , Finds Research Group 700-1700 Datasheet, 5
Hattatt, R, 1985	<i>Iron Age and Roman brooches</i>
Holmes, E F, 1988	<i>Sewing thimbles</i> , Finds Research Group 700-1700 Datasheet, 9
Hull, M R, 1958	<i>Roman Colchester</i>
—, 1963	<i>The Roman potters' kilns of Colchester</i>
Hurst, J G, Neal, D S, & van Beuningen, H J E, 1986	<i>Pottery produced and traded in north-west Europe 1350-1650</i> , Rotterdam Papers 6
May, T, 1930	<i>Catalogue of the Roman pottery in the Colchester and Essex Museum</i>
Oakley, G E, 1979	'The copper-alloy objects' in <i>St Peter's Street, Northampton, excavations 1973-6</i> , by J H Williams
Oath Book	W G Benham (editor), <i>The Oath Book or Red Parchment Book of Colchester</i> (1907)
Reece, R, 1972	'A short survey of the Roman coins found on fourteen sites in Britain' <i>Britannia</i> 3, 269-76
Shackle, R, 1988	'The Angel Inn, Colchester', <i>Colchester Archaeol Group Annual Bulletin</i> , 31, 27-3

The Society is extremely grateful to English Heritage for a generous grant towards the cost of publishing this article.

A late Roman and Saxon settlement at Great Waltham

by S. Tyler and N.P. Wickenden

with contributions by R.M. Luff and D.F. Williams

Introduction

In 1978, Paul Drury, then Director of Chelmsford Excavation Committee, was contacted by Mr A.H.Symonds, the owner of 11 Dickeymoors, Great Waltham, concerning a large feature discovered in extending the house to the rear (Fig.1; TL 699 132). As a result, a small excavation in February 1980 sampled the feature, probably a large, late Roman gravel pit, identifying a sequence of soils and deliberate fillings (Fig.2). The lowest layer (context 8) produced only late Roman pottery, but the middle fills (contexts 5-7) yielded a substantial assemblage of Anglo-Saxon pottery. The upper levels (contexts 2-4) contained medieval wares, peg tiles and clay pipe.

Interim reports have appeared in *Essex Archaeology and History* 13 (1981), 52 and *Medieval Archaeology* 25 (1981), 167. The finds have been deposited in Chelmsford and Essex Museum (CHMER 1995: 913).

The finds

Late Roman pottery

by N.P.Wickenden

The following are illustrated in Fig.3:-

1. Rim of jar in hard, red Hadham fabric, grey core, burnished exterior and inside of rim (Going 1987, fabric 4).
2. Bifid rim of jar in similar Hadham fabric to no.1 above, but lacking grey core.
3. Rim of flanged-rim bowl in fine grey fabric, dark grey smooth surfaces: Hadham (Going 1987, fabric 36).
4. Body sherd, hard, light grey sandy fabric (Going 1987, fabric 47), dark grey exterior with burnished line decoration.

Anglo-Saxon pottery

by S.Tyler

Summary

A total of 1841g of Anglo-Saxon pottery was recovered. The assemblage mainly comprises sandy fabrics (1652g), some with inclusions of iron ore and chalk, but there is a comparatively small amount with vegetable temper (178g), some also with inclusions of iron ore. It is suggested that the bulk of this pottery belongs to the early Saxon period, i.e. was manufactured in the 5th to 7th centuries, although it is possible that the vegetable-tempered sherds could be later, perhaps

8th century in date. In addition, there is a small amount (11g) of diagnostically Late Saxon pottery comprising two sherds of St. Neots-type ware. This extends the date range of the pottery through into the 10th century, and strengthens the possibility that some of the vegetable-tempered pottery is mid-Saxon, i.e. A.D. 700-900 in date.

Forms present in the assemblage comprise: bowls, jars and cooking pots. A possible bar lip spout is the only evidence for jugs, although the 'spout' is more likely to be a protective lug of swallow's nest type as found at the 5th to 8th-century settlement and cemeteries at Mucking, Thurrock (Jones, pers. comm.).

Surface treatment includes burnishing and roughening ('Schlickung'), finger rustication and decoration incorporating incised lines and finger tipping. One sherd of St. Neots-type ware has a slightly rilled surface.

Fabrics

Early Saxon The pottery was examined under a x20 magnification using a binocular microscope. Part of the assemblage had previously been examined by Dr D.F.Williams, and a majority of these sherds were thin-sectioned and examined under a petrological microscope (AML 794650 - 794660). Dr Williams identified three fabrics (1-3 below), to which the author has added a further six (4-9 below).

Fabric 1 (description by D.F. Williams)

Hard, smooth fabric, dark grey throughout (Munsell 7.5YR N3/), well smoothed or burnished surfaces with small calcareous inclusions, seen especially in fresh fracture. Thin-sectioning shows a scatter of limestone and calcite, with some sandstone and frequent quartz grains set in a reddish-brown anisotropic clay matrix. A total of 89g of fabric 1 pottery was recovered. Forms comprised bowls and jars (catalogue nos 1-5 and 38). Jars in fabric 1 tend to be small (catalogue nos 2,3,38). With the exception of the biconical jar, (catalogue no.5), the profiles of the vessels in fabric 1 cannot be determined as only the rim survives in most examples.

Fabric 2 (description by D.F. Williams)

These sherds tend to be in a fairly hard, slightly rough, greyish-brown to dark grey (10YR 4/4 to 7.5YR N3/) sandy fabric. Thin sectioning reveals a groundmass of quartz grains up to 1.40mm across, some grains of potash feldspar, flecks of mica and occasional pieces of sandstone and flint/chert, set in a reddish-brown clay matrix. A total of 682g of fabric 2 pottery was recovered. As with fabric 1, it was not possible to determine the complete profiles of many of the vessels; however, it would seem that bowls, jars and cooking pots are all present in this fabric. There are 7 probable bowls (catalogue nos 6-8, 11, 14, 21 and 23); of these, one (no.6) has a sharply carinated profile. There are 11 examples of globular and ovoid jars and cooking pots (catalogue nos 10, 12, 13, 15-20, 24 and 39). A possible bar lip spout (no.9) seems more likely to be, given its rough surfaces, a protective lug of 'swallow's nest' type. A single body sherd has incised decoration (no.22) and one vessel (a probable cooking pot, no.39) has had its outer surfaces deliberately roughened by the application of a slip containing coarse quartz-sand ('Schlickung').

LATER ROMAN AND SAXON SETTLEMENT AT GREAT WALTHAM

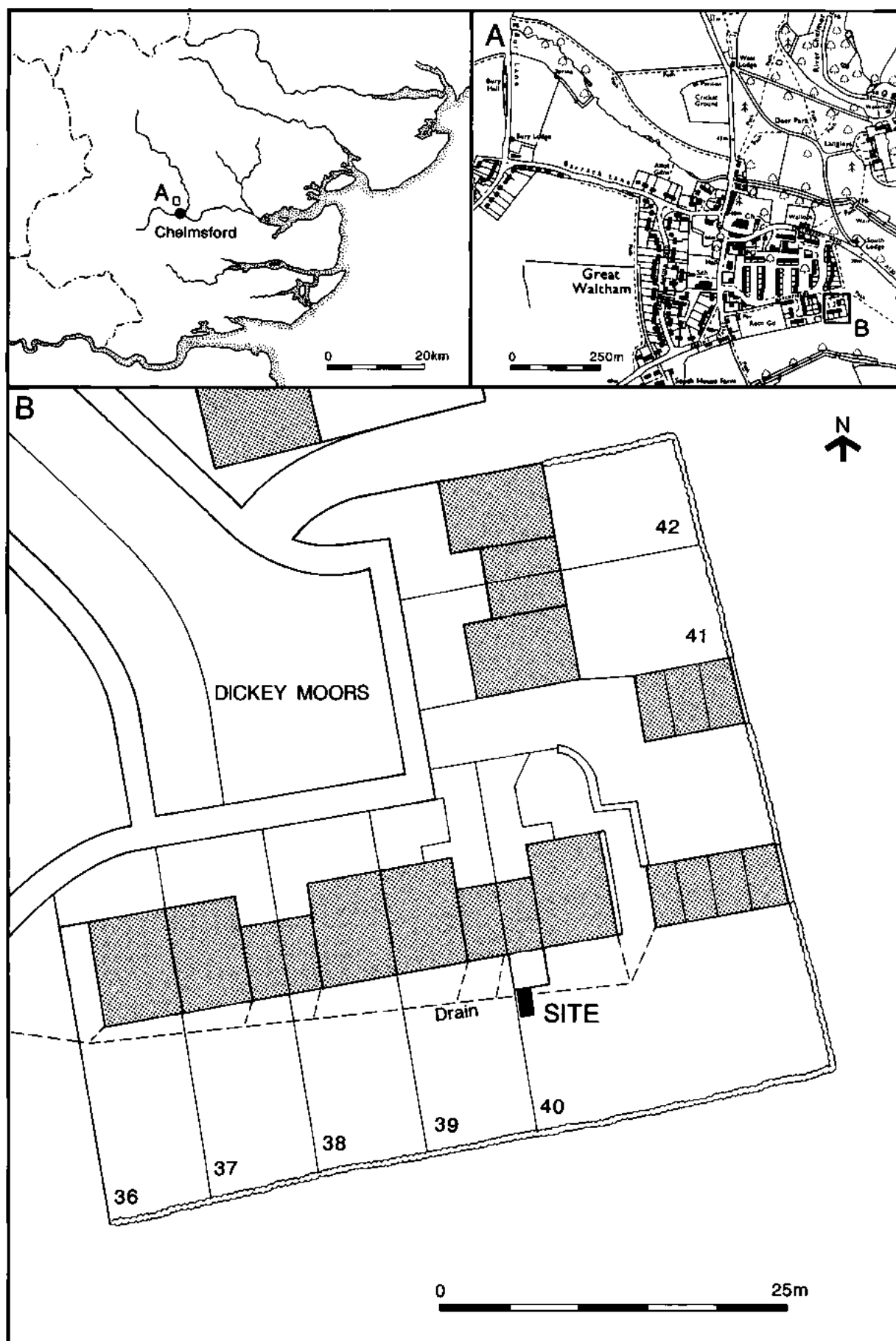


Fig.1 Dickeymoors, Great Waltham. Site location. © Crown copyright.

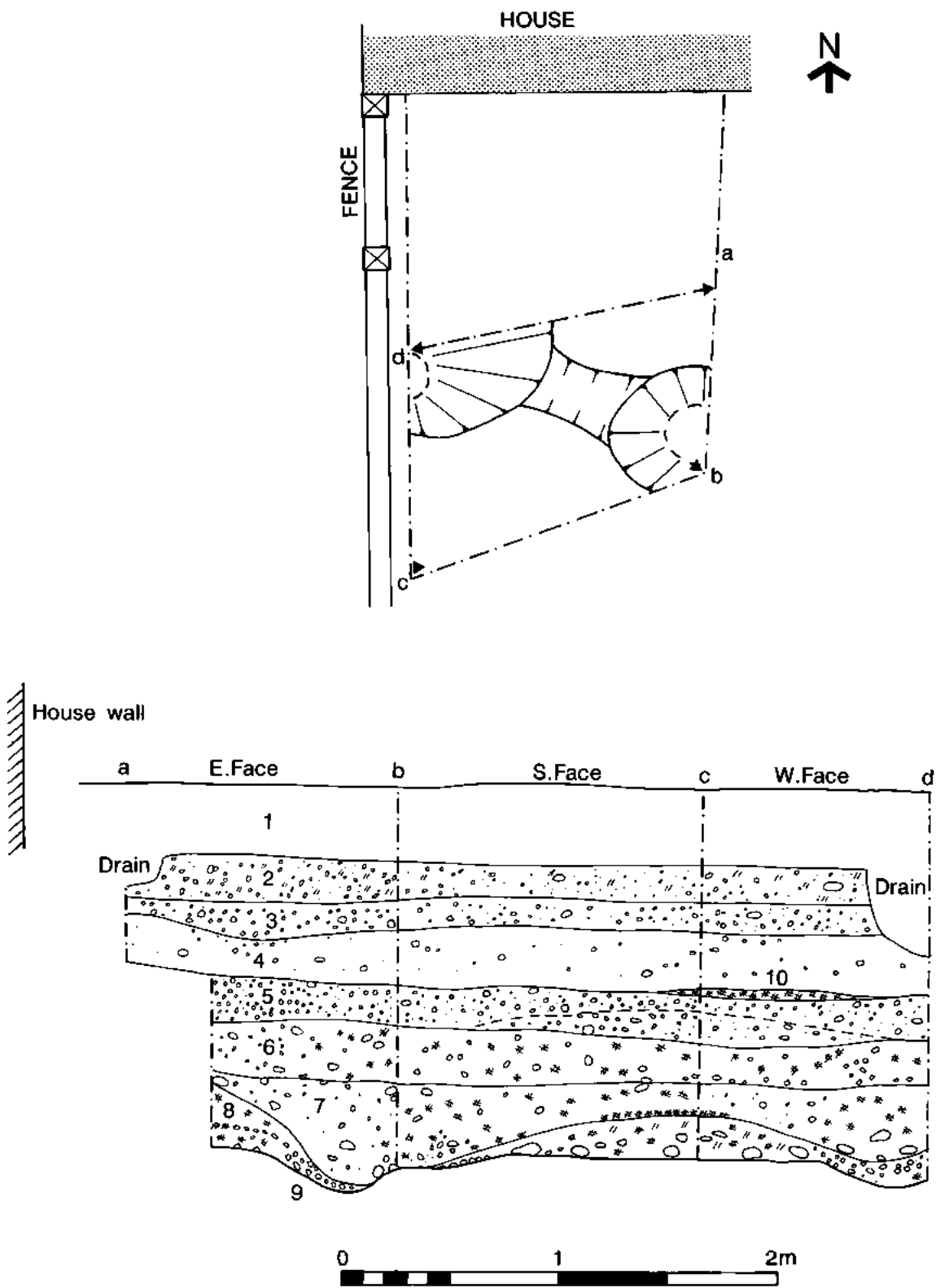


Fig.2 Dickeymoors, Great Waltham. Plan and section of the feature.

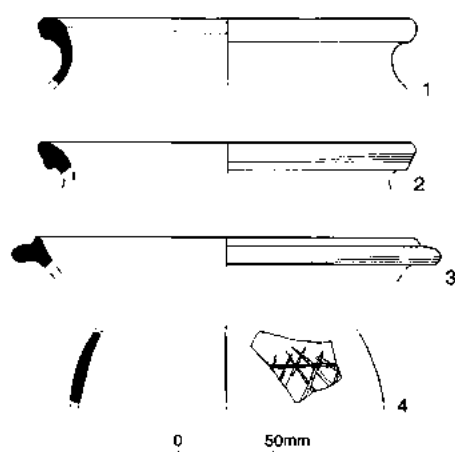


Fig.3 Dickeymoors, Great Waltham. Roman pottery.

Fabric 3 (description by D.F.Williams)

Hard, thick, slightly rough sandy fabric, patchy reddish-buff outer surface, dark inner surface. In thin section, these appear to be slightly sandier versions of fabric 2. A total of 758g of fabric 3 was recovered. The same range of vessels was present as in fabrics 1 and 2, i.e. bowls, four examples (catalogue nos 25,27,31 and 32); jars and cooking pots, eight examples (nos 26,29,30, 33-35,40,41). One body sherd, probably from a large jar (no.26) is finger rusticated, and two body sherds have deliberately roughened outer surfaces (no. 42). A single sherd (no.28) has incised line decoration.

Fabric 4

Dark grey, medium hard fabric with abundant vegetable temper in a clay matrix, containing common small quartz-sand. A total of 116g of fabric 4 was recovered. There are no diagnostic sherds in this fabric; all are body or base sherds, probably mostly from jars.

Fabric 5

Similar to 4, but slightly softer and with more variation in surface and core colouration. Common to abundant vegetable temper in a clay matrix containing common small quartz-sand. Surfaces vary from reddish-grey to reddish-brown, cores from reddish-grey to dark grey. A total of 45g of this fabric was recovered; there were no diagnostic sherds.

Fabric 6

Fairly soft fabric with slightly soapy feel to surfaces. Sandy fabric with common medium to large calcareous inclusions, mostly chalk (which is probably found naturally in the clay source). Surfaces patchy dark grey to reddish-brown; cores tend to be dark grey. A total of 47g was recovered. Two globular cooking pots or jars (catalogue nos 36 and 37) occurred in this fabric.

Fabric 7

Sandy, medium hard fabric with common iron ore. The quartz-sand is abundant and varies in size from small to large particles. Surface colour varies, but is predominantly reddish-brown; cores vary from reddish-brown to reddish-grey. A total of 76g of this fabric was recovered; there were no diagnostic sherds.

Fabric 8

Fairly soft fabric with common iron ore and sparse vegetable temper. The predominant surface colour is reddish-brown, with cores dark reddish-brown. A small amount, 11g, of this fabric was recovered, and there were no diagnostic sherds.

Fabric 9

Hard fabric with common vegetable temper (mostly voids) and abundant large particles of flint/chert and quartz-sand. Outer surfaces reddish-brown; inner surfaces and core dark grey. A single, undiagnostic body sherd in this fabric (6g) was found.

Discussion

Sandy fabrics predominate in the Early Saxon pottery from Great Waltham. The total weight of Early Saxon pottery is 1830g, of which 1652g has a high proportion of quartz-sand in its matrix (fabrics 1,2,3,6 and 7) with no vegetable temper. The remaining 178g (fabrics 4,5,8 and 9) has some added vegetable temper. Dr D.F.Williams has commented on the probable clay source as follows: 'a fairly local source for this pottery would tie in with the geology of the Great Waltham region, though a source, or sources, further afield cannot be ruled out on this evidence'. It is most likely that we are dealing here with several local sources which possess slightly different inclusions in the clay matrix. A high percentage of chalk in the clay produced fabric 6 (although only a small amount had visible chalk, the vesiculated appearance of other sherds indicated leached out chalk). A high percentage of iron ore in the clay source produced fabrics 7 and 8. With fabric 9, it is difficult to distinguish whether the unusually large particles of quartz-sand were found naturally in the clay source, or whether they were added as tempering agent.

On the evidence of the range of fabrics and the comparatively small amount of vegetable-tempered fabrics, the assemblage falls most happily into a 5th to 7th-century context.

Late Saxon The fabric series for this period is arranged roughly chronologically using a system already in use for post-Roman pottery in Essex (Cunningham 1985, 1-2). As with the Early Saxon pottery from the site, sherds were examined using a x20 binocular microscope.

Cunningham's fabric 10: St. Neots-type ware

Fairly rough fabric with small, crushed, evenly distributed fossiliferous shell. Slightly soapy feel to surfaces. Colour varies from pinkish-brown to reddish-brown to purplish-brown surfaces. The core is dark grey. The fabric dates to the period A.D. 850-1200. Other sites in Essex which have produced St. Neots-type ware include the Saxon settlement at Springfield Lyons, Chelmsford (Walker 1987, 28-9) and Cressing Temple (Tyler, in prep.).

Catalogue of diagnostic pottery

Early Saxon

1. Jar or bowl. Everted, rounded rim. Fabric 1. Dark grey throughout. Surfaces burnished. Wt 9g.
2. Small jar. Everted, angular rim. Fabric 1. Surfaces burnished. Dark grey throughout. Wt 3g.
3. Small jar or bowl. Everted rim, flattened on top. Fabric 1. Surfaces part burnished. Outer reddish-grey. Inner and core dark grey. Wt 4g.
4. Jar or cooking pot. Everted, very slightly beaded rim. Fabric 1. Surfaces patchy dark grey to buff. Core dark grey. Outer burnished. Wt 8g.
5. Jar, probably of biconical form. Everted, rounded rim. Fabric 1. Abraded burnish on outer. Dark grey throughout. Wt 4g.
6. ?Bowl. Body sherd from girth of a sharply carinated vessel. Above the carination, the outer surface has 3 incised concentric lines. The outer is part burnished. Fabric 2. Dark grey throughout. Wt 3g.
7. Bowl or small jar rim. Everted. Fabric 2. Dark grey throughout. Outer surface has burnish on top of rim and beneath neck hollow. Inner smoothed. Wt 3g.
8. Bowl rim. Inturned, slightly flattened. Fabric 2. Surfaces greyish-brown. Core grey. Top of rim burnished. Wt 6g.

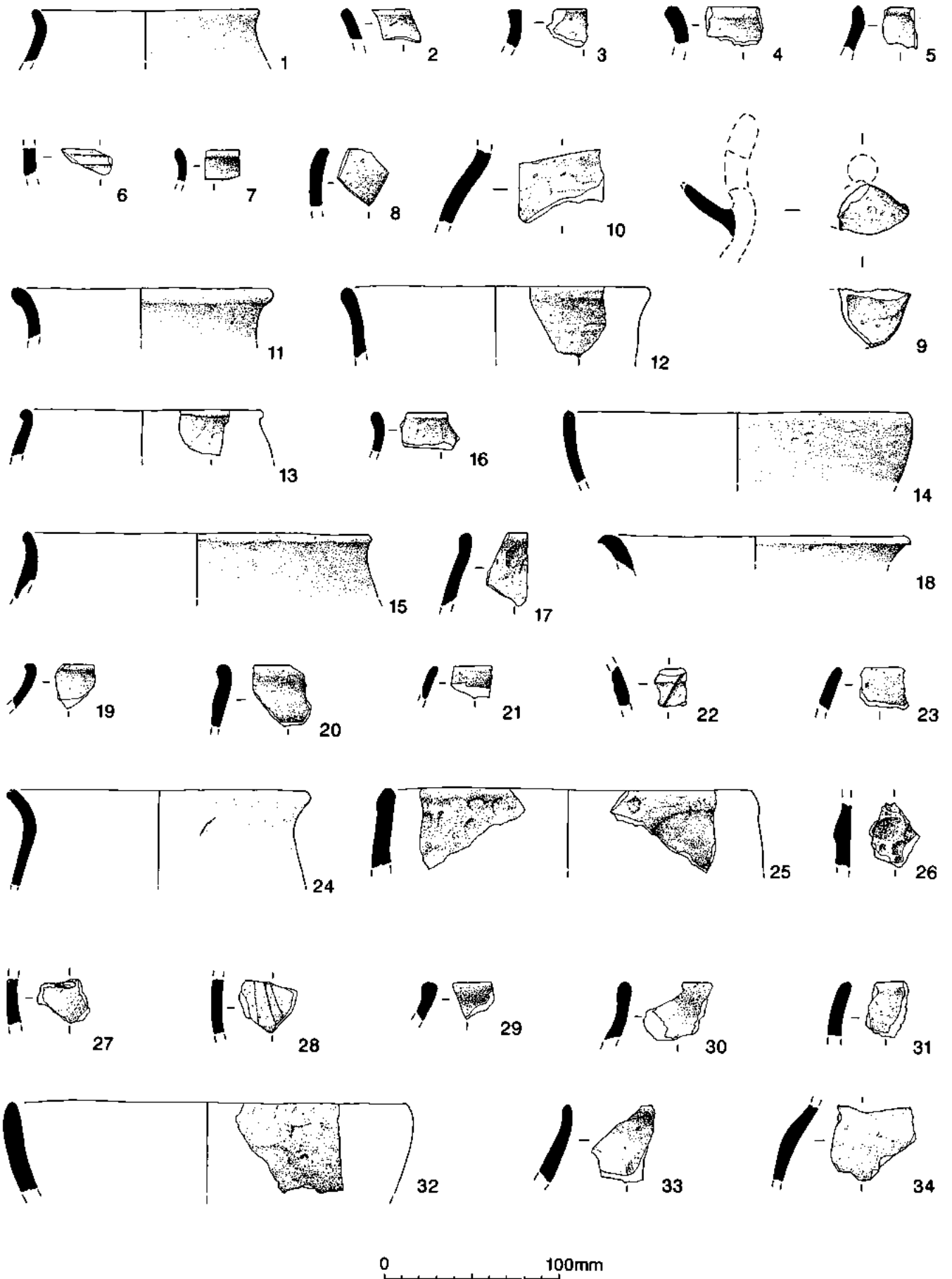


Fig.4 Dickeymoors, Great Waltham. Saxon pottery.

9. Bar lipped spout from a jug, or protective lug of 'swallow's nest' type from a cooking pot. Fabric 2. Outer surface grey-brown. Inner patchy grey-brown to grey. Core grey. Rough surfaces. Wt 10g.
10. Jar or cooking pot, sherd from the shoulder of the vessel. Fabric 2. Outer surface smoothed dark grey. Inner grey. Core grey with reddish-grey outer margin. Wt 30g.
11. Bowl or cooking pot rim. Everted, rounded, slightly beaded rim; 10% extant. Outer smoothed. Fabric 2. Dark grey throughout. Wt 12g.
12. Cooking-pot rim. Everted, slightly flattened rim; 10% extant. Smoothed surfaces. Sooting on outer. Fabric 2. Dark grey throughout. Wt 18g.
13. Small cooking pot with everted, slightly beaded rim. Sooting on outer surface. Fabric 2. Dark grey throughout. Wt 8g.
14. Bowl. Flattened, inturned rim. Fabric 2. Surfaces dark grey. Core grey. Traces of internal burnish. Wt 13g.
15. Jar. Everted, rounded rim with slight beading. Fabric 2. Surfaces dark grey. Core grey. Wt 13g.
16. Jar. Everted, rounded rim. Fabric 2. Dark grey throughout. Sooting on inner surface. Wt 6g.
17. Jar or cooking pot. Slightly everted rim. Fabric 2. Finger/thumb marks on outer (not decorative). Dark grey throughout. Wt 10g.
18. Cooking pot or jar. Everted, slightly beaded, angular rim. Fabric 2. Surfaces dark grey. Core dark grey with reddish-grey margins. Wt 9g.
19. Small jar. Everted, slightly angular rim. Fabric 2. Dark grey throughout. Wt 3g.
20. Jar or cooking pot. Slightly everted rim. Fabric 2. Finger smoothing on outer surface. Dark grey throughout. Wt 8g.
21. Bowl. Inturned, rounded rim. Fabric 2. Surfaces smoothed and part burnished. Dark grey throughout. Wt 3g.
22. Body sherd. Decorated with two incised lines: one concentric and one intersecting diagonal. Fabric 2. Surfaces smoothed. Dark grey throughout. Wt 3g.
23. Bowl. Upright, rounded rim. Fabric 2. Surfaces grey. Core grey-brown. Wt 7g.
24. Ovoid cooking pot or jar. Everted, rounded rim. Fabric 2. Surfaces dark reddish-grey. Core dark grey. Sooting ?carbonised food residue on inner. Wt 34g.
25. Bowl rim. Upright, rounded. Rather crudely made. Finger/thumb marks on surfaces (not decorative). Fabric 3. Surfaces patchy dark grey/reddish-grey/buff. Core dark grey. Wt 37g.
26. Body sherd, probably from a large jar. Finger-rusticated outer surface. Fabric 3. Outer reddish-grey. Inner and core dark grey. Wt 8g.
27. Body sherd, possibly from a faceted carinated bowl. Single facet visible, probably done with the finger tip. Fabric 3. Outer surface smoothed. Inner burnished. Outer reddish-brown. Inner and core dark grey. Wt 5g.
28. Body sherd. Fabric 3. Outer surface has three diagonally incised lines. Outer surface patchy orange to brown. Inner and core grey. Wt 6g.
29. Cooking-pot rim. Upright, rounded. Fabric 3. Coarse ware. Dark grey throughout. Wt 4g.
30. Cooking pot or jar. Rounded, everted rim. Fabric 3. Surfaces dark grey. Core reddish-grey. Outer part burnished. Wt 9g.
31. Bowl. Rounded rim. Fabric 3. Surfaces dark grey. Core light grey. Wt 5g.
32. Large bowl or cooking pot. Upright, slightly angular rim; 15% extant. Blackening on outer surface. Fabric 3. Outer surface patchy reddish-brown to dark grey. Inner dark reddish-brown to dark reddish-grey. Core dark grey. Wt 42g.
33. Jar. Everted, rounded rim. Fabric 3. Outer surface orange-brown. Inner and core dark grey. Wt 12g.
34. Body sherd from a jar of high-shouldered form. Fabric 3. Outer surface dark grey with orange-brown patches. Inner and core dark reddish-grey. Wt 23g.
35. Globular cooking pot or jar. Everted, rounded rim. Fabric 3. Surfaces patchy reddish-orange to dark grey. Core dark grey. Sooting on outer. Wt 32g.
36. Cooking pot or jar. Upright, beaded rim. Fabric 6. Outer surface dark grey. Inner dark reddish-brown to dark reddish-grey. Core dark grey with reddish-brown inner margin. Wt 2g.
37. Large globular cooking pot or jar. Upright, rounded rim. Fabric 6. Outer surface patchy reddish-grey to dark grey. Inner and core dark grey. Inner has vertical scored lines and some sooting ?carbonised food residue. Wt 42g.

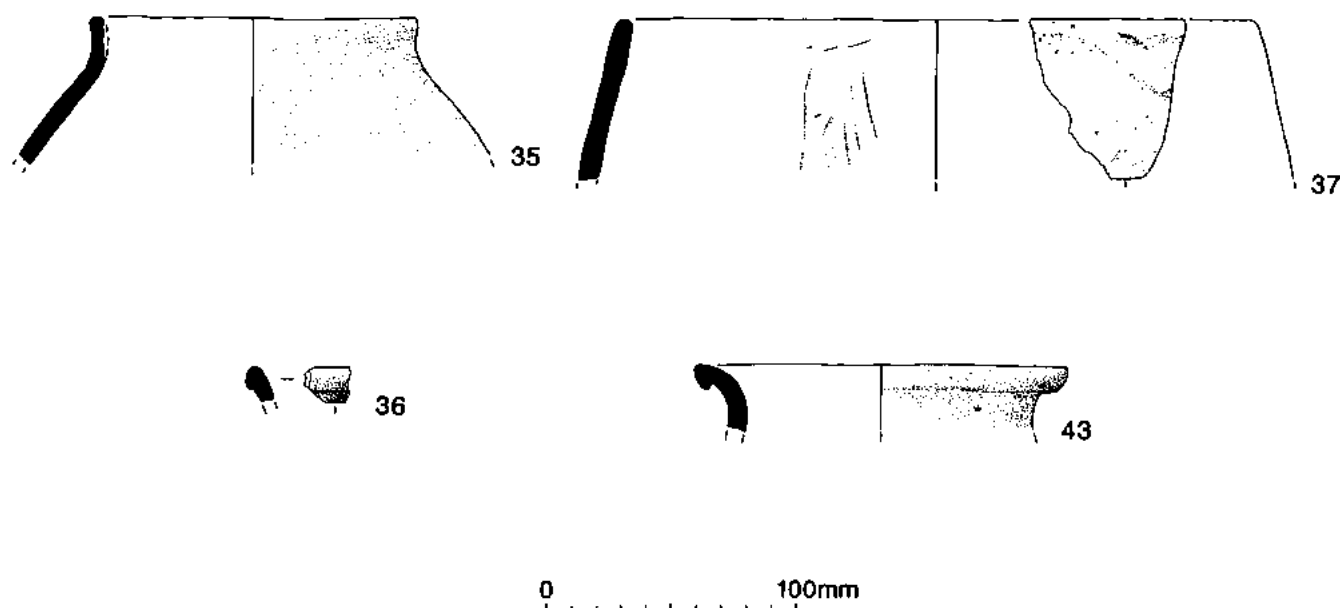


Fig.5 Dickeymoors, Great Waltham. Saxon pottery.

38. (not illustrated) Small jar. Everted, rounded rim. Fabric 1. Outer part burnished. Wt 1g.
39. (not illustrated) Body sherds (3). Probably from a large jar or cooking pot. Fabric 2. Outer surface patchy reddish-brown to grey with 'Schlickung' surface treatment. Inner and core dark grey. Wt 61g.
40. (not illustrated) Jar. Everted, rounded rim. Fabric 3. Dark reddish-grey throughout. Wt 1g.
41. (not illustrated) Jar. Everted, rounded rim. Fabric 3, but very hard with abundant small quartz-sand. ?Mid-Saxon. Wt 2g.
42. (not illustrated) Body sherds. Two sherds with 'Schlickung' outer surface treatment. Fabric 3. Outer surface patchy dark grey to reddish-brown. Inner and core dark grey. Wt 5g.

Late Saxon

43. Cooking pot. Everted, beaded rim. Rim blackened. Wt 10g.
44. (not illustrated) Body sherd. St. Neots-type ware (Cunningham's fabric 10). Outer surface slightly rilled. Outer dark reddish-grey. Inner orange-buff. Core grey. Wt 1g.

Forms and dating

The diagnostic forms present are carinated bowls (catalogue nos 6 and 27); a biconical jar (no.5); an ovoid jar (no.24); a high-shouldered jar (no.34) and two globular cooking pots or jars (nos 35 and 37). For the rest of the assemblage, it is not possible to determine full vessel profiles. Most rims are everted and rounded with varying degrees of neck hollow, and probably come from globular bowls and jars. Hamerow (1993, 37-44) has recently discussed the development of Early Saxon pottery forms based on results from excavations at Mucking; she sees carinated and biconical vessels as 5th to 6th-century forms. However, shouldered and globular types seem to occur throughout the Early Saxon period; ovoid jars are a 7th-century type, but can occur earlier. Elsewhere in Essex, carinated bowls also occur in 5th to 6th-century contexts, e.g. from the 5th-century settlement at Heybridge (Drury and Wickenden 1982, 12-20) and from the 5th to 6th-century cemetery at Springfield Lyons (Tyler 1987, 15-8, fig.13.4).

Swallow's nest lugs at Mucking seem to belong to the 6th to 7th centuries (Hamerow 1993, 41-2). Thus the Great Waltham 'lug' (catalogue no.5), initially interpreted as part of a 9th-century bar-lipped jug, is more likely to be a swallow's nest lug of 6th to 7th-century date, and thus fits comfortably into the proposed date range for the bulk of the assemblage.

The various surface treatments, in particular finger rustication and coarse slipping ('Schlickung') help to confirm the postulated Early Saxon date range. At Mucking, these surface treatments were found in the early (5th to 6th-century) parts of the settlement (Hamerow 1993, 35-7).

It is unfortunate that there are no diagnostic forms present amongst the vegetable-tempered fabrics within the assemblage. We cannot therefore date these sherds closely, and it remains possible that this material could be slightly later than the rest, perhaps being late 7th to early 8th-century in date. Parallels do exist for the dating of vegetable-tempered pottery to the 7th to 8th centuries, as at Great Dunmow (Wickenden 1988, 45-50).

The amount of Late Saxon pottery is very small and could be intrusive. The beaded cooking-pot rim (catalogue no.43) probably dates to the 10th century.

The other finds

N.P.Wickenden

(These are illustrated in Fig.6)

1. Copper-alloy Roman stud.
- 2-4. Pointed tools, antler. The working ends are slightly polished in use; paring marks are visible elsewhere.
5. Fragment of antler, cut transversely.

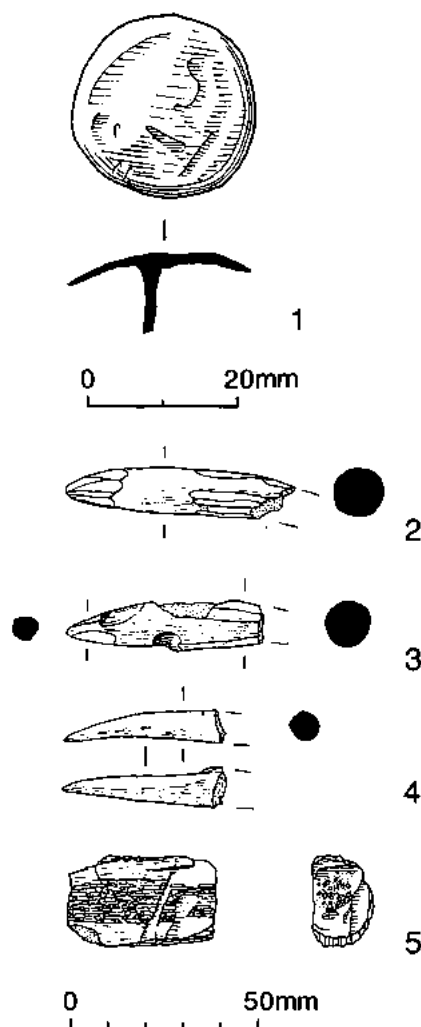


Fig.6 Dickeymoors, Great Waltham. Other finds; 1, copper alloy; 2-5, antler.

Animal bone

Rosemary Luff

A small assemblage was recovered from the various fills. Species present were: *Bos*; *Ovis/Capra*; *Sus*; *Cervus elaphus* (red deer); *Felis*.

Discussion

N.P.Wickenden

The site of these finds lies less than 1.5 km from the known Roman settlement at Little Waltham (Drury 1978), and adjacent to the Roman road which leaves the Chelmsford-Braintree road at Little Waltham for the Roman town at Great Dunmow. The church at Great Waltham is also known to contain Roman tiles in its fabric. It is thus reasonable to assume that the late Roman gravel pit from which these finds came may be

associated with an otherwise unrecorded Romano-British farmstead or with a resurfacing of the nearby Roman road.

The Anglo-Saxon pottery is virtually entirely Early Saxon (5th to 7th centuries). It is thus tempting to see a connection between this site and the focus of a putative Royal estate established in the area before the middle of the 6th century, whose existence is implied by the place name *Wealdham*, i.e. Waltham (*Medieval Archaeology* 19 [1975] 198-201), and confirmed by the 7th-century 'princely' burial on what was probably its southern boundary at Broomfield (Jones 1980, 89-90, with bibliography).

Acknowledgements

Illustrations are by Iain Bell and Stewart MacNeill of Essex County Council Planning Department.

Authors; S.Tyler, Essex County Council Planning Department, County Hall, Chelmsford CM1 1LF and N.P.Wickenden, Chelmsford Borough Museums Service, The Old Cemetery Lodge, I Writtle Road, Chelmsford CM1 3BL.

Bibliography

Buckley, D.G. and Hedges, J.D. 1987	<i>The Bronze Age and Saxon settlements at Lyons, Essex. An interim report, Essex County Occ. Pap. 5</i>	Jones, W.T. 1980	Archaeol. Rep. 21 'Early Saxon cemeteries in Essex', in Buckley, D.G. (ed.), <i>Archaeology in Essex to AD 1500</i> , CBA Res. Rep. 34, 87-95
Cunningham, C.M. 1985	'A typology for post-Roman pottery in Essex', in Cunningham, C.M. and Drury, P.J., <i>Post-Medieval sites and their pottery; Moulsham Street, Chelmsford</i> , CBA Res. Rep. 54, 1-16	Tyler, S. 1987	'The early Saxon pottery', in Buckley, D.G. and Hedges, J.D., <i>The Bronze Age and Saxon settlements at Springfield Lyons, Essex. An interim report</i> , Essex County Council Occ. Pap. 5, 15-8
Drury, P.J. 1978	<i>Excavations at Little Waltham 1970-71</i> , CBA Res. Rep. 26	Tyler, S. in prep.	'A report on the Saxon and medieval pottery from Cressing Temple'
Drury, P.J. and Wickenden, N.P. 1982	'An early Saxon settlement within the Romano-British small town at Heybridge, Essex' <i>Med. Archaeol.</i> 26, 1-40	Walker, H. 1987	'Late Saxon and early medieval pottery', in Buckley, D.G. and Hedges, J.D., <i>The Bronze Age and Saxon settlements at Springfield Lyons, Essex. An interim report</i> , Essex County Council Occ. Pap. 5, 28-9
Going, C.J. 1987	<i>The mansio and other sites in the south-eastern sector of Caesaromagus. The Roman pottery</i> , CBA Res. Rep. 62	Wickenden, N.P.	<i>Excavations at Great Dunmow, Essex</i> , E. Anglian Archaeol. 41
Hamerow, H. 1993	<i>Excavations at Mucking, vol. 2: the Anglo-Saxon settlement</i> , English Heritage		

The Vikings in Essex, 871-917

by Ann Williams

In his study of the ealdordom of Essex, C.R. Hart observed that 'the course of Essex history in the ninth century is notoriously obscure'.¹ In the seventh century, the kingdom of Essex had included Middlesex, a union remembered in the boundaries of the bishopric of London, but Middlesex had been lost to the Mercians at the beginning of the eighth century.² By the ninth century, the political independence of Essex itself was, to say the least, precarious. It had long been under the suzerainty of Mercia, and, after the collapse of the Mercian overlordship in 825, it passed into the West Saxon hegemony; Sigered, the last of its independent kings to be recorded, was probably expelled by Ecgbert of Wessex. At least one member of the East Saxon dynasty seems to have fled to Mercia; Sigeric, who received land in Hertfordshire from the bishop of London between 827 and 839, is described in the document recording this grant as a *minister* (thegn) of Wiglaf, king of the Mercians, but appears in the witness-list as *rex Orientalium Saxonum*.³

From about 825 until 860, Essex was included, with Sussex and Kent, in the subordinate kingdom held in turn by the junior members of the West Saxon dynasty; after 860, it was part of the kingdom of Wessex. The West Saxons were accustomed to appoint ealdormen to the various regions of their kingdom and the Ealdred who attested a grant of King Æthelred I for St Paul's in 867, as ealdorman (*dux*), may have had responsibility for Essex.⁴ In the absence of an East Saxon chronicle, or any surviving contemporary charters from East Saxon sources, there is little direct evidence for the history of Essex in the latter part of the ninth and the early tenth centuries. Yet something can be reconstructed. Since the history of Essex cannot be seen in isolation from that of the other English kingdoms in this period, some account of the general course of events must act as preface to the specific subject of this paper.

Viking forces were raiding in England from the latter part of the eighth century, and these raids increased in frequency and intensity as the ninth century wore on. With hindsight, a definitive change can be seen in 866. This year marks the arrival of the 'Great Army' (*tha micel here*), led by the Norwegian brothers Ivarr and Halfdan, who had already established a base in Ireland. Over the next few years, this host campaigned in East Anglia, Northumbria and Mercia until, in 871,

it fell on Wessex. During that year, according to the *Anglo-Saxon Chronicle*, 'nine general engagements were fought against the Danish army in the kingdom south of the Thames, besides the expeditions which the king's brother Alfred, and also single ealdormen and king's thegns often rode on, which were not counted'. Of these engagements, two (at Englefield and Ashdown) were West Saxon victories, the rest were defeats, and in the end the West Saxons were forced to make peace, and quite likely to pay tribute - Danegeld - as well.

In the course of this fighting, Æthelred I, king of Wessex, died, and his brother Alfred succeeded as king. At some time between 22 March and 15 April 871, a second Viking host, which the chronicler calls 'the great Summer Army (*mycel sumorlida*)', arrived at Reading and allied with the Great Army of Halfdan.⁵ Whence it came is unknown; Alfred's biographer, Asser, says only that it came from overseas (*de ultramarinis partibus*).⁶ In 872, the combined hosts removed from Wessex to London, in the land of the Mercians. The Mercian king, Burgred, made peace and paid a very heavy tribute; the bishop of Worcester had to lease an estate to one of the king's thegns, in return for a payment of 600 silver pennies, because of 'the immense tribute of the barbarians, in that same year when the pagans stayed in London'.⁷

From London, the armies moved to York, where Halfdan had already laid the foundations for a Viking kingdom. First, however, the combined hosts attacked Mercia. In 873 they over-wintered at Repton, one of the cult-centres of the Mercian royal dynasty.⁸ They were acting in concert with a disaffected ætheling of the Mercian royal house, Ceolwulf II, and in 874, the Mercian king, Burgred, was driven out, and Ceolwulf took the kingdom.⁹ In the following year, 875, the armies divided; Halfdan returned to York, where in 876 he 'shared out the land of the Northumbrians' among the veterans of the Great Army, and 'they began to plough and support themselves'. The 'Great Summer Army' remained in Southumbria; in 875-6, it was based in Cambridge. For the first time, the *Anglo-Saxon Chronicle* names three of its leaders, Oscytel, Anwend and Guthrum.¹⁰ Since the first two do not reappear, it is likely that Guthrum was the dominant leader from the first.

It is clear that the interests of Halfdan lay in

Northumbria and Ireland, where he had designs on the Viking kingdom of Dublin.¹¹ Guthrum, it seems, was to take southern England as his kingdom, if he could. He launched a raid on Wessex in 876, first attacking Wareham and then, under cover of a truce, moving on to Exeter; Alfred had to pay the invaders to depart.¹² In the following year, 877, Guthrum and Ceolwulf divided up the kingdom of Mercia, with Guthrum's army settling in the Mercian lands as Halfdan's men had in Yorkshire.¹³

In 878, Guthrum made his final and, in the event, unsuccessful putsch into Wessex. From a base in the Gloucester region, he made a descent on the royal manor of Chippenham, Wiltshire, best described in the words of the contemporary Chronicle:

'in this year, at midwinter, the enemy army came stealthily to Chippenham after Twelfth Night, and occupied the land of the West Saxons, and settled there; and drove a great part of the people across the sea and conquered most of the others; and the people submitted to them, except King Alfred [who] journeyed in difficulties through the woods and fen-fastnesses with a small force'.

Some years ago, a friend of mine, suffering from the effects of too much home-brewed mead, remarked that he saw all too well how the Danes could surprise the West Saxon army on the morning after Twelfth Night. Be that as it may, Alfred's epic defence of Wessex against Guthrum's army is too well-known to recount in detail. From his hide-out on Athelney, he organized the levies of Somerset, Wiltshire and part of Hampshire, until he was able to bring Guthrum to battle at Edington and put his host to flight. He pursued the fleeing Vikings back to Chippenham, which was besieged. After a fortnight, the Vikings capitulated and the Chronicle describes how they

gave him preliminary hostages and great oaths that they would leave his kingdom, and promised also that their king should receive baptism, and they kept their promise. Three weeks later, King Guthrum, with 30 of the men who were most important in the army, came to [Alfred] at Aller, which is near Athelney, and the king stood sponsor to him at his baptism there; and the unbinding of the chrisom took place at Wedmore.¹⁴

Guthrum's army returned to lick its wounds at Cirencester. Two years later, in 880, he and his men settled in East Anglia 'and shared out the land'.¹⁵ Guthrum ruled East Anglia in his baptismal name of Athelstan, the name of Alfred's long-deceased eldest brother.¹⁶

It is time to consider what all this has to do with the history of Essex. The Treaty between Alfred and Guthrum, preserved in a collection of Old English legal texts made at St Paul's, London, in the early twelfth century, defines the boundaries between Alfred's lands and those of Guthrum as follows (the translation is that of Keynes and Lapidge):¹⁷

'first, concerning our boundaries: along the Thames; and then along the Lea to its source [near Leagrave, Beds]; then in a straight line to Bedford, then up the Ouse to Watling Street [at Stony Stratford, Bucks]'.

The main part of this boundary follows the border between Middlesex and Essex but cuts the later shires

of Hertfordshire and Bedfordshire in half. It has been assumed that Alfred controlled the region west of this boundary, and that the land to the east, including Essex, fell to Guthrum. If this is so then it follows that, since Middlesex and London were not in Alfred's hands in 878, the treaty cannot have been concluded at Wedmore in that year.¹⁸ It has therefore been dated to 886, the year in which Alfred seized London from the Danes.¹⁹

There are various problems with this view of the treaty's date and interpretation. The *Anglo-Saxon Chronicle* makes no mention of any such agreement in 886, nor in any year between 886 and the death of King Guthrum in 890.²⁰ Moreover, in 888, only two years after the treaty was supposedly formalized, Alfred's son-in-law and ally, Æthelred of Mercia, is found disposing of land at Walden, Herts, to the east (or 'Danish') side of the boundary.²¹ Equally worrying is the fact that there is little sign that the bulk of Essex was ever occupied by the Danes. The distribution of place-names in Essex suggests that the Viking settlement penetrated no further than the north-east, around Colchester, and the lands along the Suffolk and Cambridgeshire borders; central and southern Essex seem not to have been occupied by the Danes.²²

A similar conclusion can be drawn from the archaeological record. Various isolated finds have been claimed as evidence for Danish settlement, but these may represent no more than Scandinavian artifacts acquired by individuals.²³ The fortifications built by Danish armies in the 880s and 890s are symptomatic of military campaigns, rather than permanent settlements, and the histories of some East Saxon religious communities suggest the kind of disruption caused by sporadic warfare rather than a determined effort to colonize the region.²⁴ The fate of St Cedd's minster at Bradwell-on-Sea is unknown, but it was probably attached to the manor of Tillingham, held by St Paul's, London, throughout the Old English period.²⁵ The cathedral's unbroken possession of this estate, and the survival of much of its archives 'seem to manifest a greater degree of continuity than one might expect of religious institutions in any county of the Danelaw'.²⁶ The minster at Barking, founded in the late seventh century by Bishop Eorcenwald of London for his sister, Æthelburh, also appears to have been deserted between c.870 and c.940, but once again the survival of the minster's early archive suggests a planned withdrawal rather than a sack.²⁷ The community may have sought refuge within the walls of London (re-furbished by Alfred after 886), perhaps at All Hallows-by-the-Tower, a church later associated with Barking Abbey.²⁸ The fact that Barking was eventually re-occupied may be also significant, and though its cell at Nazeing seems to have been permanently abandoned, the abbey did maintain at least some connections, both ecclesiastical and tenurial, with the land which had belonged to it.²⁹ In contrast to Barking, the evidence from Hadstock, possibly the site of St Botolf's monastery of *Icanho*,

suggests that the church there was destroyed during the campaigns of the 870s.³⁰ This, and a hoard of mainly Viking coins of the late ninth century discovered at nearby Ashdon, may indicate that north-west, as well as north-east Essex was under the shadow of the Danes.³¹ On the other hand, a hoard of English coins from a burial at Leigh-on-Sea, dated c.895-900, supports the hypothesis that southern Essex remained within the English sphere of operations.³²

A solution to these difficulties has recently been proposed by Dr. Dumville, who has argued that the Alfred-Guthrum treaty does indeed represent the agreement made at Wedmore, after the Viking capitulation at Chippenham in 878.³³ In his interpretation, the first part of the boundary, 'along the Thames', follows the river downstream from Chippenham, Wilts, to London. This section defines the ancient boundary between Wessex and Mercia, and in 878, Mercia (including Middlesex and London) was controlled by Guthrum, either directly or through his ally, Ceolwulf II.³⁴ At the point where the Lea flows into the Thames, the boundary turns northwards, and Dumville suggests that the land to the east of the boundary, including Essex, belonged not to Guthrum, but to Alfred's kingdom of Wessex, as it had for the bulk of the ninth century. There remains the difficulty that, although 'the people (*theod*) of East Anglia' are said to be party to the agreement, no boundary is specified between Essex and East Anglia; it may have followed the line of the River Stour, which seems always to have defined the borders of Essex and Suffolk.³⁵ Dr. Dumville's suggestion not only clears up most of the discrepancies in the traditional interpretation, but also clarifies the history of the later Viking incursions into the Essex region. These involve two campaigns – that of the 'Fulham army' in the 880s and 890s, and that of the ætheling Æthelwold in the early 900s. Both are difficult to understand if Essex lay within the Viking kingdom of East Anglia, but most of the problems would be resolved if it was in fact part of Wessex.

The Fulham army is so-called from its first appearance in England, in 879-80, when it overwintered at Fulham, Middlesex; in Guthrum's kingdom, if Dumville is correct.³⁶ The adventures of this force are the main theme of the *Anglo-Saxon Chronicle* in the years between 880 and 896. For much of the 880s, the army was operating in Frankia, but it made an attack on Kent in 885, and in 892 launched a much more serious onslaught on Alfred's kingdom, which lasted until 896. On both occasions, Essex was in the front line of hostilities between English and Viking forces.

In 885, the Fulham army, which was then operating in north-east France, divided in two parts. One force moved eastward, into the lands of the Carolingian kings of Germany, while the other descended on Rochester in Kent.³⁷ Alfred raised the siege of Rochester, driving out some of the enemy; the rest apparently sought refuge in East Anglia, for the *Chronicle* says that 'the Danish army in East Anglia

violated their peace with King Alfred' in 885. Further information comes from the late tenth-century historian, Æthelweard the Chronicler. He says that the invaders, helped by the East Anglian Danes, raided 'the afforested parts of the country where the Thames touches its southern shores'; this would seem to describe Essex. Eventually 'the foul people who then held East Anglia... suddenly made an expedition outside their own boundaries to Benfleet', in Essex. A quarrel between the various leaders of the Viking army then led to the departure of most of the invaders across the sea.³⁸ After they had gone, Alfred sent a fleet from Kent into East Anglia, which destroyed 16 Viking ships in the River Stour; the English fleet was, however, defeated by a second Viking force as it sailed for home.

The accounts of the 885 campaign imply that Essex formed part, not of Guthrum's kingdom, but of Alfred's. Alfred's fleet attacked East Anglia, not Essex, and Æthelweard's description of Benfleet as 'outside the boundaries' of the East Angles is especially telling. Equally evident is the precarious situation of Essex as a frontier region, harassed from the north by the East Angles, and cut off from direct contact with Wessex by Viking Mercia, which at this time included Middlesex and what later became Buckinghamshire.

The events of 885 may explain Alfred's actions in 886. This is the year in which, according to the *Chronicle*, Alfred 'occupied' London, 'and all the English people that were not under subjection to the Danes submitted to him'. This seizure would be a breach of the agreement made in 878, and Asser, Alfred's biographer, says that he took London only 'after the burning of cities and the massacre of people', suggesting a fierce campaign.³⁹ The *Chronicle* claims that after Alfred's capture of London, 'all the English people that were not under subjection to the Danes submitted to him', and that he committed the (formerly Mercian) city of London to Ealdorman Æthelred. It was probably in 886 that Æthelred, whom the Chronicler Æthelweard calls king (*rex*) of the Mercians, married Alfred's first-born child, Æthelflæd, Lady of the Mercians.⁴⁰

The incorporation of London and its region into English Mercia must have taken some of the pressure off Essex, which now had direct contact with the West Saxons and Mercians. Nothing, however, is known of its history until 892. In this year another part of the old Fulham army returned to England, to launch a second attack on Kent. They established themselves at Appledore, in the south and a second force, commanded by Hasteinn, occupied Milton Regis near Sittingbourne in north Kent.⁴¹ There they remained for a year. In 893, Alfred began operations against them, and, as a precaution, exacted oaths to keep the peace from the Northumbrians and the East Anglians. The East Anglians were also required to give hostages for good behaviour; nevertheless, the *Chronicle* says 'whenever the other Viking armies set out in full force,

then [the East Anglians] went as well, either with them or on their own'.⁴²

It seems that Alfred came to an agreement with Hasteinn, not unlike that which he had concluded with Guthrum in 878.⁴³ Hasteinn's two sons were baptized, Alfred standing godfather to one and Æthelred of Mercia to the other; money changed hands and Hasteinn gave hostages and oaths.⁴⁴ He then removed from Milton Regis across the Thames to Benfleet, Essex, where he built (or re-built) a fortification.⁴⁵ When the Appledore Vikings attempted to join him, they were intercepted by Edward ætheling, Alfred's son, at Farnham, Surrey, and put to flight. The survivors, minus their plunder, managed to cross the Thames and take refuge on an island (Thorney, near Iwer, Bucks) in the River Colne, where Edward besieged them, with the aid of his brother-in-law, King Æthelred.⁴⁶ An agreement was reached, whereby the Vikings were to leave Æthelred's kingdom, and they joined Hasteinn at Benfleet; their ships had already moved from Appledore to Mersea Island.⁴⁷

At this point the Northumbrians and East Anglians joined forces to launch a two-pronged attack on Wessex itself, one force sailing round the south coast to besiege Exeter, another attacking a fortress (probably at Pilton) on the north Devon coast.⁴⁸ Alfred turned west to deal with this threat, leaving Benfleet to an anonymous force consisting of a small detachment from his main army, the garrison of London and 'the reinforcements which came to them from the west', presumably from Mercia. This army successfully stormed Benfleet 'and seized everything that was inside it, in the way of goods, women, and children as well'. Hasteinn was away raiding at the time, but the captives included his wife and his two sons. Hasteinn's force and the survivors from Benfleet built themselves a second fortress at Shoebury.⁴⁹ Reinforced by their East Anglian and Northumbrian allies, they raided up the Thames clear across England, as far as the Severn, where they were defeated at Buttington (Montgomery) by a combined West Saxon and Mercian force.

The survivors fled back to Essex, but did not remain there long; they sent their wives and children, and all their moveable property, to East Anglia for safe-keeping, and, at the beginning of winter, moved across Mercia once more to occupy Chester. By the spring of 894, they had been driven out by the English, and returned via Northumbria and East Anglia to a base on Mersea Island. In the late autumn of 894, they moved their ships up the Thames and the Lea to a point twenty miles north of London, where, in 895, they built a fortification.⁵⁰ A force from London was unable to dislodge them, and the king himself had to intervene. The Chronicle describes how Alfred

follows: they made two fortifications, on the two sides of the river. When they had just started this work, and had encamped alongside, the Viking army realized that they would not be able to bring the ships out. Then they abandoned the ships and went overland until they reached Bridgnorth on the Severn, and there they made a fortification. The English army then rode west after the Viking army; and the men from London fetched the ships, and they broke up all that they could not take away, and they brought to London all that were serviceable. And the Danes had made their women safe in East Anglia before they set out'.

This was the final campaign of Hasteinn's army; in the summer of 896, it dispersed, some to East Anglia, some to Northumbria 'and those without property got themselves ships and went south across the sea to the Seine', never to return.⁵¹

It is significant that both in 893 and in 895, when the Danes began their harrying campaigns, they sent their women and children, and all their moveable property, to East Anglia for safe-keeping. The inference is that though they were able to campaign in Essex, and even to build fortresses there, they had no safe foothold once those fortresses were besieged by the English. The natural conclusion is that Essex was still part of Alfred's kingdom in the 880s and 890s.⁵² Confirmation comes from the entry for 896 in the *Anglo-Saxon Chronicle*, which includes Brihtwulf, ealdorman of Essex, in a list of 'the best king's thegns' who died in the plague which afflicted the land in the years 893-96.⁵³ Brihtwulf's name is English, and, as David Dumville has said, 'an area which is under Danish rule does not need an English ealdorman, and especially not one approved of by the Chronicler'.⁵⁴ Presumably Brihtwulf – the first certain ealdorman of Essex – was Alfred's man.

The long entry for the year 896 is the last contemporary entry for Alfred's reign in the *Anglo-Saxon Chronicle*. Its account of his later years, and of the reign of his son and successor, Edward, was written some time after the events described and its annals are shorter and less detailed. The surviving narrative concentrates on Edward's conquest of the Danish settlements in southern England; but first he had to face a challenge to his authority in Wessex itself.

The English did not, of course, observe the custom of primogeniture at this time. The property of deceased men – and indeed women – was normally divided among the members of their kindred, though the precise rules governing the share-out are not entirely clear. Kingdoms were a kind of property, belonging to the royal line. Succession to the kingship was determined in various ways, not all of which are now recoverable by historians. In ninth-century Wessex, the kingdom had passed from Egberht to his son Æthelwulf, and thence to Æthelwulf's four sons in turn, first Æthelbald, then Æthelberht, then Æthelred I and finally Alfred. The succession looks orderly, but the bland entries in the *Anglo-Saxon Chronicle*, composed in Alfred's reign, may conceal a great deal of diplomatic manoeuvring and outright conflict.⁵⁵ Such underlying disagreements are implied in the preamble to

'encamped in the vicinity of [London] while [the inhabitants] reaped their corn, so that the Danes could not deny them the harvest. Then one day the king rode up along the river, and looked to see where the river could be obstructed, so that the Danes would not be able to bring their ships out. And the English did as

Alfred's will, which is over-anxious to stress Alfred's rights to the royal title and property.⁵⁶ There were clearly tensions within the West Saxon royal kindred which our sources – all emanating from Alfred's circle – are not keen to specify.

These tensions surface after Alfred's death in 899. In 900, the succession of his son, Edward the Elder was challenged by the ætheling Æthelwold, a son of Alfred's elder brother, Æthelred I. The Chronicle describes how Æthelwold

rode and seized the residence at Wimborne [Dorset] and at Christchurch [Hants], against the will of the king and his councillors. Then the king rode with the army until he encamped at Badbury Rings, near Wimborne, and Æthelwold remained inside the residence with the men who had sworn allegiance to him; and he barricaded all the gates against [Edward] and said that he would either live or die there.

Despite these defiant words, the ætheling decided – or was persuaded – that he could not prevail against his cousin's force, and he fled Wimborne and Wessex to seek refuge among the Vikings of York.

The *Anglo-Saxon Chronicle* provides no explanation of the ætheling's behaviour, but he was clearly making a bid for the kingship. His occupation of Wimborne is significant. It was clearly defensible, but it was also the site of an important minster-church, where the ætheling's father Æthelred, Alfred's predecessor as king of Wessex, was buried. Æthelwold's action in 900 recalls that of Ceolwulf II in 873–4, when, with his Danish allies, he seized the residence at Repton, whose ancient minster-church was the burial place of several Mercian kings and æthelings.⁵⁷ The result of Ceolwulf's action was the flight of the rival Mercian king, Burgred, and his own acceptance as king of the Mercians. The chief difference between Ceolwulf's success and Æthelwold's failure seems to be that Æthelwold only allied with the Vikings after he was driven from Wimborne.

The chronology of Æthelwold's revolt is not entirely clear.⁵⁸ It seems that he fled to the Viking kingdom of York, which was having succession problems of its own. Indeed these were serious enough for the York Vikings to make Æthelwold himself their king.⁵⁹ By 902 or 903, Æthelwold was sufficiently well established to make another attempt on the West Saxon kingship. This time he had the fleet from Viking York to support him, and with it he invaded Essex and the inhabitants submitted to him. The significance of this event is made clear by David Dumville:

[Æthelwold] had to seize and be recognized in a part of the kingdom of Wessex in order seriously to establish his claim to the throne. It had to be a part which he could reach readily by sea. It would need to be King Edward's weakest point and his own strongest'.⁶⁰

As Dumville points out, 'Essex meets these criteria perfectly', especially when we remember that half a century earlier, it had formed part of a kingdom traditionally held by the putative successor to the West Saxon king. Moreover, the seizure of Essex allowed Æthelwold to make alliance with the East Anglian

Danes. The *Anglo-Saxon Chronicle* describes how, in 903 or 904, he

induced the army in East Anglia to break the peace, so that they harried over all Mercia until they reached Cricklade; and they then went across the Thames, and carried off all that they could seize both in and around Braydon, and then turned homeward.

Edward turned out the full West Saxon army to deal with this threat. He pursued the retreating host of the East Angles, and 'harried all their land between the Dykes and the Ouse'; the dykes concerned are the Devil's Dyke and Fleam Dyke, in Cambridgeshire.⁶¹ Edward was not yet ready, however, to invade East Anglia in force, and he ordered his army to return to Wessex. Then, in the words of the *Anglo-Saxon Chronicle*,

the men of Kent lingered there against his command – and he had sent seven messengers to them. Then the Danish army overtook them there, and they fought there. And there were killed Ealdorman Sigewulf and Ealdorman Sigehelm [the ealdormen of East and West Kent], and the king's thegn Ealdwold, and Abbot Cenwulf, and Sigebert, Sigewulf's son, and Eadwold, Acca's son, and many beside them, though I have named the most distinguished. And on the Danish side King Eohric [of the East Angles] was killed, and the ætheling Æthelwold, whom they had chosen as their king... and also very many with them, whom we cannot name now. And a great slaughter was made on both sides, but more of the Danes were killed, though they remained in possession of the battlefield.

This was the battle fought *æt thæm Holme*, the site of which is still uncertain; the word *holmr* means 'island' in Old Norse, and Dr Hart has suggested Holme in Huntingdonshire, in the fenland east of Watling Street, as the site of this fateful engagement.⁶² Though the Chronicle gives the victory to the Danes, the death of the ætheling ended any challenge to Edward's power in Wessex, and the death of King Eohric of the East Angles weakened East Anglia. In 905, peace was concluded with the East Anglians and Northumbrians at Tiddingford, on the border of Buckinghamshire and Bedfordshire. Edward must have felt some satisfaction in the outcome, despite the loss of the two Kentish ealdormen and so many other English commanders.⁶³

In 910, Edward and his sister Æthelflæd, Lady of the Mercians, began their joint campaign to conquer the Danish settlements in England. Æthelflæd concentrated on the north midlands and York, while Edward dealt with the east midlands and East Anglia. Essex naturally figures largely in his early campaigns. In 912, he built the double-burh at Hertford on the Lea and took an army deep into Essex, to Maldon, where he remained while a burh was built at Witham.⁶⁴ As a result, 'a good number of the people who had been under the rule of the Danish men submitted to him'; the chronicler does not specify where these people lived, but eastern Essex, perhaps the area north of Maldon, is a possibility.⁶⁵

The fortifications at Hertford and Witham were followed by those at Luton (913), Buckingham (914), Bedford (915), Maldon itself (916) and *Wigingamere* in 917.⁶⁶ The building of burhs was not merely a defensive

measure. The fortifications, which are what the burhs were, also provided springboards for launching attacks into the Danish-held territories in East Anglia and the East Midlands. Indeed after the building of the fortress at Buckingham, the Viking ruler of Bedford, Earl Thurcytel, submitted to Edward, and eventually left the country. By 917, the East Anglian Danes were becoming seriously alarmed by Edward's activities. With the Vikings of Huntingdon, they made a fortification of their own at Tempsford, Beds, from which they unsuccessfully attacked Edward's burh at Bedford. *Wigingamere* was also besieged by a force from Mercia, East Anglia and (according to the twelfth-century chronicler, John of Worcester) Essex.⁶⁷ Edward's response was to launch a counter-assault on Tempsford, described in the *Anglo-Saxon Chronicle*:

'a great host assembled in King Edward's dominions from the nearest burhs... and went to Tempsford, and besieged the burh and attacked it, and took it by storm; and they killed the king [of the East Angles] and Earl Toglos and his son Earl Manni, and his brother, and all those who were inside and chose to defend themselves; and they captured the others and all that was inside'.

Edward followed this up with an attack on Colchester; the first definite indication that we have that any part of Essex was in Danish hands. Even so, it was clearly only a partial occupation, for the host which attacked Colchester was drawn not only from Kent and Surrey but from Essex itself as well. Colchester fell to the English army, which 'killed all the people and seized everything that was inside, except the men who fled over the wall'.⁶⁸

The capture of Colchester provoked a reaction from the East Anglian Danes, who 'intended to avenge their injury'; they attacked Edward's burh of Maldon but the garrison and those who rallied to their assistance not only held out, but even succeeded in putting their assailants to flight. In the autumn of 917, King Edward, who had already received the submission of the Danish armies of Northampton and Huntingdon,

came with the West Saxon army to Colchester; the Chronicler describes how he

repaired and restored the burh⁶⁹ where it had been damaged. And many people who had been under the rule of the Danes both in East Anglia and in Essex submitted to him; and all the army in East Anglia swore agreement with him, that they would do all that he wished, and would keep the peace with all whom the king wished peace to be kept with, both by land and sea. And the army which belonged to Cambridge chose him especially as its lord and protector, and established it with oaths just as he decreed it.

This, allowing for the partiality of the West Saxon chronicler, marks the effective end of the Danish kingdom of East Anglia, soon to be incorporated, with the Danish earldoms of the east midlands, into one of the greatest of the late Old English ealdordoms.⁷⁰

The history of Essex in the ninth and early tenth centuries, though obscure, is not completely irrecoverable. In fact it is of the greatest interest. Far from being part of the Danish kingdom of East Anglia, Essex emerges as an outpost of Alfred's West Saxon kingdom to the north of the Thames. As such, it was very vulnerable to attack by raiders from overseas, and to pressure from the East Anglian Danes. Though Colchester and the north-east were drawn into the East Anglian sphere, and settled by East Anglian Vikings, southern and western Essex remained in English hands, and played a vital role in English politics; first in Alfred's defence of Wessex against the Danes, then in the troubled succession of Alfred's son, Edward the Elder, and finally in Edward's reconquest of the southern Danish settlements, which were incorporated into what was rapidly becoming 'the kingdom of the English'. When the most famous ealdorman of Essex fell, with his war-band, at Maldon in 991, he was continuing a long tradition of East Saxon resistance to the Scandinavian invaders.

Author: Ann Williams, 77 Gordon Road, Wanstead, London E11 2RA.

Abbreviations

Æthelweard	<i>The Chronicle of Æthelweard</i> , see Campbell (1962)
ANS	<i>Anglo-Norman Studies</i> (Proceedings of the Battle Conference on Anglo-Norman Studies)
Antiq.J.	<i>Antiquaries Journal</i>
AS Chronicle	<i>Anglo-Saxon Chronicle</i> (all references are to Whitelock (1965) unless otherwise stated)
ASE	<i>Anglo-Saxon England</i>
BNJ	<i>British Numismatic Journal</i>
CBA	Council for British Archaeology
EAH	<i>Essex Archaeology and History</i>
EHD	<i>English Historical Documents</i> , vol. 1: 500-1042, see Whitelock (1955)
S.	Sawyer (1968)

Notes

1. C.R. Hart, 'The ealdordom of Essex', in *The Danelaw*, (London, 1992) p. 115 (originally published in K. Neale ed., *An Essex tribute: essays presented to Frederick G. Emmison* (London, 1987) pp. 57-85).

2. The core of this paper is a lecture given to the Essex Society for Archaeology and History, as the Morant Lecture, at Chelmsford, on 12 May 1995. It is heavily dependent on the work of others and was not originally intended for publication. I am very grateful to Janet Cooper and David Andrews for encouraging me to prepare it for print. Owen Bedwin and Nigel Brown kindly supplied me with a copy of Dr Stephen Rippon's paper on *Essex, c. 700-1066*, delivered to the Essex Archaeology Conference in 1993, to which I owe the archaeological references cited. All errors and misconceptions are, of course, my own responsibility.
3. S. 1791; the land was at Braughing, Herts. Sigeric bears the same name as King Sigeric of Essex who retired to Rome in 798, and who was the father of King Sigereð (see B. Yorke, 'The kingdom of the East Saxons', *ASE* 14 (1985), p. 24).
4. S. 337, granting land at Navestock, Essex (see Hart, 'The ealdordom of Essex', p. 116). Though Ealdred attests as *dux*, he need not have been ealdorman of Essex, for the charter represents a 'major assembly... attested by an unusually wide range of ealdormen' (S. Keynes, 'The control of Kent in the ninth century', *Early medieval Europe* 2 (1993), p. 129).

5. The 'summer army' arrived after the battle of *Meretun* (probably Martin, Dorset) and the death of Bishop Heahmund of Sherborne on 22 March, but before the death of King Æthelred at Easter (15 April) 871 (*AS Chron* 'A', 871; *Asser's Life of King Alfred*, ed. W.H. Stevenson (Oxford, 1959), chapter 40, p. 31; *Alfred the Great*, ed. S. Keynes and M. Lapidge (Harmondsworth, 1983), pp. 80, 243). *AS Chron* 'B' 'C' 'D' and 'E' add that the 'summer army' came to Reading, as does Æthelweard, who also calls it 'the innumerable summer army' (*sine numero aestivus exercitus*) and records its alliance with the Great Army (*The Chronicle of Æthelweard*, ed. A. Campbell (London, 1962), p. 39).
6. For its exploits, see A.P. Smyth, 'Guthrum and the Second Summer Army', in *Scandinavian Kings in the British Isles, 850-880* (Oxford, 1977), pp. 240-54.
7. S. 1278, *EHD* i, no. 94, pp. 490-1.
8. The D-shaped defences of the Viking camp incorporated the existing church into the rampart, perhaps as a gate-house; this, and a 'mass-burial' perhaps reflecting the hostilities of 873-4, has been excavated by Professor Biddle (See M. Biddle and B. Kjolbye-Biddle, 'Repton, 1984', *Bulletin of the CBA Churches Committee* 21 (1984), pp. 6-8; M. Biddle et al, 'Coins of the Anglo-Saxon period from Repton, Derbyshire', in M.A.S. Blackburn (ed.), *Anglo-Saxon Monetary History* (Leicester, 1986), pp. 111-22. The coins are imitations of West Saxon issues struck for the Mercian king, Burgred, probably at London).
9. For Repton and the Mercian dynasty, see D. Rollason, *Saints and relics in Anglo-Saxon England* (Oxford, 1989), pp. 117-8; idem, 'The cults of murdered royal saints in Anglo-Saxon England', *ASE* 11 (1982), pp. 5-9; M. Biddle and B. Kjolbye-Biddle, 'The Repton Stone', *ASE* 14 (1985), pp. 234-36. St Wigstan, who was murdered in 849 and buried at Repton, was the grandson of King Wiglaf (827-838) and the son of Ælflæd, daughter of King Ceolwulf I (821-23); Ceolwulf II was perhaps a kinsman, possibly a brother, of St Wigstan.
10. *AS Chronicle*, 875, 876; Asser, chapters 47, 49 (Stevenson, pp. 35-8; Keynes and Lapidge, *Alfred the Great*, p. 82 and notes). Æthelweard (*Chronicle*, p.41) presents the north-south division as a formal agreement between the Viking armies: *barbari in sortes sibi duas dividunt regnum* ('the barbarians divided up the kingdom for themselves into two shares').
11. For Halfdan and his brother, Ivarr 'the boneless', see A.P. Smyth, *Scandinavian York and Dublin*, vol. 1, (Dublin, 1975), pp. 16-20; idem, 'Halfdan, king of Northumbria', in *Scandinavian kings in the British Isles*, pp. 255-66.
12. *AS Chronicle*, 876; Asser, chapter 49; Æthelweard, *Chronicle*, p. 41.
13. *AS Chronicle*, 877; for Asser's text, see Keynes and Lapidge, *Alfred the Great*, pp. 246-7.
14. 'For eight days after baptism, white robes were worn and a white cloth, bound round the head after the anointment with the chrism' (Whitelock, *AS Chronicle*, p. 50, note 1).
15. *AS Chronicle*, 880.
16. Keynes and Lapidge, *Alfred the Great*, p. 282, note 7.
17. Cambridge, Corpus Christi College Ms 383, printed in F. Liebermann, *Die Gesetze der Angelsachsen*, i (Halle, 1903), 122-9; translations in F.L. Attenborough, *The laws of the earliest English kings* (Cambridge, 1922), pp. 98-101; *EHD* i, no. 34; Keynes and Lapidge, *Alfred the Great*, pp. 311-13.
18. Ceolwulf II, Guthrum's ally, ruled in Mercia at least until 878/9 and perhaps until 883 (see note 34 below). The London region was in Danish hands in 883, to judge from the *Anglo-Saxon Chronicle's* statement that 'the English were encamped against the enemy army in London' at that date. This has been regarded merely as doublet of the entry for 886, but it need not be (see D.N. Dumville, 'The treaty of Alfred and Guthrum', *Wessex and England from Alfred to Edgar* (Woodbridge, 1992), pp. 6-7).
19. Keynes and Lapidge, *Alfred the Great*, p. 171.
20. Guthrum's death is recorded in the *Anglo-Saxon Chronicle*, 890. He is said to have been buried at Hadleigh, Ss.
21. Dumville, 'The Treaty of Alfred and Guthrum', p. 3 and note 15, citing S.220 (see M. Gelling, *Early charters of the Thames Valley* (Leicester, 1979), pp. 82-3; S. Keynes, 'A lost cartulary of St Albans Abbey', *ASE* 22 (1993), pp. 260, 266). Æthelred had succeeded Ceolwulf II by 883, see note 34 below.
22. Hart, 'The ealdordom of Essex', in *The Danelaw* (London, 1992), pp. 118, 125 and Map 3.1; Dumville, 'The Treaty of Alfred and Guthrum', p. 12 and note 61.
23. An example is the necklace, with Scandinavian-style decoration on its pendants, found in a female burial at Saffron Walden (see J. Campbell, *The Anglo-Saxons* (London, 1982), p. 163).
24. The observation of David Dumville on English fortifications applies equally to those of the Vikings: 'scholars have been too willing to read each notice of fortress-building as meaning that new territory had *ipso facto* been seized from the Danes' (Dumville, 'The Treaty of Alfred and Guthrum', pp. 11-12, note 60). For the Viking fortresses, see below.
25. Tillingham was allegedly part of the original endowment of St Paul's and can be traced in the cathedral's possession down to Domesday Book (D. Whitelock, 'Some Anglo-Saxon bishops of London', in *History Law and Literature in tenth- and eleventh-century England* (London, 1981), p. 4 and note 50; C.R. Hart, 'The St Paul's estates in Essex', in *The Danelaw*, pp. 205-228, esp. pp. 208-9, 213; P. Taylor, 'The endowment and military obligation of the see of London', *ANS* 14 (1992), p. 291 and note 19).
26. Dumville, 'The Treaty of Alfred and Guthrum', p. 13, note 63.
27. K. MacGowan, 'Saxon timber structures from the Barking Abbey excavations, 1985-86', *Essex Journal* 22 (1987), pp. 35-8; M. Redknap, 'The Saxon pottery from Barking, part I: local ware', *London Archaeologist* 6 (13) (1991), p. 359. For the Barking charters, see C.R. Hart, 'The early charters of Barking Abbey', *Early Charters of Eastern England* (Leicester, 1966), pp. 117-45; and for their authenticity, P. Wormald, *Bede and the conversion of England: the charter evidence*, Jarrow Lecture (Jarrow, 1984), pp. 9-11.
28. H.M. and J. Taylor, *Anglo-Saxon Architecture* (Cambridge, 1965), vol. 1, pp. 399-400; A. Vince, *Saxon London* (London, 1990), pp. 69-70. As early as 804, Abbess Seledrith of Lyminge, Kent, had bought a property in Canterbury to serve as a refuge against Viking attacks, and St Mildred's, Canterbury, may represent a similar bolt-hole for the community of Minster-in-Thanet (N.P. Brooks, *The early history of the Church of Canterbury* (Leicester, 1984), p. 201).
29. For Nazeing and its connection with Barking, see K. Bascombe, 'Two charters of King Swebred of Essex', in K. Neale ed., *An Essex tribute: essays presented to Frederick G. Emmison* (London, 1987), pp. 85-96.
30. W.J. Rodwell, 'The archaeological investigation of Hadstock Church, Essex', *Antiquaries Journal* 56 (1976), pp. 69-70.
31. M.A.S. Blackburn, 'The Ashdon (Essex) hoard and the currency of the southern Danelaw in the late ninth century', *British Numismatic Journal* 59 (1989), pp. 13-38.
32. M. Biddle, 'The Hook Norton hoard of 1848: a Viking burial from Oxfordshire?', *Oxoniensia* 52 (1987), pp. 186-95.
33. Dumville, 'The Treaty of Alfred and Guthrum', pp. 1-27.
34. The Mercian king-list preserved at Worcester gives Ceolwulf II a reign of five years, which, since he became king in 874, would mean his reign ended in 878 or 879 (Dumville, 'The Treaty of Alfred and Guthrum', p. 7, note 37; Keynes and Lapidge, *Alfred the Great*, pp. 244, 256, notes 83, 145).

- However, his successor Æthelred (for whom see note 47 below) is not recorded until 883, and it is possible that Ceolwulf II continued to rule Mercia into the 880s (D.P. Kirby, *The earliest English kings* (London, 1991), pp. 214-8).
35. There is of course a difficulty in seeing Guthrum as already 'king' of the East Angles in 878, since, according to the *Anglo-Saxon Chronicle* (sub anno 880), it was not until 879/80 that Guthrum's army settled East Anglia; for this and other problems of the treaty's description of the northern boundary, see Dumville, 'The Treaty of Alfred and Guthrum', pp. 20-3.
 36. For the Fulham Army and its relations with the Vikings of York, see Smyth, *Scandinavian York and Dublin*, i, pp. 31-7.
 37. *AS Chronicle*, 885 and see next note.
 38. The details of the Viking army's movements after the siege of Rochester were accidentally omitted from the version of the *Anglo-Saxon Chronicle* which survives, but can be supplied from the account in Æthelweard's *Chronicle*, which uses a more complete text (F.M. Stenton, 'The south-western element in the Old English Chronicle', in D.M. Stenton (ed.), *Preparatory to Anglo-Saxon England* (Oxford, 1970), pp. 111-12).
 39. Asser, chapter 83 (Stevenson, *Asser*, p. 69; Keynes and Lapidge, *Alfred the Great*, pp. 97-8).
 40. S.217, and see Dumville, 'The Treaty of Alfred and Guthrum', p. 18 and note 86; for the title *rex* accorded to Æthelred of Mercia, see Æthelweard, *Chronicle*, p. 50). Æthelred had succeeded Ceolwulf II by (at the latest) 883 (S.218) and see note 34 above.
 41. For Hasteinn, who had also been operating in Frankia, see Keynes and Lapidge, *Alfred the Great*, pp. 284-5; Smyth, *Scandinavian York and Dublin*, i, pp. 31-2.
 42. Keynes and Lapidge, *Alfred the Great*, p. 114.
 43. There are two versions of the events of 893, one in the *Anglo-Saxon Chronicle* (Keynes and Lapidge, *Alfred the Great*, pp. 114-9) and the other, perhaps drawn from a variant, now-lost *Chronicle* text, in Æthelweard (Keynes and Lapidge, *Alfred the Great*, pp. 189-91 and see F.M. Stenton, 'Æthelweard's account of the last years of King Alfred's reign', *Preparatory to Anglo-Saxon England*, pp. 8-13). What follows is my own reconstruction of the campaigns; I have not been able to consult T.A. Shippey, 'A missing army: some doubts on the Alfredian *Chronicle*', in *Geardagum* 4 (1982), pp. 41-55.
 44. Æthelweard mentions a treaty which Hasteinn broke by raiding into Mercia from his base at Benfleet, and the *Anglo-Saxon Chronicle* records that Alfred and Æthelred of Mercia were the godfathers of Hasteinn's two sons (Æthelweard, *Chronicle*, pp. 49-50; *AS Chronicle*, 893 (Keynes and Lapidge, *Alfred the Great*, pp. 116, 189-90).
 45. It is possible that a fortification had been constructed in 885 (see above and Keynes and Lapidge, *Alfred the Great*, p. 287, note 11). Cf the statement in the *Annals of St Neot's* (Stevenson, *Asser's Life of Alfred*, p. 141; Whitelock, *Anglo-Saxon Chronicle*, p. 55, note 5) that when Hasteinn came to Benfleet 'he repaired there the fortress which had been destroyed'. As it stands, this relates to a re-building of Benfleet after it was stormed by the English in 893 (see below), but the entry may be misplaced; Æthelweard says that the 'Danish rampart' at Benfleet collapsed, or was demolished, in 893 (Æthelweard, *Chronicle*, p. 50; Keynes and Lapidge, *Alfred the Great*, p. 190) but does not mention a re-building.
 46. For the site of Thorney, see F.M. Stenton, 'The Danes at Thorney Island', *Preparatory to Anglo-Saxon England*, pp. 14-5.
 47. Æthelweard, *Chronicle*, pp. 49-50, Keynes and Lapidge, *Alfred the Great*, pp. 189-90. Æthelweard is the only source to record Edward's role in the battle of Farnham, and the parts played by him and by Æthelred in the siege of Thorney. In the *Anglo-Saxon Chronicle* the leaders of the English forces are anonymous. The *Chronicle* also plays down the siege of Thorney; the Danes encamped there because their unnamed king had been wounded in the battle of Farnham and could not be moved, and the English army could not press home the siege because it had run out of provisions and the king (Alfred) was pre-occupied with the attack on Exeter (see below). It does not record how the Danish force moved from Thorney to Benfleet. Particularly noticeable is Æthelweard's description of Æthelred as king (*rex*) of Mercia, and of Mercia as Æthelred's kingdom (*regnum*); compare the *Chronicle*'s description of Mercia as 'that part [of Alfred's kingdom] for which Æthelred... was responsible' (Keynes and Lapidge, *Alfred the Great*, p. 116). For Edward's position in his father's reign, see J.L. Nelson, 'Reconstructing a royal family: reflections on Alfred from Asser, chapter 2', in I. Wood and N. Lund ed., *People and places in northern Europe: essays in honour of Peter Hayes Sawyer* (Woodbridge, 1991), pp. 62-3.
 48. Keynes and Lapidge, *Alfred the Great*, p. 115 and note 9 (p. 287); Smyth, *Scandinavian York and Dublin*, i, pp. 32-7. The siege of Exeter was not lifted till 894, and the Viking army returned by sea to East Anglia, attacking Chichester (unsuccessfully) on the way.
 49. Æthelweard does not mention the fort at Shocbury but has Hasteinn conduct his chevauchée across Mercia from Benfleet.
 50. The site has not been identified, but it was not Hertford (Dumville, 'The Treaty of Alfred and Guthrum', pp. 8-9, note 47).
 51. *AS Chronicle*, 896 (Keynes and Lapidge, *Alfred the Great*, p. 118). Examination of the ships captured on the Lea perhaps helped in the design of the longships built at Alfred's command in 896, 'neither on the Frisian nor on the Danish pattern but as it seemed to Alfred himself that they would be most useful' (Keynes and Lapidge, *Alfred the Great*, p. 119 and note 35, pp. 289-90).
 52. In the early years of the ninth century, the Mercian overlords of Kent required their subjects to destroy the fortresses built by Vikings in Kent (S. 168, 186, dated 811 and 822 respectively); but no permanent bases or settlements were made by the Vikings.
 53. Keynes and Lapidge, *Alfred the Great*, p. 118 and note 29 (p. 289).
 54. Dumville, 'The Treaty of Alfred and Guthrum', p. 9.
 55. For a discussion of the succession before and after the reign of Alfred, see Nelson, 'Reconstructing a royal family', pp. 47-66, especially pp. 62-4.
 56. Translated in Keynes and Lapidge, *Alfred the Great*, pp. 173-78.
 57. Among them was St Wigstan, to whom Ceolwulf was almost certainly related (see note 9 above).
 58. For the chronology of Edward the Elder's reign, see Whitelock, *Anglo-Saxon Chronicle*, p. 59 note 5; cf Dumville, 'The Treaty of Alfred and Guthrum', p. 10 note 54.
 59. Smyth, *Scandinavian York and Dublin*, i, 49-52; C.E. Blunt, 'Northumbrian coins in the name of *Alwaldus*', *BNF* 55 (1985), 192-4.
 60. Dumville, 'The Treaty of Alfred and Guthrum', p. 10.
 61. Whitelock, *Anglo-Saxon Chronicle*, p. 59, note 14.
 62. C.R. Hart, 'The battles of the *Holme*, *Brunanburh* and *Ringmere*', *The Danelaw*, pp. 511-15.
 63. Edward was soon to marry, as his third wife, Eadgifu, the daughter of Ealdorman Sigehelm. She was the mother of Edward's son, King Edmund, grandmother of King Edgar, and through Edgar's great-great-granddaughter, St Margaret of Scotland, an ancestress of all the English monarchs from Henry II onwards.
 64. The burh at Witham was not, as once thought, in the Iron Age hillfort at Chipping Hill, but may be represented either

- by the enclosure at 'Burgate' in Rivenhall End, or the D-shaped enclosure under the medieval new town of Witham (W.J. Rodwell and K.A. Rodwell, 'Rivenhall: investigations of a villa, church and village, 1950-1977', vol 1, Chelmsford Archaeological Trust Report 4.1, CBA Research Report 55 (1986), pp. 179-82; vol. 2, Chelmsford Archaeological Trust Report 4.2, CBA Research Report 80 (1993), p. 176; see also W.J. Rodwell, *The origins and early development of Witham, Essex: a study in settlement and fortification, prehistoric to medieval*, Oxbow Monograph 26 (Oxford, 1993).
65. Dumville suggests that the Hertford burhs were built to secure Edward's rear as he advanced against the Danish-held areas in north-east Essex (Dumville, 'The Treaty of Alfred and Guthrum', p. 11).
 66. The burh at Maldon probably re-used the Iron Age hill-fort at the west end of the present High Street (O. Bedwin, 'Early Iron Age settlement at Maldon and the Maldon burh': excavations at Beacon Green, 1987', *Essex Archaeology and History* 23 (1992), pp. 10-23. *Wigingamere* may be Linslade, near Wing, in Buckinghamshire (B. Nurse, J. Pugh and I. Mollet, *A village in time. The history of Newport, Essex*, Newport, 1995, p. 10).
 67. R.R. Darlington and P. McGurk ed., *The Chronicle of John of Worcester*, ii (Oxford, 1995), pp. 374-5. John was using (among other materials) a lost version of the *Anglo-Saxon Chronicle* as the basis for his work.
 68. *AS Chronicle*, 917.
 69. The pattern of boundaries within the walled area of Colchester is very regular, suggesting a planned layout, probably that of King Edward in 917 (P. Crummy, *Saxon and Norman Colchester*, Colchester Archaeological Reports 1 (1981), pp. 50-1, 72).
 70. C.R. Hart, 'Athelstan "Half-king" and his family', *ASE* 2 (1973), pp. 115-44; *The Danelaw*, pp. 569-604.

References

- Attenborough, F.L. (1922) *The laws of the earliest English kings*, Cambridge, University Press
- Bascombe, K. (1987) 'Two charters of King Sæbered of Essex', in K. Neale ed., *An Essex Tribute: essays presented to Frederick G. Emmison*, London, Leopard's Head Press, 85-96
- Bedwin, O. (1992) 'Early Iron Age settlement at Maldon and Maldon burh': excavations at Beacon Green, 1987', *EAH* 23, 10-24
- Biddle, M. (1987) 'The Hook Norton hoard of 1848: a Viking burial from Oxfordshire?', *Oxoniensia* 52, 186-95
- Biddle, M. and B. Kjolbye-Biddle (1984) 'Repton, 1984', *Bull. CBA Churches Committee* 21, 6-8
- Biddle, M. and B. Kjolbye-Biddle (1985) 'The Repton Stone', *ASE* 14, 233-92
- Biddle, M., B. Kjolbye-Biddle, J.P. Northover and H. Pagan (1986) 'Coins of the Anglo-Saxon period from Repton, Derbyshire, in M.A.S. Blackburn ed., *Anglo-Saxon monetary history*, Leicester University Press, 111-32
- Blackburn, M.A.S. (1989) 'The Ashdon (Essex) hoard and the currency of the southern Danelaw in the late ninth century', *BNJ* 59, 13-38
- Blunt, C.E. (1985) 'Northumbrian coins in the name of *Athwoldus*', *BNJ* 55, 192-4
- Brooks, N.P. (1984) *The early history of the Church of Canterbury*, Leicester, University Press
- Campbell, A. (ed.) (1962) *The Chronicle of Æthelweard*, London, Nelson's Medieval Texts
- Campbell, J. (ed.) (1982) *The Anglo-Saxons*, London, Phaidon
- Crummy, P. (1981) *Saxon and Norman Colchester*, Colchester Archaeological Reports 1
- Darlington, R.R. and P. McGurk ed. (1995) *The Chronicle of John of Worcester*, ii, Oxford Medieval Texts
- Dumville, D.N. (1992) 'The Treaty of Alfred and Guthrum', in D.N. Dumville, *Wessex and England from Alfred to Edgar*, Woodbridge, Boydell and Brewer
- Gelling, M. (1979) *Early charters of the Thames Valley*, Leicester, University Press
- Hart, C.R. (1966), 'The early charters of Barking Abbey' in C.R. Hart, *Early charters of eastern England*, Leicester, University Press, 117-45
- Hart, C.R. (1973), 'Athelstan "Half-king" and his family', *ASE* 2, 115-44 (reprinted and revised in Hart (1993), 569-604)
- Hart, C.R. (1993) *The Danelaw*, Woodbridge, Boydell and Brewer
- Hart, C.R. (1993a) 'The battles of the Holme, Brunanburh and Ringmere', in Hart (1993), 511-32
- Hart, C.R. (1993b) 'The ealdordom of Essex', in Hart, C.R. (1993), 115-40 (revised and reprinted from Kenneth Neale ed., *An Essex Tribute: essays presented to Frederick G. Emmison*, London, Leopard's Head Press, 1987, 57-85)
- Hart, C.R. (1993c) 'The St Paul's estates in Essex', in Hart (1993), 205-20
- Haslam, J. (1988) 'The Anglo-Saxon burh at *Wigingamere*', *Landscape History* 10, 25-36
- Keynes, S. (1993a) 'A lost cartulary of St Albans Abbey' *ASE* 22, 253-78
- Keynes, S. (1993b) 'The control of Kent in the ninth century', *Early Medieval Europe* 2, 111-131
- Keynes, S. and M. Lapidge (1983) *Alfred the Great*, Harmondsworth, Penguin Classics
- Kirby, D.P. (1991) *The earliest English kings*, London, Unwin
- Liebermann, F. (1903) *Die Gesetze der Angelsachsen*, vol. 1, Halle
- MacGowan, K. (1987) 'Saxon timber structures from the Barking Abbey excavations, 1885-86', *Essex Journal* 22, 35-8
- Nelson, J.L. (1991) 'Reconstructing a royal family: reflections on Alfred from Asser, chapter 2', in I. Wood and N. Lund ed., *People and places in northern Europe: essays in honour of Peter Hayes Sawyer*, Woodbridge, Boydell and Brewer, 47-66
- Redknap, M. (1991) 'The Saxon pottery from Barking, part I: local ware', *London Archaeologist* 6(13), 353-60
- Rippon, S. (forthcoming) 'Essex, c. 700-1066', in O. Bedwin ed., *The Archaeology of Essex, Proceedings of the 1993 Writtle Conference*
- Rodwell, W.J. (1976) 'The archaeological investigation of Hadstock Church, Essex', *Antiq. J.* 56, 55-71
- Rodwell, W.J. (1993) *The origins and early development of Witham, Essex: a study in settlement and fortification, prehistoric to medieval*, Oxford, Oxbow Monograph 26
- Rodwell, W.J. and K.A. Rodwell (1986) *Rivenhall: investigations of a villa, church and village, 1950-1977*, Chelmsford Archaeological Trust Report 4.1, London, CBA Research Reports 55
- Rodwell, W.J. and K.A. Rodwell (1993) *Rivenhall: investigation of a villa, church and village, 1950-1977*, Volume 2: specialist studies, Chelmsford Archaeological Trust Report 4.2, London, CBA Research Reports 80
- Rollason, D. (1982) 'The cults of murdered royal saints in Anglo-Saxon England', *ASE* 11, 1-22

- Rollason, D. (1989) *Saints and relics in Anglo-Saxon England*, Oxford, Basil Blackwell
- Sawyer, P. ed. (1968) *Anglo-Saxon Charters: an annotated list and bibliography*, London, Royal Historical Society
- Smyth, A.P. (1975) *Scandinavian York and Dublin* volume 1, Dublin, Templekieran Press
- Smyth, A.P. (1977a) 'Guthrum and the Second Summer Army', in A.P. Smyth, *Scandinavian kings in the British Isles, 850-880*, Oxford, 249-54
- Smyth, A.P. (1977b) 'Halfdan, king of Northumbria' in A.P. Smyth, *Scandinavian kings in the British Isles, 850-880*, Oxford, University Press, 255-68
- Shippey, T.A. (1982) 'A missing army: some doubts on the Alfredian Chronicle', *In Geardagum* 4, 41-55
- Stenton, F.M. (1970a) 'Æthelweard's account of the last years of King Alfred's reign', in D.M. Stenton ed., *Preparatory to Anglo-Saxon England*, Oxford, Clarendon Press, 8-13
- Stenton, F.M. (1970b) 'The Danes at Thorney Island'. in D.M. Stenton ed., *Preparatory to Anglo-Saxon England*, 14-15
- Stenton, F.M. (1970c) 'The south-western element in the Old English Chronicle', in D.M. Stenton ed., *Preparatory to Anglo-Saxon England*, 106-15
- Stevenson, W.H. ed. (1959) *Asser's Life of King Alfred*, Oxford Clarendon Press (reprinted from 1904 edition)
- Taylor, H.M. and J. (1965) *Anglo-Saxon Architecture*, 2 vols, Cambridge, University Press
- Taylor, P. (1992) 'The endowment and military obligation of the see of London', *ANS* 14 287-312
- Vince, A. (1990) *Saxon London*, London, B.A. Seaby
- Whitelock, D. (1981) 'Some Anglo-Saxon bishops of London' in D. Whitelock, *History, law and literature in tenth- and eleventh-century England*, London, Variorum Reprints
- Whitelock, D. ed. (1955) *English Historical Documents, volume 1: 500-1042*, London, Eyre and Spottiswood
- Whitelock, D. et al ed. (1965) *The Anglo-Saxon Chronicle: a revised translation*, London, Eyre and Spottiswood
- Wormald, P. (1984) *Bede and the conversion of England: the charter evidence*, Jarrow Lecture, Jarrow
- Yorke, B. (1985) 'The kingdom of the East Saxons', *ASE* 14, 1-36

Part of the cost of publishing this article has been met by a grant derived from the interest on the Society's Publications Development Fund.

A medieval farm and its landscape: excavations at Stebbingford, Felsted 1993

by Maria Medlycott

Specialist contributions by D. Andrews, O. Bedwin, N. Brown, J. Evans, K. Horsley, H. Major, P. Murphy, K. Reidy, M. Robinson, P. Ryan, A. Wade, H. Walker, P. Wiltshire and J. Winder.

An area of approximately a hectare was excavated at Stebbingford Farm, revealing a mid-twelfth to mid-fourteenth century farm. This comprised four buildings, a yard, field-system and horticultural area. A nearby palaeochannel containing peat deposits was also sampled; the lower fills were of an early post-glacial date (c. 8000-6000 BC).

INTRODUCTION

This report presents the results of a large-scale rescue excavation at Stebbingford Farm (Figs. 1 and 2) in 1993. The work was undertaken because of the proposed construction of the A120 trunk-road by the Department of Transport. It was first located by aerial photography and fieldwalking, and its presence and potential confirmed by trial-trenching in 1991. Because the proposed road-construction would have destroyed the majority of the crop-mark complex it was decided to excavate in advance of the construction. The excavation was undertaken in accordance with the guidelines laid out in English Heritage's *Management of Archaeological Projects* (1991), and was funded by the Highways Agency (Department of Transport), who also funded the post-excavation work.

The finds and full written archive will be lodged at Saffron Walden Museum.

SITE BACKGROUND

LOCATION AND GEOLOGY (Figs 1-3)

The site is at Stebbingford Farm, in Felsted parish, north-west Essex (TL 6745 2250), 80m south of the present A120, which is thought to follow the line of Roman Stane Street at this point. It is situated on the east side of the Stebbing Brook valley. The Stebbing Brook is a tributary of the River Chelmer. The Stebbing Brook valley drops from c. 75m OD at the top of eastern side to c. 50m OD at the valley bottom. The

north-eastern corner lies at 67.5 m OD, and it drops in a gradual westerly slope to 63m OD. At that point the steepness of the slope increases markedly and the ground drops to both the south and west; the lowest point on the site is the south-western corner at 57m OD.

The surface geology over the excavated area and its environs is extremely varied (Fig. 3), but is all glacial in origin. Running from east-west it consisted of bands of gravelly clay, chalky boulder clay and boulder clay, clayey gravel (in places overlain by gravelly hillwash), sand and a white clayey silt. The western end of the site was a very heavy London Clay with bands of gravel running through it. Of particular interest was the discovery of organic deposits within a palaeochannel along the southern edge of the site. The pollen and microfossils evidence suggest a Mesolithic date. The topsoil had an average depth of 0.30m and its consistency varied according to the underlying sub-soil, but generally it was a sandy clay loam.

To the south of the site, there is a shallow valley containing a number of springs, possibly rising at the interface between the boulder clay and the sand/silts. Until field drains were installed this century, a small stream flowed from these springs down into the Stebbing Brook (approximately along the same line as the palaeochannel).

The land is at present under arable cultivation, and has been so since at least 1790 (estate map in Essex Record Office, D/DCW P62), and as a result no earthworks survive.

ARCHAEOLOGICAL BACKGROUND

The site was first located by aerial photography on 7 June 1976 (Fig. 2), which showed a number of field boundaries and what was interpreted as a penannular enclosure (subsequently found to be a line of natural gravel). The proposed route of the A120 trunk-road runs directly through these cropmarks, and the site was

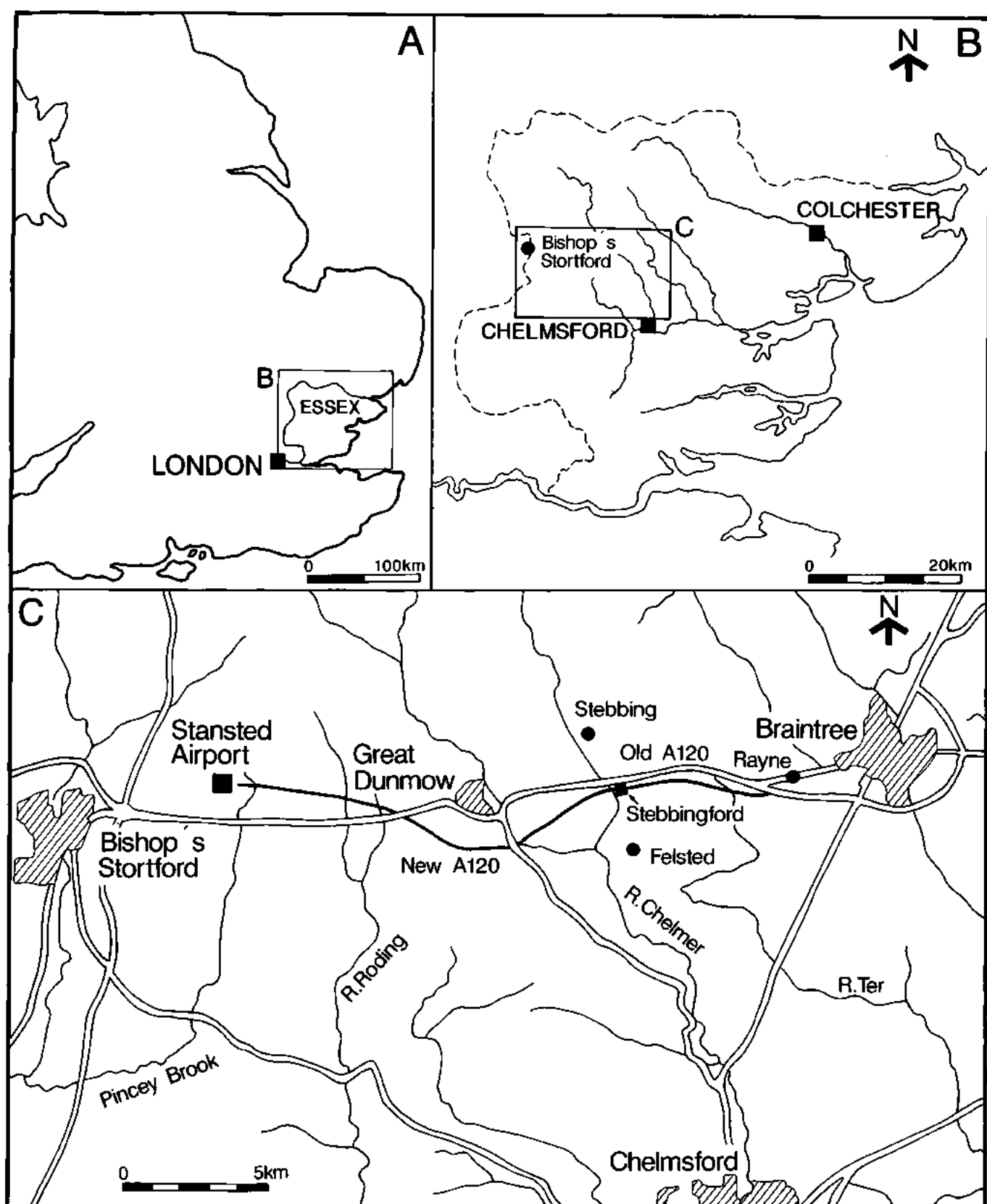


Fig. 1 Site location. © Crown copyright.

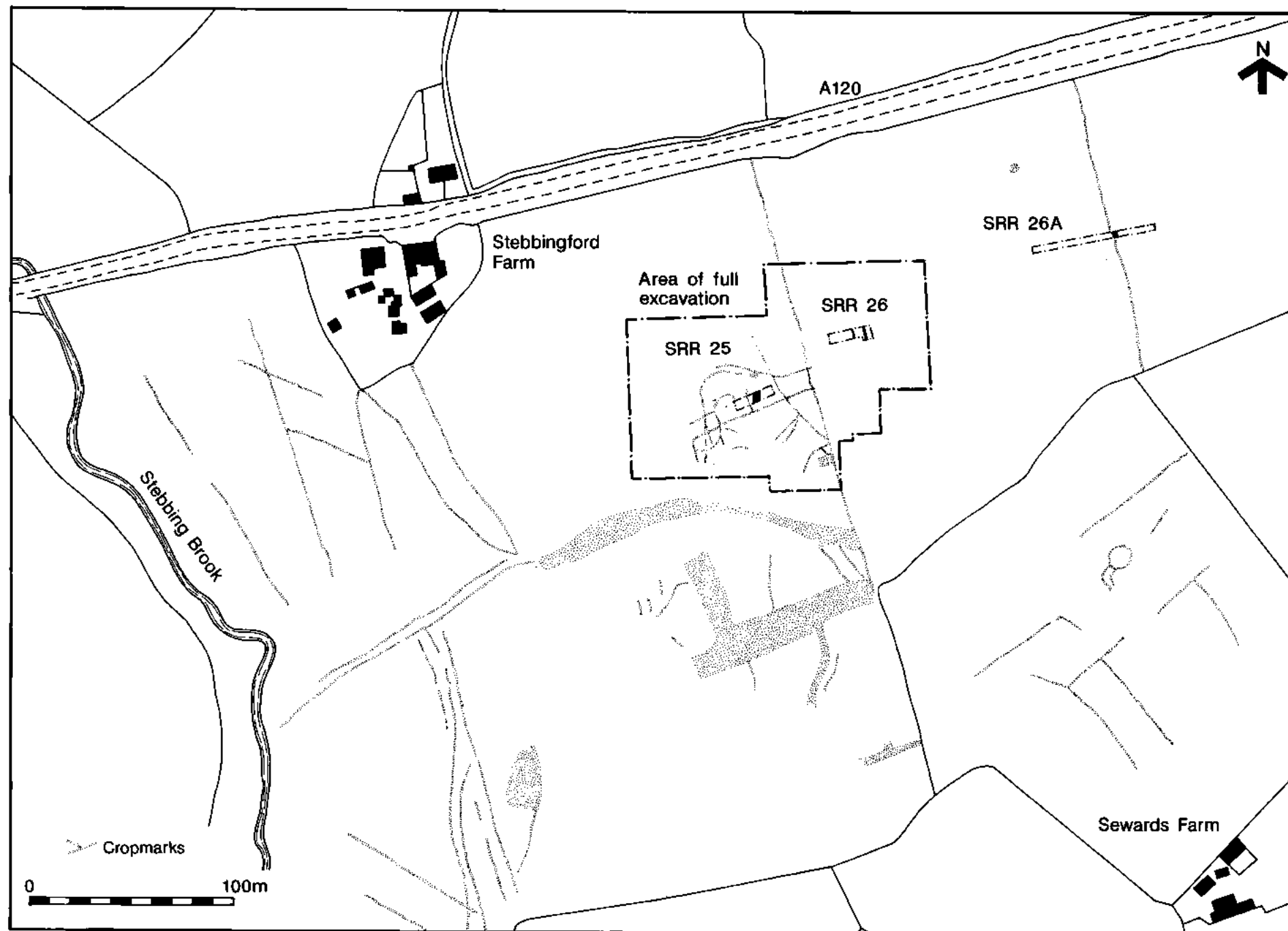


Fig. 2 Location of the excavated area, evaluation trenches and cropmarks. © Crown copyright.

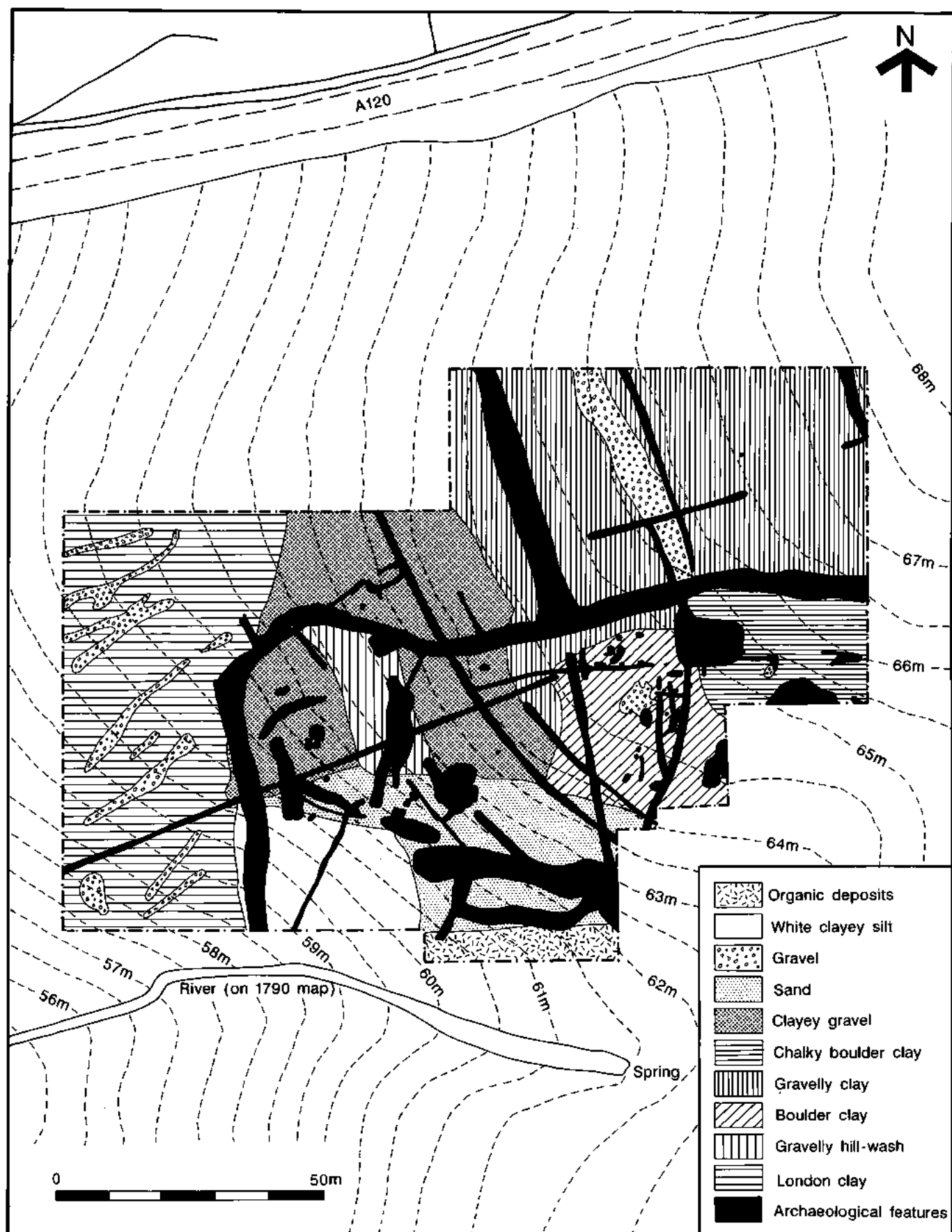


Fig. 3 Surface geology and contours, with archaeological features superimposed. Note that the river no longer exists.
© Crown copyright.

fieldwalked as a part of the A120 Project (Medlycott 1990). A thin scatter of prehistoric flint flakes and burnt flint, as well as some Roman and post-medieval pottery sherds were recovered. Although the finds densities in themselves were not particularly high, it was decided to evaluate the areas of the cropmarks. Accordingly two trenches (20m x 5m) were excavated. Trench SRR 25 was located over the field boundary cropmarks and Trench SRR 26 was sited on the line of the presumed penannular enclosure (Medlycott 1992). SRR 25 and 26 both contained medieval ditches, dated by pottery to the tenth to thirteenth centuries; the finds included quantities of structural daub and charcoal suggesting occupation in the immediate vicinity. A third trench, SRR 26A, (60m x 1.2m) was dug in an attempt to locate the presumed penannular enclosure; this only revealed a post-medieval field boundary that had been back-filled in the 1970s. On the basis of the evaluation results from trenches SRR 25 and 26, it was decided to excavate an area of approximately one hectare, encompassing the crop-mark complex, ahead of road construction. The excavation took place in the winter of 1993.

METHOD

The excavation site covered 1.2 hectares in area. The area stripped lay within the boundaries of the road-line and was centred on the crop-marks, encompassing the majority of it (Figs 2 and 3). The site was stripped by machine; individual features and feature groups were cleaned by hand.

Feature types included ditches, pits, post-holes, wall trenches, tree-root holes and possible horticultural features. Each linear feature was sampled by at least one segment; all post-holes and the smaller pits were at least half-sectioned. Those features thought to be of particular importance (part of a building or with a high finds content) were fully excavated. In areas where the extent or nature of the features were unclear sondages were cut; this method was also used on those features which were too large to half-section.

64 bulk soil-samples were taken. An assessment of the site for soil phosphate analysis was undertaken, but the soil-types were found not to retain enough phosphates for analysis to be worthwhile.

All finds-types were collected, washed and catalogued. A total of 109 metal objects were examined under magnification and x-radiography; of these, 12 were selected for further analysis.

CARTOGRAPHIC AND DOCUMENTARY EVIDENCE

by Maria Medlycott and Pat Ryan

The earliest reference to the Stebbingford area is in the

Domesday Book (Rumble 1983, 63.2):-

Land of Adam son of Durand Malzor.

Hundred of Hinckford.

Godric, a free man, held Stebbingford [Horstedafort] for 15 acres before 1066. Now Adam holds it. Then and later 1 plough, now 1/2.

Always 5 smallholders.

Woodland, 11 pigs; meadow, 3 acres

Value then 10s; now 13[s].

The original name *Horstedafort* is the Old English for 'the ford by the miry place' (Reaney 1935). Reaney thought that *Horstedafort* must have been a ford located where Stane Street crossed the Stebbing Brook at Stebbingford Bridge and *Horsted* must be the surrounding area (Reaney 1933, 63-4).

There is a reference to *Horstedeford* in the 1248 Assizes (Assize Roll 232, m. 7d) when a William de *Horstedeford* was engaged in a law-suit with William le Draper of Stisted. A Godfrey de *Horstedeford* is referred to as holding land in Bocking in 1285 (Assize Roll 243, m. 15; Essex Fines Vol. ii, p.46). *Horsted* is referred to in the 1254 Assize. As late as 1545 John Parker of Highwood Green leased "8 acres of land parcel of 19 acres 3 roods of demesne land in Great Horsted, 14 acres of demesne land in Hamondes Horsted, 16 acres of land in Horsted, 51 acres in Gr[e]at Horsted parcel of 69 acres 3 roods in Gr[e]at Horsted and 10 acres parcel of 69 acres 3 roods in Gr[e]at Horsted" (PRO SC6 Hen VIII 777). The various acreages quoted in this extract are suggestive of large demesne fields named Hamonds Horsted and Great Horsted, which have been sub-divided and leased to a number of tenants.

In 1548 Walter Farre and Ralph Standyshe of London were granted 'the messuage called Horsteds' and lands in Felsted in the tenure of John Wood in addition to other lands which had belonged to the chantry of Stebbing (Cal Patent Rolls Ed VI 1548-9 74-5). In 1576 the area east of the Stebbing Brook and south of Stane Street was divided into many more holdings than it was by the 19th century according to a rental of the manor of Felsted (ERO D/DCw 158/1). John Wood's heirs were recorded as holding "a teneement called Horstedes, one curtilage, two barns, one stable and other necessary houses constructed thereon and 22 acres of land in five parcels".

Immediately to the east of Stebbingford farm is a farm now known as Horstages or Hostages Farm, but formerly as Horsteds, which is probably the Horstedes referred to in the documentation. What is unclear is whether *Horstedafort* was simply another name for Horstedes, or whether it solely referred to the area by the Stebbing Brook, now known as Stebbingford Farm. The latter explanation is more likely as Stebbingford is mentioned by that name from 1337 onwards.

There is a reference to *Stebbyngford* in the 1337 Court Rolls. *Stebbyngford Bredge* is named in the 1547



Fig. 4 Site plan; all features.

Rental. In the *Feet of Fines Quarter Sessions* of 25 September 1562, "We find another bridge broke and gone, between Moche Dunmowe and Rayne call Stebbing Ford Bryge, but who shall make them, we do not know. Master Wisemans land on one side, Vuckes on the other" (Dowsett 1975). There was a Mr Wiseman living in Felsted in 1556, and a 17th-century Wiseman family lived in Great Canfield Park, but whether either of these were the Stebbingford land-owners is unknown. The earliest map which includes the excavation site at Stebbingford is dated 1790 (ERO D/DCw P62). It shows that the current single field was once sub-divided into smaller fields; the ones in the valley bottom were pasture, whilst those on the slope and crest of the hill were arable. There was a pond about halfway down the slope and a small river bisected the field. These features are all now visible as crop-marks (Fig. 2). According to the tithe survey of 1845, the fields bordering the road between the Stebbing Brook and Peets Lane were part of Ford Farm (ERO D/CT 138). Chapman and André's map of Essex published in 1777 shows that the Stebbing Brook formed the boundary between the hundreds of Dunmow on the west and Hinckford on the east, whilst Stane Street forms the border between the parishes of Felsted and Stebbing.

STRATIGRAPHIC EVIDENCE

PREHISTORIC FEATURES

Palaeochannel (Fig. 5)

The excavation revealed a palaeochannel (41) which ran along the southern edge of the site. This channel appeared to have flowed from a spring, located just outside the excavation on its south-eastern side, and to have flowed down to join the Stebbing Brook in the valley floor. A machine-cut section (Fig. 24) was dug through the palaeochannel sediments and samples were taken for analysis for pollen, plant macrofossils and insects.

An early post-glacial date (Pre-Boreal to Boreal, c.8000 BC- 6000 BC) is indicated for the lower fills. The mollusc and insect evidence suggests that the channel contained only a slow seepage of water from the springs further up slope, producing consistently damp conditions with impermanent pools and puddles. The pollen assemblage points to a generally open landscape, with some birch and pine. Slightly later in the sequence, willow pollen is also found, as well as leaves, twigs and roots, suggesting that the willow trees at least were located in the immediate vicinity. Quantities of microscopic charcoal were also found. The insect evidence also derives from a marshy habitat; some of the beetles were exclusively willow-feeders,

whilst the others also feed on birch and alder. An unworked red deer antler was retrieved from this level.

The upper fills included tufaceous sediments, likely to be of Late Boreal/Atlantic date. The mollusc assemblages indicate a locally damp and shaded environment, although the wider catchment area appears to have been open. The presence of rowan and alder indicates relatively warm conditions.

The uppermost fills contained a wider range of tree taxa, including oak, elm and lime suggesting an Atlantic date for the final stages of channel infilling. Microscopic charcoal was also present in the upper fills.

In summary, the palaeochannel was formed and filled during the Mesolithic period, the sequence of sedimental deposits indicate a progressive drying of the channel, which was set within a fairly open landscape with some woodland. (Full details of the results, pollen and macro-fossils are included in the specialist reports, below).

Mesolithic

Two small heavily patinated flint flakes were found (contexts 1141 and 1394), which may be Mesolithic in origin; they were however residual in later contexts. It is possible that the charcoal found in the palaeochannel also derives from human activity.

The Late Neolithic/Early Bronze Age

A barbed-and-tanged arrowhead was found during surface cleaning; it is Late Neolithic/Early Bronze Age in date. A thumbnail scraper (residual in medieval context 1069) is compatible in period with this although of a general wider date range.

General prehistoric date

The remainder of the flint flakes found were either recovered during surface cleaning or were residual in later features, and are not datable on stylistic grounds. However, they do have varying degrees of patination, and are therefore thought to date to more than one phase of activity during the prehistoric period.

Burnt flints were recovered during surface cleaning and from fills (the largest groups from depression 7 and ditch 10). It is possible that some of these could be prehistoric in date. The use of burnt stone as pot-boilers appears to have reached its peak during the second millennium BC (Buckley, V. 1990), and the location of the site close to a natural spring and marshy area is also conducive to that theory. However, there is no means of dating the material, and it may relate to the medieval occupation of the area.

All the pottery sherds recovered were too small and abraded to be given anything other than a general 'prehistoric' date. Only context 1119 (posthole 59) could be prehistoric in date on the basis of the pottery, but the sherds were so small and abraded that there is a high probability that they were residual, and on the

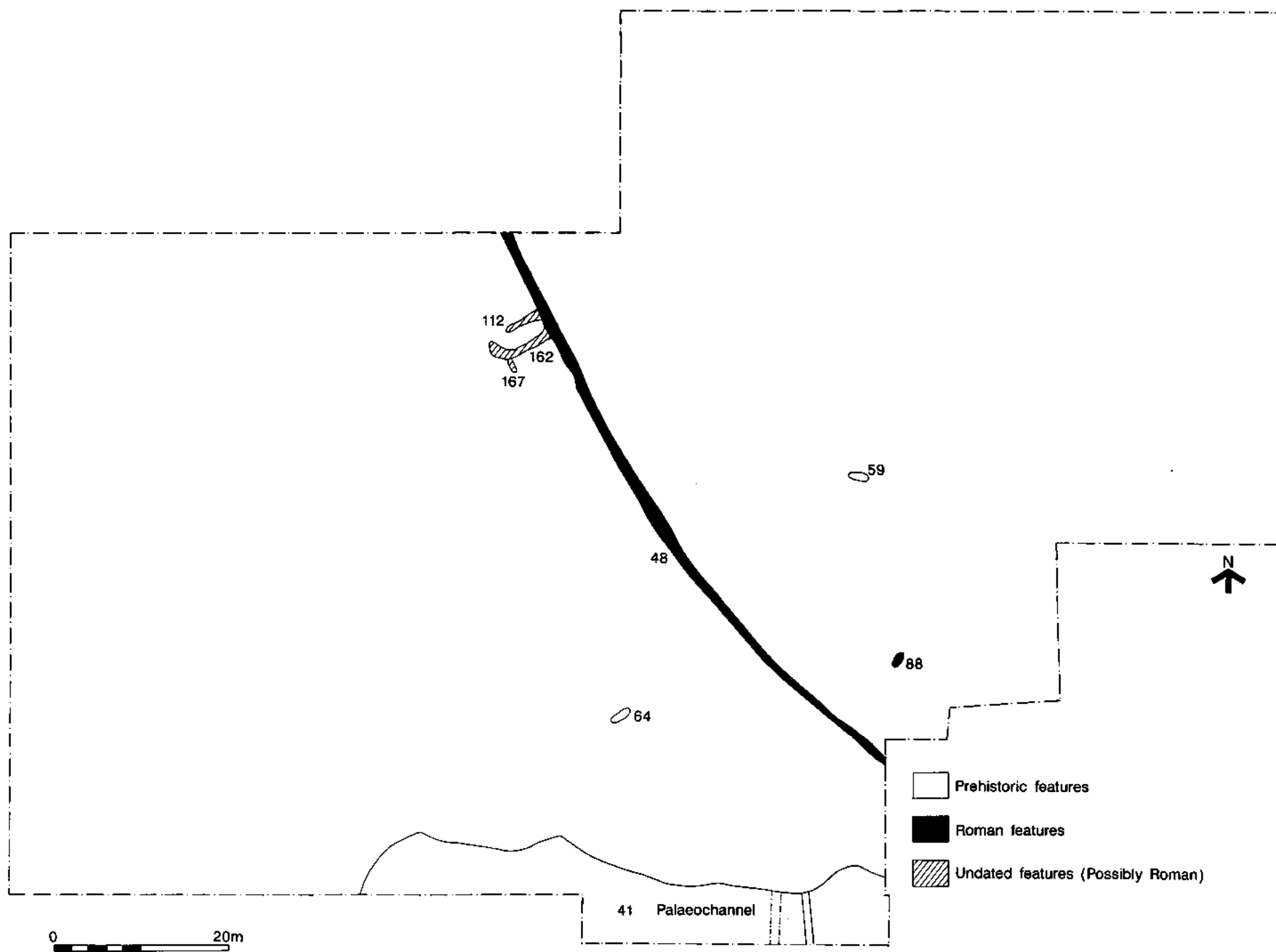


Fig. 5 Features of the prehistoric and Roman periods.

basis of ground plan it is more probable that posthole 59 forms part of medieval Building A. The remainder of the prehistoric sherds are residual in medieval contexts.

ROMAN FEATURES (Fig. 5)

Three features contain Roman pottery only (ditch 48 and pits 64 and 88). Ditch 48 is 1.5m wide and averaged 0.75m in depth; it lies along the 63.5m contour on a north-west/south-east axis and effectively cuts the excavated area in half. Pit 64 was 2m in diameter and 0.52m deep. Pit 88 was a shallow oval pit (2.02m long by 0.96m and 0.24m deep). A further two short gullies (112 and 162) appear to be stratigraphically earlier than ditch 48, and may also be considered Roman in date. However, there are a number of problems with the interpretation of these two features as Roman. Firstly, the pottery is very worn and abraded suggesting that it had possibly been lying around on the surface prior to its inclusion in the fills of these features. Secondly, the features themselves fit into the overall medieval plan very convincingly.

MEDIEVAL FEATURES (Figs 6-14)

The excavated area was apparently abandoned from the end of the Roman period until the late twelfth century. There is documentary evidence for Late Saxon occupation in the vicinity in the eleventh century, but no material traces of this were found (see the documentary and cartographic evidence, above). The main phases of occupation on the site were in the medieval period, from the late twelfth to the fourteenth century. The medieval occupation has been sub-divided into a late twelfth and early thirteenth phase and a mid-thirteenth to mid-fourteenth phase on the basis of the pottery identification and stratigraphic relationships. These phases are purely for the purposes of establishing a chronological framework; it is not thought that they represent any actual gap in occupation. Spatially, the site can be divided into a number of distinct areas or feature groups, and the following description is based on these groups. The earliest phase contains Buildings A-C whilst the later contains only Buildings A and D.

Late twelfth to early thirteenth centuries (Fig. 6)

Field-system (Fig. 6 and 26)

The area was sub-divided into a series of fields and trackways, each defined by shallow ditches (2, 3, 6, 8, 10, 43, 47, 107, 160, 172). Of particular interest is the way in which the field-system delimits the edges of the various sub-soil-types and follow the lie of the contours (Fig. 3). The description of these features runs from east to west across the site.

Ditch 8 (2m wide and 0.55m deep) was oriented across the north-east corner of the site. It cut ditch 2 (4m long by 0.74m wide and 0.14m deep).

Context 1013 was a band of natural gravel, 6m wide, running north-south across the top half of the site. Although natural in origin, the gravel has been disturbed by human activity, and its clay matrix contained flecks of charcoal, daub and pottery. 1013 was bordered on its eastern side by ditch 6 (1.15m wide and 0.40m deep). Ditch 6 was re-cut at its southern end by ditch 5 (0.90m wide and 0.35m deep), which contained a large quantity of daub and charcoal and 54 sherds from 12th-13th century cooking vessels. The western side of gravel 1013 was bordered at its southern end by ditch 3 (1m wide and 0.33m deep). Ditches 3 and 6 and gravel band 1013 were all cut by ditch 10 (0.90m wide and 0.20m deep), which ran at right angles to them on an east-west axis. It contained 60 sherds of mid 12th – early 13th century cooking pots. There is a possibility that ditch 10 and ditch 2 may be part of the same boundary line; however, there was a definite gap between them.

Ditch 47 was 1.5m wide and 0.75m deep; it curved around the contours of the hill, paralleling the line of the Roman ditch 48. On the same alignment as 47 is ditch 172, which aerial photography demonstrates is the part of the same ditch.

Ditch 118 was 1.35m wide and 0.16m deep; it ran north-west/south-east across the lower portion of the site. Although its full length could not be traced on the ground, examination of the aerial photos demonstrates that it continues to the limits of the site.

Only a small section of ditch 160 was extant, consisting of the terminus of a ditch 0.55m wide and 0.25m deep. It had been mainly removed by the cutting of post-medieval ditch 130, so it is not known whether it continued as far as ditch 43 (belonging to the later medieval phase, Fig. 12) or even beyond this point down to the stream. Ditch 160 butted ditch 107 which ran north-east/south-west down the slope. Ditch 107 was 0.85m wide by 0.18m deep; it contained one sherd of mid 12th – 13th pottery. It had also been cut by post-medieval ditch 130 (Fig. 18), but both termini and a portion of the central stretch were still visible. It appeared from the surface that ditch 107 cut ditch 149, which lay on a north-south alignment. This ditch was 1.1m wide and 0.3m deep. 107 was in turn cut by 105, a shallow pit (1.13m long by 0.7m wide and 0.24m deep), containing one sherd of Roman pottery. However from its place in the stratigraphic sequence it must be at least medieval in date. Ditch 107 forms an alignment with gully 112. The latter contained no datable pottery, but stratigraphically should be Roman in date, however in plan it and its neighbouring gully 162 seem more likely to be part of the overall medieval field-system, possibly forming an animal pen or cattle-crush.

The alignment of Roman ditch 48 curving around

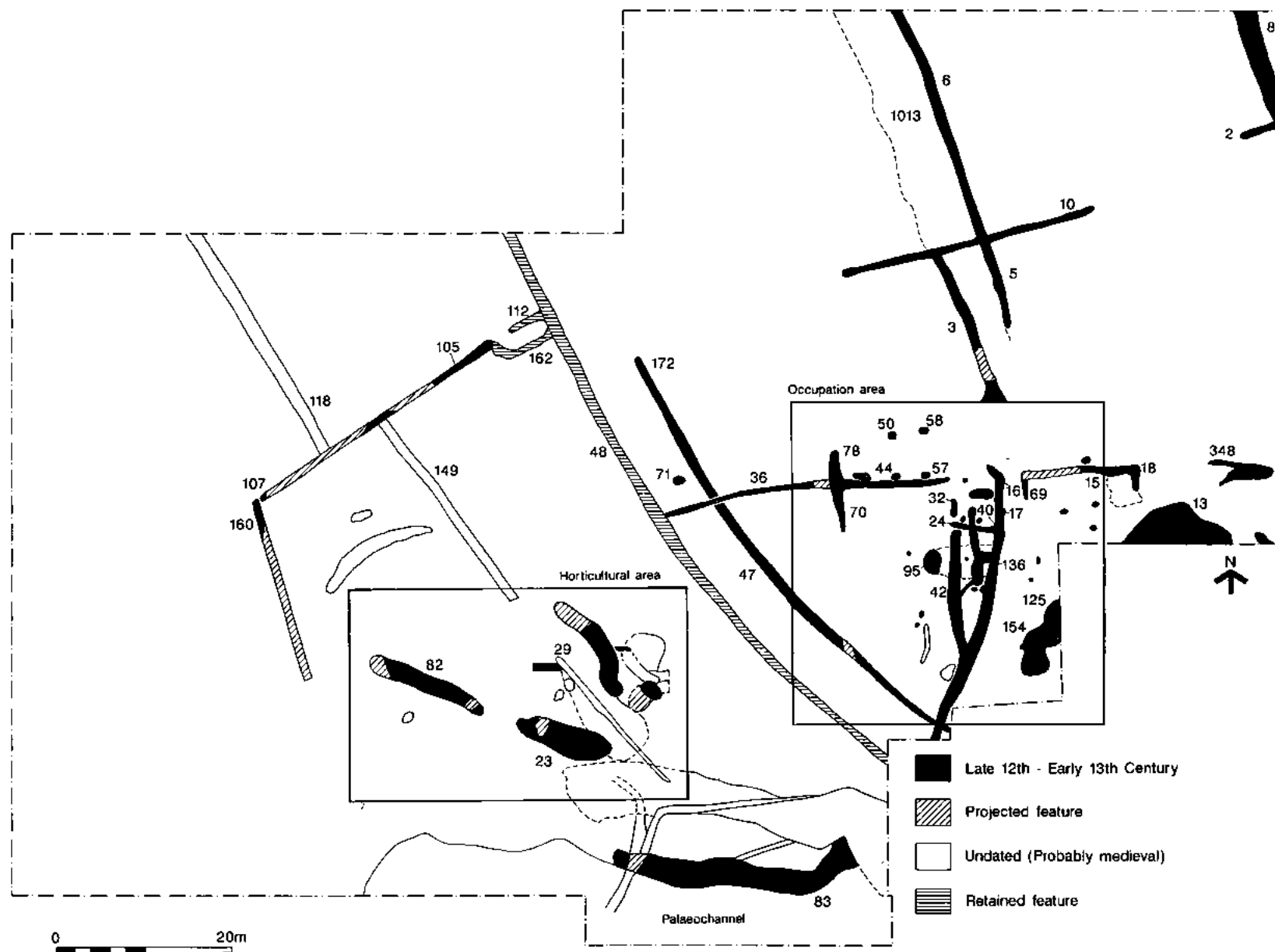


Fig. 6 Late 12th to early 13th-century features.

the contours of the slope from north-west to south-east, is paralleled exactly by the alignment of medieval ditch 172/47, making a trackway 6m wide running across the centre of the site from Stane Street. Medieval gully 36, which has been interpreted as a drainage gully for Building A, runs into ditch 48, suggesting that it was still open in the medieval period. It is possible that ditch 48 (presumably with a bank and hedge) was dug in the Roman period but remained a landscape feature until the twelfth century AD, whereupon it was incorporated into the medieval farm layout, possibly forming a trackway 6m wide running across the centre of the site, from Stane Street.

Miscellaneous features

71 was also a possible hearth or it may just be the base of a shallow oval pit (1.5m long, 1.07m wide and 0.06m deep); it was sited between ditch 47 and ditch 48. Context 103 was a very small circular feature (0.5m diam. by 0.15m deep), containing a quantity of burnt clay and charcoal, and sited midway between ditches 6 and 8.

Occupation Area (Fig. 7)

The occupation area is located on the southern side of the site, on the crest of the slope, where the ground levels out to form a small plateau. The sub-soil in this area is a boulder clay, with quite a high silt content, and very few chalk inclusions. The occupation area comprises what would have been the medieval *messuage*, that is the buildings, their enclosing yard and accompanying structures. The majority of the finds recovered come from this area.

Building A (Fig. 8)

The feature group identified as being Building A consisted of post-holes 44, 50, 57, 58, and 55/59, as well as gully 36/78. Building A is located on the north side of the yard or *messuage* area, with the building's southern wall forming the yard's northern limit. The building itself is on an east-west axis. Post-hole 58 (north-east corner) was rectangular in plan (0.90m long by 0.70m wide and 0.37m deep) with vertical sides. Post-hole 50 (centre of northern side) was square with vertical sides (0.90m long by 0.90m wide and 0.57m deep). Posthole 50 contained post-pipe 51 (0.65m square by 0.4m deep). Posthole 57 (south-east corner) was also rectangular in plan (1.2m long by 0.8m wide and 0.4m deep). Post-hole 44 (centre of southern side) was square (0.80m long by 0.70m wide and 0.50m deep) with steep sides. It contained a large stone which appeared to have been placed as a packing-stone. The stone was wedged at an angle between the side of post-hole 44 and the cut of post-pipe 27 (0.5m square by 0.36m). Context 55 was roughly circular in plan (0.65m diam. by 0.20m deep); it appeared to cut 59 (2m long by 0.9m wide and 0.53m), a cut which contained very abraded prehistoric pottery. It is suggested that this pottery is residual and that 59 formed the

south-west corner post-hole of Building A with 55 as the post-pipe. There must once have been a sixth post to support the north-west corner of Building A, although no trace of this was found.

On the south and west sides the building was bordered by shallow gullies. Gully 36, on the southern side (0.6m wide by 0.2m deep), clipped the corner of post-hole 59. It was also thought to cut gully 70/78 which ran at right-angles to it, although this stratigraphic relationship is by no means certain and the two gullies may in fact be contemporary. 70/78 was 0.75m wide by 0.15m deep with a gently curving profile; it was therefore thought unlikely to form a structural component of the building. Gully 36 continued on down the slope to the west, cutting ditch 47/172 and linking into ditch 48. 36 and 70/78 are thought to form a drip-gully around the outside of Building A, draining rainwater down-slope.

The area enclosed by the post-holes (assuming a sixth at the north-west corner) is 8m long by 5.5m wide (44 m²), if the gullies are eaves-drip gullies the roof-span is 12.5m long by 6.5m wide (81.3 m²). The posts are spaced at a distance of 2.5m from each other; the post-pipe dimensions suggest an average post-size of 0.65m square.

In the centre of the building were located two hearths. Hearth 20 was a shallow circular pit (1.4m diam. by 0.25m deep), filled with intensely burnt clay. Hearth 72 was circular in plan (1.2m diam. by 0.35m deep), containing much charcoal. A shallow curving gully (73) ran around the outside of this hearth, enclosing about three-quarters of it. It is suggested that 73 formed the foundation trench for the walls of an oven, with 72 as the internal hearth. 73 and 72 were not datable, but because of their position are presumed to belong to the same phase of occupation as Building A.

Activity prior to the construction of Building B

In the area later to be occupied by Building B, there was evidence of considerable activity, consisting of cut features and rubbish disposal. However the precise purpose of this activity is uncertain, although there is a possibility that there was an earlier building than Building B in this area.

Ditch 16 (1.5m wide by 0.5m deep) may be the same feature as ditch 3, but it is separated from 3 by the cut of Building D (Figs 6 and 7). Ditch 16 contained 95 sherds of mid-12th – earlier 13th-century pottery plus part of a Hedingham ware jug and 3 cylindrical clay objects of unknown function. Cut into its side, and thought to be contemporary with it, was post-hole 17. Also dating to this period was a shallow gully 49/60/127 (0.7m wide by 0.15m deep) which ran parallel to ditch 16. Gully 49/60/127 contained a quantity of pottery (103 miscellaneous sherds and 2 nearly complete pots). At the southern end of gully 127 and contemporary with it, was an arc of stake-holes (137-140, 142 and 144), these had an average diameter of 0.4m and depth of 0.25m. A shallow curving gully (141) cut

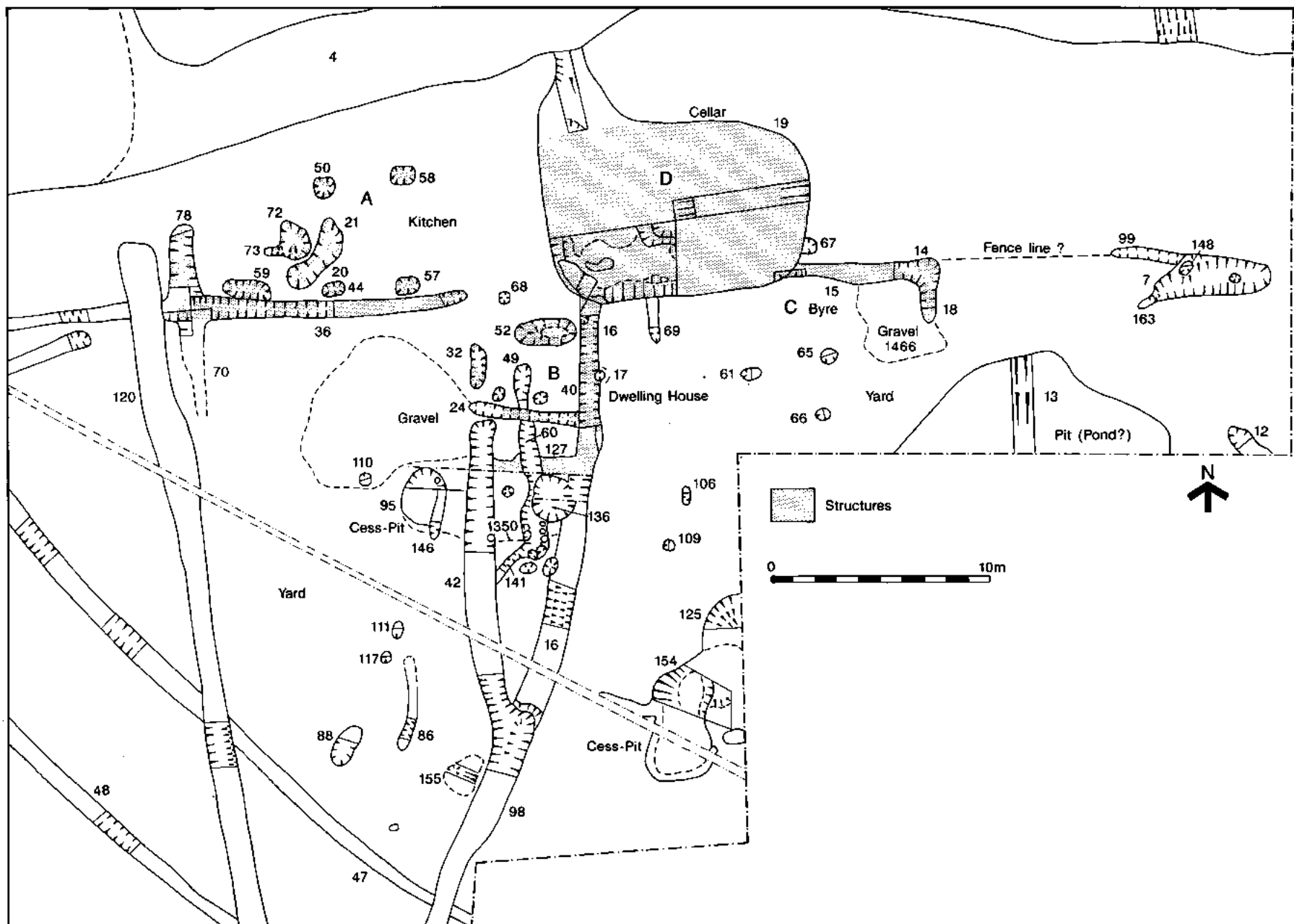
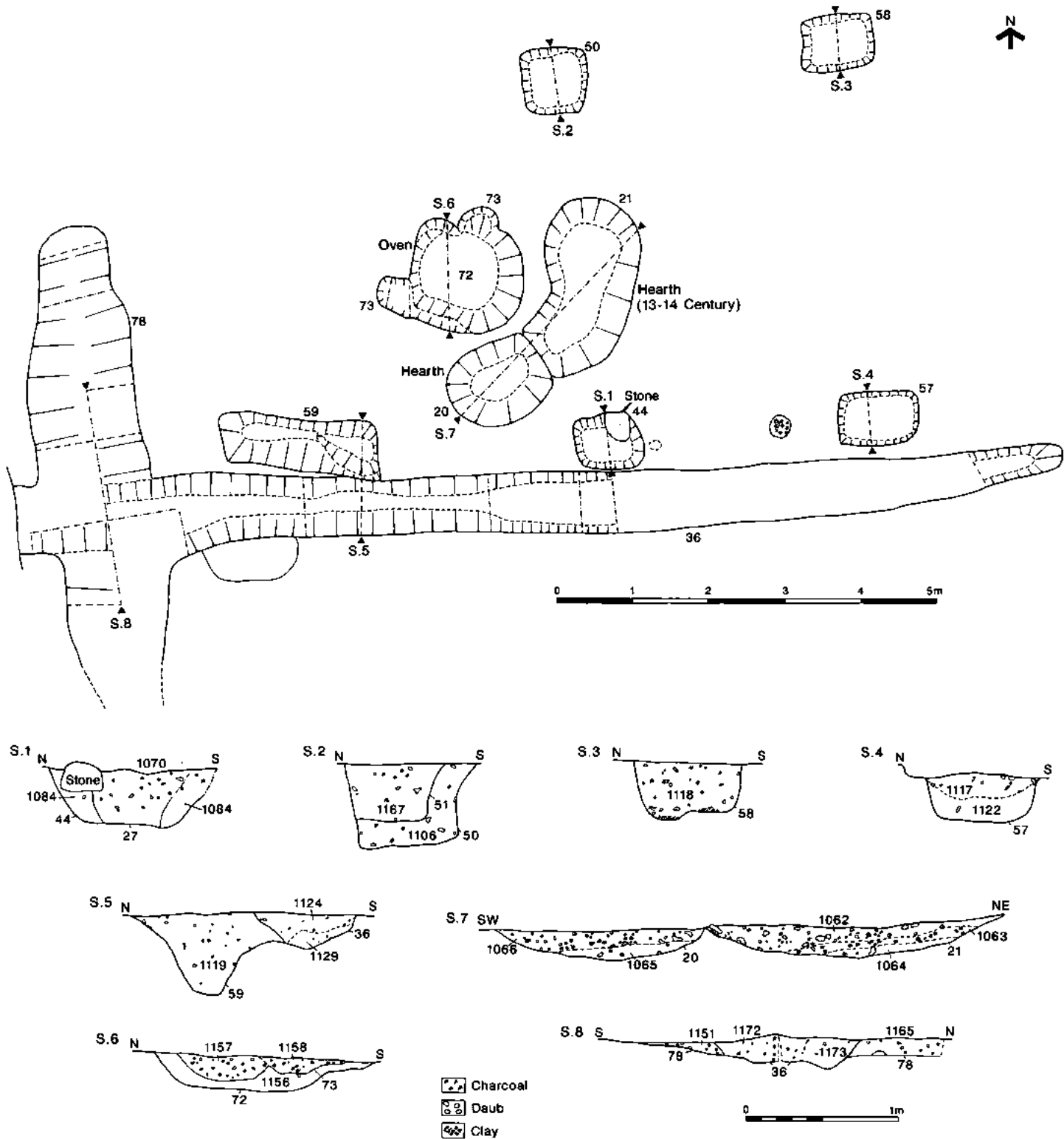


Fig. 7 The occupation area: the medieval period.



the south-west corner of gully 127. A number of scattered post-holes, which form no overall pattern may also belong to the mid 12th – earlier 13th century (56, 62, 68, 96, 109, 110, 111, 117, 143 and 145).

The northern half of ditch 16 was deliberately back-filled, whilst the southern half (ditch 98) was left open. A new ditch (42) was dug (1.5m wide by 0.45m deep), effectively forming a dog-leg in plan. Ditch 42

contained 557 sherds of pottery, a complete bowl, a Hedingham ware strip jug and part of a curfew, as well as oyster and whelk shells. The earlier fills of 42 appear to date to the early 13th century, whilst the later ones belong to not before the mid 13th century. Ditch 98, which although cut at the same time as ditch 16, was filled at the same time as ditch 42, contained 25 sherds of ?13th-century date.

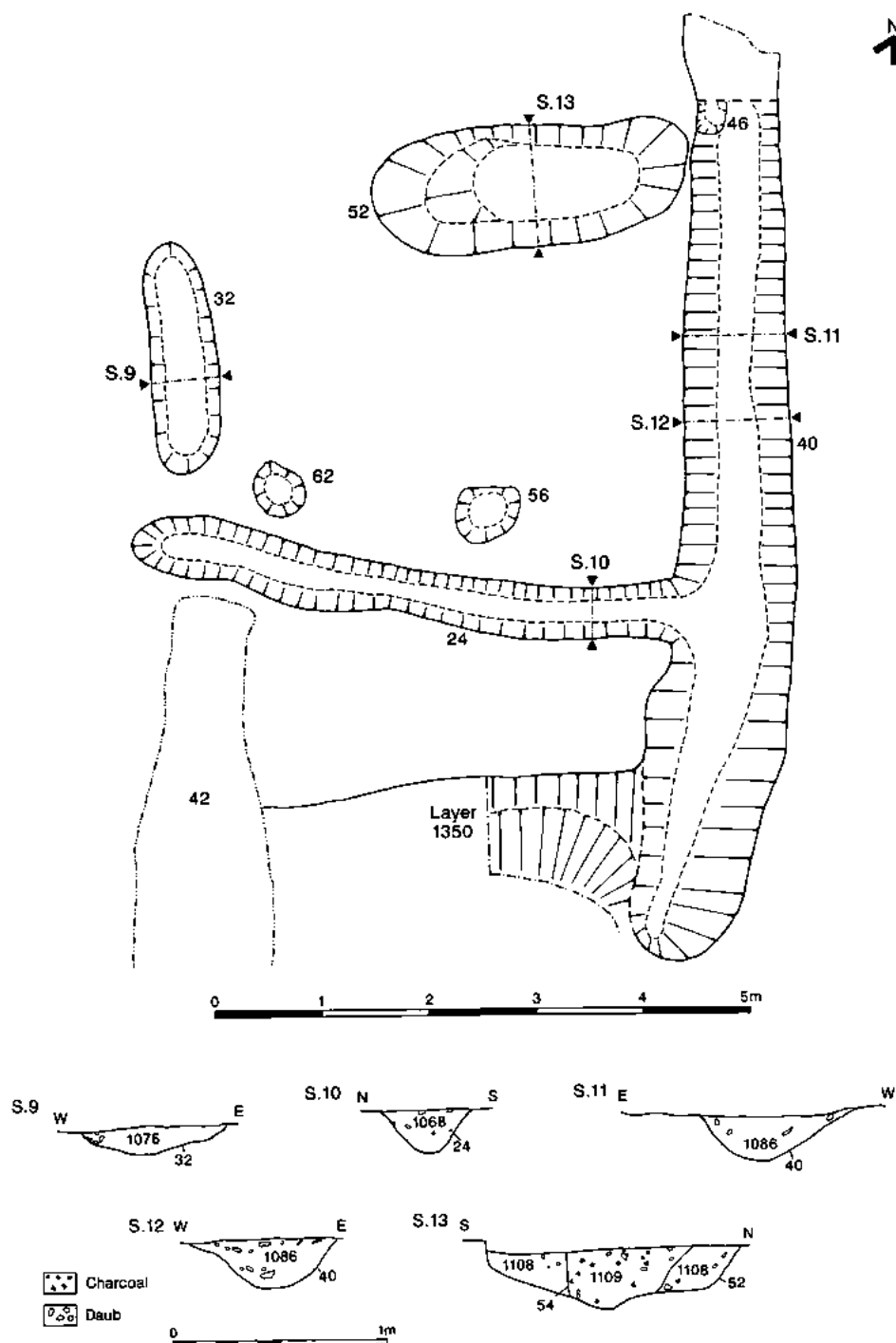


Fig. 9 Building B: plan and sections.

Building B (Fig. 9)

This consisted of slots 24, 40, 52 and 32, and possibly postholes 62 and 56. Slots 24 and 40 were set at right angles to each other, forming a T-junction; excavation showed that they were contemporary. They were 0.5–0.75m wide and 0.25m deep; slot 24 was 5m long, slot 40 was 8m long. Slot 40 was clearly visible as an oyster-shell filled slot cut into the top fill of ditch 16, which had already been deliberately back-filled. Slot 24 contained 46 sherds of early 13th-century pottery, whilst slot 40 contained 100 sherds of early-mid 13th-century pottery. One of the sherds of pottery is from a Hedingham ware vessel deposited during the back-filling of ditch 16 (from a segment 7.5m away), demonstrating that the back-filling of 16 and cutting of 40 must have happened in quick succession. Slot 40 is cut at its northern end by post-hole 46. Slot 52 was set at right-angles to the northern end of slot 40 (3m long by 1.2m wide and 0.3m deep). It contained a secondary vertical-sided cut (54) containing charcoal and daub. Cut 54 is thought to represent the line of a wattle and daub wall. Slot 32 (2.2m long by 0.6m wide and 0.3m deep) lay at right angles to slots 52 and 24 and parallel to slot 40. It contained 24 sherds of pottery dating to the earlier 13th century. Post-holes 56 and 62 (0.5m diam. by 0.25m deep) may also be part of Building B. Slot 40 is thought to have supported a wattle and daub wall (see above), the remainder of the slots (24, 32 and 52) have been interpreted as beam slots for the retention of earthfast beams on which a timber-framed superstructure would have been supported, the reason for this interpretation is the sharp right-angle junction of 24 and 40 which suggests the presence of solid structural elements within the slots.

The area enclosed by slots 24, 40, 32 and 52 measures 5.5m by 4.5m (24.75 m²). Slot 40 extends a further 3.5m to the south, parallel to ditch 42. D. Stenning (pers. comm.) suggests this may be a second room at the end of Building B (5m by 3m); if this is the case, ditch 42 must have destroyed the western wall of the room. It is possible that the straight-edged cut excavated as part of layer 1350 is actually the southern limit of the second room. Assuming a second room, the total area of Building B is 8m by 4.5m (36 m²).

Building C (Fig. 10)

This is made up of slots 15, 18, 69, post hole 14 and cobbles 1466, and possibly post-holes 65 and 61. The slots have been interpreted as structural in nature, possibly beam-slots. The north-west corner of Building C has been obliterated by the cutting of Building D (19); however a portion of slot 69 survives. Slot 69 was 0.5m wide by 0.1m deep. It lies parallel to slot 18, at a distance of 12m. Slots 15 and 18 (0.6m wide by 0.2m deep) were set at right-angles to each other; their junction was cut by posthole 14. Within the corner formed by this junction was a gravel spread (1466), which contained trampled bone and pottery fragments (not collected). This spread appears to have been deliberately

laid whilst the walls of the building were *in situ*, as it lies flush to the edge of the cuts but does not overlap them or extend beyond them.

The gravel spread extends beyond the open front by 1m. In line with the southern edge of the gravel is posthole 65 (0.5m diam. by 0.07m deep). Slightly off this line but still on approximately the same alignment is posthole 61, which was rectangular in plan (0.5m long by 0.39m wide and 0.4m deep); it contained a large packing-stone. It is suggested therefore that the roof of Building C overhung at the front by about 1m, and was supported by posthole 61 and possibly posthole 65. The building plan of an open-sided rectangle with an overhanging roof, 12m long by 4m wide (48 m²), suggests a byre. The spacing of the postholes and the side walls suggest that the building was divided into 3 bays, each 4 m square.

Cess- and rubbish-pits

Pit 136 was located immediately to the south of Building B (Fig. 7) and may be contemporary; it cut north-south ditch 16 and east-west gully 127. Pit 136 (3m long by 2m wide and 0.4m deep) was oval in plan, steep-sided and flat-bottomed. Finds included oyster shell, 531 sherds of early to mid-13th century pottery (mostly from cooking pots), a complete medieval jug, a spindlewhorl, a padlock key and a very fragmentary rectangular baked clay object. The plant macrofossils included wheat, oats, rye, barley and peas, as well as grasses and meadow weeds, and brambles and elder. It is interpreted as a domestic rubbish-pit.

The cess-pit complex consists of a series of inter-cutting pits (125, 122/156, 154, 168, 169, 157, 170, 164/165 and 171; only pits 125 and 154 have been numbered in Fig. 7 for clarity's sake). Each pit contained a series of layers of dark brown silty material and mixed natural sand/gravel/clay. The sequence of events appears to have been that pit 171 was dug first and filled. Pit 171 was then cut by pit 164/165 which was in turn filled. Pit 164/165 was cut by pit 157, which contained 37 sherds of early-mid 13th-century pottery, pollen including cereal-type pollen and a grain of possible grape pollen, as well as the egg of a parasitic intestinal worm (*Ascaris*). This evidence is consistent with the interpretation of these features as cess-pits. The neighbouring pits 169 and 170 were dug at approximately the same time as 157, and all 3 pits were cut by pits 122/156 and pit 168. Pit 122/156 contained 55 sherds of mid 12th – early 13th century pottery. The final pit in the sequence was pit 154 which contained 46 sherds of mid 12th – early 13th century pottery. Pit 125 is also probably part of the cess-pit complex, as it contained a similar series of layers of silty deposit and back-filled natural; it was dated to the mid 12th – 13th centuries on the basis of 15 sherds.

To the east of the occupation area (half-sectioned by the site baulk), was a large irregular pit, 13, (4m wide and 1.3m deep [not bottomed], Figs 6 and 7). A total of 133 sherds of pottery, were recovered from the

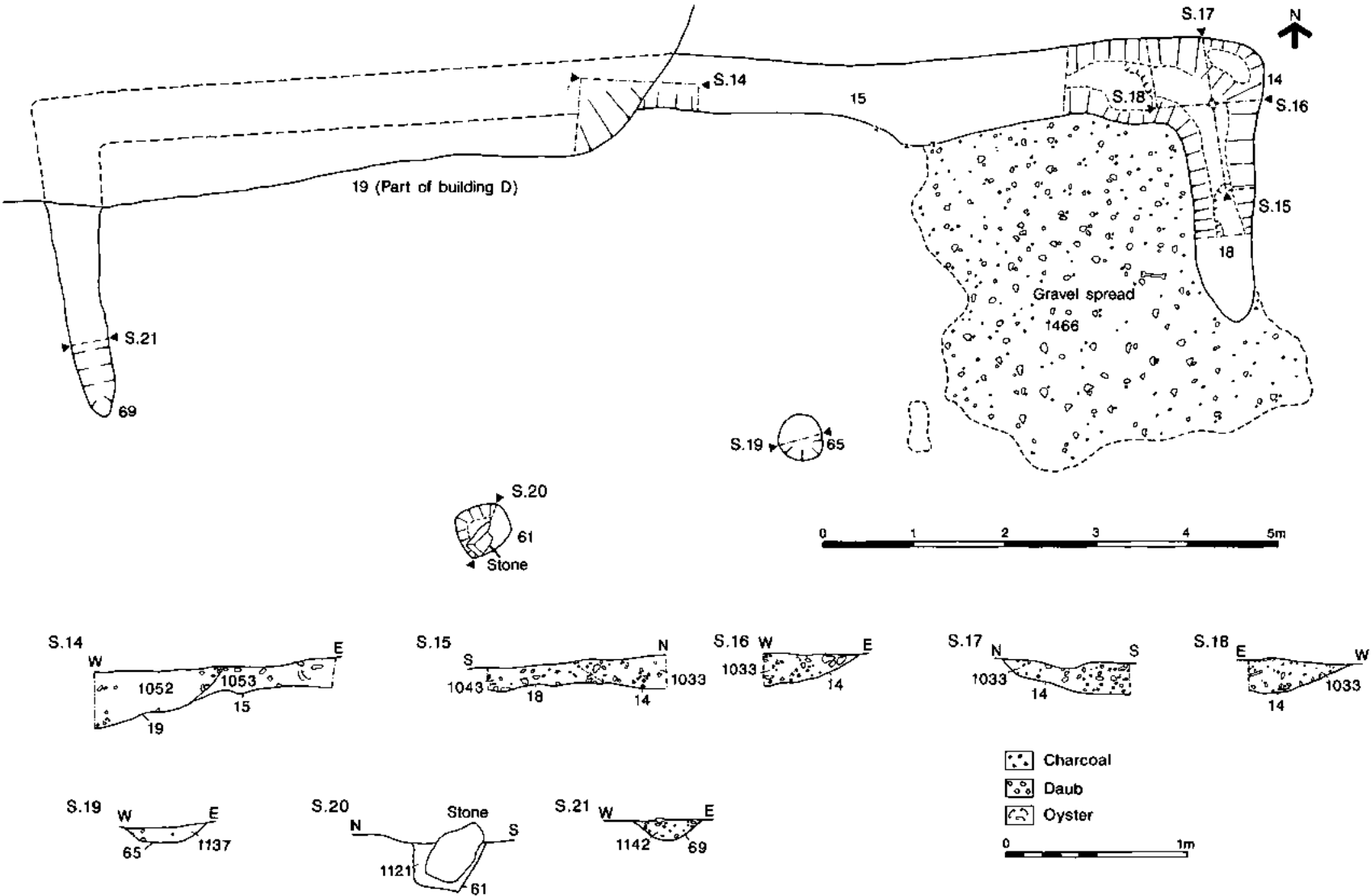


Fig. 10 Building C: plan and sections.

section; the lower 2 fills were probably early 13th century, the upper 3 fills late 13th century. Its function is not entirely clear; it could have been an extension of the cess-pit complex (125 *et al.*) to its south-west. Alternatively, as it lacks the complex pattern of re-cuts that the cess-pit group had, it might have been a pond, but it did not actually hold water during the excavation, despite the wet weather.

Gully 99, to the east of the occupation area, was cut by pit 7, which was oval in shape (4m long by 2m wide and 0.4m deep). It contained very charcoally fills, with 37 miscellaneous mid 12th- early 13th- century pottery sherds as well as large portions of a further 11 cooking vessels dating to the same period. Pit 7 is interpreted as rubbish-pit. It is of interest that gully 99 is in a direct line with the back-wall of Building C, possibly forming a division separating the occupation and rubbish-pit area from the remainder of the site. Gully 163 lay adjacent to 99; it was shallow (0.25m wide and 0.07m deep), and it is possible that it is actually just a deep ploughmark.

Miscellaneous features

The following features are grouped by feature type; post-hole, hearth etc.

Post-hole 67 was dated to the mid 12th - early 13th century. Post-hole 117 (0.57m diam. and 0.1m deep) was situated to the south-west of the main building area.

Feature 66 was a possible hearth, a very shallow circular pit, with flat base (0.6 diam. and 0.08m deep), sited immediately to the south of Building C.

Feature 12 was a short length of gully jutting out from the south-eastern corner of the excavated area, it contained 17 sherds of mid 12th - early 13th-century pottery and a copper-alloy finger-ring.

Feature 86 was a short thin curving gully (4m long by 0.5m wide and 0.2m deep) located to the south-west of the buildings. 134 was a small post-hole (0.34m diam. and 0.3m deep). Feature 155 was a shallow pit (2m long by 1.6m wide and 0.25m deep), possibly cut by ditch 98, towards the latter's southern end.

Possible horticultural area (Fig. 11)

This area in the south-central part of the excavation, characterised by a number of elongated, shallow, irregular pits (e.g. 37, 89) is here given the term 'horticultural area' for the sake of convenient reference, although it is accepted that this anticipates the discussion.

The horticultural area is sited on the south-facing slope largely on sand, but over-spilling on to the white clayey silts, clayey gravel and gravelly hill-wash. The sub-soils were very free-draining; the sands and the clayey silts were also very loose in consistence. Following the removal of the top-soil from this area, there was a problem with erosion of both the sub-soils

and the feature fills, by animal action (rabbits primarily), wind erosion and more seriously by water run-off. Water erosion caused considerable difficulties in planning and identifying features at the bottom of the slope, because they became covered by newly deposited layers of hill-wash or simply washed away.

The area is bordered by ditch 48 to the east, ditch 107 to the north, ditch 160 to the south and palaeochannel 41 to the south. Within this are there were further sub-divisions that were removed as the area expanded.

The features are described in stratigraphical order and from east to west. Feature 34 was a very shallow circular cut (1.4m diam and 0.1m deep) in the south-east corner of the horticultural area. Adjacent to 34 and possibly cut by it was a large irregular depression (90), this was 6.5m long, 4.5m wide and 0.35m deep. Its fills were very dark silty clays and its function is unknown but it may have been a tree-hole/s or planting area. Both 34 and 90 were cut by gully 64 (3m long, 1m wide and 0.52m deep). This in turn was cut by gully 29 (18.5m long, 0.44m wide and 0.32m deep). Gully 29 lay on a south-east/north-west axis, parallel to ditch 48, and may have formed an internal division or drainage channel. Macrofossils recovered from 29 included elder seeds, chickweed, pansy, raspberry and sedges. Gully 29 was cut by 53, a short gully-like feature containing a peaty fill.

Depression 90 was also cut by feature 23, which was interpreted as a planting bed. Feature 23 was a shallow, elongated oval feature which curved around the contours of the slope. It contained two fills of organically rich re-deposited peat, very friable in consistence. It was sampled for pollen and macrofossils. The pollen of *Pinus*, *Compositae*, fungal spores and hyphae, *Glomus* and charcoal were recovered. The macrofossil analysis established that it was filled with highly humified peat, containing some scraps of degraded wood and very abundant but poorly preserved uncharred elder seeds. The macrofossil and pollen specialists agree that the fills contained bioactive soil composed of wood peat, mixed with midden material, perhaps including (in view of the presence of fruit pips) human sewage. Feature 23 was cut by feature 126, an amorphous patch of peat, very shallow and irregular in plan, possibly a tree-hole.

Feature 31 was an irregular depression (1.1m wide and 0.25m deep), which may have been a tree-hole. Context 28/102 was a flat-based linear feature; it cut feature 35, a large shallow flat-bottomed feature, possibly a tree-bowl.

119 was an roughly circular cut with an 0.75m diam. and a depth of 0.2m, probably a tree-hole in origin.

To the south of the horticultural area the ground dropped to form a shallow east-west valley, which originally contained the palaeochannel. By 1790 (see cartographic evidence, above), it contained a number of springs which fed a small stream (now piped) with

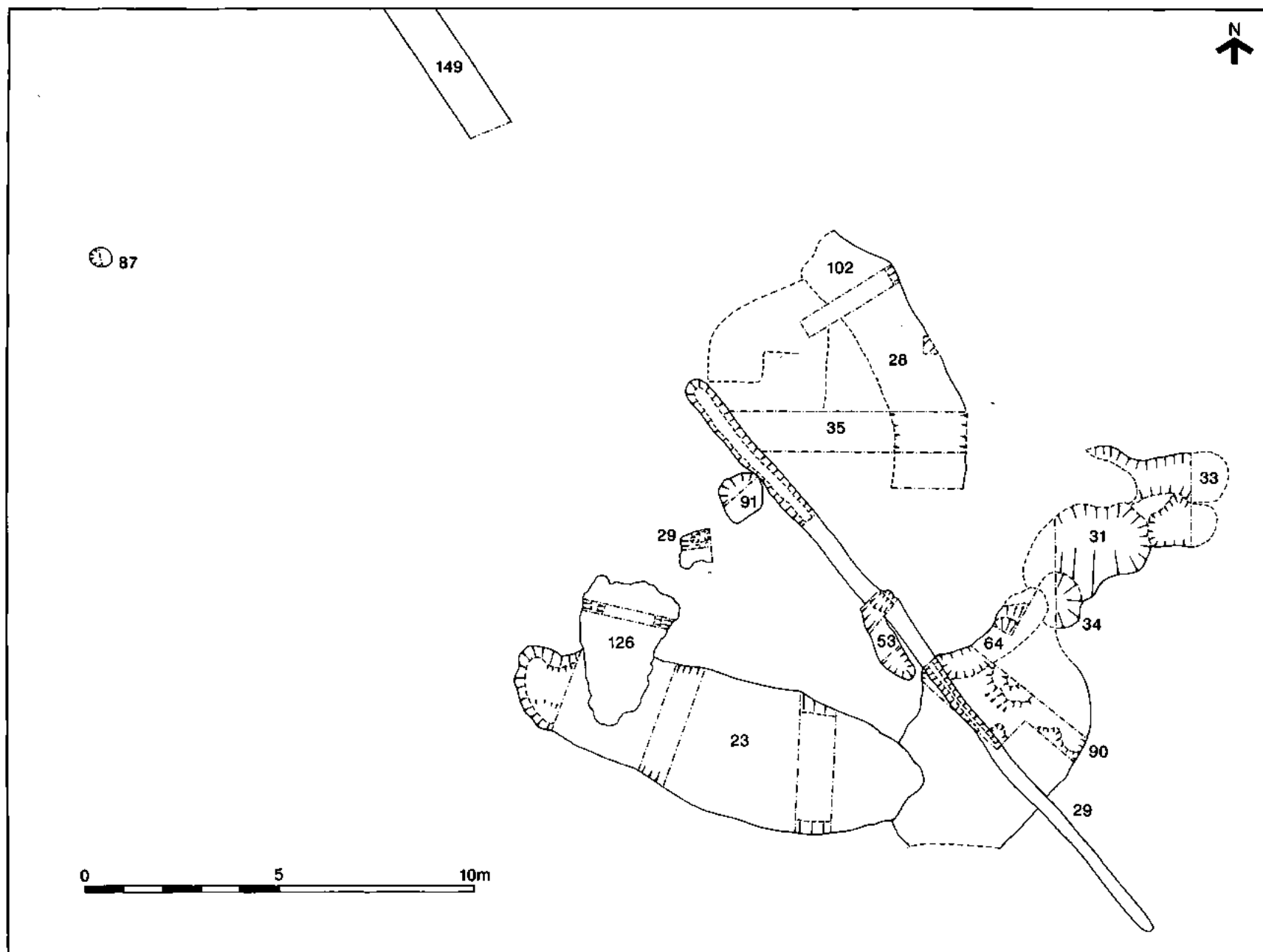


Fig. 11 Horticultural area: late 12th to early 13th-century features.

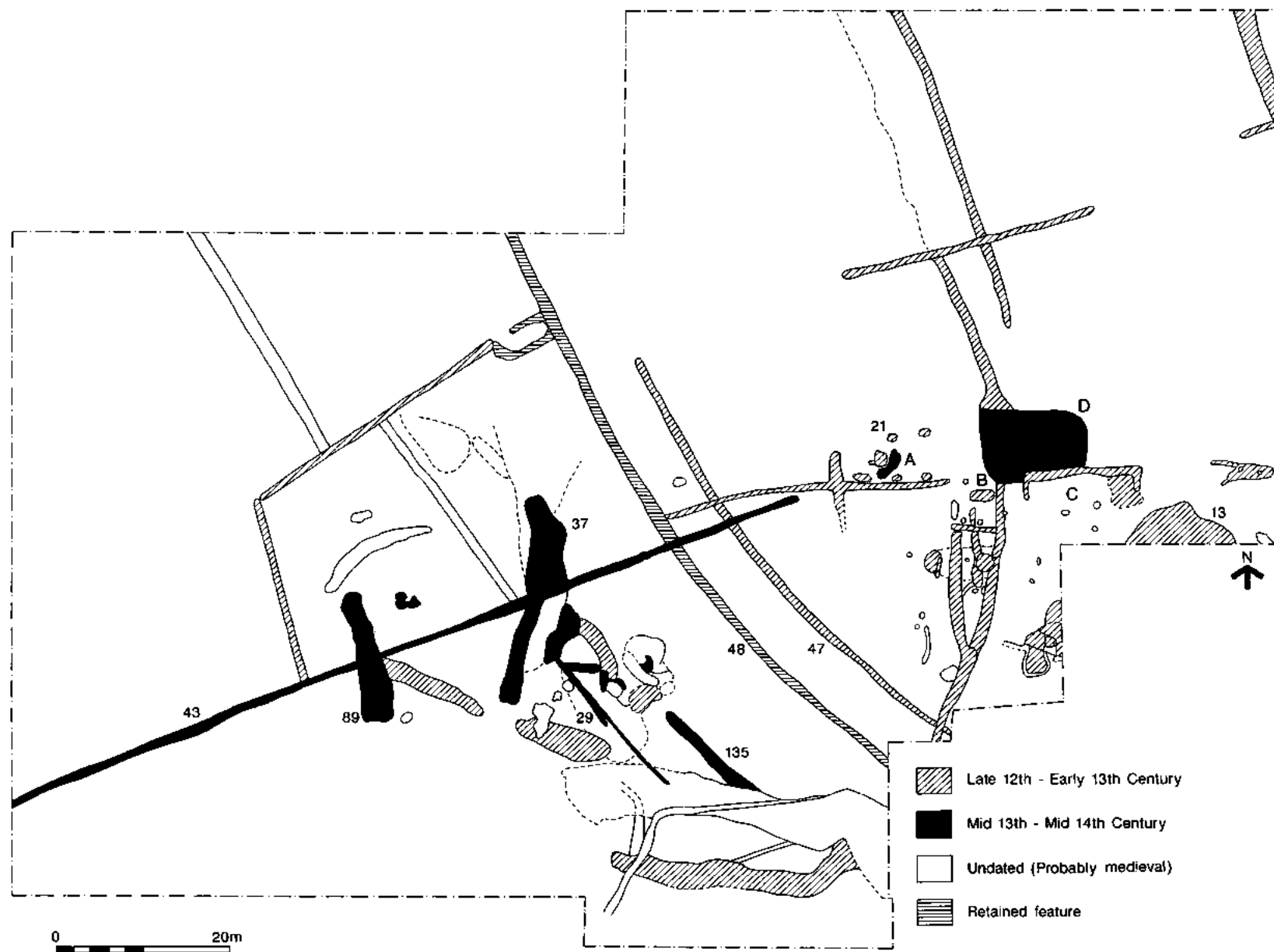


Fig. 12 Mid 13th to early 14th-century features.

marshy margins. Feature 83 was a linear gully which ran along the north side of the palaeochannel, filled with re-deposited peat. It is thought to be a planting bed, possibly delimiting the edge of the marshy area and stream (the plants would have needed a preference for moisture; osiers are one possibility). Feature 94 was a wide shallow cut (4.9m wide by 0.45m deep); it may actually have been more than one feature. 94 was cut by 93, a narrow steep-sided gully (0.5m wide by 0.28m deep). 93 was probably the same feature as 128 (0.5 wide by 0.25m deep). 128 cut 129 a shallow ditch (1.8m wide and 0.3m deep). 94 also cut 113, a shallow gully (0.4m wide and 0.15m deep), which ran north-east/south-west across the lower half of the site. All of these ditches may have been attempts at drainage in the valley floor.

Post-hole 87 was 0.6m in diam. and 0.2m deep. Context 106 was a small elliptical feature (0.9m long, 0.3m wide and 0.08m deep).

Mid-thirteenth to mid-fourteenth centuries (Fig. 12)

Field-system (Figs 12 and 26)

The field-system underwent less adaptation in the mid-thirteenth to the mid-fourteenth centuries than it had in the previous centuries. The only major change was the digging of ditch 43/63, a linear ditch which lay on a north-east/south-west axis across the lower half of the excavated area. Ditch 43/63 was 1m wide and 0.4m deep, with a steep-sided, U-shaped profile. It contained 58 sherds of 12th - 13th century pottery and one sherd of Mill Green ware, dated to after the mid-13th century. It cut ditches 47 and 48, putting the trackway that they delimited out of action.

Occupation area (Fig. 7)

Some changes were made within the occupation area, the most important of which is the construction of Building D. The foundations of Building D destroy half of the back-wall of Building C; it is possible however that the southern wall of the Building D formed a new back-wall for Building C. A quantity of rubbish appears to have been deposited immediately to the rear of Building B during this period also.

Building A (Fig. 8)

In the 13th- mid 14th century, hearth 20 in Building A was replaced by kidney-shaped hearth 21, centrally positioned within the building. It was 2m long by 1m wide and 0.2m deep.

Building D (Figs 13 and 14)

Building C was cut by context 19, a large rectangular pit (12m long x 8m x 1.2m deep), interpreted as a cellar, below a putative Building D. This building comprised a number of features. The earliest is square shaft 161 (2.5m square x 1.8m deep [not bottomed]), with

vertical sides, centrally positioned within pit 19. This cut appears to have been back-filled and 166 cut through it. 166 was sub-rectangular in plan (1m square x 1.5m deep) with very steep sides. The purpose of these two features is unknown, and there is no dating evidence. 161 could be a very large post-hole with 166 as the post-pipe; alternatively they could be the cut and re-cut of a central drainage sump for Building B; 161 could even be a well-shaft, although this is less likely, given the presence of a natural source of spring-water only 80m away.

Features 161 and 166 were cut by 19 (see S.25 in Fig. 14), a very large rectangular pit (12m long by 8m wide [96m²] and 1.2m deep), aligned east-west, and on the same axis as Building A. The lip of 19 was cut (or possibly weathered) at an angle of approximately 45%, but it rapidly steepened to a near-vertical cut; in the south-western corner it was vertical (S.22, 23 and 24; Figs 13 and 14), suggesting that some form of timber shuttering had held it in place. Along the base of 19 was a deliberately laid spread of gravel (context 1163; S.24 in Fig. 14). In the south-west corner there were three clusters of flint cobbles, laid at different levels, so as to form very crude steps or possibly step supports down into the pit. The lowest fills with datable finds contained 62 sherds of medieval pottery dating to the mid 13th century. In total 151 sherds of mid 13th - mid 14th century pottery were recovered. Approximately halfway down the sequence in fill 1132 (S.23 in Fig. 13) were found 2 clay pipe stems which cannot be earlier than mid-sixteenth century in date. These stems were found in association with mole bones, and may be an intrusive later deposit (they could even have rolled in from the top). It is possible also that pit 19 was first dug in the mid 13th - mid 14th century, but its final phase of back-filling took place in the post-medieval period. It is of interest that pit 19 remained dry during excavation, despite being dug during an extremely wet winter.

It is suggested that pit 19 is a cellar, with a dwelling or store-house (Building D) built above it. After top-soil stripping, the pit was 1.2m deep; with the addition of topsoil it would have had a total depth of 1.5m (5 ft). If the building above was raised on cill-beams that would add up to another foot in height, sufficient for an adult to stand upright. The gravel floor and the traces of possible timber-shuttering in the south-west corner add strength to its interpretation as a cellar. What the superstructure above looked like is of course unknown, but given the absence of any surviving structural elements, a fully timber-framed structure is suggested.

The construction of Building D would appear to have necessitated the destruction of Building C (Figs 7 and 10). However, the south wall of D may have formed a new back-wall for C, in which case C would simply have been enlarged. Building D is on the same axis as Building A. In the gap of 4.5m between the buildings and approximately equidistant between them

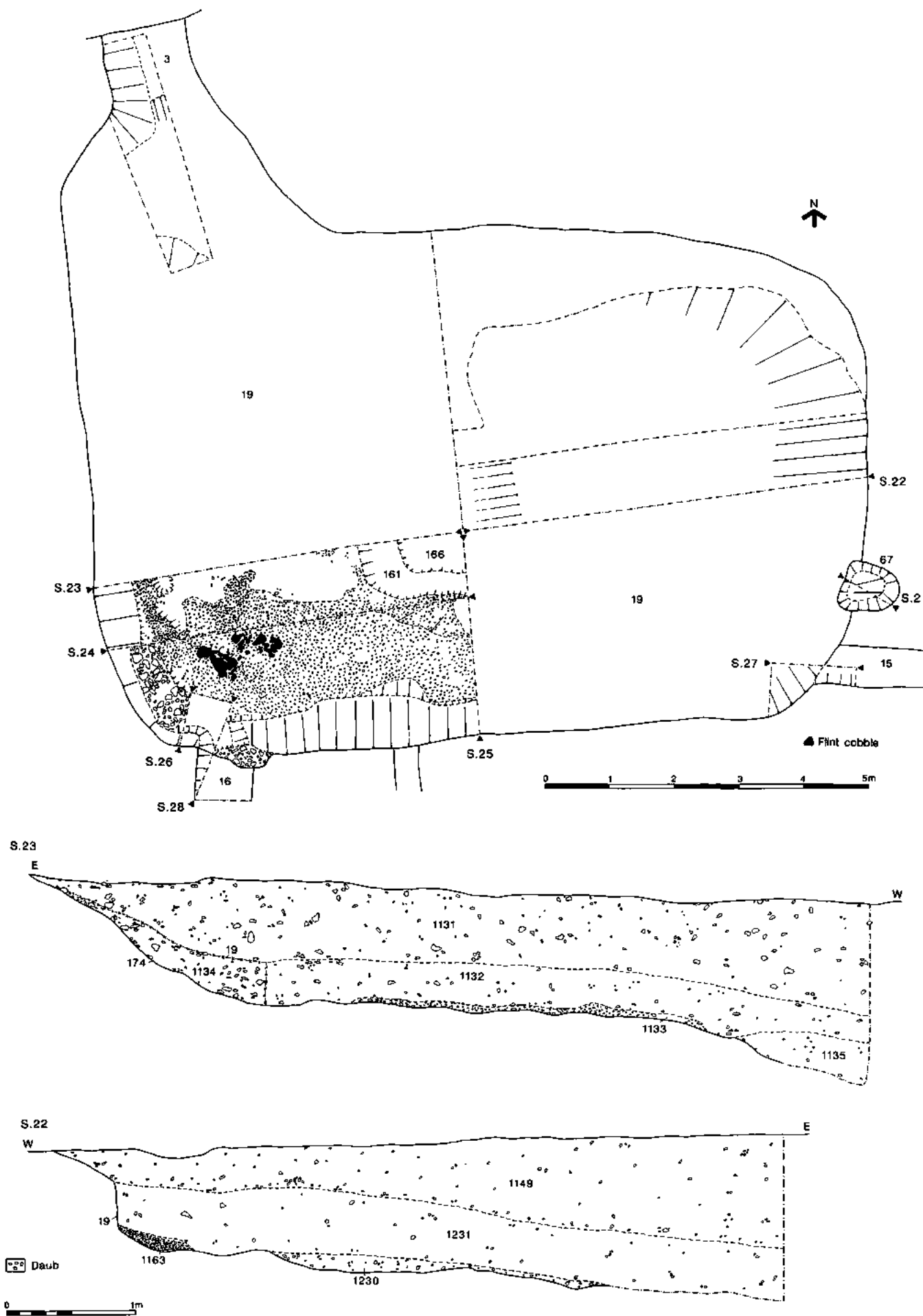


Fig. 13 Building D: plan and sections.

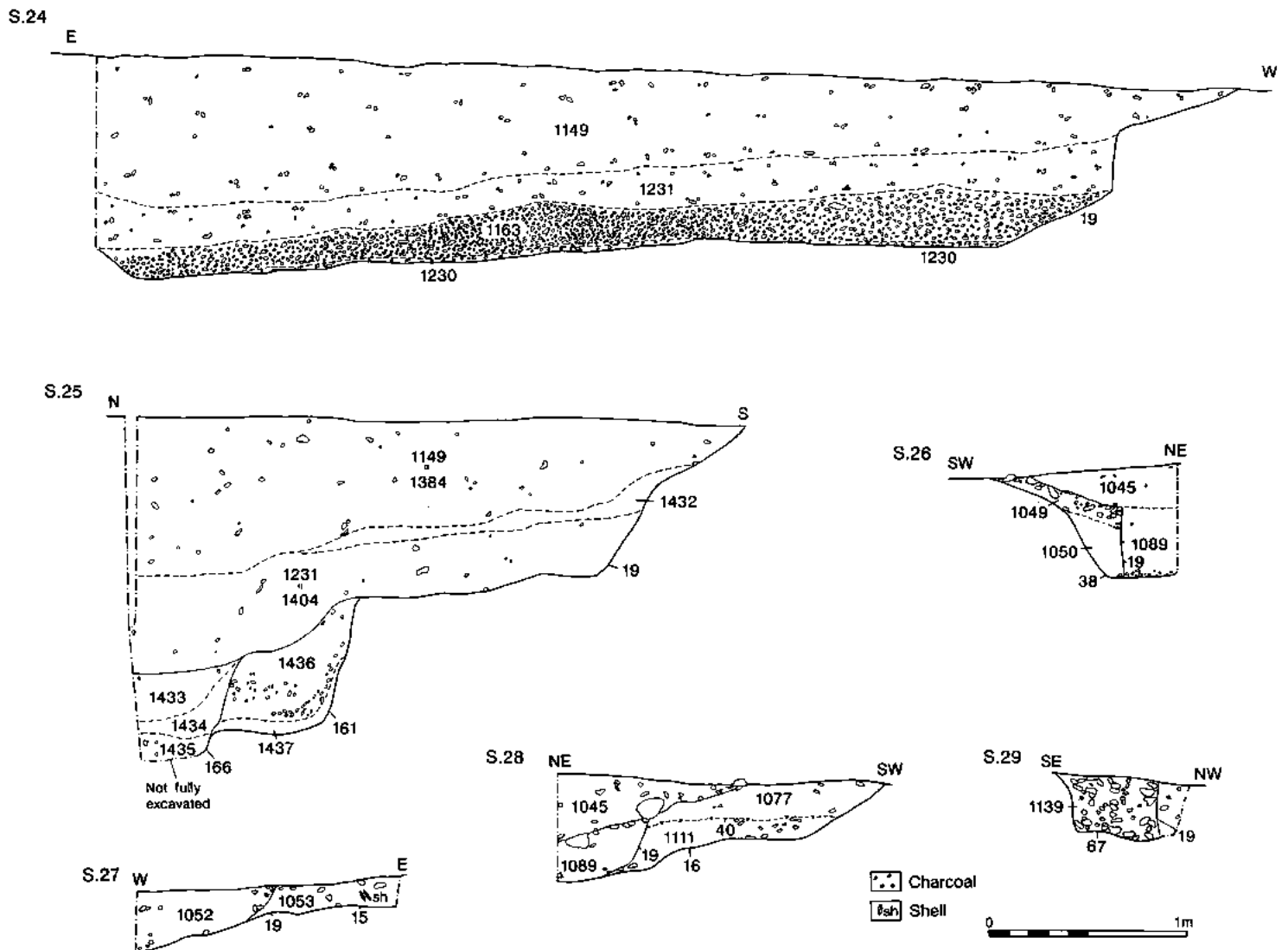


Fig. 14 Building D: sections continued.

was posthole 68, which could have supported either a linking fence or gates at the end of the passage between the two. Alternatively they may have been linked by a covered cross-passage.

Cess and rubbish-pits

Rubbish pit 136 (Fig. 7) had been filled by the middle of the thirteenth century. Four metres to the west of 136 was pit 95 (3m long by 2m wide and 0.8m deep). This feature had very steep sides and a convex base; it contained numerous layers of a green-tinged fill which contained fungal spores and hyphae and six late 13th-century sherds. Due to the presence of green-staining and the number of fills, this pit has been interpreted as a latrine-pit or cess-pit.

Pits 95 and 136 were covered by a layer of domestic debris (1337/1350), which contained 184 sherds dating to the earlier 13th century, as well as a quantity of oyster shell and daub. This layer, despite the evi-

dence from the pottery, is probably late 13th century in date, on the basis of its stratigraphic relationship with pit 136, which is early - mid 13th century in date and pit 95, which is late 13th century in date. This layer of debris came to a straight-edged limit along the edge of the presumed southern wall of Building B, indicating that the building was still standing when the layer was put down.

The top three fills of pit 13 to the east of the occupation area were deposited during the later thirteenth century.

Horticultural area (Fig. 15)

The horticultural area underwent considerable change during the mid-thirteenth to mid-fourteenth century, with the digging of a number of new planting-beds and gullies, as well as the cutting of a ditch across the area, and its subsequent back-filling. The features are described stratigraphically and from east to west.

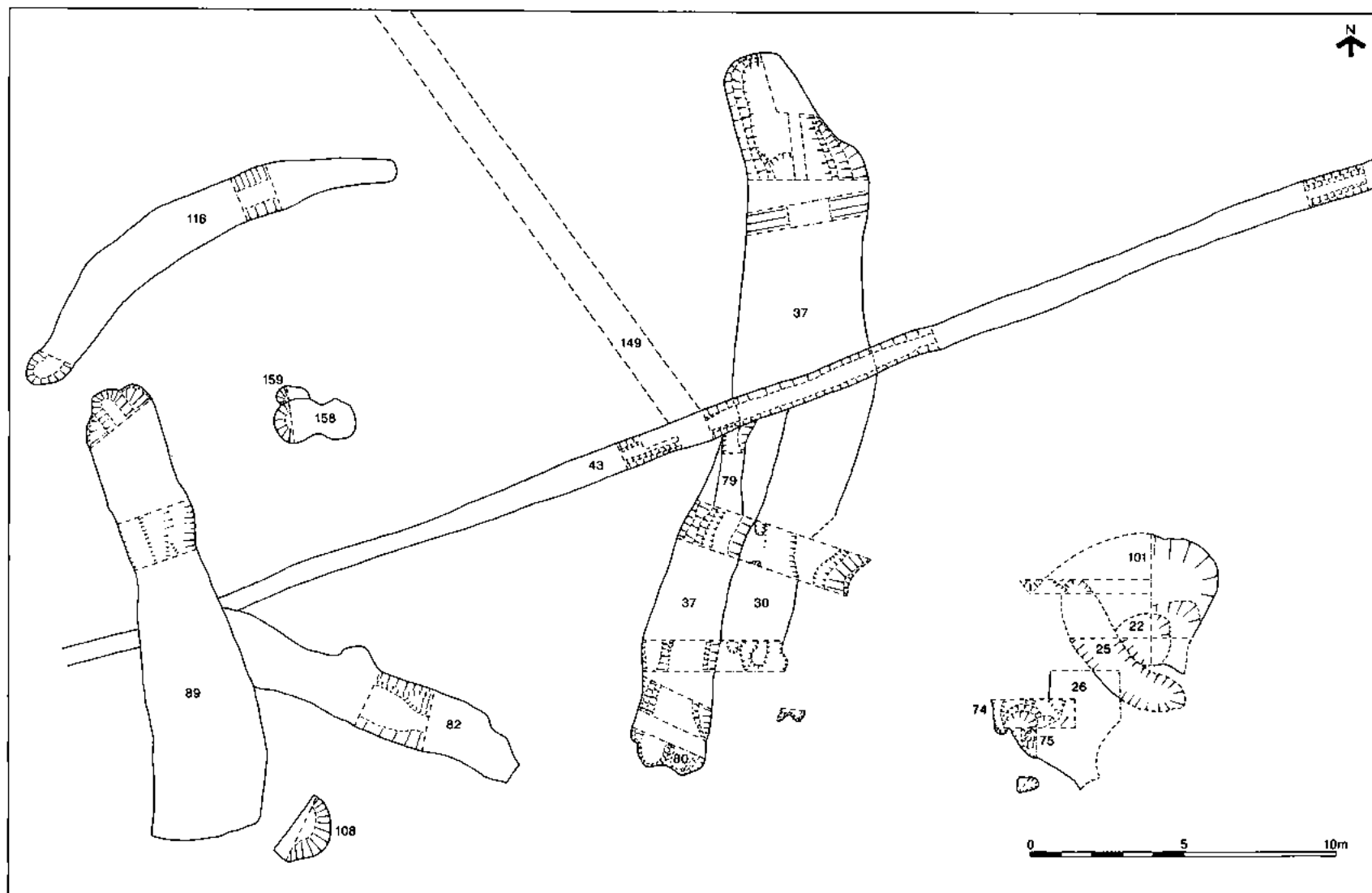


Fig. 15 Horticultural area: mid 13th to early 14th-century features.

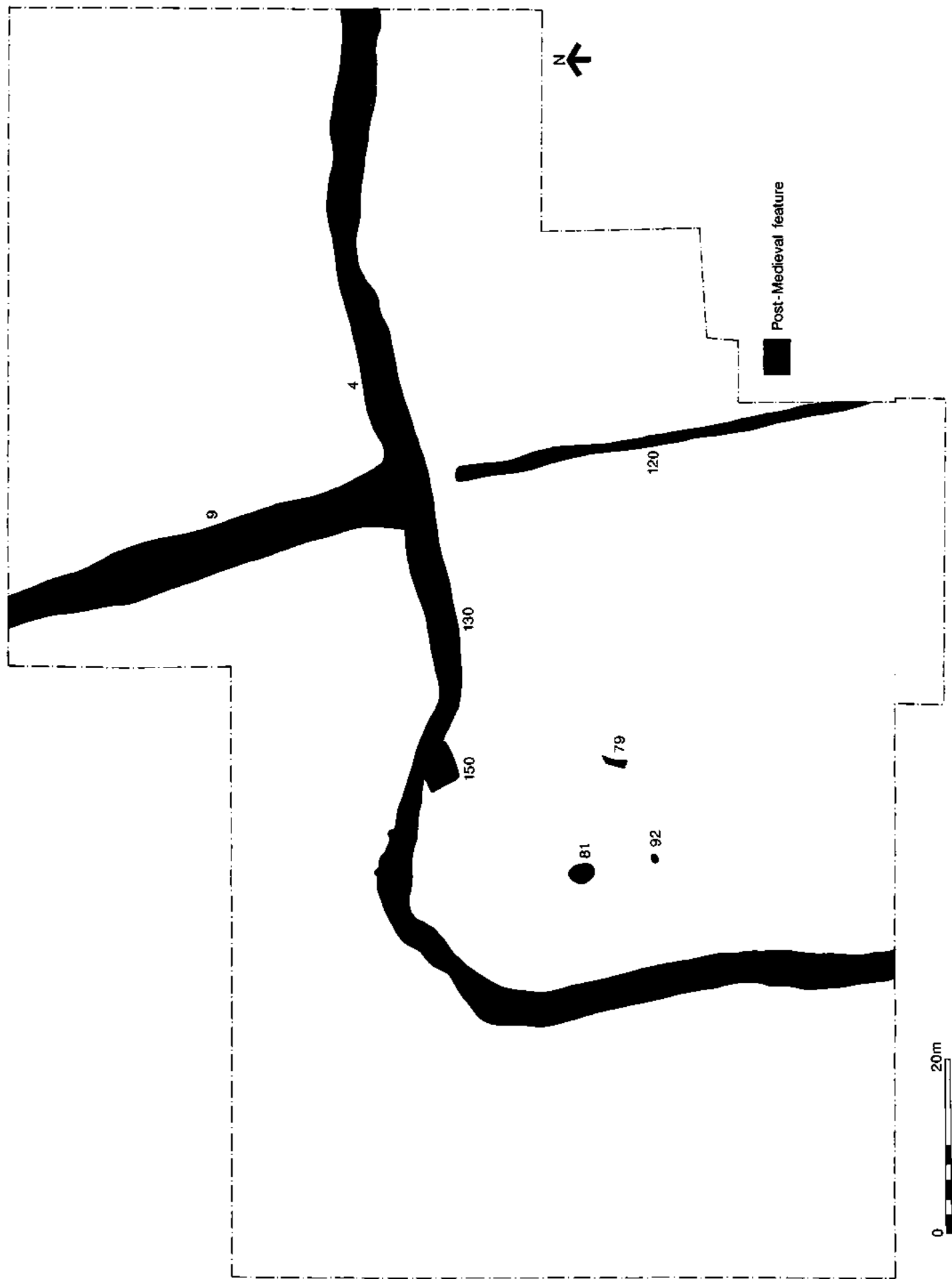


Fig. 16 Features of the post-medieval period.

Feature 22 was a large irregular shallow depression (5m diam. and 0.1m deep), which may have been a tree-hole. It was cut by 25, a shallow curving gully (1.2m wide and 0.3m deep). Although unproved, it appears from the plan that gully 25 may be the same feature as gully 100, which was of similar dimensions. Gully 100 was cut by gully 101.

Feature 37 cut 30. 37 was a steep-sided flat-based ditch (1.9m wide x 0.6m deep). It contained 81 sherds of a mid 13th-14th century date, a copper-alloy stud probably from a belt mount and a small annular brooch. Ditch 37 was cut by ditch 43/63, and by gully 79. Gully 79 was roughly aligned north/south, cutting diagonally across the upper surface of 37, it contained 9 sherds of 13th century date. Gully 80 ran north-east/south-west across the terminus of ditch 37.

Feature 30 was much disturbed by land-drains; however, sufficient remained to show that it was rectangular in plan (c. 2m wide by 0.35/0.05m deep), and that it ran parallel to ditch 37. It was cut by linear ditch 46/63 which ran north-east/south-west across the horticultural area, splitting it in half. 30 was also cut by 91, a shallow circular feature (0.8m diam. by 0.2m deep).

Ditch 43/63 was cut by planting bed 82, which like bed 23, had a fill of re-deposited peat containing possible midden material. Four sherds of 10th - early 13th-century pottery were recovered. However the feature must post-date the mid 13th century on the basis of its stratigraphy. Feature 82 was cut by 89, a linear feature 2.5m wide and 15m long containing 27 sherds of late 13th - mid 14th-century pottery and a copper-alloy brooch or buckle.

Feature 82 was cut by 124, a thin shallow irregular gully (0.2m wide by 0.15m deep); it was not clear whether 124 was a genuine feature or the result of modern agricultural activity. 82 was also cut by 121, again a shallow gully of uncertain origin and date.

Features 25 and 28 were cut by linear depression 26. Feature 116 was a curving cut (14m long, 1.5m wide and 0.4m deep). This feature may be another planting bed; its fills were light-brown silty clays, and it contained part of a stone mortar.

Feature 74 was a shallow steep-sided gully (0.3m wide by 0.2m deep). It bordered pit 75 (1.5m diam by 0.15m deep). The shape of this latter feature was very irregular due to animal disturbance, but it may have been a tree-hole.

Feature 108 was roughly rectangular with steep sides and flat base with possible post-holes at the corners. It contained several peaty fills, but the only find was a carved bone finial.

Miscellaneous features

Post-hole 1 (0.4m diam. by 0.12m deep) was located some 15m to the north-east of 107.

POST-MEDIEVAL FEATURES (Fig. 16)

The medieval farm appears to have been abandoned

for many centuries, before the excavated area was once again re-laid as a series of fields in the post-medieval period.

These are represented by a series of field-ditches (4, 9/11, 120 and 130). Ditch 4 was 4.5m wide and 1.18m deep. Ditch 9 was 2.6m wide and 0.9m deep, it had an accompanying hedge (11). Ditch 120 was 2m wide and 1m deep. Ditch 130 (4m wide, 1.5m deep) had a possible hedge-line on the western side (context 1330). It contained only Roman pottery, but is known from the estate map to have been in use in 1790 (D/DCW P62). Ditches 4 and 9/11 are also illustrated on this estate map. Ditch 120 is not on the 1790 map; it could either pre- or post-date the drawing of the map, and is visible as a crop-mark, where it links into the current field-system.

Three other post-medieval features were discovered (pits 81, 92 and 150). Pit 81 was 2m in diameter and 0.8m deep, it contained medieval and post-medieval sherds and 12 fragments of iron, mainly nails. Pit 92 (0.8m in diameter and 0.5m deep) contained the remnants of at least five glass bottles, which had apparently been packed into it whole and crushed *in situ*. Pit 150 was roughly rectangular in plan (4m by 5m); it was not excavated, but it could be seen that from the surface that it cut the post-medieval ditch 130.

ARTEFACTUAL EVIDENCE

PREHISTORIC POTTERY

by Nigel Brown

16 sherds of prehistoric pottery were recovered. All the sherds are too small and abraded to be given anything other than a general 'prehistoric' date. Context 1119 (Feature 59) contained 11 sherds and could be prehistoric in date. The remainder of the sherds are residual in medieval contexts.

THE ROMAN POTTERY

by K. Horsley

Three features of containing solely Roman pottery were excavated, but several medieval features also contained residual Roman pottery (94 sherds in total). The pottery was classified using the form and fabric series developed in Going's Mansio report (1987), augmented by Monaghan (1987). Quantification is by weight and sherd number.

The fabrics recovered comprised:- Colchester colour-coat (1), miscellaneous red ware (21), miscellaneous buff ware (31), North Kent grey ware (32), fine grey ware (39), storage jar fabric (44), sandy grey ware (47) and samian.

The assemblage

Twenty seven contexts contained Roman pottery of which three were of probable Roman date; however, only two of these could be ascribed a date other than a general one of Roman.

1146 (fill of ditch 48): 19 sherds (108g). Misc. pottery: Monaghan 4E0.1 (32), (44), (47). The simple rimmed jar/beaker present in this context has few parallels, the only one being a unique vessel from North Kent (Monaghan 1987) which was dated between 50-100 AD. This suggests a tentative early second-century *terminus post quem* for this feature.

1237 (fill of pit 88): 8 sherds (91g). Misc. pottery: G26 (47), ledge-rimmed jar (26).

This context contained an off-white/buff fabric with a dark grey core, probably a variant of Verulamium region ware and of a second or early third-century date; also present was a jar with a flrilled rim in sandy grey ware supporting the late second to mid third-century date for this feature.

Discussion

Very little can be said about the Roman pottery from Stebbingford Farm. The beaker in North Kent grey ware is an unusual form and of some interest; as is the ledge-rimmed jar in Verulamium region ware. The majority of the material was, however, extremely abraded and of no intrinsic or dating interest. None was worth illustrating; full details are in the archive.

MEDIEVAL AND POST-MEDIEVAL POTTERY (Figs 17-20)

by Helen Walker

Summary

A total of 3677 sherds weighing nearly 43kg was excavated, with an estimated vessel equivalent (eves) of 18.21. Most occurred in the late 12th to 13th-century phase, where a large pit group was excavated. Relatively little pottery was found in the mid-13th to 14th century, and post-medieval phases. Hedingham ware, exhibiting various styles of decoration, is the commonest fine ware. Small amounts of Mill Green fine ware are present and some of the pottery, including a part of a highly decorated jug has been tentatively identified as medieval Harlow ware. Some almost complete coarse-ware forms are present and include an elaborately decorated curfew. Other forms comprise large wide bowls and squat jugs, but cooking-pots are by far the commonest. Coarse-ware fabrics comprise mainly shell-and-sand-tempered ware, early medieval wares, medieval coarse-ware and Hedingham coarse-ware, the latter being the most frequent.

Method

The pottery has been recorded using Cunningham's typology (Cunningham 1985a, 1-16) and her fabric numbers, vessel form and rim codes are quoted in this report. The rim-codes for the cooking-pots are often used because the rim shape can be difficult to describe in words. Cunningham's cooking-pot rim codes are described by Drury (1993, 81-4), who suggests an approximate date range for each type and this dating framework has been used to date the cooking-pots from Stebbingford, (although the framework was originally developed for pottery in central Essex).

The pottery has been written up in phase order and because the late 12th to 13th-century phase is so large it has been divided into areas. The fabrics present in each phase and area are summarised by means of tables giving sherd count and total weight of pottery within each context (Tables 1-14). In some sections of the text, where a variety of cooking pot rim types are present, these have also been tabulated (Tables 3, 10 and 13). The presence of Roman and prehistoric pottery is also noted on the tables as a check for residuality, 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. All percentages quoted are calculated from sherd count. The illustrated pottery is described in the catalogue which shows the context and feature number of the vessel in italics, additional context numbers quoted after the main feature number indicate that sherds from the illustrated vessel also occur there.

The fabrics

Fabric 10 St Neots-type ware: (<0.25% of total) This is a Late Saxon fabric dating from c. 900 to the 12th century, and was made from Jurassic clays naturally containing fossil shell fragments, including those of bryozoa. It has a wide distribution in the east and south Midlands, and is an occasional find in north-east Essex. For descriptions of St Neots-type ware, see Hurst (1976, 320-3) and Vince

and Jenner (1991, 54-6). At Stebbingford it occurred only in late 12th to 13th-century cut 7, where a body sherd and a jar rim (No.42) were found.

Fabric 12A Shell-tempered ware: (0.25% of total) 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. In addition supplies would have been readily available on inland sites as oysters were regularly eaten. Its date range is 10th to 13th century, but see under 'Fabric 12B' for a discussion of the dating of shelly wares. Only a few, unfeatured body sherds of this ware were found.

Fabric 12B Shell-and-sand-tempered ware: (15% of total) An early medieval fabric described by Drury (1993, 78). 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, 119-23 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 11th to 13th century.

At Stebbingford, this ware is commonest in features below building B and in the south-east corner. Apart from one possible curfew fragment (No.29), the only form is the cooking-pot. Rims fall into three main types; beaded rims, sub-form C1 (Nos 9,10,40,44); B2-type rims, the least common (No.2); and turned over or cavetto rims, sub-form D2 (No.11). Beaded rim No.9 shows impressed decoration on the rim, while No.44 has a thumb rim and is the only example of a thumb rim cooking-pot rim to be found at Stebbingford. The only other rim types encountered in this ware are a thickened everted cooking-pot rim (sub-form B1A) from gully 40, showing the same rim decoration as No.9, and a beaded rim with internal thickening (sub-form C3) from cut 7. One body sherd is decorated with incised zigzags. A sagging base with a carbonised residue is also illustrated (No.12).

Fabric 12C Sand-and-superficial-shell-tempered ware: (0.5% of total) Another early medieval fabric described by Drury (1993, 78). Here, sand is the dominant tempering agent with only sparse, usually superficial, shell. Very little of this ware is present at Stebbingford; two cooking-pot rims were found, a beaded rim (sub-form C1), showing a dusting of shell on the inside of the rim, and an everted rim (sub-form A1) (No.41), both from late 12th to 13th-century cut 7.

Fabric 13 Early medieval ware: (21% 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 a 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 an abundant fabric at Stebbingford, occurring in all areas and phases. *Forms* Jugs: four fragments from strap handles and one jug rim and handle (No.7) were excavated, while No.48 shows an unusual handle attachment which could be from a jug. A possible tripod pitcher rim was also excavated from pit 156 in the south-east corner and is described in the text. Bowls: one flanged bowl rim was found (No.45); in addition there is a perforated body sherd (from gully 127) which could be from a perforated bowl. Cooking pots: as ever cooking pots are the commonest form, the main rim forms are; thickened everted rims, sub-form C1 (No.14); B2 rims (Nos 3, 43); turned over or cavetto rims, sub-form D2, similar to those in Fabric 12B; and B4 rims (No.15). *Decoration* Cooking-pot No.3 is decorated with bands of wavy line combing and such decoration is occasionally found in sherd material. A total of three base sherds show continuous thumbing around the basal angle. It is not known what type of vessel they belong to but bowls with continuously thumbbed bases were found at Stansted, Roundwood (Walker, forthcoming b, no.44). In addition, a single body sherd exhibits a thumbbed, applied strip.

Fabric 13^{ant} Early medieval ware with amber sands: (1% of total) This ware has been sub-divided from other early medieval ware because it shows relatively fine, abundant inclusions of amber-coloured quartz which are clearly visible to the naked eye. It occurred mainly in pit 136, where finds included a sagging base, and it was occasionally found in other areas and phases. The only form present is a small, cavetto cooking-pot rim (sub-form D2) of 180mm diameter from mid-13th to 14th century cut 7. It is probably an insignificant variant of early medieval ware.

Fabric 13^t Early medieval ware – transitional: (5.5% of total) This has a buff-brown to red fabric, sometimes with a grey core and darker surfaces. Vessels are often thick-walled. The matrix is fine and there is a tempering of predominantly grey, white and colourless sands. It was first recognised at Stansted (Walker forthcoming a), and may be an early product of the Hedingham kilns. At Stebbingford, it was commonest in building B. *Forms*: elaborately decorated curfew (No.28), and a sherd from a second curfew, which is described in the text (gully 42). The remains of at least three large, wide bowls were found (Nos 8, 32) and cooking pots comprise two with H2-type rims (No.4) and one B2 rim. *Decoration*: Apart from the decoration on the curfews, the only example of decoration is a body sherd with a thumbbed, applied strip.

Fabric 13B Early medieval ware – later types: (1% of total) This ware was sub-divided because it had a much finer tempering than the rest of the early medieval ware, but could not be classified as medieval coarse-ware because it still has the typical early medieval red-brown surfaces. It occurred almost exclusively in pit 136, with a small amount from cut 7 in the south-east corner. *Forms* comprise three cooking-pot rims; one of sub-form B4 (No.16), one cavetto rim (sub-form D2) and one bead-ed rim (sub-form C1), all from pit 136.

Fabric 20 Medieval coarse ware: (10.5% of total) This is a general category of grey-firing, sand-tempered coarse-ware dating from the 12th to 14th centuries, and manufactured at several production centres in the county. At Stebbingford, it is commonest in building B. There are a couple of sherds from jugs, for example a strap handle with thumbbed edges in gully 42, otherwise the only form

is the cooking pot. These fall into three main rim types; cavetto rims, sub-form D2; H2-type rims, the commonest type (No.35) and H1-type rims (No.51). In addition, there is single example of a B2-type rim and a semi-complete cooking pot with a flanged, everted rim (No.23). A base with foot attachment scars is also illustrated (No.39). There is only one example of decoration, a body sherd showing horizontal striations.

Fabric 20C Mill Green coarse ware: (<0.25% of total) Mill Green coarse-ware is a type of medieval coarse-ware made at Mill Green, near Ingatestone and described by Pearce *et al.* (1982, 289-92) and Meddens and Redknap (1992, 17-18), where it is dated to the later 13th to mid-14th century, but see under 'Fabric 35' for a further discussion of dating. Unlike other medieval coarse-wares, this ware is normally oxidised and a uniform orange or red-brown with a grey core are typical colours. It has a fine, micaceous matrix with moderate inclusions of relatively large sands (1.0mm or more), which are often rounded and glossy, giving a pimply surface texture. Only one example of Mill Green coarse-ware was found, a flanged cooking-pot rim (No.58).

Fabric 20D Hedingham coarse ware (25% 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.

This is by far the commonest fabric at Stebbingford, accounting for a quarter of all pottery present. It occurs in all phases and areas, although there is very little in ditch 16, stratigraphically the earliest feature in the sequence, and it does not become abundant until pit 136. However this is probably not significant as Hedingham fine ware is current in ditch 16. A large group of Hedingham coarse-ware was excavated from gully 42, a feature associated with building B and it is the commonest ware in the mid-13th to 14th-century phase.

Forms: Jugs; there is one almost complete squat jug (No.6), the body of a smaller rounded jug (No.30) and two jug rim and handles (Nos 31 and 46). Of the jug rims present, two show thickened everted rims, while No.31 has a thickened rim decorated with bands of incised lines. All handles are strap handles and are either stabbed (Nos 6 and 46) or grooved (No.31). Another, unillustrated, handle from gully 42 shows continuous thumbing along the edges. Bowls: large flanged rim bowls (No.33) and one thickened everted rim from a smaller bowl (No.34). Cooking-pots: These are by far the commonest form. All the developed rim forms occur in Hedingham coarse-ware except for the cavetto rim (sub-form D2). There are one or two examples of the B2 and B4 rims, with sub-form H2 easily the most common (Nos 36,37,53). There are some examples of the H1 type rim (Nos 17,38,51) and the late-13th to 14th century H3 and E5A sub-forms (54,55). One cooking-pot shows incised horizontal lines around the neck.

Decoration: Examples of decoration are rare. Apart from that already described above, one body sherd shows a thumbbed applied strip and several sherds are decorated with combed wavy lines. In addition, a fragment from the shoulder of a vessel exhibits a row of horizontal dimples, and one body sherd shows stab marks.

Fabric 20D^f Hedingham coarse ware – fine version: (<0.25% of total) This is the same as the coarse ware in colour and

general appearance, but with little or no sand-tempering. Vessels tend to be thin-walled and texture varies from quite smooth to slightly pimply. So far this has only been recognised in north Essex and the Suffolk/Essex border, for example at Pentlow Hall (Walker 1991a, 178-9) and at Maplecroft, Castle Hedingham (Walker 1991b, 175-6). In addition, a small cooking pot in this fabric was found amongst kiln material from Southey Green, an unpublished Hedingham-ware production site. Very little of this fabric was found at Stebbingford; three body sherds were excavated from ditch 47 and body sherds showing a raised cordon were found unstratified.

Fabric 20^{ox} Oxidised medieval coarse ware: (4% of total) A number of oxidised cooking-pots were excavated from features below building B and were especially common in pit 136. A few sherds were also excavated from features belonging to building B. 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. Cooking pots were the only form found and occur in sub-forms D2 (No.18) and H2 (No.20). The base and sides of a large cooking pot decorated with thumb applied strips is also shown (No.19).

Fabric 20^{am} Medieval coarse ware with amber sands: (3% of total) Nearly all examples of this ware occur in pit 136, with one sherd found in another below building B feature and four sherds excavated from the cleaning of gully 42, a feature associated with building B. Its distribution is therefore similar to that of Fabric 20^{ox}. This fabric has been sub-divided, because like that of Fabric 13^{am}, there are inclusions of amber-coloured sands clearly visible on the vessel surface. Forms comprise a cooking pot with an H2 type rim (No.21), and the base and sides of a cooking pot from pit 136 which is described in the text.

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. Jugs are often made in this ware. For a discussion of late medieval sandy orange ware see Cunningham (1985a, 1).

Sandy orange ware occurs in all phases and nearly all areas but not in any great quantity. It is commonest in the mid-13th to 14th-century phase. Small amounts occur in features below building B, in gully 127 and in the top fill of pit 136, where featured sherds comprise a body sherd with a splash glaze and a fragment from a jug in a very coarse fabric that is borderline with early medieval ware. The sherd from the top fill of pit 136 is thickly encrusted with limescale and may be intrusive; a second limescale encrusted sherd was excavated from post-hole 56 belonging to building B. Fragments from sandy orange-ware jugs were found in gully 42, a feature associated with building B, and forms comprise a fragment from a slip-painted jug with a slightly everted rim, and a thumb jug base. The fabric of the latter sherd is not unlike that of Mill Green ware, but is rather too sandy. Fragments of jugs were also found in the mid-13th to 14th-century phase; no rims are present but the remains of two handles were found, both oval in section, and one shows slip-painted decoration. Some examples show cream slip-coating beneath a mottled green glaze, perhaps in imitation of Mill Green ware (see below); this includes the neck of a baluster jug in cellar 19. Some of

the material (but not the Mill Green copies) may be products of the medieval Harlow industry (see below). Part of a small sandy orange-ware H3-type cooking-pot rim was found in this phase (No.57). Again, this could be a Harlow-ware product but the rim shape is not typical.

Fabric 21^r Reduced sandy orange ware: (1% of total) A couple of glazed and slip-painted jug fragments occurred in a reduced sandy fabric, not unlike that of Hedingham coarse-ware, but as slip-painted jugs were not usually produced in coarse ware, they have been classified as reduced sandy orange ware. It occurs in the mid-13th to 14th-century phase, and one intrusive sherd was found in gully 127 below building B. The remains of two jugs are illustrated (Nos 50 and 60).

Fabric 21D Medieval Harlow ware: (2% of total) This is a type of sandy orange ware made at, or near, Harlow. It is micaceous with inclusions of well-sorted sub-rounded sands often with a red or amber sheen, 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 Redknapp, 1992, 39), and there is documentary evidence of potters there from the 13th century (Newton and Bibbings 1960, 360). In addition, it has been found at Molehill Green, Stansted, in association with fine wares dating to the mid-13th century (Walker forthcoming a), and it therefore seems likely that production was underway by the 13th century, and may have continued throughout the Middle Ages, eventually evolving into the better known post-medieval industry.

Identification of medieval Harlow ware at this site is rather tentative, as the most typical Harlow-ware form, cooking pots with down-turned flanged rims, are absent. Most occurs in the mid-13th to 14th-century phase with two sherds intrusive in the late 12th to 13th-century phase. Forms comprise jug fragments including the remains of a highly decorated jug (No.49) showing applied pellet and lattice decoration. A second jug rim is slip-painted (No.61).

Fabric 22 Hedingham fine ware: (5.5% of total) 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, 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, 223-247).

Hedingham ware is the commonest of the fine wares; it is present in all phases and nearly all areas. There are large concentrations of Hedingham fine ware in building B gully 42, with smaller concentrations in ditch 43, mid-13th to 14th-century ditch 37, and in cellar 19. All forms found are from jugs showing various styles of decoration. One from a stratigraphically early feature, shows a band of incised line decoration (No.1). There are

examples of Rouen-style applied strip and pellet decoration (No.5); red and white slip-painting (Nos 22 and 52); sherds decorated with vertical applied strips (No.26) including sherds from strip jugs with ring-and-dot stamps (No.24). Several sherds showing applied strips have been coated with a thin layer of red slip before the strips were applied. The applied strips themselves are either of the same coloured clay as that used for the body of the pot (self-coloured) or are in a paler coloured clay. A couple of sherds exhibit applied scale decoration (No.25) and the rim of a French style parrot-beak jug is also shown (No.27).

Where the jug rim is present, all are of a similar shape, flat-topped with thickening either side, which is typical of Hedingham ware. Handles are either of the strap variety (Nos 1 and 47, the latter being decorated with an incised zigzag) or twisted rod which are usually associated with ring-and-dot stamped strip jugs. Bases, where present, are sagging, although cellar 19 produced some flat bases and two examples of thumb bases.

Fabric 35 Mill Green fine ware: (2.5% 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. Mill Green ware has therefore been given the expanded date range of mid-13th to mid-14th century.

Four sherds were found in late-12th to 13th century features and these are probably intrusive. Most comes from the mid-13th to 14th phase. Forms comprise sherds from jugs; two jug rims are present (Nos 59 and 63), both with typical Mill Green inturned rims, and No.63 possesses a rod handle. Fragments of thumb jug bases were also found. Cream slip-painting under a full or partial green glaze is the commonest type of surface treatment, and two such examples also show combed decoration. The second method of Mill Green surface treatment, slip-painting under a plain lead glaze, is less common, in fact there are only two instances of this, both from the mid-13th to 14th century phase. In addition, a small fragment of cooking-pot rim in this fabric was excavated from cut 38 in the mid-13th to 14th-century phase.

Fabric 35B Mill Green-type ware: (<0.25% of the total) Sherds are classified as Mill Green-type ware if they are too small or abraded to be positively identified as Mill Green ware. Three sherds fall into this category; however one sherd, from gully 43, has been classified thus because, although the fabric resembles that of Mill Green, there are sparse inclusions of red sands which is not a Mill Green characteristic.

Fabric 40 Post-medieval red earthenware: (0.25% of total) This is described by Cunningham (1985a, 1-2) and spans the whole post-medieval period starting from the late 15th/16th century and persisting into the 19th. It was made in several centres in the county including Harlow, Loughton, Gestingthorpe and Stock. Only small amounts of this ware occurred at Stebbingford, where diagnostic sherds include an early post-medieval slip-painted sherd from cellar 19 and a glazed storage-jar rim from ditch 147 (No.62). Most sherds have an internal glaze. In addition, the remains of a tripod base from a pipkin or cauldron was found in unphased context 1046.

Fabric 51A Late kitchen earthenware: (0.25% of total) 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 Victorian and probably made in Yorkshire. Only one sherd was found at Stebbingford, excavated from post-medieval ditch 9.

Pottery from the Late 12th to Early 13th-Century phase

Pottery from features below Building B

A total of 1143 sherds weighing 19.396kg was excavated. This group of features is considered first as they contained the largest and most deeply stratified groups of pottery.

Pottery from ditch 16. This feature lay at the bottom of the stratigraphic sequence. Several of its fills, which were mostly at the same stratigraphic level, contained pottery, although the range of fabrics is rather limited. Shell-and-sand-tempered ware and Early Medieval ware (Fabric 13) are the most frequent, with smaller amounts of medieval coarse-ware including Hedingham coarse-ware; there is one sherd of shell-tempered ware.

Hedingham fine ware is present, and the most interesting find is part of the body of a Hedingham fine-ware jug from fill 1310 (No.1), showing incised wavy line decoration and a splash glaze (see catalogue entry). There is no parallel for this type of decoration on Hedingham ware, neither does it occur on London-type ware jugs, an industry that greatly influenced the development of Hedingham ware (Drury 1993, 86). There is however, a London-type early baluster jug, dating to the second half of the 12th century, showing several rows of incised wavy line decoration, separated by bands of horizontal incised lines (Pearce *et al.* 1985, fig.24.48). The primitive splash glaze on jug No.1 also indicates an early date of perhaps the second half of the 12th century. No other featured fine wares were present within this ditch.

A number of shell-and-sand-tempered cooking-pot rims and one early medieval ware beaded cooking-pot rim are present in the same fill as jug No.1; there are two Fabric 12B examples with 12th-century beaded rims (sub-form C1); a developed thickened rim (sub-form B2) dating to c. 1200, which is illustrated (No.2); and an example of a cavetto rim (sub-form D2), which has, in Drury's typology, a suggested date range of first half of the 13th century (Drury 1993, 82-4) and is somewhat later than the suggested date for jug No.1. However, there may be some contamination of this feature as it was cut by Building B feature 24, and a sherd from jug No.1 was in fact found in fill 1086 of cut 24. Further evidence of contamination is provided by cooking-pot No.2, part of which was excavated from the top fill of succeeding pit 136 (fill 1350). But again, it is equally possible that jug No.1 is in fact early 13th century.

Less pottery was found in the remaining ditch fills; the only other featured sherds consist of another shell-and-sand-tempered ware beaded cooking-pot rim in fill 1307, while fill 1087 produced a medieval coarse-ware cooking-pot rim with a vertical neck and a squared sloping top (sub-form H2). This is an early to mid-13th century type and therefore of a similar date to the cavetto rim found in fill 1310.

- 1 Body of jug: Hedingham fine ware; orange external surface, darker 'burnt' orange internal surface and ill defined darker core; two crudely incised horizontal lines with intervening incised wavy-line decoration; pitted pale green splash glaze; abraded internal surface with abraded patch on the external surface about 30mm beneath the lower incised band; slightly laminated fracture; coil-built. *Fill 1310 (ditch 16)*
- 2 Cooking-pot rim: shell-and-sand-tempered ware; red-brown external surface, buff internal surface and thick grey core; no traces of use. *Fill 1310 (ditch 16); fill 1350 (pit 136)*

Pottery from pit 95. Only two fills of this pit contained pottery. Fill 1297 produced a single sherd of shell-tempered ware, while above this, fill 1294 produced a very small group of Hedingham coarse-

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

Table 1: Quantification of pottery from features below Building B, by fabric, feature and sherd count

Fill	Feature	Relationship	Fabrics														Wt
			12A	12B	13	13 ^{am}	13'	13B	20	20D	20 ^{ox}	20 ^{am}	21	21'	22	35	
1041	ditch 16	cut by post hole 17	1	-	1	-	-	-	-	-	-	-	-	-	-	-	5g
1087	ditch 16	= 1041, cut by F24	-	1	1	-	-	-	1	-	-	-	-	-	-	-	40g
1383	ditch 16	= 1041, cut by F24	-	1	5	-	-	-	3	-	-	-	-	-	-	-	51g
1310	ditch 16	= 1041	-	40	17	-	-	-	8	-	-	-	-	-	13	-	760g
1307	ditch 16	= 1041, below 1314	-	2	2	-	-	-	2	5	-	-	-	-	2	-	131g
1314	ditch 16	cut by F42	-	-	1	-	-	-	3	-	-	-	-	-	-	-	8g
1297	pit 95	below 1294	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6g
1294	pit 95	below F40	-	-	-	-	-	-	5	-	-	-	-	-	-	-	56g
1120	gully 60	= 127 & 49	-	1	64	-	15	-	1	-	3	-	-	-	1	-	1571g
1389	gully 141	part of gully 60	-	1	4	-	-	-	-	-	-	-	-	-	-	-	34g
1358	gully 127	= 1351	-	4	2	-	1	-	2	9	-	-	1	-	-	-	361g
1351	gully 127	-	-	1	1	-	4	-	-	1	2	1	-	-	1	-	255g
1427	gully 127	same as 1358	-	20	8	-	2	-	2	8	4	-	-	1	-	-	502g
1056	gully 49	?same as gully 60	-	1	11	-	-	-	2	3	-	-	2	-	-	-	162g
1358	pit 136	above F16 & F127	-	61	119	18	15	25	7	156	67	61	-	-	3	-	10406g
1393	pit 136	above 1385	-	33	15	1	20	-	3	-	29	23	-	-	-	-	2816g
1350	pit 136	above 1393	1	37	19	-	16	1	8	49	33	17	1	-	2	1	2218g
1337	pit 136	cleaning of 1350	-	1	-	-	-	-	-	-	-	-	-	-	-	-	8g
1039	post hole 17	below gully 40	-	-	-	-	-	-	2	-	-	-	-	-	-	-	6g

wares. These comprise a jug rim showing bands of incised lines, from the same vessel as No.31 in succeeding gully 42, and part of a bowl rim from the same vessel as No.33 also in gully 42. There is also a fragment of cooking-pot rim, which has been broken around the neck but is probably of sub-form H2.

Pottery from gully 60/127. A fairly large group of pottery was found. The range of fabrics is similar to that from ditch 16, but now Fabric 13t, sandy orange ware, and the medieval coarse-ware variants of Fabric 20^{ox} and 20^{am} are also present. The only featured fine ware is a sherd of Hedingham ware from fill 1120, showing a self-coloured applied strip under a mottled pale green glaze. In addition, a little sandy orange ware is present. An abraded sherd in fill 1358 shows the remains of a pitted yellowish splash glaze, and distinct internal horizontal lines indicate it was wheel-thrown. Sandy orange ware also occurred in fill 1056, of gully 49, and includes a fragment of a very abraded jug rim and handle which is borderline with early medieval ware. There is a sherd of reduced sandy orange ware in fill 1427, exhibiting a patchy greenish glaze. This is the only instance of this ware occurring in this phase; the rest belongs in the mid-13th to 14th century, so it may be intrusive here.

Most of the sherds of Fabric 13 in fill 1120 (Table 1) are accounted for by an almost complete cooking-pot decorated with bands of wavy line combing (No.3), sherds from which were sent for analysis but no discernible residue was found. Its rim conforms to Cunningham's type B2, generally datable to c. 1200. Sherds from this vessel also occur in gully fill 1427 and cross-fit with succeeding pit 136.

Cooking pot No.3 is the only complete profile from this gully, but a number of other featured coarse-ware sherds are present, comprising a strap handle from a Hedingham coarse-ware jug (in fill 1056) and part of a fabric 13' bowl from fill 1358 which is part of bowl No.8 in pit 136. The remaining forms are all cooking-pot rims, but also of interest is an early medieval ware ?base sherd, showing the remains of a hole made during manufacture. It could be from a per-

forated bowl or a cheese press, although there are no accompanying runnels. Of the cooking pots, only one is complete enough to merit illustration, a well used example in Fabric 13' (No.4a,b). The range of cooking-pot rim types is similar those already seen with thickened rims, beaded rims and the more developed B2, D2 and H2 rims. A Fabric 13 B2-type rim from fill 1389 cross-fits with gully 40 (fill 1375) in building B, while two oxidised medieval coarse-ware rims may be from the same vessel as those found in pit 136.

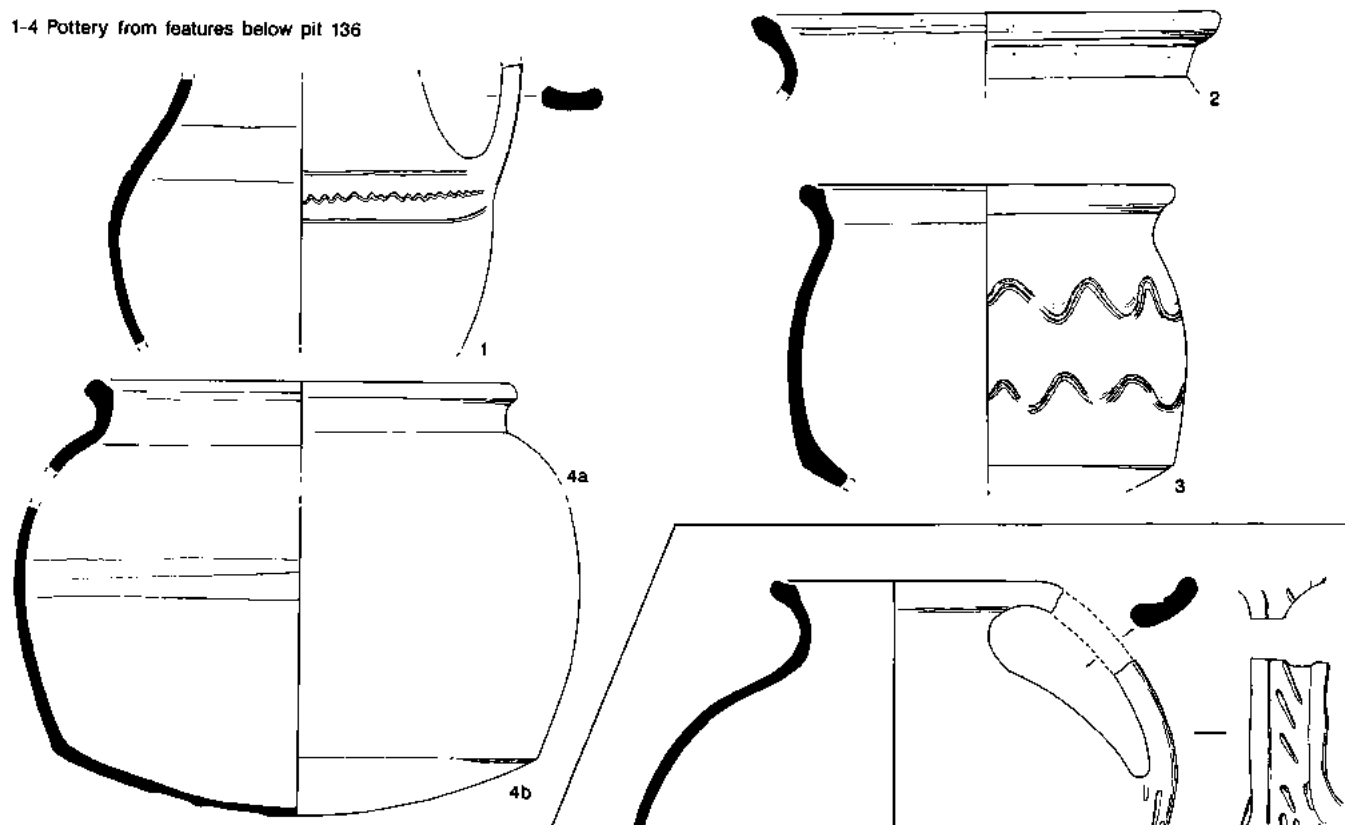
3 Cooking pot: early Medieval ware; about 70% complete, although most of the base is missing; tempered with moderate sub-rounded sands about 0.5mm across with sparser, large, pale coloured sands 1.5 to 4mm across; surface colour varies from dark grey to red-brown and is paler towards the rim and on the external surface, reddish or dark grey internal surface; there is no discernible core; combed decoration which has been smoothed over in places. *Fill 1120 (gully 60); fill 1427 (gully 127); fills 1385, 1350 (pit 136)*

4a Cooking-pot rim: Fabric 13t; buff with grey internal margins. *Fill 1351 (gully 127)*

4b Base and sides of cooking pot: probably from same vessel as No.4a, although sherds do not join; buff fabric; heavily spalled base; fire-blackened up the sides. *Fill 1120 (gully 60)*

Pottery from pit 136. Pit 136 constituted the largest pottery group, with a total of 842 sherds weighing 15.5kg, excavated from three main fills. The total eves is 5.8. The primary fill yielded the largest amount of pottery (Table 1) and the average sherd size for the lower two fills is around 20g, although this drops to 12g in upper fill 1350. Cross-fits between all three fills indicate they were deposited during the same episode, although the composition of the top fill is slightly different, as it contains some later pottery (see below). As well as cross-fits between other features below building B, there are cross-fits with Building B features, namely between fill 1385 of pit 136, and fill 1375 of gully 40 and fill 1086 of cut 24; and between fill 1350 of pit 136, and fill 1376 of post-hole 132. Two new types appear in this

1-4 Pottery from features below pit 136



5-21 Pottery from pit 136

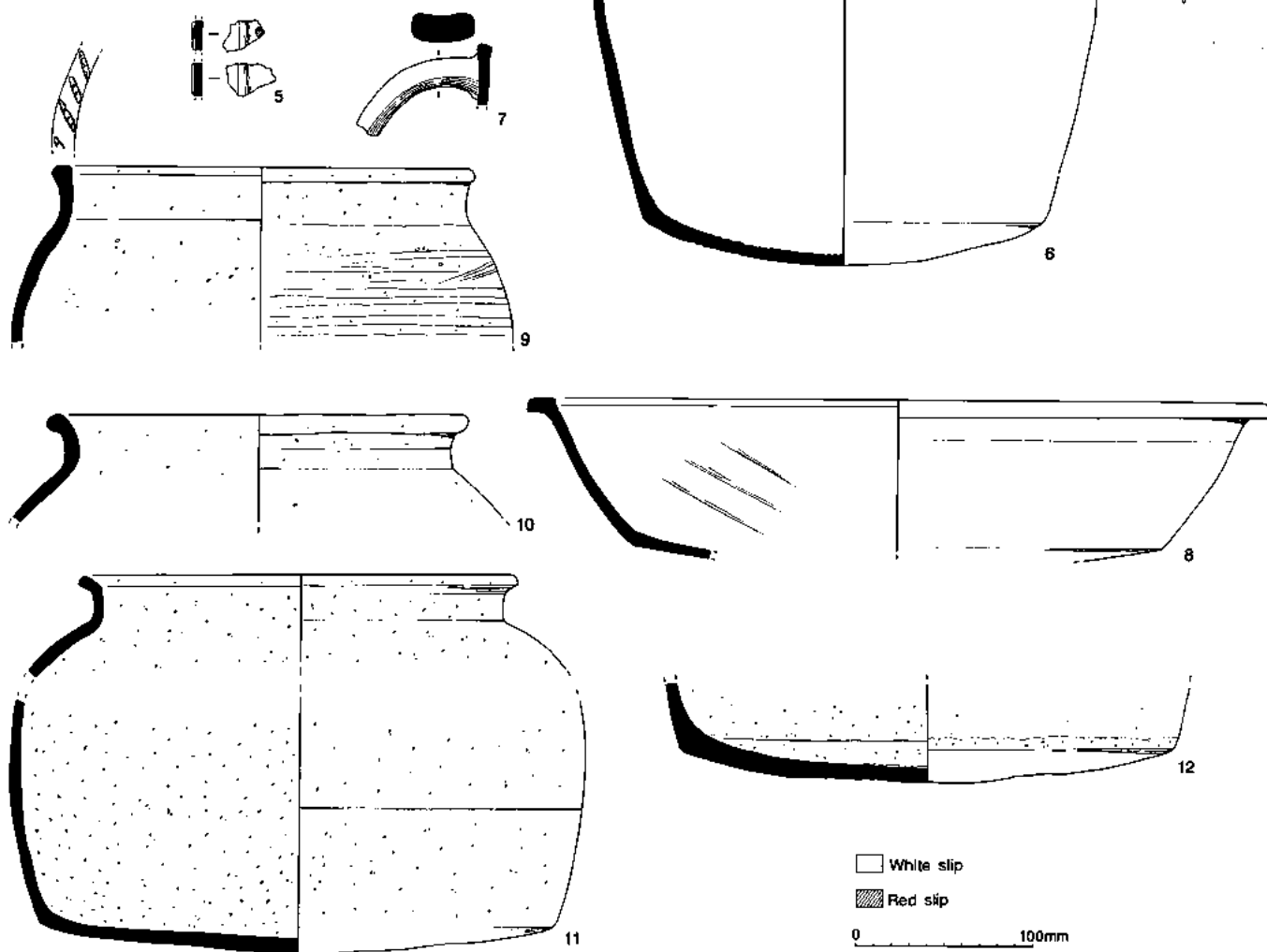


Fig. 17 Medieval pottery.

group, Fabric 13am, early medieval ware tempered with amber-coloured sands, and Fabric 13B, a finer version of early medieval ware. In addition one sherd of Mill Green fine ware appears in top fill 1350.

As the evidence suggests all the pottery was deposited at the same time, it has been considered as one group and has been looked at in terms of fine wares, coarse wares and forms present, in order to determine the nature of occupation. All the most complete vessels have been illustrated except where there is more than one example with the same form and fabric.

The fine wares: Very little was present. Three sherds of Hedingham ware came from the primary fill; one has a plain lead glaze while the other two are from the same vessel, decorated with red and white slip, and may be from a Rouen-style jug (No.5). No fine wares are present in middle fill 1393. Upper fill 1350, produced a rather abraded sherd of Hedingham ware with an applied strip in a clay paler than that used for the body of the pot; it also shows the remains of a plain lead glaze. A second Hedingham ware sherd is plain except for a single splash of glaze, but is unusual in that, instead of the typical uniform orange fabric, the internal margin is a very pale grey. Other fine ware sherds in the upper fill comprise an unglazed, undecorated sherd of Mill Green ware and an abraded sherd of sandy orange ware showing a thickly encrusted limescale deposit on the internal surface.

5 Sherds from decorated jug: Hedingham fine ware; orange fabric with pale brown core; white slip-coating and applied white slip strip showing a distinctive ridge; applied red slip pellet; plain lead glaze. *Fill 1385*

Coarse-ware jugs: Coarse-ware jugs are also an uncommon form here. One almost complete Hedingham coarse-ware jug was found, along with handles from two early medieval ware jugs; all are from the primary fill and are described/illustrated below:-

6 Almost complete jug: Hedingham coarse ware; about 85% complete; grey fabric with thick orange margins; quite coarsely tempered with white sands visible on the surface; laminated fracture. Its shape corresponds to Cunningham's vessel form D4, 'squat jugs with narrow necks and wide bodies and bases', and apart from the top portion, the vessel is very similar in shape to a cooking pot. The inside of the upper handle attachment has been smoothed over, but a plug, where the handle was pushed through the vessel wall is clearly visible at the lower handle attachment. The vessel shows stabbed decoration along handle. The inside of the base is severely pitted, with pit marks extending to about 3cm up the vessel wall; the underside of the base is also pitted. There appear to be three, irregularly spaced, jagged holes in the vessel wall (not shown); two are about 3cm across and occur at a level just below the lower handle attachment and the third is larger, about 5cm across, and occurs further down the vessel. The holes were made after manufacture, and laminated breaks on the internal surface indicate they were made from the inside, but it is impossible to tell whether they were made deliberately (indicating a secondary use) or they happened by accident and are part of the breakage pattern of the vessel. There is no evidence that the vessel has been heated, i.e. there is no fire-blackening or soot-ing. *Fill 1385*

7 Jug rim and handle: early medieval ware (Fabric 13); uniform orange-brown surface and brown-buff core except for patch of blackening on top of the handle, perhaps caused by coming into contact with a direct flame or wood ash in the kiln. *Fill 1385*

Not illustrated: second early medieval ware jug handle, similar to No.7, but with two finger-made indentations at the lower end. *Fill 1385*

Bowls: The remains of two large wide bowls were found both are of Fabric 13¹:

8 Wide bowl: early medieval transitional ware (Fabric 13¹); red-brown surfaces and margins with ill-defined brownish core; slight diagonal ridges on internal surface, perhaps done while shaping the vessel on a turntable; externally fire-blackened.

Residue analysis was undertaken, but no traces found. *Fills 1385, 1393, 1350*

Not illustrated: wide bowl; Fabric 13¹; very similar in size shape and traces of use to No.8, but buff in colour and the base is more complete. The base is of even thickness, about 6mm thick and although the underside is fire-blackened, there is no spalling or laminating of the underside associated with the intense heating, as often found on the bases of cooking pots. *Fills 1385, 1393, 1350 and fill 1375*

Cooking pots: Cooking pots, as typical of medieval sites, are by far the commonest form. Many are illustrated or described below (Nos 9-21); very incomplete rim fragments did not merit illustration, but all rim types are shown in Table 2, which summarises which rim types occur in which fabrics. No cooking-pot rims occurred in Fabrics 13^{am} and 13¹.

As expected, the early medieval cooking pots possess the 12th to mid-13th century rim types, B1, C1, B2, D2 and B4, (although there is actually little difference between B4 and H2 rims), while the medieval coarse wares tend to have H2, H1 rims, and H3 rims. However, instances of the 13th-century H1 rim and the late-13th to 14th-century H3 rim only occur singly in upper fill 1350, and are more than likely later than the rest of the pit group. In contrast, the early to mid-13th century H2 rim occurs in all fills and is relatively common. The only overlap is the cavetto rim, sub-form D2 which occurs in Fabrics 12B, 13B and 20^{am}. Comparisons of Nos 11 and 18 (Figs 17 and 18) show just how similar the rims are, even though No.11 is of shell-and-sand-tempered ware and No.18 is of oxidised medieval coarse ware.

Most cooking pots fall into the size range 180-280mm in rim diameter, 240mm being the commonest occurring size. There is one very small cooking-pot rim of 130mm diameter and one very large one at 320mm. No correlation could be found between rim size and fabric, except that Fabric 12B cooking pots tend to be larger; none are below 240mm and the two largest cooking-pot rims of 280 and 320mm are both of Fabric 12B. There is not enough data to determine whether there is any correlation between rim form and rim size.

Looking at the illustrations of cooking pots with complete or near-complete profiles, it can be seen that most belong to Cunningham's form C3A (those with a pronounced shoulder and upright neck), while No.13 is of form C3B, where the shoulder is not so pronounced and the neck slightly everted.

9 Cooking-pot rim: shell-and-sand-tempered ware (Fabric 12B); red-brown surfaces with thick grey core; decoration on rim probably made by pricking with the end of a comb; incised striations around body; vessel walls of uneven thickness and ill-sorted shell-tempering give a more primitive appearance than other shell-and-sand-tempered cooking-pots from this pit, even though it is from the top fill; fire-blackened externally. *Fill 1350 (pit 136) and fill 1376 (post-hole 132)*

10 Cooking-pot rim: shell-and-sand-tempered ware (Fabric 12B); pale red-brown external surface, buff-grey internal surface and thick grey core. *Fill 1385*

11 Cooking pot: shell-and-sand-tempered ware (Fabric 12B); about 20% complete; red-brown surfaces with occasional flashing and thick grey core; fire-blackened around sides; no traces of use internally; underside of base abraded in patches. *Fills 1385, 1393 (pit 136) and fill 1427 (gully 127)*

12 Base of ?cooking pot: shell-and-sand-tempered ware (Fabric 12B); red-brown with thick grey core; fire-blackened about 1cm above basal angle; underside worn and laminated in places, probably due to heating; carbonised residue inside base at the centre, consistent with burning food; strangely the patch of residue is more or less square in outline rather than circular; the base is complete but there is no sign of the rest of the vessel, suggesting the base may have served some kind of secondary use after the rest of the vessel had broken, however, it is also possible that the rest of the pot went unnoticed in another context. *Fills 1385, 1393, 1350 (pit 136) and fill 1427 (gully 127)*

13 Cooking pot: early medieval ware (Fabric 13); about 65% complete; thick grey core; surface colour varies, the internal surface

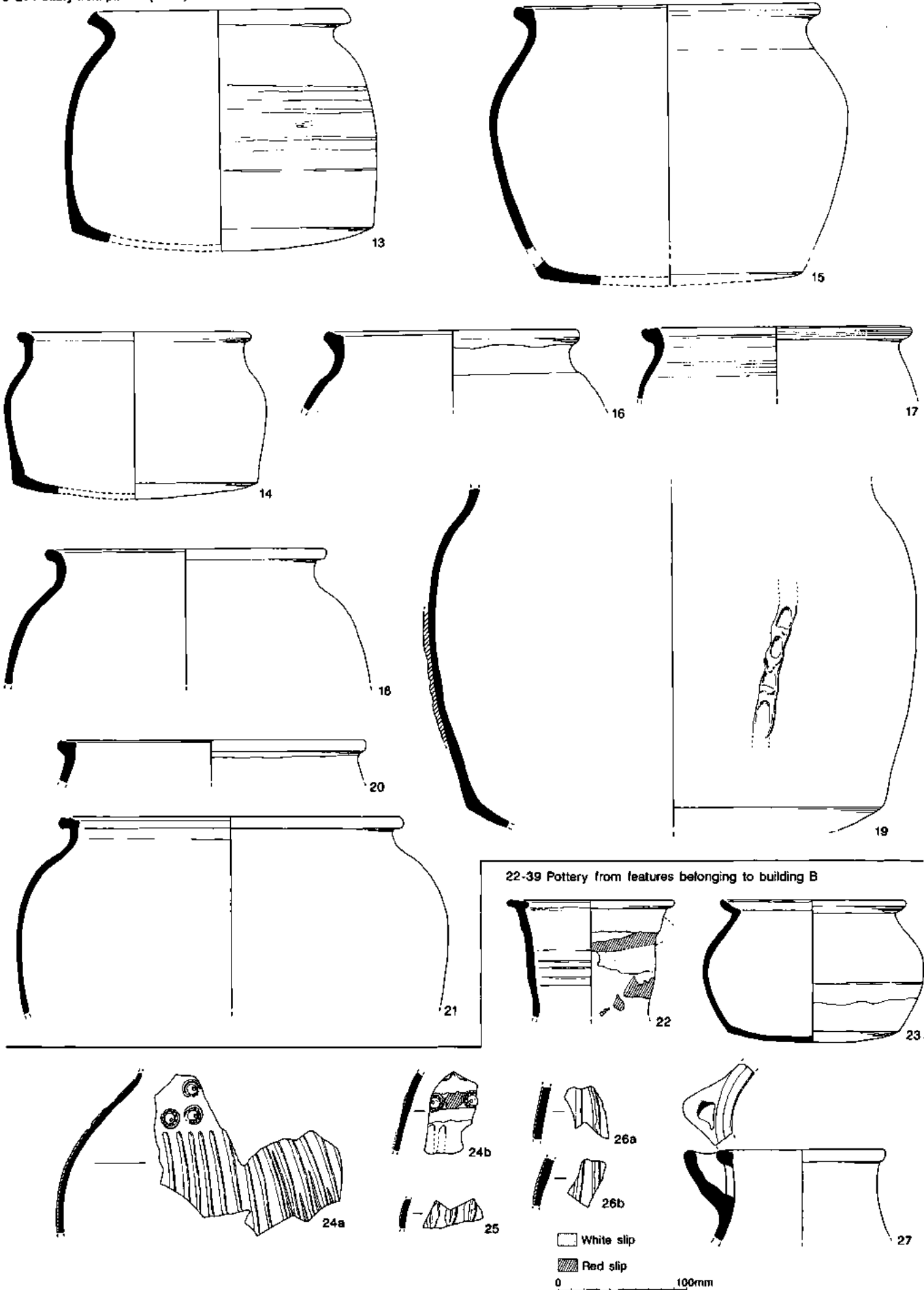


Fig. 18 Medieval pottery.

is mainly buff, darkening to mid grey; the external surface is mainly red-brown with patches of flashing, showing as a blackened patch surrounded by a pale grey or orange-brown 'halo'; patches of sooting around sides and under rim; no evidence of use internally. *Fill 1385 (pit 136) and fill 1351 (gully 127)*

14 Small cooking pot: early medieval ware (Fabric 13); about 25% complete; red-brown internal surface with grey to dark grey external surface; red margins and grey core; distinct horizontal breakline below the shoulder where vessel walls are at their thinnest; internal finger marks around this line indicate the vessel was made in two halves and joined together at this point. *Fill 1385 (pit 136) and fill 1086 (cut 24)*

15 Cooking pot: early medieval ware; buff brown surfaces, grey core; occasional quite large quartz inclusions up to 2mm across; heavily fire-blackened with patches of soot around sides, ending at shoulder; also fire-blackened under rim. *Fill 1385*

16 Cooking-pot rim: early medieval ware, finer version (Fabric 13B); red-brown surface and paler, thick red core; no traces of use; sherds from the base and body of the vessel are also present but not illustrated; part of the exterior surface of the base has laminated away at the basal angle. *Fill 1385 (pit 136) and fill 1375 (gully 40)*

17 Cooking-pot rim: Hedingham coarse ware; buff surface and pinky-orange core; fire-blackened on shoulder and around rim. *Fill 1350*

18 Cooking-pot rim: oxidised medieval coarse ware (Fabric 20^{ox}); vivid orange surfaces which are thicker on the external side; distinct grey core; patch of fire-blackening on shoulder and under rim. *Fill 1385*

Not illustrated: Cooking-pot rim; Fabric 20^{ox}; as No.20 in size, shape and traces of use but the surface colour is duller and the core narrower. *Fill 1385*

19 Body of large cooking pot: oxidised medieval coarse ware (Fabric 20^{ox}); dull orange surfaces, red margins and brown-grey core (not unlike medieval Harlow ware); no internal throwing lines; applied, thumbled strip; fire-blackened up to shoulder with patches of encrusted soot. *Fill 1393, 1385, 1350*

20 Cooking-pot rim: oxidised medieval coarse ware; creamy orange surfaces and darker core and margins. *Fill 1393*

21 Cooking pot: medieval coarse ware with amber sands (Fabric 20^{am}); grey-brown surfaces and core; red margins; amber sand can clearly be seen on the surface; patch of fire-blackening below shoulder. *Fills 1385, 1393, 1350*

Not illustrated: body of cooking pot; Fabric 20^{am}; as No.21 but surfaces are lighter in colour and there is a dusting of crushed shell around the shoulder of the vessel. *Fills 1385, 1393, 1350*

Decorated coarse wares: Few sherds are decorated. Jug No.6 (Fig. 17) is decorated with stab marks along the handle, which continue below the handle attachment. However, stabbing of handles was also to ensure thorough firing as the handle is usually the thickest part of the pot. Two of the illustrated cooking pots are decorated; No.9 shows stabbed combing on the rim, while No.19 shows an applied thumbled strip. These also gave strength to the vessel, and as in this case, are nearly always found on large cooking-pots. A few body sherds of early medieval ware exhibit wavy-line combing, but all but one sherd derives from cooking pot No.3 in gully 60.

Pottery from post-hole 17. Nothing diagnostic was found in this feature, only two joining sherds of medieval coarse ware.

Discussion of pottery from pit 136 and the rest of the features below building B. The dearth of fine ware and abundance of coarse ware in pit 136 indicates the pottery is from a service area. The example of Rouen-style Hedingham ware (No.5) is most likely to be a copy of London-type Rouen style-jugs produced from the early to mid-13th century (Pearce *et al.* 1985, 19). This dating fits in with the cooking-pot rims, especially the H2-type rim, providing a date of early to mid-13th century for infilling of the pit. However the presence of a sherd of Mill Green ware and the H1 and H3-type cooking-pot rims in upper fill 1350 give a mid-13th to 14th century date and therefore belong to the succeeding phase.

As for the other coarse-ware in pit 136, there is no evidence of any specialised forms. Coarse-ware jugs were used for storage, and fetching and carrying of liquids. Residue analysis of sherds from jug

Table 2: Summary of cooking-pot rim-forms by fabric in pit 136

= rim-form present in this fabric

Numbers shown are illustration numbers

Cooking pot rim forms

F A B R I C S		B1	C1	B2	D2	B4	H2	H1	H3
	12B	-	# 9,10	#	# 11	-	-	-	-
	13	# 13	# 14	-	-	# 15	-	-	-
	13B	-	#	-	#	# 16	-	-	-
	20	-	-	-	-	-	#	-	-
	20D	-	-	-	-	-	#	# 17	#
	20 ^{ox}	-	-	-	# 18	-	# 20	-	-
	20 ^{am}	-	-	-	-	-	# 21	-	-

Rim-form B1 thickened everted rims

Rim-form C1 beaded rims

Rim-form B2 developed everted rims

Rim-form B4 developed rims with pointed ends and internal thickening

Rim-form H2 squared with a sloping top

Rim-form H1 squared with a flat top

Rim-form H3 blocked rim, neckless

no. 6 found that it had contained wine and had a secondary use involving salt water which could account for the holes and the pitting. The two large wide bowls show evidence of gentle heating and were probably used for food processing or cooking; one possibility is that milk was heated in these bowls in order to make cheese (McCarthy and Brooks 1988, 109-10). Bowl No. 8 was sent for residue analysis but no evidence of use was detected. Cooking pots were multi-purpose vessels used for food preparation and storage as well as for cooking, which explains their abundance on medieval sites. They were, however, commonly used for cooking (or other types of heating), as evidenced from the fire-blackening and sooting seen on the surfaces and the spalling on the undersides of the bases. This fire-blackening or sooting usually extends up the sides to the shoulder and is found around the rim especially on the underside of the rim. This is consistent with being placed in, or beside, a wood-burning fire, and this pattern of use is typical of cooking pots found in Essex. Some cooking pots also show residues on the internal surface. Sherds from cooking-pot No. 12 and an unillustrated medieval coarse-ware cooking-pot base from fill 1385 were sent for residue analysis. Vessel No. 12 revealed traces of water scale, while a black char visible on the medieval coarse-ware base showed cooking residues and, more unusually, traces of copper and tin. No copper-alloy objects were found in pit 136 so these metals may derive from a copper-alloy utensil or the ingredients may have been processed in a copper-alloy vessel (see Residue Analysis report).

Of the pottery from other features, the earliest pottery came from fill 1310 of ditch 16, with the early style Hedingham fine-ware jug No.1, although the dating is confused by the presence of early to mid-13th-century type cooking-pot rims.

Apart from jug No.1, the minimal fine wares in these features indicate that, like pit 136, most of the pottery derives from service areas. The Hedingham-ware sherd with applied strip decoration in gully 60/127 is probably from a strip jug; this is a common Hedingham-ware form and a more complete example occurs in gully 42 (No.24). This form probably dates from the late-12th to earlier-13th century; sherds from strip jugs were found at Pleshey Castle period 1C-D dating to the later 12th century + (Williams 1977, fig.31.15) and similar material was also found at King John's Hunting Lodge, Writtle in period 1a, the earliest phase of a period dated 1211 - c. 1306 (Rahiz 1969, fig.52.15). (NB The published pottery from both these sites has been recently re-examined by the author.) Several cross-fits between gully 60/127 and pit 136 indicate they were infilled at the same time.

Pottery from features belonging to Building B

A total of 945 sherds weighing 10.705kg was excavated from building B. This section includes gully 42, which was not actually part of the building but was probably an associated drainage ditch.

Pottery from gully 40 and cut 24. The pottery came from stratigraphically equivalent fills. Shell-and-sand-tempered ware, early medieval ware, medieval coarse ware and Hedingham coarse ware were the commonest fabrics. The largest concentration of pottery came from fill 1035 of gully 40 and fill 1075 of cut 24; these also had the largest average sherd size of 12.3g and 13.5g respectively. Although contemporary, no cross-fits between the two features were noted; however, there were internal cross-fits between fills 1035 and 1375 of gully 40. Apart from cross-fits with earlier features there were also joins between gully 40 and adjacent gully 42 (fills 1035 and 1252 respectively).

Fine wares were only found in fill 1086; these included two sherds of Mill Green ware showing the typical surface treatment of a cream slip-coating under a mottled green glaze. They constitute the latest pottery in the group, dating from the mid-13th century, but could be intrusive. Hedingham fine ware is also present and comprises an unusual jug rim (No.22), which may be exhibiting Rouen-style decoration, and a sherd from jug No.1 in ditch 16.

Apart from the cooking pots, the only coarse-ware vessel present is a buff-coloured Fabric 13¹ bowl rim, from the same vessel as described in pit 136. An almost complete, small medieval coarse-

ware cooking pot was excavated from fill 1075 (No.23), sherds from which were sent for residue analysis but no evidence of use was detected. Its everted rim does not fit into Cunningham's typology. Many other rim fragments from cooking pots are present and many are from the same vessels as found lower down in the sequence in pit 136. For example, there is a large Fabric 20¹⁰ H2-type cooking-pot rim of 320mm diameter which may well belong to vessel No.19. In addition, part of early medieval-ware cooking pot No.14 occurred in fill 1086 of cut 24. Worth mentioning is the rim of a small shell-and-sand-tempered ware cooking pot of diameter 160mm from fill 1035 of gully 40, showing the same stabbed combed decoration on the rim as seen on cooking-pot No. 9.

22 Jug rim: Hedingham fine ware; orange internal surface and margins, but thick brown-red core and red-brown external surface where glaze is missing; slightly coarse for Hedingham ware and with very sparse mica, not unlike London-type ware; fine horizontal lines on both surfaces indicate the vessel is wheel-thrown; handle attachment scar; messily applied thick white and red slip-painting under a plain lead glaze gives yellow and reddish-brown decoration and an olive-green background. *Fill 1086 (cut 24)*

23 Small cooking pot: medieval coarse ware; about 75% complete; very dark grey with areas of red-brown on the external surface; paler red-brown core; smooth surfaces; laminated fracture; no throwing lines; distinct break line about 1cm above basal angle; probably coil-built on a turntable; band of sooting around shoulder; underside abraded; knife-trimming around base. *Fill 1075 (cut 24)*

Pottery from post-hole 132. Little pottery of interest was found, although part of decorated shell-and-sand-tempered ware cooking-pot No.9 belongs here.

Pottery from gully 42. This constituted quite a large group; 764 sherds weighing 8.8kg from 11 fills. This accounted for most of the pottery from building B. There are a large number of cross-fits within the gully itself, most notably between fill 1093 and fills 1088, 1097, 1252 and 1352. There is also a cross-fit between fills 1352 and 1356. As can be seen from table 3, Hedingham coarse ware is the commonest fabric, although there are still substantial amounts of early medieval fabrics, especially Fabric 13¹. Hedingham fine ware is also relatively common. Although some of the fills are at stratigraphically different levels, the pottery has been considered as one group, as the cross-fits indicate the pottery is contemporary. It is examined in the same order as that from pit 136, first the fine wares and then the coarse-ware forms.

The fine wares: Fine-ware sherds are commoner here than in pit 136 or any other feature discussed so far. Hedingham fine ware occurs in nearly all gully fills, but no other fine wares occur apart from a few sherds of sandy orange ware. Many sherds are decorated and are illustrated below (Nos 24-7). No. 24 shows a large fragment of strip jug. This is a very typical style of Hedingham-ware decoration probably dating from the late-12th to earlier-13th century and has already been discussed above. Both surfaces are extremely abraded (see catalogue entry) and as nothing else in the gully is particularly abraded, this must have occurred prior to deposition. As fine wares were relatively expensive, it is unlikely to have been mistreated but it may have been demoted from use at table after breakage or because it was old and had gone out of fashion. This strip jug differs from most examples (e.g. Rackham 1972, pl.33) in that the ring-and-dot stamps are on the shoulder of the vessel rather than the neck.

The applied scale decoration on No.25 is less typical of Hedingham ware; in London-type ware, this type of decoration occurs on late-12th century early rounded jugs (Pearce *et al.* 1985, fig.17.28), on early baluster jugs (Pearce *et al.* 1985, fig.24.50) and North French-style jugs of the early to mid-13th century (e.g. Pearce *et al.* 1985, fig.53.198). In Kingston-type ware, applied pellet decoration occurs on metal copy and cylindrical-necked baluster, squat and rounded jugs (Pearce and Vince 1988, 44) dating from the later-

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

13th to 14th century, so it would appear to be a long-lived decorative type. Nos 26 a and b show sherds from another strip jug, but it differs from No.24 in that the applied strips are thicker and the glaze is plain rather than green. The sherds are too fragmented to tell whether they belong to any particular decorative style.

The parrot-beak spout may (No.27) may be the latest datable sherd in this group. The parrot-beak shape may be copying Scarborough ware phase II jugs of the second half of the 13th century, which were in turn imitating French Saintonge jugs (Farmer and Farmer 1982, 105). The fact that Heddingham potters imitated Scarborough ware products has already been demonstrated by Cunningham *et al.* (1983, 63). However, bridge-spouts are also found on other, earlier French wares which were copied in London-type ware, for example on early to mid-13th century North French-style conical jugs (Pearce *et al.* 1985, fig.54.203-206). On closer inspection, the spout is more of a Saintonge shape, but it does mean the dating is inconclusive.

As for the sandy orange ware, there is a thumbled jug base showing a decomposed lead glaze, in fill 1088, its fabric is not unlike that of Mill Green ware, but is rather too sandy. Two small fragments from a sandy orange ware slip-painted jug rim were found in fill 1254.

24a Body of jug: Heddingham fine ware; uniform creamy orange fabric; applied strips and ring-and-dot stamps in a clay paler than that used for the body of the pot; red slip-coating between some of the applied strips; mottled green glaze; very abraded both inside and out, with several sections of applied strip missing, and parts of inside surface have laminated away. *Fill 1093*

24b Body sherd: Heddingham fine ware; ?from same vessel as

No.24a, but shows horizontal bands of slip with a red slip-coating in between; position of applied strips indicates vessel must be this way up, but judging by the position of the dots in the ring-and-dot stamps, the sherd should be the other way round. *Fill 1093*

25 Body sherd: Heddingham fine ware; orange fabric with a pale grey external surface; applied pellet decoration; under mottled pale green glaze. *Fill 1093*

26a 8 body sherds: Heddingham fine ware; uniform orange fabric; thick applied strips in a pale, buff-coloured & b clay; partial clear lead glaze. *Fill 1093 (gully 42) & fill 1378 (cut 157)*

Not illustrated: Heddingham fine ware jug base; uniform orange fabric; could be from same vessel as No.26; slightly sagging base, a typical Heddingham ware shape; splashes of plain lead glaze on the underside of the base. *Fill 1093*

27 Spout of jug: Heddingham fine ware; uniform creamy orange fabric; parrot-beak spout; poorly finished; sparse mottled green glaze. *Fill 1294*

Coarse-ware curfews: Curfews are large inverted bowls used to put over the fire at night and stop stray sparks from igniting the building. They usually have a handle and ventilation holes to keep the fire alight. A total of three curfew fragments were found and are illustrated or described below. No. 28 (Fig. 19) comprises a large section of finely decorated curfew; it lacks a handle and there are no ventilation holes but this is probably because the vessel is incomplete. The high quality of the decoration is unusual; many coarse-wares, including curfews, were decorated but usually in fairly perfunctory way,

Table 3: Quantification of pottery from Building B features by fabric, feature and sherd count

R = Roman pottery present

Fill	Feature	Relationship	Fabrics													Wt
			12A	12B	12C	13	13'	13B	20	20D	20 ^{ox}	20 ^{am}	21	22	35	
1375	gully 40	above F17 & F136	-	2	1	3	2	1	-	3	-	-	-	-	-	112g
1035	gully 40	= 1375 & 1101	-	17	-	1	1	-	6	-	4	-	-	-	-	357g
1101	gully 40	= 1375 & 1035	-	2	-	-	-	-	-	-	-	-	-	-	-	9g
1077	gully 40	below topsoil	-	-	-	1	-	-	-	-	-	-	-	-	-	2g
1068	cut 24	same as gully 40	-	1	-	-	-	-	1	4	-	-	-	-	-	48g
1086	cut 24	= 1068 & 1075	-	18	-	18	-	-	3	5	-	-	-	6	2	291g
1075	cut 24	= 1068 & 1086	-	-	-	2	-	-	32	8	-	-	-	-	-	582g
1376	PH 132	below gully 42	2	1	-	1	-	-	-	1	-	-	-	-	-	178g
1097	gully 42	primary fill	-	-	1	-	1	-	-	3	-	-	-	-	-	45g
1093	gully 42	above 1097	-	15	-	16	6	-	-	90	-	-	-	49	-	2289g
1088	gully 42	above 1093	-	1	-	1	2	-	6	13	1	-	1	2	-	163g
1255	gully 42	-	-	-	-	1	-	-	1	7	-	-	-	1	-	22g
1254	gully 42	above 1255	-	13	-	10	6	-	3	56	-	-	2	1	-	673g
1252	gully 42	-	-	1	-	4	1	-	34	1	-	-	-	6	-	339g
1264	gully 42	same as 1252	-	2	-	5	-	-	5	5	-	-	-	5	-	147g
1373	gully 42	below 1356	-	3	-	3	-	-	5	1	-	-	-	-	-	107g
1356	gully 42	below topsoil	-	8	-	18	8	-	22	117	-	-	-	12	-	2384g
1352	gully 42	cleaning = 1356	-	7	-	15	56	-	9	80	4	4	3	11	-	2648g
1354	ditch 98	same as 42	-	-	-	2	-	-	-	-	-	-	-	-	-	12g
1076	gully 32	?aligned with F42	-	4	-	5	-	-	7	1	6	-	-	-	-	227g
1109	recut 54	-	-	-	-	1	-	-	-	-	-	-	-	-	-	27g
1116	PH56	-	-	-	-	-	-	-	2	-	-	-	1	-	-	15g
1123	PH62	same as F136	-	2	-	-	-	-	-	1	-	-	-	-	-	28g

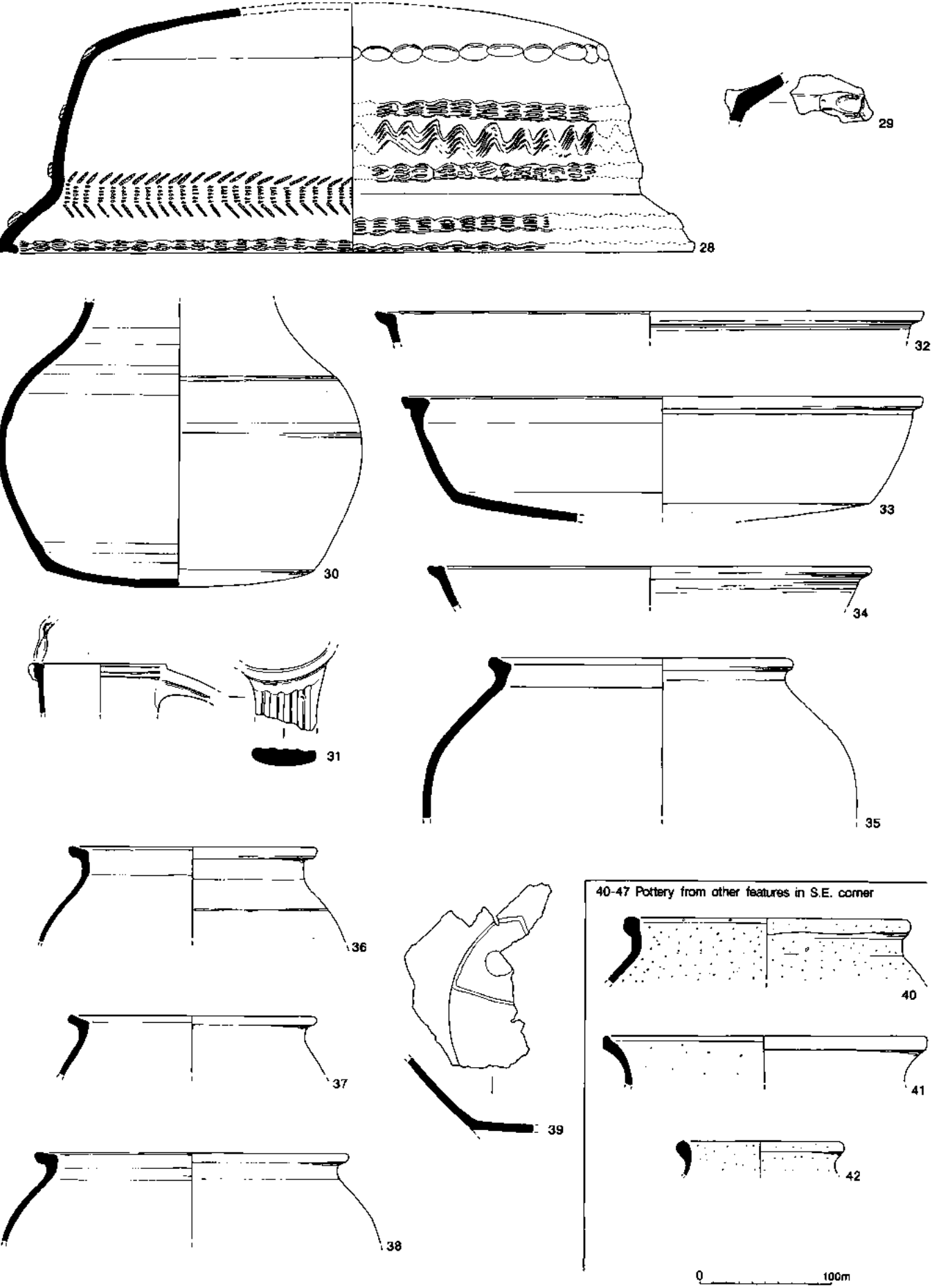


Fig. 19 Medieval pottery.

although in this case, the applied bands may have helped to strengthen the vessel as well as decorate it. Such a curfew may have formed the centre piece of the room, but this also is unlikely as curfews would have only been used at night when the household was asleep. Perhaps it was used in the summer when the cooking may have been done outside and a fire was not needed for warmth. However, it is also difficult to see why the interior was decorated as it would have been entirely hidden from view when in use.

28 Curfew: Early medieval ware-transitional (Fabric 13t); about 20% complete; no trace of perforations or a handle; buff-brown with grey core, although external surface is quite mottled in places, varying from orange brown to very dark grey; internal surface fire-blackened; very elaborate, neatly executed decoration on both internal and external surfaces. The indentations around the top of the vessel are made with a knife rather than the usual thumbing, as evidenced by the smoothness of the indents and drag marks left by the sand particles; other external decoration comprises wavy line combing and combed, thumbing, applied strips. Thumbings and combing also occur around the rim of the vessel on both inner and outer surfaces, the internal decoration consisting of pronging the end of the comb, the decoration has not been partially smoothed over, as on cooking-pot No.3. *Fills 1352, 1093, 1252*

29 ?curfew fragment; shell-and-sand-tempered ware (Fabric 12B); abraded and most of shell leached out; thumbing applied strip; some fire-blackening on internal surface. *Fill 1254*

Not illustrated: small fragment from a ?third curfew; Early medieval transitional ware (Fabric 13t); thumbing applied strip around top of curfew with the remains of a vertical applied strip up the sides of the vessel. *Fill 1254*

Coarse-ware jugs: The remains of three Hedingham coarse-ware jugs were found. Number 30 is much smaller than the Hedingham ware jug found in pit 136 (No.6), but unlike No.6 it shows no evidence of pitting. It does however, have a internal white residue that is not limescale (as it does not react with hydrochloric acid). Urine can leave such a residue so it could have been used as a urinal (a male urinal as it is a jug), or it could have been used to store urine as this substance had a number of household purposes.

30 Body of jug: Hedingham coarse ware; grey with salmon-pink core; internal horizontal lines and ripple marks would indicate that the vessel was wheel-thrown, but a horizontal break-line around the upper half corresponds to the point where the vessel wall constricts and indicates the vessel was made in two halves and joined at this point; internal white deposit that does not effervesce on the application of dilute hydrochloric acid. *Fill 1356*

31 Jug rim: Hedingham coarse ware; quite fine tempering; borderline Fabric 20Df; grey external surface; red-brown core and internal surface; incised horizontal lines around rim. *Fill 1294 (pit 95) and fill 1352 (gully 42)*

Not illustrated: jug handle; Hedingham coarse ware; buff with grey core; strap handle with continuous thumbing along the edges. *Fill 1254*

Coarse-ware bowls: The remains of three bowls were found (Nos 32-4). Bowl No.33 is similar in size and shape to those found in pit 136, but this example is oxidised and is in Hedingham coarse ware, not Fabric 13t. There is one example of a Fabric 13t large wide bowl (No.32), but this has a hollowed slightly everted rim, rather than the flat flange of the bowls in pit 136. Number 34 is in Hedingham coarse ware and appears to be from a smaller bowl.

32 Bowl rim: early medieval transitional ware (Fabric 13t); red-brown surfaces; grey core. *Fill 1352*

33 Large wide bowl; Hedingham coarse ware; buff fabric with reddish core; no traces of use. *Fills 1093, 1097 (gully 42) and fill 1294 (pit 95)*

34 Bowl rim: Hedingham coarse ware; buff fabric; fire-blackened externally. *Fill 1088*

Coarse-ware cooking pots: The most complete cooking-pot rims

have been drawn (Nos 35-38). Only two early medieval cooking-pot rims were found (both Fabric 13). By far the commonest type are Hedingham coarse-ware cooking pots with H2 rims. There is also an example of an H1 rim in this fabric (No.38). Of the illustrated Hedingham coarse-ware cooking-pot rims, all have a uniform grey colour without the red or orange cores and margins as found on stratigraphically earlier Hedingham ware. This may be due to improvements in firing techniques indicating a later date, but could equally well have no chronological significance and be due to other factors such as the vessels position in the kiln (Hedingham jug no. 30 does have an oxidised core). Cooking-pot size ranges from 180 to 300mm in diameter, with no particular size predominating.

35 Cooking pot: medieval coarse ware; red-orange surfaces and thick grey core; no traces of use. *Fill 1356*

36 Cooking pot: Hedingham coarse ware; uniform; pale grey fabric; ?wheel-thrown; no traces of use. *Fill 1093*

37 Cooking pot: Hedingham coarse ware; uniform grey fabric; no traces of use. *Fills 1093 and 1352*

38 Cooking-pot rim: Hedingham coarse ware; uniform pale grey fabric; no traces of use. *Fill 1352*

Miscellaneous pottery: The remains of what might be a medieval coarse-ware tripod base is shown (No.39); it is the wrong fabric and shape to be from a tripod pitcher, but could be from a tripod pipkin or cauldron. These forms are rare in medieval Essex, although they were produced in London-type ware (*cf. Pearce et al. 1985, fig.69*). It may have had a specialised function.

39 Base of vessel: medieval coarse ware; grey core, red margins and dark grey, almost black surfaces; attachment scar of foot on underside of base; underside pitted and spalled; interior has laminated. *Fill 1252 (gully 42)*

Pottery from the remaining features belonging to building B. A few other features, mainly at the north end of building B contained modest amounts of pottery. Gully 32 produced little pottery from its single fill (1076); there are no fine wares but a mixture of unfeatured early medieval and medieval coarse wares. The other features, namely recut 54, and post-holes 56 and 62, produced even less pottery. Again no fine wares or featured sherds were found, although there is an unglazed sherd of sandy orange ware from post-hole 56 showing a very thick internal limescale deposit.

Pottery from features belonging to building C

A total of 25 sherds weighing 149g was excavated from building C.

As can be seen from Table 4, very little pottery belonged to building C; it comprised a mixture of early medieval fabrics (mainly Fabrics 12B and 13) and Hedingham coarse ware. Only one featured sherd is present, an early medieval ware continuously thumbing base. However post-hole 61 (fill 1121) produced a small glazed sherd of medieval Harlow ware from the same vessel as jug No.49, belonging to adjacent cut 13 in the mid-13th to 14th century phase.

Pottery from features belonging to Building A

A total of 38 sherds weighing 243g was excavated from building A. Again, very little pottery belongs to this building (Table 5). Most is a mixture of early medieval and medieval coarse-wares. The early medieval wares (mainly Fabrics 12B, 13 and 13t) predominate over the medieval coarse wares (Fabrics 20 and 20D). Forms comprise a shell-and-sand-tempered cooking-pot fragment with a beaded rim. Single, unfeatured sherds of sandy orange ware and Hedingham fine ware are also present.

Pottery from other features in south east corner (Figs 19 and 20)

A total of 432 sherds weighing 5.133kg was excavated from the remaining features in the south-east corner of the excavation.

Pottery from cut 12. Little pottery was excavated from this feature, apart from two sherds of medieval coarse-ware; all the pottery comprises early medieval fabrics. Featured sherds consist of a Fabric 12C

Table 4: Quantification of pottery from Building C by fabric, feature and sherd count

Fill	Feature	Relationship	Fabrics					Wt
			12A	12B	13	20D	21D	
1053	ditch 15	below pit 14 & cellar 19	1	1	1	7	-	76g
1042	ditch 18	below cellar 19	-	-	2	-	-	22g
1142	gully 69	below cellar 19	-	10	-	1	-	36g
1077	post-hole 61	-	-	-	1	-	1	15g

beaded cooking-pot rim, with a dusting of crushed shell on the inside surface, and a sherd of early medieval ware (Fabric 13) with a continuously thumbled base. This group therefore dates from the 12th century or later.

Pottery from cut 7. This feature lay just to the north of cut 12, and produced the largest group of pottery from any feature in the south-east corner. It yielded a total of 3.8kg from two fills, both of which have an average sherd weight of 15.6g. The primary fill 1022, like cut 12, produced nearly all early medieval pottery apart from two sherds of Fabric 20. Diagnostic material comprises; a Fabric 12B, beaded

but two of the larger examples are drawn. No.43 shows part of a Fabric 13 cooking pot with a B2 rim, and No.44 shows a thumbled, beaded-rim cooking pot in Fabric 12B. There is also an example of a Fabric 12B, B2-type rim which is very similar to No.2 from ditch 16, below building B. The shape of No.43 is also similar to No.2. While a Fabric 12B rim of type D2 is very similar to No.11 in pit 136, also below building B.

No forms are present in medieval coarse ware or Hedingham coarse ware, although there are several body sherds belonging to the same Hedingham coarse-ware vessel, possibly a jug.

The pottery found in cut 7 is therefore similar to that found

Table 5: Quantification of pottery from Building A features by fabric, feature and sherd count

P = Prehistoric pottery present

Fill	Feature	Relationship	Fabrics								Wt
			12B	12C	13	13 [†]	20	20D	21	22	
1106	post-hole 50	-	2	-	3	1	-	-	1	-	62g
1118	post-hole 58	next to P-H 50	2	-	2	-	-	-	-	-	28g
1117	post-hole 57	next to P-H 44	-	-	-	2	1	-	-	-	33g
1084	post-hole 44	below F36	-	-	1	-	1	-	-	-	6g
1070	post-pipe 27	within P-H 44	2	-	6	-	-	2	-	1	45g
1151	cut 78	below F36	-	-	1	2	-	-	-	-	25g
1165	cut 78	= 1151	-	2	3	1	-	1	-	-	38g
1143	cut 70	= 78	-	-	1	-	-	-	-	-	6g

P
P

cooking-pot rim which cross-fits with upper fill 1010 (No.40); a Fabric 12C everted cooking-pot rim (No.41) and a Fabric 13 B2-type cooking-pot rim which is comparable in rim form to vessel No.3 from gully 60.

The upper fill 1010, produced a larger, but similar assemblage, i.e. no fine wares, but mainly early medieval fabrics predominating over medieval coarse wares. But in this fill, Hedingham coarse ware is present, and more exceptionally, there are two sherds of St Neots-type ware. The latter comprises a body sherd and a thickened everted jar rim (No.42). Small amounts of St Neots ware on a site can be problematic, as some Roman shelly wares exploited the same (Jurassic) clays, giving rise to very similar sherd material that is indistinguishable under the microscope. No other Roman pottery was found in this feature, although residual Roman sherds were found nearby, for example cut 12 and post-hole 67. The rim form however is quite acceptable for St Neots ware and is similar to that from St Neots (*cf.* Hurst 1976, fig.7.18.4); see also Hurst (1956, fig.7.23). Of the early medieval fabrics, the only form present is the cooking pot. The rim forms are as follows:

Fabric 12B: rim-forms; C1, C3 (beaded with internal thickening), B2 and D2

Fabric 13: rim-forms B1, C1, B2

Most of the rim sherds are too fragmented to merit illustration,

below building B. The only dating evidence is the presence of the two developed cooking-pot rim types B2 and D2, giving a date of c. 1200 to mid-13th century for the infilling of this feature.

40 Cooking-pot rim: shell-and-sand-tempered ware; red-brown surfaces and grey core; some small gastropod-shell temper as well as crushed oyster; fire-blackened around rim. *Fills 1022, 1010 (cut 7)*

41 Cooking-pot rim: sand-with-superficial shell-tempered ware; red-brown surfaces; grey core; dusting of crushed shell on inside of rim; fire-blackened on inside of rim. *Fill 1022 (cut 7)*

42 Jar rim: St Neots ware; purplish surfaces; grey core; fire-blackened externally. *Fill 1010 (cut 7)*

43 Large cooking pot: early medieval ware (Fabric 13); robust, chunky vessel; red-brown surfaces, grey core; fire-blackened on the sides from about 1cm above the basal angle. *Fill 1010 (cut 7)*

44 Thumbled cooking-pot rim; shell-and-sand-tempered ware (Fabric 12B); robust fabric with high proportion of sand relative to shell; dark grey except for reddish external margin. *Fill 1010 (cut 7)*

Pottery from hearth 66 and post-holes 67, 106 and 109. Very little pot-

tery was found in these features, no fine wares were present and the only featured sherd, from post-hole 109, was the shoulder of a Hedingham coarse-ware vessel showing a row of dimples. As residual Roman pottery was present in post-holes 67 and 109, then it follows that the medieval pottery found could also be residual.

Pottery from cut 157 and pits 168, 156, 122 and 154. These features formed part of a stratigraphic sequence. Cut 157 lay at the bottom of this sequence, and here, fine wares comprise a sherd from Hedingham strip jug No.26, which first appeared in gully 42 (fill 1093), a feature that was associated with building B and lay about 12 metres to the west of cut 157. There is one sherd of medieval Harlow ware, not from jug No.49, but a plain unglazed sherd, probably from a cooking pot. Coarse-ware forms comprise an early medieval ware bowl rim (No.45); it is comparable in shape to the large, wide bowls found in pit 136 (No.8), but is smaller, 320mm in diameter as opposed to 420mm, and probably shallower. The bowl cross-fits with a sherd from fill 1335 of pit 154, stratified above. Also present is a medieval coarse-ware cavetto cooking-pot rim (sub-form D2) in lower fill 1420.

Stratified above was pit 168, which cut the upper fill of cut 157 (fill 1378). Typologically, the latest pottery is a Hedingham coarse-ware cooking-pot rim of sub-form H2.

Pit 156 was stratigraphically similar to pit 168, in that both are stratified below pit 154. A mixture of early medieval and medieval coarse-ware was found. Of interest in the lower fill, is a small part of a Fabric 13 beaded rim which appears to be coming into a pulled spout. It may be from a tripod pitcher, as found at Stansted (Walker forthcoming a, MGS no.69). Other forms comprise a Hedingham coarse-ware jug handle (No.46) and an early medieval ware beaded cooking-pot rim, both are from fill 1388. No diagnostic forms were found in pit 122, also stratified below pit 154.

Pit 154, at the top of this sequence, produced little of interest. Most of the pottery came from primary fill 1380; the only fine ware comprises four sherds of sandy orange ware, but these are plain and unglazed. Three H2-type cooking-pot rims are present, one in Fabric 13t and two in Hedingham coarse ware. Part of bowl No.45 was present in upper fill 1335.

45 Bowl: early medieval ware (Fabric 13); red-brown external surface, reddish external margin, grey internal surface and margin; internal surface abraded. *Fill 1378 (cut 157) and fill 1335 (pit 154)*

46 Jug rim: Hedingham coarse-ware; grey fabric with a thick, pale grey core; stabbed decoration along handle. *Fill 1388 (pit 156)*

Pottery from pit 125. This feature, which lay next to pit 154, produced another very modest assemblage. A sherd in middle fill 1347 has been classified as Fabric 35B, Mill Green-type ware; the fabric appears to be the same as that of Mill Green ware, but the sherd is so small and abraded, identification can only be tentative. Upper fill 1342, produced sherds of Hedingham fine ware including part of a decorated jug handle (No.47).

47 Section of jug handle: Hedingham fine ware; orange with buff-grey core; incised zigzag along handle; abraded; remains of a plain or pale green lead glaze. *Fill 1342*

Discussion of pottery from features in the south-east corner. The pottery seems to relate to building B and the features below it. For example, the pottery from cut 7 appears to be contemporary with the features below building B, and as there is a cross-fit between pit 154 and gully 42, a feature associated with building B, indicating the features were open at the same time. In spite of the relatively deep sequence formed by features 157, 168 and 156 etc., there is no evidence that pottery from the top of the sequence is any later than that from the bottom.

Table 6: Quantification of pottery from other features in the south-east corner by fabric, feature and sherd count

R = Roman pottery present

Fill	Feature	Relationship	Fabrics														Wt
			10	12A	12B	12C	13	13 ^{am}	13 ^c	13B	20	20D	21	21D	22	35B	
1026	cut 12	-		1	3	1	10	-	-	-	2	-	-	-	-	-	96g
1022	cut 7	primary fill	-	-	8	10	3	1	-	2	2	-	-	-	-	-	405g
1010	cut 7	above 1022	2	1	102	-	87	-	-	3	6	14	-	-	-	-	3353g
1139	post-hole 67	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	33g
1138	Hearth 66	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	11g
1269	post-hole 106	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	5g
1274	post-hole 109	near post-hole 106	-	-	-	-	-	-	-	-	1	1	-	-	-	-	R 32g
1420	cut 157	primary fill	-	-	-	-	7	-	-	-	3	-	-	-	-	-	85g
1378	cut 157	above 1420	-	-	5	-	11	-	-	-	3	5	-	1	1	-	189g
1381	pit 168	above 1378	-	-	2	-	1	-	2	-	-	2	-	-	-	-	86g
1371	pit 168	below 154	-	-	-	-	-	-	1	-	-	1	-	-	-	-	4g
1364	pit 156	primary fill	-	-	-	-	2	-	-	-	-	1	-	-	-	-	25g
1388	pit 156	below 154	-	-	5	-	15	2	13	-	2	12	-	-	-	-	336g
1357	pit 156	below topsoil	-	-	-	-	-	-	-	-	2	-	-	-	-	-	10g
1336	pit 122	below 154	-	-	-	-	5	-	-	-	2	-	-	-	-	-	47g
1380	pit 154	primary fill	-	-	1	-	11	-	9	-	4	6	4	-	-	-	286g
1372	pit 154	upper fill	-	-	-	-	1	-	-	-	1	-	-	-	-	-	7g
1335	pit 154	same as 1372	-	-	1	-	2	-	1	-	-	2	-	-	-	-	29g
1348	pit 125	next to F154	-	-	-	-	1	-	-	-	-	2	-	-	-	-	5g
1347	pit 125	above 1348	-	-	-	-	-	-	-	-	-	2	-	-	-	1	22g
1342	pit 125	top fill	-	-	-	-	4	-	3	-	-	-	-	-	4	-	67g

Pottery from other features in S.E. corner

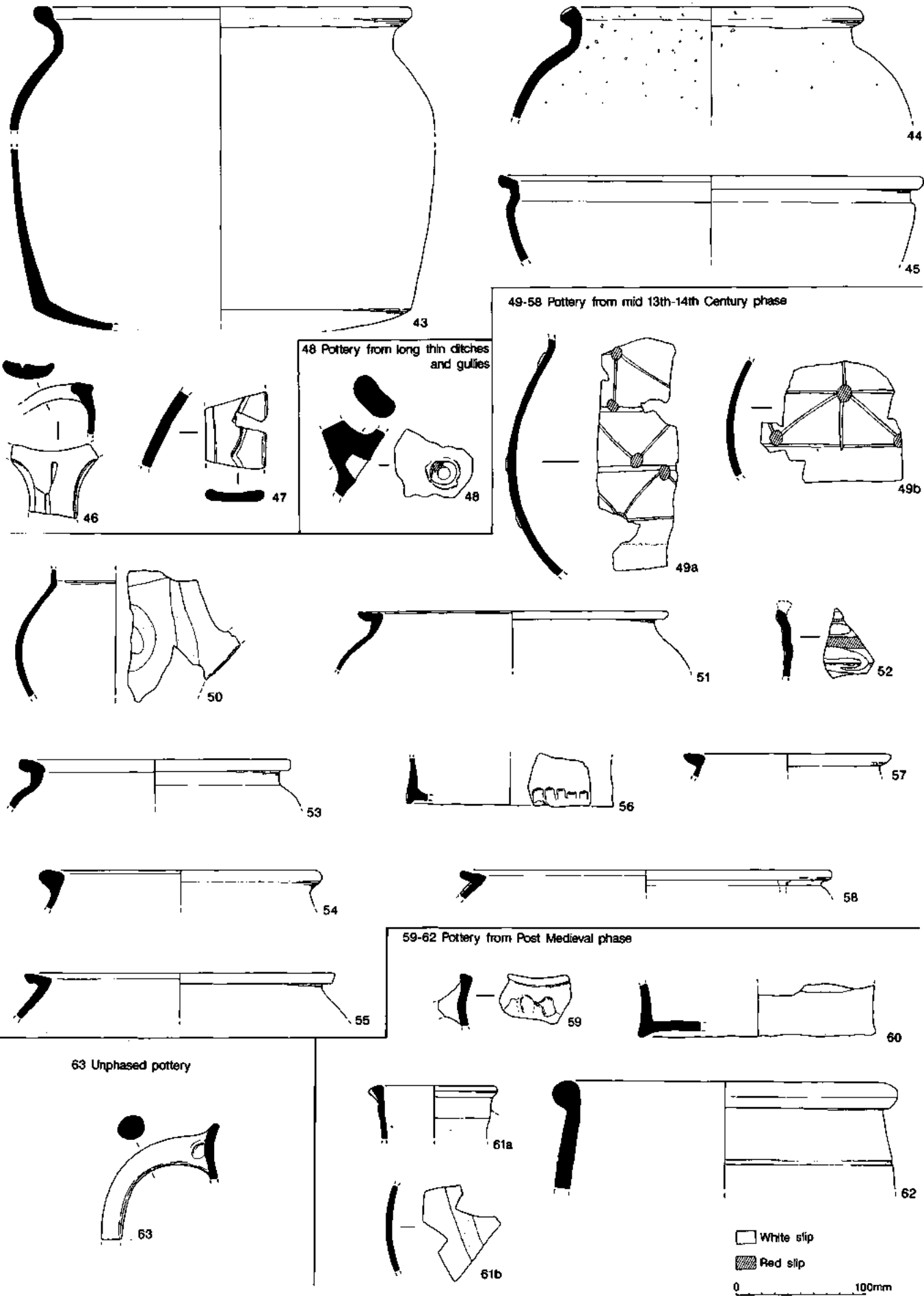


Fig. 20 Medieval pottery.

Table 7: Quantification of pottery from linear gullies and ditches by fabric, feature and sherd count

R = Roman pottery present

P = Prehistoric pottery present

Fill	Feature	Segment	Relationship	Fabrics									Wt
				12B	13	13 ^{am}	20	20D	20D ^f	21	22	35B	
1059	ditch 3	5017	primary fill	-	-	-	1	-	-	-	-	-	1g
1057	ditch 3	5017	above 1059, below cellar 19	-	2	-	1	-	-	-	-	-	49g R
1013	trackways	-	bounded by F3 and F6	-	1	-	-	-	-	-	-	-	6g
1012	ditch 5	5004	below ditch 10	-	8	7	24	-	-	-	-	-	476g
1308	ditch 10	-	top fill, above F3 and 5	55	-	-	3	-	-	-	-	-	168g
1015	ditch 8	5005	parallel to ditch 3	-	3	-	-	2	-	-	1	-	14g
1104	ditch 47	5039	primary fill	-	2	-	-	-	-	1	-	-	16g
1167	ditch 47	5058	secondary fill	3	-	-	-	-	-	-	-	-	2g R
1155	ditch 47	5054	top fill	-	-	-	-	-	3	-	-	-	4g
1095	gully 43	5033	primary fill	-	3	-	6	1	-	1	6	-	62g R
1094	gully 43	5033	above 1095	-	-	-	1	-	-	-	1	-	9g R
1171	gully 43	-	same as 1094	1	14	-	3	4	-	-	2	1	142g
1127	ditch 63	5073	= gully 43	-	-	-	1	-	-	-	1	-	5g
1126	ditch 63	5073	above 1127	-	1	-	2	-	-	-	-	-	14g R P
1125	ditch 63	5073	above 1126	-	-	-	1	-	-	-	-	-	3g
1323	gully 43	5091	primary fill	-	1	-	-	-	-	-	-	-	5g
1322	gully 43	5091	above 1323	-	-	-	1	-	-	-	-	-	11g
1345	gully 43	-	below topsoil	-	-	-	2	-	-	-	-	-	3g
1275	gully 107	5081	-	-	-	-	1	-	-	-	-	-	4g R
1232	post-hole 87	-	adjacent to gully 43	-	1	-	-	-	-	-	1	-	8g
1154	pit 71	-	?aligned with ditch 47	-	-	-	1	-	-	-	-	-	1g R
1421	layer	-	above F3 and 43	-	-	-	5	-	-	-	-	-	15g

Pottery from long thin ditches and gullies

A total of 180 sherds weighing 1.018kg was excavated from these features (Table 7). Post-hole 87 and pit 71 are included in this section as they lay adjacent to some of the linear features. Very little pottery was found, only one sherd per fill in some cases. In addition, many fills contained only small abraded sherds, and some also contained Roman or prehistoric sherds indicating that all the pottery in that particular feature might be residual. Medieval coarse ware occurs the most frequently.

Pottery from ditches 3, 5, 8, 10 and trackway 1013. Nothing diagnostic was found in ditch 3 or trackway 1013. Rather more pottery was excavated from ditch 5, where featured sherds include an early medieval ware handle (No.48) and quite a large fragment from an medieval coarse-ware H2-type cooking-pot rim. This is similar in shape to cooking-pot No.35 in gully 42 (but is not part of the same vessel), and gives a date of early to mid-13th century.

Stratified above this, ditch 10 yielded sherds of medieval coarse ware and fragments from a Fabric 12B cooking pot with a beaded rim. The latter has not been illustrated as it is very abraded. The vessel is unevenly fired, with large vesicles where coarsely crushed shell fragments have leached out. Its rim form and appearance suggest an early date, but as it is stratified above a feature containing an H2-type cooking-pot rim, this is unlikely to be the case, and as 55 sherds from this vessel were found, it is unlikely to be residual either.

Ditch 8 produced a small, abraded sherd of Hedingham ware which has an unusual red-brown colour and could be from the same vessel as Jug No.22 from cut 24, although the sherds did not fit.

48 Lower handle attachment (Fig. 20): early medieval ware (Fabric 13); uniform brick-red colour; externally fire-blackened on one side; unusual method of handle attachment where, instead of a finger, the potter has used some sort of tool to secure the han-

dle. What remains of the body of the vessel is flat, rather than curved as would be expected if it was a jug; it could be from a curfew, although there is no internal fire-blackening or evidence of ventilation holes. *Fill 1012 (ditch 5)*

Pottery from ditches 43 and 47. Hardly any pottery was excavated from ditch 47. A beaded early medieval ware cooking-pot rim was excavated from primary fill 1104, along with an unfeatured, unglazed sherd of sandy orange ware. Three tiny sherds of the fine version of Hedingham coarse ware (Fabric 20D^f) were found in fill 1155, the only stratified occurrence of this fabric on site. Parallel ditch 48 contained only Roman pottery.

At right angles to ditch 47, ditch 43 contained a relatively large amount of pottery. The pottery from the primary fill 1095, was very abraded, but the remains of Hedingham fine-ware jug rim is present. It is too small and abraded to draw but shows the remains of cream slip-coating or cream slip-painting, and has a typical Hedingham jug rim-form similar to that on vessel No.27 from building B. A very abraded medieval coarse-ware H2-type cooking-pot rim is also present. Gully 43 contained the largest quantity of Hedingham fine ware within this group, but apart from the jug rim mentioned above, there are no other featured sherds. A second H2-type cooking-pot rim was found in fill 1171, this time in Hedingham coarse ware. A small fine-ware sherd is also present; it is similar to Mill Green ware but shows uncharacteristic red sands and has been classified as Mill Green-type ware. No other diagnostic sherds were found within the gully.

Pottery from the remaining features from this group. Only one sherd per feature was found except for layer 1421, which produced five sherds from the same medieval coarse-ware vessel. None of the pottery is diagnostic.

Discussion of pottery from long thin ditches and gullies. The latest datable pottery from these features is the Hedingham-ware jug rim and the H2-type coarse-ware cooking-pot rims, giving an early to mid-13th century date. There is no evidence to say whether these features are contemporary or not. Features 43 and 47 would be expected to be of the same date, as they are at right angles to each other. However, their fills are not particularly similar; there is a much larger quantity of pottery in gully 43 than in ditch 47, and Fabrics 20 and 22 which are relatively common in gully 43 are absent in ditch 47, although this still does not mean that one feature is later than the other.

Pottery from features bounded by ditches/gullies 43 and 47

A total of 72 sherds weighing 416g was excavated from these features. This amounts to very little pottery, sometimes only one sherd per feature, and much is abraded. As there is quite a high incidence of Roman pottery, it is possible that all the pottery is residual, and derived from other features across the site. The greatest quantity of pottery was found in depression 28, but as this totalled only 137g with an average sherd weight of 3.7g, it hardly constitutes a large group. There is the usual mixture of early medieval wares (Fabrics 12B, 13, 13^{am}) and medieval coarse-wares (Fabrics 20 and 20D), which are present in roughly equal amounts.

Small quantities of Hedingham fine ware occur in depressions 30 and 35 and cut 94, although no diagnostic sherds are present. Cut 94 produced a relatively large sherd of Hedingham fine ware, from a sagging base. One small abraded sherd of Mill Green ware was recovered from depression 22; no glaze is left but it shows traces of slip-painting.

Except for a bowl rim, the only coarse-ware form is the ever ubiquitous cooking-pot, occurring in a variety of rim forms and fabrics; they have been summarised in Table 10. The bowl, in Hedingham coarse ware, is large and wide (diameter 400mm), with a flanged rim and was excavated from the primary fill of depression 30 (fill 1073). Colour is buff with a grey core and it is fire-blackened externally. It

is similar to bowls Nos 8 and 33 from Building B and below, but it is not part of either of these vessels.

Table 9: Summary of cooking-pots from features bounded by ditches/gullies 43 and 47

Context	Fabric	Rim code	Diameter
1061	20D	B2	-
1246	20	D2	160mm
1152	20	H2	120mm
	20D	H2	-
1071	12B	D2	-
	13	D2	240mm
	20	H2	140mm
	20D	H2	250mm

There is nothing remarkable about these cooking pots; most of the sherds are small and abraded, and in several cases, there is not enough of the rim present to measure diameter. Three examples however, are from unusually small cooking pots. The range of rim form and fabric is similar to that found in Building B and the features below building B. For instance the Fabric 12B example with a D2-type rim is very similar to No.11 in pit 136. However, no cross-fits were noted.

In spite of some stratigraphic relationships, i.e. several features were stratified below gully 25 (Table 8), there is no evidence to suggest that the pottery from the top of the sequence is later than that below. The latest datable pottery is the sherd of Mill Green ware in depression 22, dating from the mid-13th to mid-14th century. Otherwise, the latest pottery comprises the H2-type cooking-pot rims dating from the early to mid-13th century.

Table 8: Quantification of pottery from features bounded by ditches/gullies 43 and 47, by fabric, feature and sherd count
R = Roman pottery present

Fill	Feature	Relationship	Fabrics							Wt
			12B	13	13 ^{am}	20	20D	22	35	
1210	gully 82	-	-	3	-	1	-	-	-	20g R
1061	ditch 23	aligned with gully 82	-	-	-	-	1	-	-	17g
1246	ditch 83	primary fill	-	-	-	1	-	-	-	8g
1206	ditch 83	-	-	-	-	1	-	-	-	6g R
1074	gully 31	below F25	-	1	-	-	-	-	-	3g R
1058	depression 22	below F25	1	3	-	2	-	-	1	45g
1152	depression 35	below F25	-	-	-	1	1	1	-	21g
1071	depression 28	below F26 in next phase	5	12	-	13	4	-	-	122g R
1153	depression 28	= 1071	-	1	-	-	2	-	-	15g
1069	gully 25	below F26	1	-	-	-	-	-	-	24g R
1259	gully 102	below F101 in next phase	1	-	-	-	-	-	-	2g
1073	depression 30	below F37 in next phase	-	1	2	1	5	2	-	104g R
1161	pit 75	primary fill	-	1	-	-	-	-	-	3g
1160	pit 74	only fill	-	-	-	1	-	-	-	3g
1280	cut 94	below gully 93	-	-	-	-	-	1	-	20g
1092	layer	In stream bed 41	-	1	-	-	-	-	-	3g

Pottery from the mid-13th to 14th-century phase

Much less pottery belonged to this phase, a total of 670 sherds weighing 4.872kg (summarised in Table 10), as opposed to nearly 3000 sherds weighing over 37kg from the earlier phase. The largest groups came from cut 13 at the eastern end of the site, and from linear features 37 and 89 which straddled the 12th to 13th-century gully 43, and from the cellar of building D (feature 19). The pottery from building D is shown on a separate table (Table 12). Much the same range of fabrics occurs here as in the earlier phase, except that some wares which were rare in the earlier phase and may have been intrusive, i.e. Mill Green ware, medieval Harlow ware, and reduced sandy orange ware, are now more common. The only new ware is a Mill Green coarse ware; a single cooking-pot rim was found in this fabric (No.58). There is also an intrusive post-medieval sherd in cellar 19.

Pottery from post-hole 1

This feature produced single sherds of shell-and-sand-tempered ware and sandy orange ware. The latter sherd has an all-over cream slip-coating with a mottled green glaze on the external surface and is most likely an imitation of Mill Green ware giving a date of mid-13th to mid-14th century.

Pottery from cut 13

This feature produced a larger group of pottery. Coarse wares only were found in the primary fill 1047, with an assemblage much the same as that from the preceding phase. Forms comprise a shell-and-sand-tempered ware cavetto cooking-pot rim, sub-form D2, similar to No.11 from pit 136 and the remains of a Hedingham coarse-ware cooking-pot with an H2-type rim. Also of note is a body sherd of shell-and-sand-tempered ware showing incised zigzag decoration.

Rather more interesting, is the group of pottery from the middle and upper fills, 1027, 1055 and 1032, where the remains of two decorated jugs were found (Fig. 20, Nos 49 and 50). No. 49 is the more unusual and more elaborate (see description in catalogue entry). Two large fragments from this jug have been drawn and are divided into 49a and b. It is a sandy orange ware and may be a Harlow product. The lattice and pellet decoration seen on this jug is also found on London-type ware jugs classified as of the 'highly decorated style' and dating to the mid-13th century (*cf.* Pearce *et al.* 1985, 19 and fig.42.243). However, the London-type ware jug differs in that the lattice is produced using applied strips rather than incised lines, and the applied pellets are positioned in the spaces between the lattice rather than on the intersections. The overall effect, however is similar, as if the potter was copying the jug from memory. Comparable designs also occur on highly decorated style Kingston-type ware jugs of the mid-13th century (*cf.* Pearce and Vince 1988, figs.50.4 and 69.97), but again the lattice is created using applied strips, not incised lines; the pellets, however, are on the intersections, not the spaces.

The second jug (No.50), in reduced sandy orange ware, is more familiar, showing the remains of scrolled and linear slip-painting, a technique that is common on many wares of the region and is very long-lived, in use from the 13th to 16th centuries. As mentioned in the fabrics section, it is not unlike Hedingham coarse ware in appearance and glazed Hedingham coarse-ware sherds have been seen before, on sherds from a possible kiln dump at Brooks Wood near Sible Hedingham (Walker 1992, 94), but as these sherds are probably wasters, the glaze may be accidental.

The remaining fine wares comprise a small unglazed and unfeathered sherd of Mill Green ware, and sherds of sandy orange ware, including more medieval Harlow ware sherds. A very small fragment of medieval Harlow ware thickened everted jug rim was found in upper fill 1032. Like No.49a, it is blackened and may well be from the same vessel, (there is too little of it to merit illustration). Also from this fill is a medieval Harlow ware sagging base showing a partial internal glaze, typical of Harlow ware cooking pots. All the other sherds identified as Harlow products are unglazed except for one slip-painted sherd. No sandy orange ware forms are present, but there are the remains of two jug handles, some slip-painted sherds and one slip-painted green-glazed sherd, similar to that in post-hole 1.

Of the coarse wares present in these fills, early medieval ware and Hedingham coarse ware are the most frequent. The only form is the cooking pot, including a small cavetto rim in Fabric 13am (described below) and two medieval coarse-ware cooking-pot rims of forms H2 and H1, the latter is illustrated (No.51).

49a Body of ?rounded jug: ?medieval Harlow ware; dull orange surfaces with brighter orange cores or margins; some red and amber sands, otherwise a mixture of colours; internal surface abraded exposing sand inclusions; thin white slip-coating underneath which vertical, horizontal and diagonal lines have been scored to form a lattice; dark reddish abraded pellets applied at the intersections; a coating of thin, slightly greenish glaze then gives very dark green pellets on a yellowish background with occasional speckles of green; lower external surface abraded. *Fills 1027 and 1032*

49b Body of jug: ?medieval Harlow ware; same vessel as No.49a but the fabric is darker and more abraded; it may have been burnt. *Fills 1027 and 1055*

50 Body of baluster-shaped jug: reduced sandy orange ware; fine sandy grey fabric with orange cores or external margins in places; external surface is paler and is a brownish purple colour; cream slip-painted decoration under a patchy greenish glaze; little remains of the handle which could be strap or oval in section. *Fill 1027*

51 Cooking-pot rim: medieval coarse-ware; grey external surface; buff internal surface and reddish core; no traces of use. *Fill 1032*

Not illustrated: cooking-pot rim; Fabric 13am; the only form found in this ware; it is small with a diameter of 180mm and is comparable in shape to cooking-pot No.11; red-brown in colour with an ill-defined darker core; shows fire-blackening around the rim. *Fills 1027 and 1032*

Pottery from cuts 20 and 21. These features overlay building A in the earlier phase, and little was found here. The primary fill of cut 20 produced undiagnostic sherds of Fabric 13^t and Hedingham coarse ware. Adjacent cut 21 produced pottery from the middle and upper fills, and cross-fits between the two fills suggest they were deposited at the same time. Pottery from middle fill 1063 included a plain unglazed sherd of Hedingham fine ware and a small sherd of Mill Green fine ware with a partial mottled green glaze. Upper fill 1062 produced another sherd of Mill Green fine ware, this time showing a slip-painted stripe under a plain lead glaze plus three sherds of sandy orange ware, one of which is an example of reduced sandy orange ware and shows white slip-painting but no glaze. Sherds of medieval coarse ware and Hedingham coarse ware are also present.

Pottery from gullies 26, 29 and 101. These were three small adjacent features in the southern half of the site. Gully 26 cut 12th to 13th-century gully 25, while gully 101 was stratified above 12th to 13th-century gully 102. This is certainly reflected in the fill of gully 26 (context 1067), where a Hedingham fine-ware twisted rod-handle and sherd with applied pellets was found. Twisted rod-handles are common in Hedingham ware and are often found on strip jugs with ring-and-dot-stamps (*cf.* No.24), giving a date of late 12th to earlier 13th century. It is too incomplete to illustrate, but similar examples occurred at Rivenhall (*cf.* Drury 1993, fig.43.127). The sherd with applied pellets is abraded but very similar to No.25 from building B and could be from the same vessel as No.25 which was dated to the late-12th to mid-13th century. The remaining pottery in this gully comprises unfeathered sherds of early medieval and medieval coarse wares.

Gully 101 produced only a body sherd of Hedingham coarse ware, while gully 29 produced sherds from a Fabric 13^t base and body sherds of early medieval ware and Hedingham coarse ware.

Pottery from ditch 37. Pottery was produced from several segments of this ditch but only in moderate amounts. Most pottery came from segment 5119 at the northern end of the ditch. Except for one very small, unfeathered sherd of Mill Green ware and a sandy orange-ware jug handle in the primary fill (fill 1442), most of the pottery would

be at home in the previous phase. Upper fill 1440 produced the largest amount, which included a sherd from a Heddingham-ware strip jug, similar to, but not from the same vessel, as jug No.24. It also contained an early medieval-ware caverio cooking-pot rim and a Heddingham coarse-ware H1-type rim, a form common in the mid-13th century but also made throughout the whole century (Drury 1993, 81).

Ditch segment 5070 (south of ditch 43), produced pottery

from three main fills, all of which share cross-fills. The primary fill, context 1234, cut the 12th to 13th-century depression 30, although no cross-fills were noted between the two fills. However, the pottery found in fill 1234 could again, quite easily belong to the earlier phase and includes an unusually decorated Heddingham fine-ware jug rim (No.52), which may be a copy of Rouen-style decoration but lacks the applied pellets usually found on the necks of Rouen-style jugs. Also found was a Heddingham coarse-ware cooking-pot rim of sub-

R

Table 10: Quantification of pottery from other features in the south-east corner by fabric, feature and sherd count

R = Roman pottery present

Fill	Feature	Segment	Relationship	Fabrics														Wt
				12B	12C	13	13 ^{am}	13 ^t	20	20C	20D	21	21 ^r	21D	22	35	35B	
1002	post-hole 1	-	-	1		-	-	-	-	-	-	1	-	-	-	-	-	26g
1047	cut 13	-	primary fill	3	1	4	-	-	-	-	24	-	-	-	-	-	-	234g
1027	cut 13	-	below 1032	-	-	6	1	-	1	-	11	11	17	18	-	-	-	348g
1055	cut 13	-	below 1032	-	-	4	-	-	2	-	1	4	-	1	-	1	-	80g
1032	cut 13	-	upper fill	-	-	6	1	-	4	-	10	1	-	14	-	-	-	199g
1065	cut 20	-	primary fill	-	-	-	-	1	-	-	2	-	-	-	-	-	-	13g
1063	cut 21	-	next to cut 20	1	-	-	-	-	1	-	-	-	-	-	1	1	-	23g
1062	cut 21	-	above 1063	-	-	-	-	-	6	-	2	2	1	-	-	1	-	122g
1067	gully 26	-	cuts F25	1	1	6	-	-	1	-	4	-	-	-	2	-	-	177g
1249	gully 101	-	above F102	-	-	-	-	-	-	-	1	-	-	-	-	-	-	13g
1072	gully 29	-	primary fill	-	-	1	-	9	-	-	3	-	-	-	-	-	-	70g
1442	ditch 37	5119	below 1441	1	-	6	-	-	1	-	3	2	-	-	-	1	-	73g
1441	ditch 37	5119	below 1440	1	-	5	-	-	3	-	3	-	-	-	-	-	-	109g
1440	ditch 37	5119	top fill	-	-	4	1	-	1	-	11	1	-	-	2	-	-	216g
1234	ditch 37	5070	primary fill	-	-	-	-	-	-	-	4	-	-	-	1	-	-	84g
1236	ditch 37	5070	above 1234	2	-	3	-	-	-	-	10	1	-	-	5	-	1	121g
1235	ditch 37	5070	above 1236	1	-	1	-	1	-	-	5	-	-	-	-	-	-	84g
1176	ditch 37	5070	above 1236	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1g
1080	ditch 37	5020	top fill	-	-	-	-	-	1	-	-	-	-	-	-	1	-	11g
1338	ditch 37	5020	same as 1080	1	-	2	-	-	7	-	4	-	-	-	-	-	-	59g
1219	ditch 37	5068	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	33g
1405	ditch 135	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	4g
1293	gully 104	-	primary fill	-	-	1	-	-	-	-	5	-	-	-	-	-	-	60g
1238	gully 89	5071	below 1240	2	-	19	-	-	9	-	11	1	-	-	-	1	-	407g
1240	gully 89	5071	-	7	-	9	-	-	11	-	4	1	-	-	1	6	-	245g
1412	gully 89	5114	primary fill	1	-	1	-	5	-	-	5	-	-	-	-	-	-	75g
1413	gully 89	5114	above 1412	2	-	4	-	-	-	3	-	-	-	-	-	1	-	51g
1418	gully 158	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	6g

form H2 (No.53), sherds of which occur in three of the fills.

Middle fill 1236 produced further sherds of Hedingham fine ware, including a sherd with an applied strip and a very small sherd with a red slip-coating over which very small white slip pellets have been applied under a plain lead glaze. This would seem to be fairly obvious example of Rouen-style decoration. This sherd is too small to draw, but a larger, very similar example was found at Molehill Green, Stansted (Walker forthcoming b, MGS no.1). The only other fine wares in the middle fill comprise a sherd of sandy orange ware and a small sherd of possible Mill Green ware which has been classified as Mill Green-type as it is too abraded to give a positive identification. Upper fill 1235, did however produce latter pottery in the form of a cooking-pot fragment with a blocked, neckless rim, datable, in Drury's typology to the late 13th to 14th century (No.54).

Segment 5020 which lay to the south of segment 5070 produced less pottery, but this did include a sherd of unabraded Mill Green ware, showing a cream-slip-coating under a mottled green glaze, a typical and often imitated Mill Green method of surface treatment. Nothing of interest was recovered from segment 5068.

- 52 Rilled neck of jug: Hedingham fine ware; orange fabric with grey core and darker internal surface; thin red slip-coating underlying horizontal bands of white slip in the grooves between the ridges; a mottled green glaze gives red slip ridges and a green background. *Fill 1234*
- 53 Cooking-pot rim: Hedingham coarse ware; pale grey surfaces; orange margins and grey cores; abraded; no traces of use. *Fills 1234, 1235 and 1236*
- 54 Cooking-pot rim: Hedingham coarse ware; pale grey except for thin oxidised margins; quite fine fabric; borderline Fabric 20Df; no traces of use. *Fill 1235*

Pottery from ditch 135. Ditch 135 which lay parallel to gully 29, produced only single undiagnostic sherds of early medieval ware and Hedingham fine ware.

Pottery from gully 104. Diagnostic sherds from this feature comprise a Hedingham coarse-ware H1-type cooking-pot rim datable to the 13th, especially the mid-13th century, it is paralleled in shape (but not fabric) by No.51 in cut 13.

Pottery from gully 89. Gully 89 was roughly parallel to ditch 37 and

contained a similar amount of pottery, most of which came from segment 5071 on the north side of ditch 43. There are still significant amounts of early medieval wares (mainly Fabrics 12B and 13), but this segment also produced a relatively large concentration of Mill Green ware, seven sherds in total. Fill 1238 produced a single sherd of Mill Green ware with a partial plain lead glaze. Several cooking pots were also found here comprising:

Fabric 12B: cavetto rim (sub-form D2) similar to No.11 in pit 136

Medieval coarse ware: cavetto rim, similar to Nos 11 and 18

Hedingham coarse ware: H2-type cooking-pot rim similar to No.53; 2 cooking-pots with horizontal flanged rims, sub-form E5A, one of which is illustrated (No.55)

The horizontal flanged rim is typologically the latest, and gives a late-13th to 14th-century date (Drury 1993, 81-2), which fits in with the dating of the Mill Green sherd.

Fine wares in succeeding fill 1240 comprise a small abraded sherd of Hedingham fine ware and six sherds of Mill Green ware. A Mill Green fine-ware continuously thumbled jug base is illustrated (No.56). The thumbing is very compact and is similar to bases found on Mill Green conical and baluster-shaped found in London water-front deposits (*cf.* Pearce *et al.* 1982, figs.3.2 and 6.12). Body sherds of Mill Green ware present show slip-painting and slip-coating under a mottled green glaze, both typical methods of Mill Green ware surface treatment. As in the preceding fill, several cooking-pot rims are present, comprising:

Fabric 12B: 2 cavetto rims (sub-form D2)

Medieval coarse ware: one H2-type rim and one thickened, everted flat-topped rim, sub-form B2

Sandy orange ware: a blocked, neckless rim, sub-form H3; could be a Harlow product (No.57)

Sandy orange ware cooking-pot rims are unusual but by no means unknown, and in medieval Harlow ware, cooking pots with down-turned flanged rims seem to be one of the commonest forms manufactured.

Less pottery was excavated from segment 5114. Lower fill 1412 produced a mixture of coarse wares; the only form present is a Fabric 13¹ B2-type cooking-pot rim. Examples of Mill Green ware occurred in the top fill 1413 and include the only example of the coarse-ware fabric, cooking-pot (No.58), which is decorated with an applied strip and is typical of Mill Green ware (*cf.* Meddens and Redknapp 1992, fig.4.3.3).

Table 11: Quantification of pottery from Building D and cut 38, by fabric, fill and sherd count

Fill	Feature	Relationship	Fabrics														Wt
			12A	12B	12C	13	13 ^t	20	20D	21	21 ^r	21D	22	35	40		
1050	cellar 19	below 1049	-	-	-	1	-	1	1	-	-	-	5	1	-	36g	
1049	cellar 19	cut by F38	1	-	1	1	-	-	1	-	-	-	2	-	-	41g	
1168	cellar 19	below 1051	-	-	-	-	-	-	-	-	9	-	-	-	-	122g	
1051	cellar 19	below 1048	-	-	-	-	-	1	1	-	-	-	-	-	-	23g	
1048	cellar 19	top fill	-	-	-	1	-	1	-	-	-	-	-	-	-	10g	
1052	cellar 19	-	-	-	-	5	-	-	3	-	-	-	-	1	-	81g	
1132	cellar 19	below 1131	-	1	-	12	-	1	6	2	2	2	1	-	-	235g	
1131	cellar 19	top fill	-	-	-	1	-	1	1	-	-	-	-	-	1	17g	
1163	cellar 19	below 1231, 1149	-	-	-	2	-	2	8	4	2	3	7	25	-	256g	
1425	cellar 19	set into 1163	-	-	-	-	-	4	2	-	-	-	-	-	-	68g	
1149	cellar 19	= 1384, above 1163	-	3	-	3	-	5	15	1	-	-	8	20	-	377g	
1404	cellar 19	below 1384	-	-	-	3	1	13	5	9	1	10	6	19	-	692g	
1384	cellar 19	= 1149	-	-	-	-	-	-	-	-	-	-	-	1	-	3g	
1355	cellar 19	cleaning of 1384	-	-	-	-	-	-	-	-	-	-	1	-	-	2g	
1045	cut 38	cut cellar 19	-	-	-	-	-	-	6	-	-	-	1	2	-	25g	

- 55 Cooking-pot rim: Hedingham coarse ware; grey with orange margins and orange grey internal surface; coarse fabric; no traces of use. *Fill 1238 (gully 89) and cleaning context 1000*
- 56 Jug base: Mill Green fine ware; continuously thumbbed; typical Mill Green colouring of orange-brown surfaces and a grey core; external surface slightly abraded; unglazed except for patches of greenish glaze on the underside of the base. *Fill 1240*
- 57 Cooking-pot rim; sandy orange ware; dull orange surfaces with a pale core or margins; similar fabric to medieval Harlow ware but this sherd lacks the characteristic red and amber sands and the rim form is not typical; fire-blackening around rim. *Fill 1240*
- 58 Cooking pot: Mill Green coarse ware; uniform orange fabric but with slightly darker orange surfaces; abraded. *Fill 1413*

Pottery from gully 185. One body sherd of early medieval ware was excavated from this feature which lay between ditches 37 and 89.

Pottery from cellar 19, Building D (Fig. 20). Nearly 2kg of pottery was excavated from this feature, with an average sherd weight of 7.8g. The pit overlay four late 12th to 13th-century features, which probably accounts for the early medieval pottery present. Pottery was excavated from 14 fills, and several cross-fits between the cellar fills were noted; therefore, all the pottery has been considered as one group.

Hedingham fine ware occurs in several fills, a jug rim showing the remains of ring-and-dot-stamps around the neck was present in fills 1050 and 1163, and there is a second jug rim with a twisted rod handle. These are comparable to examples from Rivenhall (Drury 1993, fig.43.129 and 127 respectively). There are also sherds from strip jugs and a body sherd showing ring-and-dot-stamps.

Cellar 19 produced the greatest concentration of Mill Green ware to be found on site, a total of 67 sherds. One jug rim is illustrated (No.59), it shows an inturned rim and two thumbbed impressions at the top of the handle, both typical Mill Green ware features, as found on Mill Green ware jugs from London (Pearce *et al.* 1982, figs.3, 4.4, 11) and amongst the kiln material (Meddens and Redknap 1992, fig.16). Also present are body sherds with slip-coating under a mottled green glaze, but none showed the other typical method of Mill Green surface treatment, slip-painting under a plain lead glaze. One Mill Green jug base, thumbbed at intervals, was excavated from fills 1163 and 1404.

Examples of reduced sandy orange ware present from the pit include the recessed base from a jug (No.60). A second fragment of this ware from fill 1132 is carinated and may be from a small baluster jug, while other body sherds are slip-painted under a plain lead glaze.

Examples of ?medieval Harlow ware are also present, and the remains of a slip-painted jug are illustrated (No.61), sherds from which have been sent for neutron activation analysis. Other featured medieval Harlow ware sherds comprise part of a jug handle which is oval in section and shows the remains of slip-painting and a plain lead glaze.

Of interest amongst the sandy orange wares is a fragment of long thin jug neck, most likely from a baluster jug, showing cream slip-coating and a mottled green glaze, in imitation of Mill Green ware (fills 1149, 1163, 1404).

The usual range of coarse wares are present in the pit. Hedingham coarse ware is the commonest followed by medieval coarse ware. There are still significant amounts of early medieval ware but the shell-tempered fabrics have dwindled to almost nothing. One sherd in fill 1049, classified as Fabric 12A, has very fine shell inclusions and may be an example of St Neots-type ware; however the fabric did not contain bryozoa. With the exception of an early medieval ware strap handle, the only coarse-ware form present is the cooking pot, and the rim forms present are summarised in Table 12.

The only post-medieval pottery in cellar 19 is one small intrusive sherd of post-medieval red earthenware from top fill 1131. It shows a reduced external skin and a line of cream slip-painting. This type of surface treatment on post-medieval red earthenware is generally datable to the 15th/16th century (Cunningham 1985b, 64).

Table 12: Summary of cooking-pots from cellar 19

Context	Fabric	Rim code	Diameter
1050	13	B1	-
1049	20D	E5A	-
1052	20D	H3	220mm
1132	13	C1	-
1425	20	H1	230mm

59 Jug rim: Mill Green ware; pale grey surfaces with patches of orange; sandwich effect of grey outer margin; orange inner margin and grey core; splashes of olive green glaze externally; remains of strap handle with two thumbbed impressions at the top. *Fill 1404*

60 Recessed jug base: reduced sandy orange ware (Fabric 21r); grey but with orange external margins and darker, slightly purplish external surface; remains of slip-painting and patches of olive green glaze; resembles No.50 but this example has a much coarser fabric. *Fill 1168*

61a Jug rim: ?medieval Harlow ware; uniform orange fabric except for grey core where vessel walls are at their thickest; handle attachment scar; no glaze or decoration. *Fill 1404*

61b Body sherds: ?medieval Harlow ware; from same vessel as No.61a, but slightly duller orange fabric; slip-painted decoration; splashes of plain lead glaze. *Fills 1163, 1404*

Pottery from cut 38. This feature cut context 1049, a fill of cellar 19, and produced small amounts of pottery similar to that from cellar 19. Of interest are two sherds of Mill Green fine ware, one showing vertical combing through a cream slip-coating and green glaze, while the second is a fragment of unglazed, everted cooking-pot rim (too small to draw). Coarse-ware forms in the fine-ware fabric are not unknown in Mill Green ware.

Discussion of pottery from the mid-13th to 14th-century phase. The most closely datable vessel is the lattice and pellet jug (No.49), which is dated by style of decoration to the mid-13th century. However, the fact that it is burnt and abraded indicates that the vessel may have been old when discarded, while the sherds of Mill Green ware provide a mid-13th to mid-14th century date. The large amount of fine wares in cellar 19 suggests much of the pottery is from living, rather than service, areas. Of the coarse wares, there are several typologically later cooking-pot rims (types H3 and E5A) which give a late-13th to 14th-century date. The fact that there is much less pottery in this phase in comparison to that from the late 12th to 13th-century phase indicates that settlement had contracted.

Pottery from the post-medieval phase

Only 94 sherds weighing 650g was excavated from the post-medieval phase and most of this comprises residual medieval sherds. The only post-medieval fabrics are post-medieval red earthenware (with a total of eight sherds) and late kitchen earthenware (total, one sherd).

Pottery from ditches 4, 9 and 147. Little pottery came from the large east-west ditch 4, but it did boast a fragment of post-medieval red earthenware from fill 1009, comprising four joining sherds with an all-over internal and partial external glaze. They are from a thick-walled vessel, perhaps a large storage jar, and could belong anywhere in the post-medieval period.

Ditch 9, which ran at right angles to ditch 4, produced a single sherd of late kitchen earthenware with an internal cream slip-coating and an all-over glaze, which is probably Victorian.

Ditch 147 (same as ditch 120), a long thin ditch to the south of, and running in the same direction as, ditch 9. It produced a stor-

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

age-jar rim (No.62), (not from the same vessel as the sherds in ditch 4). Again it can be assigned a post-medieval date, and could easily be as late as 18th or 19th century.

62 Rim of storage jar (Fig. 20): post-medieval red earthenware; all over brownish glaze. *Fill 1397 (ditch 147)*

Pottery from cut 79. A relatively large group of medieval pottery was excavated from this feature, which cut mid-13th to 14th century ditch 37. Three green-glazed Mill Green ware sherds were found in

Pottery from pit 81. Pit 81 contained some very abraded medieval sherds and a single very small sherd of post-medieval red earthenware with an external plain lead glaze.

Discussion of pottery from the post-medieval phase. What little post-medieval pottery there is could easily have been spread by manuring the fields, especially as most of the sherds, although not all, are from the top fills. The storage-jar rim (No.62) and the other thick-walled

Table 13: Quantification of pottery from features belonging to the post-medieval phase by fabric.

R = Roman pottery present

Fill	Feature	Relationship	Fabrics										Wt	R
			12B	13	20	20D	21	22	35	40	51A			
1034	ditch 4	primary fill	-	-	-	1	-	-	-	-	-	-	4g	
1009	ditch 4	above 1034	-	-	-	-	-	-	-	4	-	-	60g	
1006	ditch 4	-	-	-	-	1	-	-	1	-	-	-	8g	
1021	ditch 9	-	-	-	-	-	-	-	-	-	1	-	7g	
1397	ditch 147	= ditch 120	-	-	-	-	-	-	-	1	-	-	146g	
1170	cut 79	cut ditch 37	1	3	3	-	-	3	-	-	-	-	47g	
1141	cut 79	above 1170	2	12	6	24	-	11	3	1	-	-	336g	
1179	pit 81	top fill	-	6	1	3	1	3	1	1	-	-	42g	

Table 14: Quantification of pottery from cleaning and unphased features by fabric feature and sherd count

R = Roman pottery present

Fill/context	Feature/type	Fabric													Wt
		12B	13	13 sm	13 ^t	20	20D	20D ^t	21	21D	22	35	40		
1000	Surface cleaning	-	3	-	-	-	6	-	-	-	-	-	-	-	46g
1150	cleaning	4	-	-	1	6	1	-	-	-	-	-	-	-	57g
1159	cleaning	1	7	-	-	4	6	-	-	-	2	-	-	-	109g
1184	cleaning	1	2	-	-	4	1	3	1	17	1	-	-	-	89g
1046	-	-	-	-	-	-	-	-	-	-	-	-	1	-	46g
1370	yellow clay layer	-	-	-	-	2	-	-	-	-	-	2	-	-	R 98g
1399	?hill wash	-	-	1	-	-	-	-	-	-	1	-	-	-	13g

cut 79, two with an underlying coating of cream slip, one of which also had combed decoration. Hedingham fine ware is also relatively common in cut 79; in fact there are more sherds here than in medieval ditch 37 (fourteen as opposed to nine). Featured Hedingham fine-ware sherds comprise part of a thumbled base, two sherds from strip jugs and a very abraded sherd showing an applied pellet over a red slip-coating (this is probably an example of Rouen-style decoration). Another abraded sherd shows brown slip-coating and a pale green glaze. Coarse-ware forms comprise a Hedingham coarse-ware stabbed jug handle with thumbled edges and three Hedingham coarse-ware cooking pots, two of sub-form H2 and one of sub-form B4.

There is one post-medieval sherd, a sherd of post-medieval red earthenware in upper fill 1141. It is from a thick-walled vessel and has an internal glaze; the external surface is very abraded. Again the sherd could belong to anytime in the post-medieval period.

vessels could be quite late, perhaps 18th or 19th century, and could be contemporary with the Victorian sherd of late kitchen earthenware from ditch 9.

Pottery from cleaning and unphased contexts

A further 78 sherds of mainly medieval pottery weighing 458g was excavated from various cleaning and unphased contexts. Only sherds of intrinsic interest are discussed below.

The only featured sherds of Hedingham ware comprise a sherd from a strip jug and a small sherd showing applied pellets under a mottled green glaze, probably in imitation of Rouen ware. Layer 1370, produced a Mill Green ware jug rim and handle (Fig. 20, No.63). The thumbled impressions on either side of the handle are another typical Mill Green feature (cf. Meddens and Redknap 1992, fig.4.3.1). The sherds of ?medieval Harlow ware from cleaning context 1184 are in fact, part of the lattice and pellet jug found in mid-

13th to 14th-century feature 13 (Fig. 20, No.49).

Coarse-ware forms comprise cooking-pot rims; there are two Hedingham coarse-ware type H1 cooking-pot rims in cleaning layer 1000, one is part of vessel No.55 from gully 89 in the mid-13th to 14th century phase. A second Hedingham coarse-ware cooking-pot of sub-form H2 was found in cleaning context 1159. The only post-medieval sherd was excavated from context 1046 and comprises an internally glazed tripod base from a pipkin or cauldron and dates from the late 16th century.

63 Jug rim: Mill Green fine ware; abraded red-brown surface and grey core; no traces of glaze or decoration; part of handle surface has laminated away. *Layer 1370*

Discussion of pottery from all phases of Stebbingford

The pottery assemblage seems typical of a medieval rural site in the county, with small but significant amounts of fine wares, lots of coarse-ware cooking-pots and a smaller amount of other coarse-ware vessels such as bowls, jugs and the odd curfew.

As would be expected from a medieval site in the northern half of the county, Hedingham fine ware is the commonest fine ware. Its centre of production lay only about 16km to the north-east of Stebbingford and may have reached there via the A131/A1017 and Stane Street, the present day A120, which were both Roman roads still in use in the medieval period (Hindle 1982, fig.21). A convenient place to buy Hedingham ware would have been Braintree, which held markets from 1200 AD or earlier (Walker, W. 1981, 6). As seems typical for Hedingham ware, a variety of decorative styles are present, totalling five styles in all. (A similar pattern emerged at Stansted, Roundwood, where parts of four Hedingham fine-ware jugs, each showing a different style of decoration, were excavated from the same ditch (Walker forthcoming a, nos 68-71).) This contrasts with Mill Green ware which, as on this site, typically only shows two types of decoration (although there are more styles in its repertoire); these are cream slip-coating under a mottled green glaze, or slip-painting under a plain lead glaze. This may indicate that Mill Green production was more standardised, or that decoration did not vary through time.

Finds of Mill Green ware are concentrated mainly in the southern half of the county (Drury 1993, 89), but finds in the northern half of the county are not unusual; for example it occurs at Rivenhall, Colchester, Stansted and Great Easton (Meddens and Redknap 1992, fig.8). Its trade route to Stebbingford is not obvious; it may have gone via Chelmsford and thence up the Chelmer valley. If this is the case, Felsted would have been a convenient market, although there is no record of a market here before 1292 (Walker, W., 1981 6).

As for the dating evidence for Mill Green ware at this site, of the six sherds classified as either Mill Green or Mill Green-type ware found in the late 12th to 13th century phase, all but two are from upper fills covered only by the topsoil and could easily be intrusive. Of the remaining two sherds, one was found in the second from top fill and the other, from depression 22, was quite far down the stratigraphic sequence but is small and abraded and therefore could also be intrusive. It would seem safe to assume therefore that Mill Green ware does not become current until the mid-13th to 14th century phase. The evidence for the start date for Mill Green ware at Stebbingford is limited by the fact that little of this ware was present (less than half the quantity of Hedingham ware), and the remains of as little as four vessels may be represented (two jug rims and two cooking-pot rims). They may only reflect when the vessels were purchased, not the starting date of the industry.

Mill Green ware occurs in the same feature as the lattice and pellet jug (No.49), dated on stylistic grounds to the mid-13th century, but as only one small unfeatured sherd of Mill Green ware was found, there is again the danger that it is intrusive. In addition, the lattice and pellet jug may have been old when discarded. The largest concentration of Mill Green ware in the mid-13th to 14th-century phase, is in cellar 19; also in this feature were examples of H3 and E5A-type cooking-pot rims indicating a late-13th to 14th-century

date. In conclusion, there is no convincing evidence that Mill Green ware is occurring before the later 13th century on this site, which would agree with the starting date for Mill Green ware found in London.

Medieval Harlow ware may have been transported up the route-way formed by the Stort valley and thence along Stane Street. There is no evidence at Stebbingford however, of an extended pottery distribution along Stane Street, as there is no non-local pottery present that would have made use of this route; for example there is no Colchester ware and no pottery identified as coming from Hertfordshire.

Although the occurrence of fine wares does not indicate a high status site, their presence, especially the unusual lattice and pellet jug and the elaborately decorated curfew does suggest that the occupants took pride in the appearance of their home and were not just concerned with eking out an existence.

When examining the distribution of pottery across the excavated area, it can be seen that nearly all the pottery from the late 12th to 13th-century phase occurs in the south-east corner of the site, roughly in the area bounded by linear features 4 and 120 (Fig. 4). By contrast, the central area of the site including long, thin linear features 43 and 47 and the features bounded by these gullies/ditches, contained very little pottery, even though the concentration of features is just as dense. No cross-fits between these two areas were noted. As discussed above, with such small amounts of medieval pottery and the presence of residual Roman and prehistoric pottery, it follows that all the pottery could be residual, and probably derives from the south-east corner. It was perhaps spread by the action of the plough or was the result of subsequent levelling after the site was cleared, although if the latter was the case a denser spread of pottery might be expected. However, it at least shows that these late-12th to 13th-century features were open at the same time.

This pattern is not repeated for the mid-13th to 14th-century phase where groups of comparable size occur in the south-east corner (cut 13) and in the central part of the site (ditch 37 and gully 89), although no cross-fits between these features were noted.

A number of observations can be made about the coarse wares, as nearly all the cooking-pot rim shapes fit into Cunningham's typology (except for No.23). It would seem that the typology works for this area of Essex as well as central Essex. The dating framework of the rims also seems to hold true but as this depends on the dating of the fine-ware the argument becomes circular, as the cooking-pot rims have helped to date the fine wares.

From the stratigraphic evidence and evidence of cooking-pot rim type, there are Hedingham ware cooking-pots dating from the c.1200 to the later 13th to 14th-century. Throughout this period there is no discernible change in fabric. For example, it might be expected that the fabric would become finer but a late-13th to 14th-century type horizontal flanged rim (sub-form E5A) from the mid 13th to 14th-century phase (No.55) has quite a coarse fabric. It might also be expected that examples with orange, oxidised margins would be early and those with a uniform grey fabric later when firing techniques improved, but this does not seem to be the case either, as both late-13th to 14th-century Hedingham coarse-ware cooking-pot rims illustrated in the mid-13th to 14th-century phase (Nos 54 and 55) have oxidised margins.

When comparing Hedingham coarse-ware forms with those of Fabric 13t, which may be an early product of the Hedingham-ware kilns, it can be seen that large wide bowls were produced in both forms; for example Fabric 13t bowl No.8 and Hedingham coarse-ware bowl No.33. The similarity of forms suggests they may indeed be part of the same industry.

Of the sherds sent for residue analysis, the most interesting results were from Hedingham coarse-ware jug (No. 6) which was found to have contained wine. As can be seen from the illustration, this jug is quite large, though not complete enough to measure capacity. It is much larger than a complete jug found at Chelmsford (Walker forthcoming b, No. 7), however, which had a capacity of one gallon. The Stebbingford jug could therefore easily have contained in excess of 1½ gallons of wine, which presents the possibility that wine

was made on site. Unfortunately, the only other archaeological evidence to support this is a single grain of *Vitis* pollen which may have been deposited in the archaeological record via someone's digestive system, and may therefore have its origins elsewhere. It is possible that the wine comes from nearby Stebbing (on the other side of Stane Street, about 2km distant), where vineyards are mentioned in the Domesday Survey (Hagen 1995, 221). These vineyards may have been extant in the late 12th / early 13th century when the climate was still in a warm phase which lasted from the 9th to 13th centuries (Hagen 1995, 228).

Residue analysis of six of the sherds

by John Evans

All the sherds were initially examined by both optical and electron microscopy. Sherds 1075D, (from cooking-pot No. 23) 1120C (cooking-pot No. 3) and 1393B (bowl no. 8) had no discernible residue. None of the residues on the remaining samples contained any recognisable structural debris, either of a botanical or other nature. The deposits on 1385A (coarse-ware jug No. 6) and 1393E (base of *?*cooking-pot No. 12) had the general appearance of water scale whilst that on 1385F (from a medieval coarse-ware base in pit 136, not illustrated) appeared to be a black char.

The next stage of the analysis was to examine the sherds by x-ray fluorescence spectroscopy to establish the major chemical elements present. Both sides of each sherd were investigated in order to detect any differences between the faces. Such information can be of particular value for those samples having obvious deposits. As would be expected the usual range of clay elements were present. In the cases of 1385A (coarse-ware jug No. 6) and 1393E (*?*cooking-pot base No. 12), the residue face showed a marked increase in the levels of calcium, magnesium and sulphur; in addition 1385A (coarse-ware jug No. 6) contained traces of sodium and chloride. The black char on 1385F (medieval coarse-ware base) gave traces of copper and tin.

Subsequent analysis by infrared spectroscopy and wet chemical testing showed residues 1385A (jug No. 6) and 1393E (Cooking base No. 12) to be composed primarily of calcium carbonate with traces of calcium and magnesium sulphates. Such results strongly support these residues as hard water scales. The traces of sodium chloride in 1385A (jug No. 6) indicates that this scale was derived from a salted water.

The presence of copper and tin in 1385F was of interest. Although both these elements are to be found in the biological record, it is not usual to detect them in chars of this sort and quantity. It seems more likely therefore that they have been derived from a copper alloy in some way. Possibly the residue has been produced from parent ingredients that have either been processed in a copper-alloy vessel or stirred with an appropriate metal utensil.

The final stage of the investigation was to extract and analyse any organic components trapped within the matrices of the sherds or residues. All residues were removed from their parent sherds for separate analysis. All sherds had approximately 2mm of their outer surfaces removed in order to minimise contamination from external sources since deposition. The sherds and residues were pulverised and subjected to soxhlet extraction with a range of solvents of increasing polarity, namely hexane, chloroform and 2-propanol.

The various extracts were concentrated and subjected initially to infrared spectroscopic investigation. Only samples from the sherd and char 1385F (medieval coarse-ware base) and the residue 1385A (jug No. 6) showed the presence of organic substances. Subsequent analysis by various chromatographic techniques including both high-performance liquid and gas-liquid chromatography detected the presence of some triglycerides, amino-acids and starch residues in both sets of sample from 1385F (medieval coarse-ware base) and traces of wine acids (fumaric, tartaric and traces of oxalic acids) in 1385A (Jug No. 6). Unfortunately the compounds isolated from both 1385F (medieval coarse-ware base) samples were non-specific and suggested that the vessel had been used for general cooking purposes.

Vessel 1385A (Jug No. 6) would appear to have had at least two usages. It has almost certainly been associated with wine. (The absence of any botanical debris strongly argues against the residue being produced via the decay of botanical matter). The presence of water scale, sodium and chloride ions suggests a secondary use. It is difficult to see how these substances could have arisen from wine unless of course the wine was being used as a carrier. In a smaller vessel it could have been a tincture of some description.

The remaining samples have either been used for simple aqueous systems that have not been allowed to evaporate (thus no scale) or have been used for dry goods.

SMALL FINDS

by H. Major

Copper Alloy

There were only four copper-alloy objects from the site, all illustrated here (Fig. 21). All are objects of personal adornment, and three came from contexts not in the immediate vicinity of the house. This may indicate loss away from the house, or perhaps transportation in rubbish or manure from the house. Both F37 and F89 are interpreted as planting beds within the garden, so the latter explanation seems feasible. It is nevertheless somewhat surprising that so few pieces of copper-alloy were found, and that they were all items of personal adornment.

1. Ring, probably a finger ring, with tapering circular section and lapped ends. Brown patina. Ext. diam. 19mm. 1026, F12, mid 12th-early 13th cent.
2. Belt or strap mount, roughly scabbard-shaped, with two rivets on the back. There is organic material on the back, identified by J. Watson of the Ancient Monuments Laboratory as leather, of 4mm thickness, which indicates cattle hide. L. 21mm, W. 14mm. 1236, F37, late 13th cent?
3. Small annular buckle or brooch, most of the tongue missing. There appeared to be a constriction for the tongue, but the X-ray showed this to be an illusion created by a crack at this point. This object would be very small for a brooch, and is most likely to be a buckle. 1238, F89, 13th/14th cent.
4. Small annular brooch, tongue missing. It is decorated with groups of raised dots surrounded by pellets. Diam. 18mm. 1440, F37, late 13th cent?

Iron (Figs 21-22)

The ironwork from the site threw little light on the activities taking place there. The presence of several horseshoe fragments, and horseshoe nails, reflects the dominant mode of transport at the time. One object which does suggest activities other than arable farming or stock keeping is a possible barking iron, used to strip bark for use in tanning.

The remainder of the ironwork is catalogued in the archive. It consists mainly of bar and sheet fragments of indeterminate use, but includes a further fragment of horseshoe of uncertain form and date, a possible tool tang, and a probable small buckle fragment from a post-medieval context.

1. Small tanged knife blade, point missing. Probably medieval. L. 54mm. 1000, cleaning context.
2. Two non-joining pieces, probably from the same object, with an open socket, and a small, sub-circular blade, 60x50mm. L. c. 160mm. This may be a spud, used as a weeding tool, but an alternative identification is that it is a barking iron, used for removing the bark from trees, which was then used in tanning. Salaman (1986, 299) illustrates post-medieval barking irons, and the present example, with its small blunt blade, is certainly of a size and shape to fit into the category. 1167, F47, 12th-14th cent.
3. Socketed crossbow bolt or arrowhead, with a very small head with a lozenge section. L. 79mm. The cross-section of the head would be typical of a crossbow bolt (Payne-Gallwey 1958, 18),

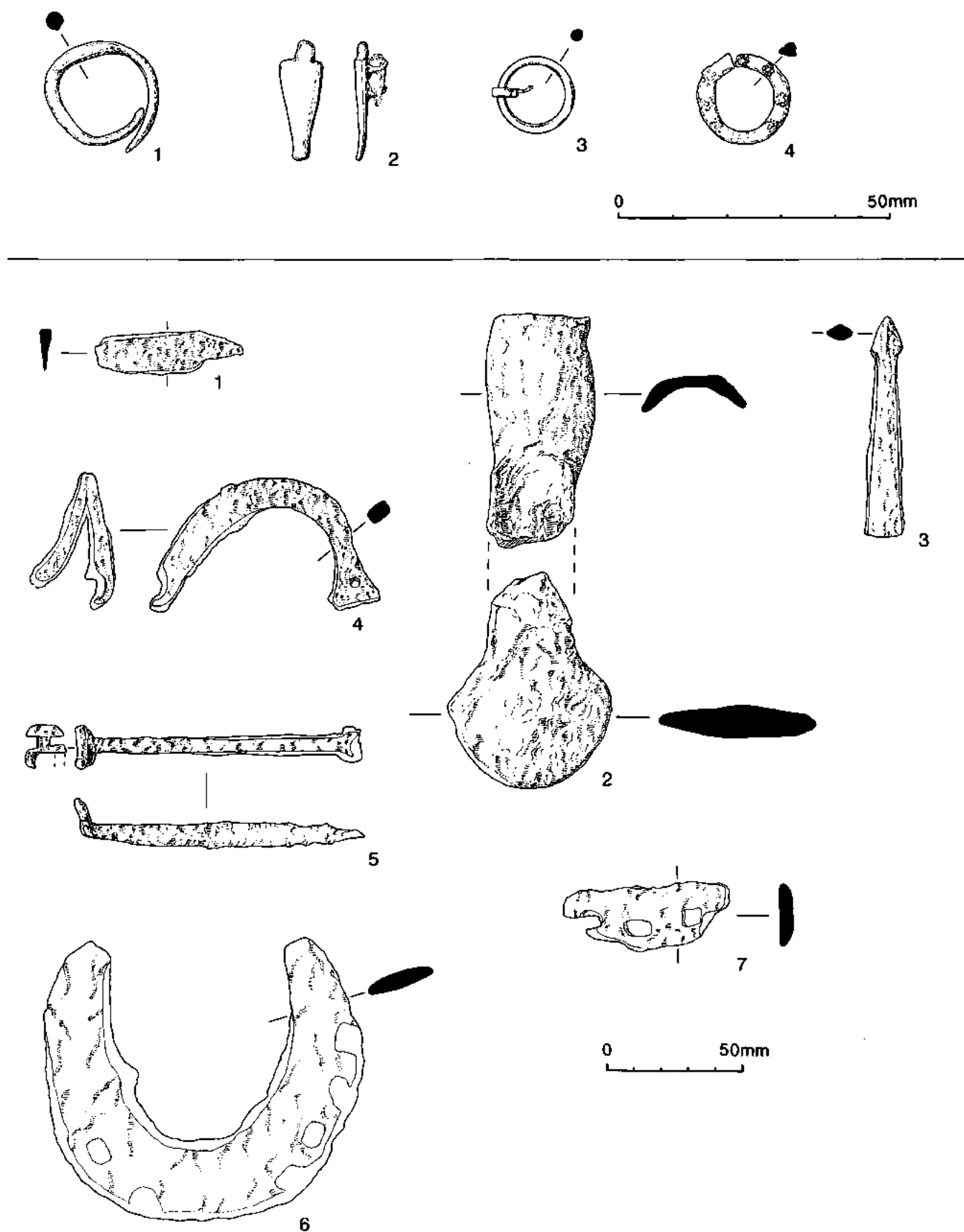


Fig. 21 Copper-alloy and iron objects.

and Biddle (1990, 1076-80) regards this type of head as being generally from a crossbow bolt. He does, however, note that it can be difficult to tell bolts from arrowheads, as they can be similar in form. This particular example does not fit neatly into the London Museum series (Ward Perkins 1940, 65-73), although it is clearly related to types 7-9, whose genesis is seen as being within the thirteenth century. 1384, F19, medieval.

4. Padlock shackle, from a padlock of Winchester type D (Goodall 1990, 1012). The iron has split at the ring end. L 85mm. 1385, F136, early to mid 13th cent.
5. Padlock key, top of shaft missing. Winchester type A, bit as no. 3704 (Goodall 1990, 1021). L 105mm. 1393, F136, early to mid 13th cent.
6. Horseshoe of dove type, with no calkins. It has at least seven rectangular nail holes, one with a nail of indeterminate type surviving in it. The edge of the shoe has worn through, but it might

have had a wavy profile originally. W 115mm, L 103mm. 1176, F79, 12th-14th cent.

7. Horseshoe fragment with parts of three perforations. The wavy edge may be the result of damage rather than original. Max. W 22mm. 1356, F42, 13th cent.
8. Flat spatulate plate, narrow end broken. It has the remains of a coating of tin (identified by N. de Silva, English Heritage). This is possibly part of a vessel handle. L 83mm, max. W 20mm. 1323, F43, mid 13th-14th cent.
9. T-headed bar. L 44mm. 1458, F41, medieval.
10. (Not illustrated) Strip fragment, broken across a small perforation. W 16mm, L 22mm, diam of hole, 3mm. 1027, F13, 13th cent.
11. (Not illustrated) Rod, slightly tapering at either end, ends broken. Section uncertain. Possibly an awl. L 72mm. 1385,
12. (Not illustrated) Cast iron; a triangular fragment, apparently a

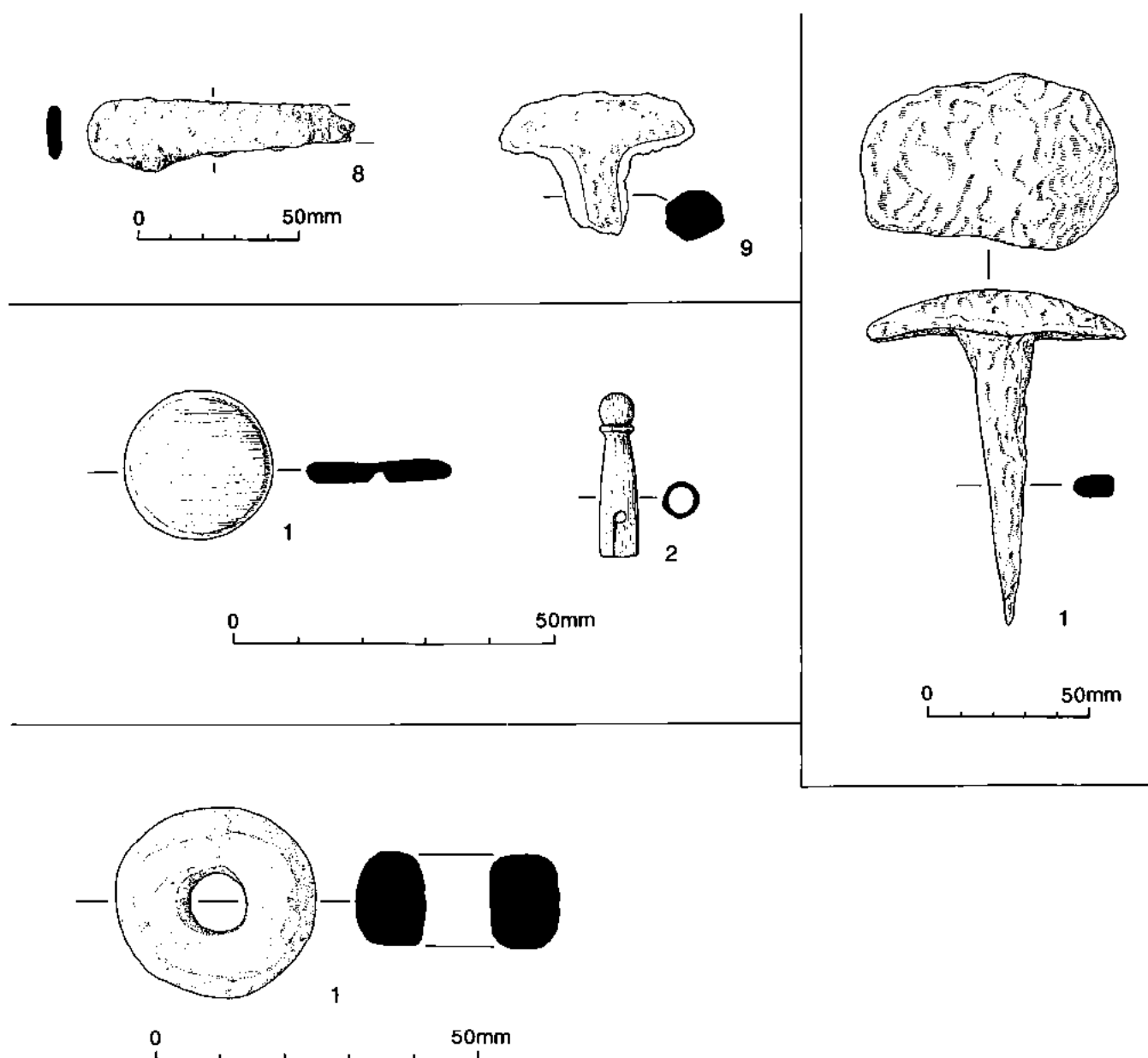


Fig. 22 Iron nail, other iron objects, worked bone and stone. (Note different scales).

corner from a plate, with an angle of c. 80°. T 5mm, L of sides c. 40mm. 1323, F43. This was identified as cast iron by D. Starley, English Heritage Ancient Monuments Lab. He is of the opinion that it is intrusive in its context, as cast iron is very unlikely to occur in a context of this date (13th-14th cent.).

13. (Not illustrated) Small tapering bar, point missing, perhaps a small wedge. L 45mm, max. sect. 9x5mm. 1141, surface clearance.

Iron Nails

There were a fair number of nails from the site, and it was hoped that they would be informative about the different types of nail in use on a medieval site of relatively limited date. However, they proved to be mostly in poor condition, with very few complete nails. This has severely limited their usefulness, as there are too few examples of any single type of nail, or from any period, to produce meaningful distribution plans for the site, or, in some cases, to be certain that the type is not intrusive.

There were 42 nails of identifiable, or probably identifiable type, of which only eight were complete, and also 69 nail shafts. The commonest type of nail overall was the standard general purpose nail common from the Roman period on, with a round, flat head and square-sectioned shaft (eight definite, and two possible examples). There were sixteen horseshoe nails, considered in more detail below. The remainder were mainly variations on the general purpose nail (e.g. rectangular headed), with a few examples of possible decorative nails from thirteenth to fourteenth-century contexts. These include a probable ball-headed tack, a nail with a domed, solid head, and a large, rectangular headed nail (Fig. 22). There were no hobnails.

The horseshoe nails exhibited a variety of shapes. The most common, with four examples, was the 'fiddle-key' nail, an earlier medieval type. Sparkes (1976, 10) sees it as having gone out of use in favour of T-headed nails soon after the eleventh century. While the examples from this site may be residual, their presence suggests that they may have still been in use into the fourteenth century. T-headed nails are the second most common horseshoe nail form on the site, together with nails with a semi-circular head, base to the shaft. There are two horseshoe nails from medieval contexts which possibly have truncated pyramidal heads. This is a post-medieval type, and these are likely to be intrusive. Both features concerned (F19 and F42) contained other intrusive post-medieval material, clay pipe in the case of F19, and cast iron from F42. There was also a possible example of a nail with a cuboid head, elongated in the plane of the shaft. The other types present are definitely post-medieval, and come from surface clearance or features with post-medieval pot.

1. Nail with a large rectangular head and rectangular shaft. This may be decorative rather than purely functional. L 110mm. 1132, F1, mid 13th-14th cent.

Bone Objects (Fig. 22)

1. Counter; flat disc with central, non-perforating, hole and chamfered edge. Diam. 23mm. 1073, F30, 13th cent.
2. Hollow terminal with ball and disc head. It has two small, opposed perforations on the body. L 25mm. 1271, F108, 12-early 13th cent. The object seems too small to be a handle in its own right, so is presumably the terminal of an object in another material, perhaps wood.

Stone

A) Querns (not illustrated)

Small fragments of lava quern came from ten contexts, predominantly from the immediate vicinity of the house. Most were in poor condition. They were probably all from flat querns, and where surface detail was visible, the grinding surface was pecked.

A fragment of millstone grit, probably from a millstone, came from surface clearance. There is very little evidence for the utilisation of millstone grit in Essex during the middle ages, and this is likely to be residual Roman.

Fragments of lava quern appear with regularity on medieval sites in Essex, although seldom in any quantity. This evidence for

their widespread use is at odds with the often expressed view that villagers were banned from using querns, being forced to grind their corn at the Lord of the Manor's mill. While this seems to have been the case in some places (e.g. on the manors of Crowland Abbey, Cambridgeshire (Page 1934, 107), the archaeological evidence from Essex, at least, suggests widespread use of domestic querns on rural sites. This use, however, was not necessarily for grinding flour. 'Malt querns' or 'malt mills' were common at a slightly later period, as can be seen from wills and inventories of the sixteenth to seventeenth centuries (Steer 1969), and these were used to grind malt for making beer. Alternatively, they may have been used for grinding animal feed.

B) Other stone objects

1. Chalk spindle whorl; cylinder with slightly curved sides, slightly irregular profile. Diam. 31mm, ht. 15mm, hole diam. 9mm. 1385, F136 (Fig. 22).
2. (Not illustrated) Limestone. A fragment from a vessel, probably from the base and part of the side of a mortar with a slightly bulbous profile. The surface is eroded, and there is no full thickness. The base diameter is c. 200mm, with a maximum diameter of c. 260mm. The surviving height is 88mm, with a thickness >35mm. 638g. 1315, F116. I would like to thank P. Ryan for her comments on this object.
3. (Not illustrated) Sarsen boulder fragment, c. 150 x 115 x 60mm. This was possibly utilised as a rubbing stone. 1600g. 1321, F118.
4. (Not illustrated) A slabby fragment of hard limestone, probably not an erratic. It probably has two deliberately squared corners, and may be an architectural stone. 1700g. 1356, F42.

Baked Clay Objects (Fig. 23)

1-4 Parts of at least three cylindrical objects, with flared bases. The group consists of four large pieces, and other fragments which may join. Three pieces have a roughly circular section, and are in a fairly chalky fabric, with roughly smoothed surfaces; the fourth, which is in a sandier fabric, is roughly square in section. All have circular perforations. The diameters are c. 60mm, flaring out to c. 105mm at the base, with perforations 15-17mm in diameter. Wt. 1844g. 1310, F16

The function of these objects is unclear, although a number of possibilities may be suggested. They are possibly crude chimney pots, although there is no sign of the sooting which might have confirmed this use, and the holes appear to be rather small, even for medieval chimney pots. If they are chimney pots, the nearest comparison would appear to be the hour-glass shaped examples from Pleshey Castle (Dunning 1977), 8km from Stebbingford. These had a minimum internal diameter of 32mm, with walls c. 10mm thick, and were in a somewhat finer fabric than the Stebbingford pots. They came from late twelfth or slightly later contexts, and it is thus entirely feasible that similar pots adorned the castle roofs at the time Stebbingford was built, and that the occupants (or local potters) could have seen and copied these objects. If so, the copy was presumably not very successful, since there is no evidence of sooting, and they were presumably discarded after a minimum of use. If these are chimney pots, then they are crude in the extreme, and the small bore would surely have made them very inefficient.

Another possible use is as pottery kiln furniture. Tubular kiln supports are known from medieval kilns, e.g. from Coulston, East Lothian (Brooks 1978-80, 385). Stebbingford is close to the area of the Heddingham Ware kilns, and it is possible that these objects could have been brought from one of them. There were, however, no pottery wasters from the excavated area, which one might expect if there was pottery production very close by. In addition, the Coulston kiln stands were made from the same clay as the pottery from the kiln, which is likely to have been normal for such objects, and were wheel-thrown, with a minimum internal diameter of 56mm. This is very different from the daub-like fabric, poor finish, and small bore of the Stebbingford objects. While the objects could have functioned as kiln furniture, their crudeness, and the lack of other evidence of pottery

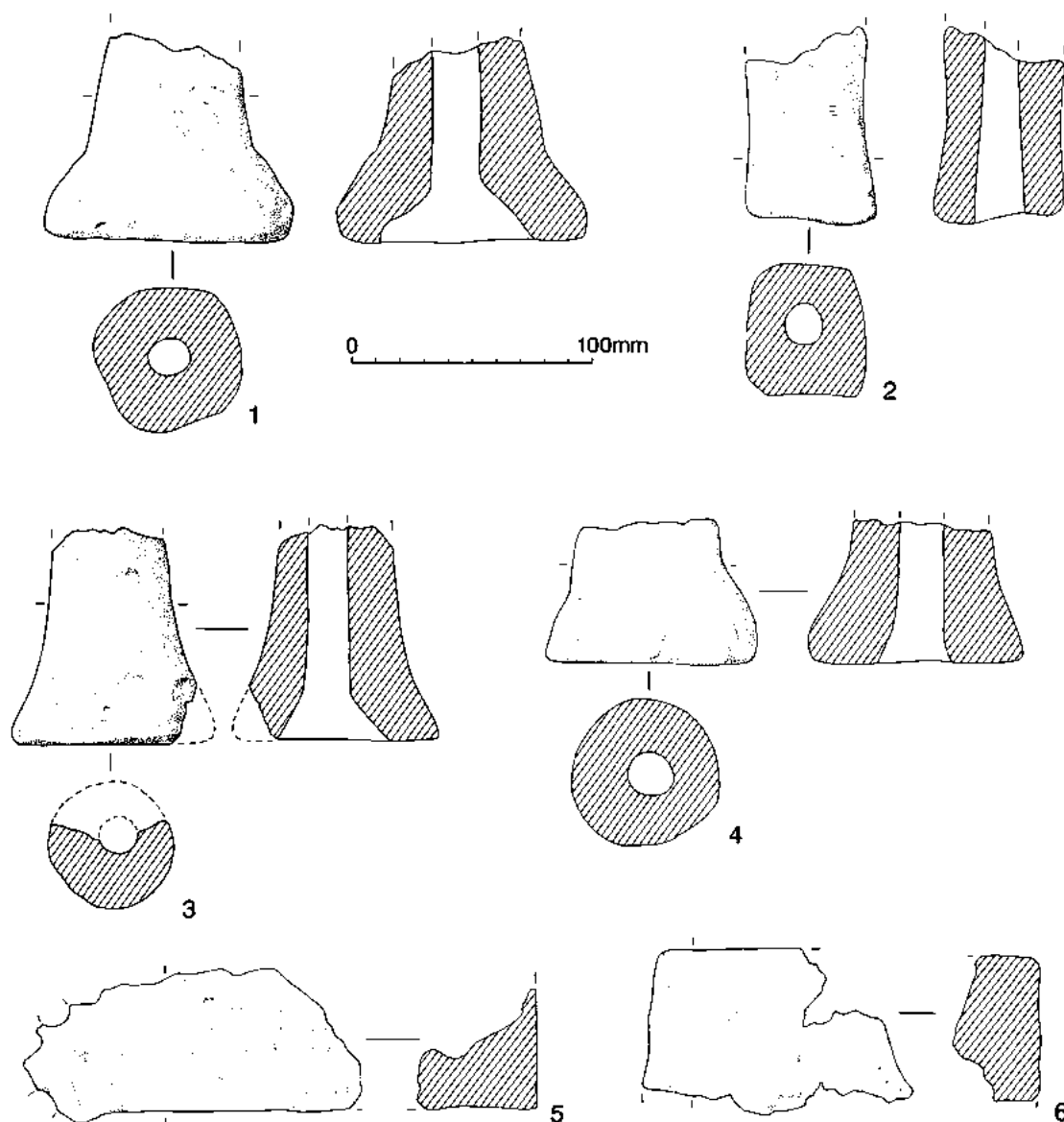


Fig. 23 Baked clay objects.

manufacture from the site appears to make this use unlikely.

A third possible use is as a bellows guard. An interesting comparison may be made with an Iron Age object from Danebury, interpreted as a possible bellows guard (Poole 1984, 407). The latter object is thick walled, with a squared section and flared profile, similar in shape to one of the Stebbingford objects, although slightly larger. At Danebury, there was evidence for metalworking, with which this object was assumed to be associated, but there is no evidence for metalworking at Stebbingford. If these are bellows guards, then they may have been used with a domestic oven.

- 5 Part of a block-like object in a chalky fabric with sparse vegetable temper, of the same type as that used for structural daub. It crumbled badly on lifting; the excavator described it as a 'rectangular block'. Some reconstruction was possible, showing it to be at least 140 x 60 x 52 mm. It has one right-angled edge, and parts of two perforations or mouldings orthogonal to one face. The block as reconstructed weighs 248g, with 106g of fragments from the middle of the block. 1385, F136
6. Fragment from the corner of a block, fabric as no. 4. The end

face is slightly irregular, and may not be original. At least 112 x 70 x 46 mm. 240g. 1385, F136

There are other fragments from 1385 which are probably part of these objects, and similar fragments from 1350, which is part of the same feature. The original shape and function of the 'blocks' is uncertain, and they may have been part of the same object. They may be structural elements, as they are in the same fabric as the daub from the site. If so, they might be part of door or window surrounds, especially if the features on no. 5 are mouldings rather than perforations.

Daub

122 contexts contained baked clay, a total of 1789 fragments (excluding objects), weighing 10,649g. The majority of the material was in a chalky fabric, typical of medieval structural daub in the north of Essex, and paralleled on other archaeological sites. The presence of wattle impressions on some fragments tends to confirm their identification as structural daub. Only one fragment (from F19) had measurable impressions, of withies c. 17mm in diameter.

The contexts containing more than 500g of baked clay were clustered round the buildings, with a spread of small fragments across the rest of the site. The relatively small amounts of material found suggest that the buildings at Stebbingford were not destroyed by fire.

Flint

by Owen Bedwin

A total of 64 pieces of struck flint were recovered, plus one probable hammerstone. These came from 39 different contexts. Thirteen pieces were from surface cleaning (i.e. effectively unstratified); the remainder were residual. No worked flint came from the one probable prehistoric feature, context 59.

The raw material is mostly good quality, glossy, dark grey flint, though a small proportion (c. 10 pieces) used mottled grey flint, or mid-brown flint, of poorer quality. Most of the material was unpatinated, though c. 10 pieces were heavily patinated, and c. 5 lightly patinated. Apart from 2 slightly battered looking flakes, all were in reasonably good condition, in spite of the degree of residuality.

Implements consisted of a barbed-and-tanged arrowhead (with both barbs snapped off), a thumbnail scraper, and c. 10 flakes or blades with some degree of retouch. On 8 of these, the retouch formed a shallow concavity or notch. In 3 cases, the retouch was unpatinated, though the rest of the flake was patinated.

In terms of dating, the only really diagnostic piece is the barbed-and-tanged arrowhead, suggesting a Late Neolithic/Early Bronze Age date. The thumbnail scraper is compatible with this although of a general wider date range. Two small blades, both heavily patinated (from contexts 1141 and 1394) would not be out of place in the Mesolithic. Furthermore, the presence of unpatinated, lightly patinated and heavily patinated pieces implies episodes (probably small-scale) of flint-working over a long period, although the considerable local variability in subsoil conditions could go some way to explaining this. However, the existence of 3 heavily patinated flakes with unpatinated retouch (from contexts 1006, 1117 and 1118) does underline the impression of minor flint working episodes, widely spaced in time. If one had to characterise the assemblage, all that could be said is that the arrowhead and the notched pieces (which might be interpreted as used for cleaning up arrowshafts, for example) point to prehistoric hunting activity in woodland.

Burnt flints were recovered during surface cleaning and in some contexts. It is possible that a number of these may be prehistoric in origin.

Glass

by David Andrews

Two contexts contained glass fragments, both were post-medieval in date. Of these pit 92 (context 1251) was of interest in that it was entirely filled by the broken remains of 5 bottles which had been apparently been placed in the pit whilst intact.

Brick and tile

by Pat Ryan

The tile from Stebbingford is very fragmentary and lacks features which aid identification. One fragment includes a peg-hole. The thickness of the remainder of the tile, 9-14mm, with the majority about 12mm thick, indicates that it is pegtile which dates from the late 13th century to the modern period. Eight fragments from Stebbingford (1163) have a quantity of sand either mixed in or occurring naturally in the fabric. As these fragments are also noticeably flat, they probably date from the medieval period.

Roman tile occurred in contexts 1236, 1294, 1356, 1380 and 1385.

The brick is even more fragmentary and in a number of instances it is impossible to differentiate between it and burnt daub.

One large and two small pieces with brick type fabric occur in

1010. Unfortunately no complete section of edge survives. It is possible these may be from a pavement or large flooring brick of 16th or 17th-century date.

PALAEOENVIRONMENTAL STUDIES

by Peter L. Murphy (Plant macrofossils and molluscs) and Patricia F.J. Wiltshire (palynology), with contributions from Val Fryer (charred plant macrofossils) and Mark Robinson (insects)

The palaeochannel

Introduction

The excavation exposed the upper fills of a palaeochannel (Figs 3 and 4). This channel appeared to have flowed from a spring down-slope towards the adjacent valley floor. The section (Fig. 24) shows the complete profile of the channel visible in the machine trench, the location of the monolith samples and a measured sketch section of sediments infilling it. The section exposed was unstable and its base rapidly filled with water, but two series of monolith samples, for palynomorphs and macrofossils, were collected.

Methods

Descriptions of sediments infilling the channel are given in Table 15. Samples for assessment of pollen and macrofossils were removed from the palaeochannel monoliths at the following depths (cm): 9.0, 20.0, 35.0, 45.0, 62.0, 68.0, 73.0, 85.0, 107.0, 119.0, 139.0, 160.0, 166.0, 168.0.

Macrofossils and molluscs: Samples, comprising no more than 2cm of sediment, 100-200g in weight, were disaggregated by soaking in hot water, with gentle manual agitation. The disaggregated sediment was then washed through a sieve bank with a minimum mesh size of 0.25mm. The fractions retained were scanned under a binocular microscope at low power, noting the presence of plant and animal macrofossils and other constituents (Table 16). This gave an indication of preservation at various levels, but the samples were too small to produce adequately large, interpretable assemblages. Consequently larger samples were processed where initial assessment indicated the presence of significant numbers of macrofossils (Tables 17 and 18).

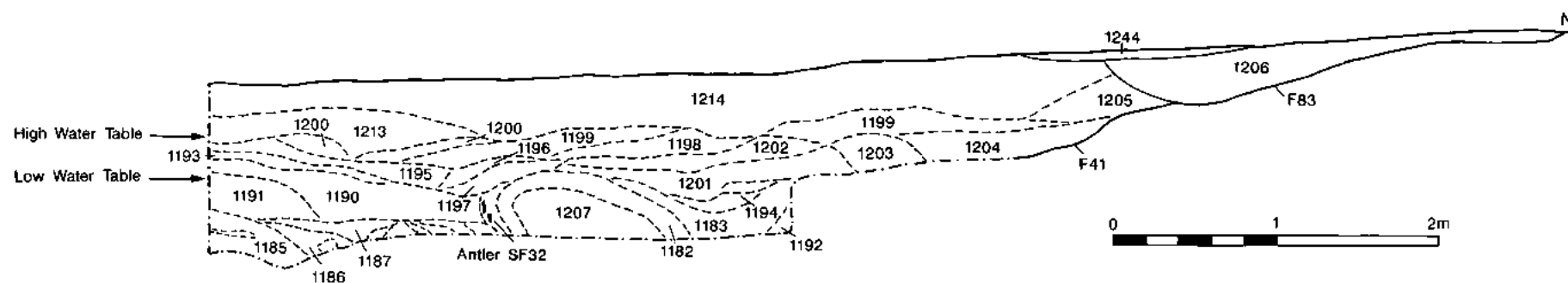
Palynology: In view of the possibility of low pollen concentration, 2.0g of sediment were processed for each sample. Samples were subjected to standard concentration techniques (Dimbleby 1985). Palynomorphs were stained lightly with 0.5% aqueous safranin and mounted in glycerol jelly. Slide preparations were examined with phase contrast microscopy at x400 and x1000 magnification. Ten traverses of each slide were scanned and palynomorphs were scored subjectively. Scores were recorded as + or ++, the former representing presence and latter indicating relative abundance. Palynomorph assemblages are shown in Table 19. Nomenclature follows that of Bennett *et al.* (1994), Moore *et al.* (1991) and Stace (1991). *Corylus avellana* type includes both *Corylus avellana* (hazel) and *Myrica gale* (sweet gale). It must be stressed that every caveat must be applied to interpretation in view of the relatively cursory examination carried out here.

Discussion of results

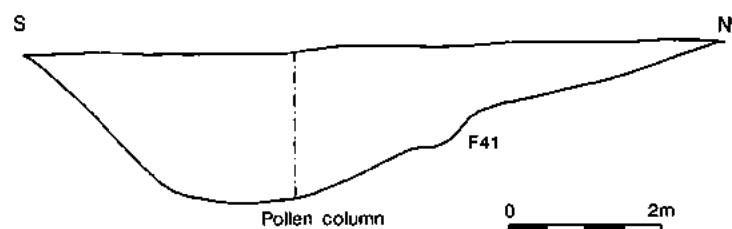
Plant macrofossils: Plant macrofossils were absent from the topmost calcareous sediments and the basal peat. They were very rare in the intervening deposits (Table 18). The restricted range of taxa represented by fruits and seeds comprised wetland, grassland and ruderal plants.

Twigs and woody roots were sectioned for identification from samples at 84-86, 106-108, 118-120 and 139-141cm. All the identi-

F41 & F83 SEGMENT 5060 E. FACING



F41 SEGMENT 5122 LOCATION OF THE POLLEN COLUMN E. FACING



F41 & F83 SEGMENT 5122 SKETCH-SECTION E. FACING

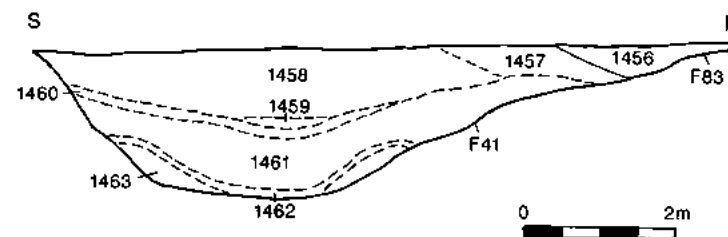


Fig. 24 Sections through the palaeochannel.

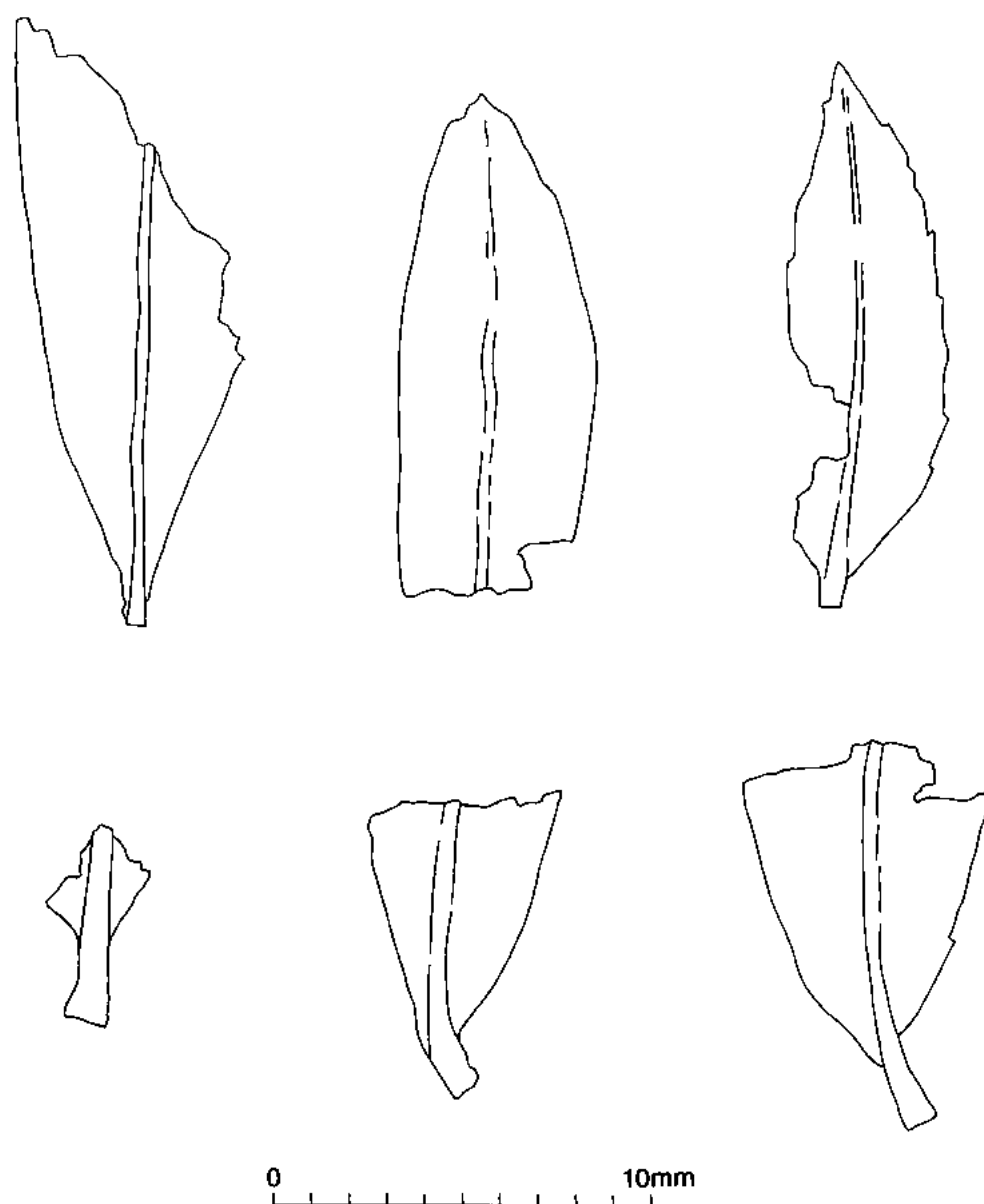


Fig. 25 *Salix* leaves (outline drawings).

fiable specimens were of *Salix* sp. and all stems examined were semi-diffuse porous. Schweingruber (1978, 156) notes that this is a characteristic feature of *Salix retusa*, a creeping willow, though tree and shrub willows may also show this feature. Leaf fragments of *Salix* sp. from 152.5-155.5 cm are illustrated in Figure 25. They appear to be of tree or shrub species. Charcoal fragments up to 15mm were noted at 145cm.

In view of the absence or low density of plant macrofossils at most levels in this palaeochannel, and the consequent very short species list, further work was not considered to be justified.

Molluscs: Molluscs identified are listed in Table 17. Shells were common in the tufaceous calcareous silts at 10.5-57.5cm, but below that

were present only sporadically and often in small numbers. Terrestrial and marsh species predominated throughout, and no molluscs indicative of well-oxygenated water were noted. Throughout the period of infilling it seems probable that there was only a slow seepage of water from springs further upslope, maintaining consistently damp conditions with shallow impersistent pools and puddles, which *Lymnaea truncatula* was able to colonise.

Moderately diverse assemblages were present at 130-140, 140-150 and 152.5-155.5cm. Terrestrial/marsh taxa included Succineidae, a species of *Columella*, *Vertigo genesii*, *Pupilla muscorum*, *Vallonia* cf. *pulchella*, *Arioidae* and *Trichia* spp. An open marshy local habitat is indicated. The presence of *V. genesii*, now extinct in Britain, probably indicates a Boreal or earlier date for the sediments

at this level (Evans 1972, 145 and 300). Interestingly, Kerney and Cameron (1979, 74) note that this snail is particularly characteristic in Scandinavia today of "calcareous seepages on mountain hillsides".

The more diverse assemblages from the tufaceous silts above were typical of tufa deposits (Evans 1972, 297-305). The assemblages were dominated by woodland and marsh snails, indicating an environment of shaded swamp. Where radiocarbon dates were available, a broadly Atlantic date for most tufa formation in England seems to be indicated. However, *V. genesii* persisted in the Stebbingford channel up to a depth of 50cm, so here there is perhaps some evidence for earlier tufa initiation.

It need hardly be said that this channel was infilled long before medieval activity at the site, and, by then, would have been detectable, if at all, as no more than an area of damp ground. Mollusc assessment indicated the broad character of local palaeoenvironments whilst the channel became infilled, and it was not thought that quantitative analysis would add significantly to this.

Palynology: Palynomorphs were exceedingly sparse in the palaeochannel sediments, and the scores on Table 19 indicate that a considerable degree of differential preservation has influenced the pollen assemblages. Every caution must be taken in interpreting these sparse data but, nevertheless, it is possible to ascertain broadly the time span covered by the sediments from those palynomorphs which have been preserved. It is obvious from the pollen spectra that the palaeochannel sediments started accumulating in the early Flandrian (Holocene). Four local pollen assemblage zones may be delimited:

165-85 cm: It is of great interest to find a high frequency of microscopic charcoal between 139 and 107 cm. *Pinus* (Pine) and *Betula* (birch) were the most frequent woody taxa but *Salix* (willow) was found at 119 cm. Although trees appear to have been present in the catchment, the most frequent palynomorphs were those of open habitat - Cyperaceae (sedges), Poaceae (grasses) and other herbs. It is interesting that *Ophioglossum* (adder's tongue fern) was present since it is characteristic of wet meadows and is frequently found in sediments of Late Devensian and Early Flandrian age (Godwin 1975).

Fungal remains were abundant and these could have been derived from organic debris falling into the channel. Iron pyrites framboids were exceedingly frequent. These inorganic concretions form at, and just below, the water/sediment interface as a result of microbial reduction of iron and sulphate ions. Sources of sulphate ions, fermentation products and detrital ferric iron, and very low redox potential are also required for their formation (Wiltshire *et al.* 1994). These conditions are often met in bodies of stagnant/slow moving water which receive organic debris and detrital iron either in drainage water or from wind-blown sources. Tentatively, it might be inferred, therefore, that the channel contained stagnant or sluggishly flowing water during the time represented by samples from 166-85 cm. No framboids were found above 85cm and it may be assumed that hydrological and/or sedimentological conditions within the channel changed considerably.

73-35 cm: The sample at 73 cm was from a very narrow band of pale grey silt containing wood fragments and very few palynomorphs. No framboids were found and it is possible that the channel dried out considerably during this phase. Drier conditions might result in microbial degradation and/or autooxidation of pollen as well as oxidation of any preformed framboids. These effects would be manifest even if drying (and thus aeration) were seasonal or periodic.

Again, Poaceae (grasses), Cyperaceae (sedges), and weeds were more abundant than trees although *Pinus* (pine) was the most frequent tree taxon. *Betula* (birch) and *Corylus* (c.f. hazel) were present and *Salix* (willow) seems to have colonised the channel edge. Fungal remains were abundant and *Glomus*-type was abundant in the upper samples. This probably indicates that bioactive soil was eroding into the channel sediments. The area immediately around the channel at least seems to have supported grass/sedge and tall herb

communities containing *Thalictrum* (meadow rue) and *Filipendula* (meadow sweet); there also seem to have been areas of bare soil being colonised by ruderals.

20 cm: Tree pollen became more abundant although the habitat seems to have remained predominantly open. Again charcoal was present and *Glomus*-type was abundant in the sediment. A single tetrad of Ericaceae (e.g. ling/heather) and several spores of Pteropsida monolete indet. (undifferentiated ferns) were found. The fern spores might have been derived from plants within local woodland. *Crataegus* type (c.f. *Sorbus* - rowan) was present, and the find of *Alnus* (alder) indicates relatively warm conditions; it might also help to construct a temporal framework for the sequence. *Thalictrum* (meadow rue) and *Filipendula* (meadow sweet) were not found and this might indicate slightly drier conditions in the environs of the channel and/or that conditions were becoming more shaded as trees invaded the site.

9 cm: Microscopic charcoal was again present and fungal remains were abundant (including *Glomus*-type). Grass/sedge communities with tall herbs appear to have been important locally but tree pollen became far more frequent than in the lower part of the profile. It is notable that *Corylus avellana* type (c.f. hazel), *Quercus* (oak), *Ulmus* (elm) and *Tilia* (lime) were present.

Interpretation of channel palynology: The pollen spectra for most of the sequence suggest an open landscape with birch and pine in the catchment. Although caution must be taken in interpreting these rather limited data, it is probable that the lower part of the sequence started accumulating in the Preboreal (*sensu* Godwin 1940). In the absence of absolute dating and more detailed pollen data, it is impossible to assess the transition from Preboreal to Boreal conditions in the sequence. This problem is compounded by the very low representation of *Corylus* (c.f. hazel); the low frequency of this shrub is difficult to understand since most British pollen diagrams record its massive expansion in the Early Boreal (Huntley 1993).

The relative abundance of *Thalictrum* (meadow rue) is of considerable interest since in British pollen diagrams, it is associated with the Late Devensian and does not seem to be represented later than the Early Boreal (Pennington 1970): its demise usually appears to be associated with the expansion of the post-glacial birch/pine forests. At Stebbingford, it was found from 85 to 35 cm and probably found refuge in the open habitat around the channel. It was certainly not found at 20 cm when tree pollen was more abundant. The presence of *Alnus* (alder) at 20 cm would indicate that this represents either Late Boreal times or the Boreal/Atlantic transition, dated approximately 7,500 years ago. Most British pollen diagrams covering this period record a very marked and rapid increase in *Alnus* (alder) in the early Atlantic period (Smith 1984). The paucity of its pollen here is as enigmatic as the low levels of *Corylus avellana* (c.f. hazel) discussed above. The presence of *Quercus* (oak), *Ulmus* (elm) and *Tilia* (lime) (the most thermophilous of British native trees) at 9cm suggests that this sediment sample is of Atlantic date or later.

In terms of archaeological significance, most (if not all) of the sedimentary sequence accumulated in Mesolithic times. It is of interest, therefore, to find such high frequencies of microscopic charcoal throughout. This phenomenon has been noted elsewhere, for example in Derbyshire (Wiltshire and Edwards 1993) and at Uxbridge, West London (Wiltshire 1989; Lewis *et al.* 1992). The proximity and extent of fires are difficult to assess; it is also difficult to know whether the charcoal is due to natural or man-made fires. Bennett *et al.* (1990) interpret Mesolithic charcoal as being derived from intensive occupation beside the water's edge rather than a record of man-made burning of the landscape. The pertinent literature has been reviewed by Macdonald *et al.* (1991).

Insect remains

by Mark Robinson

Insect remains were recorded in the majority of the samples from the

palaeochannel at Stebbingford from which macroscopic plant remains were identified, although in very low concentrations. These remains were identified with reference to the Hope Entomological Collections of the University Museum Oxford and their presence is recorded in Table 20.

Although the remains were from a channel, aquatic insects are absent apart from the small water beetle *Heophorus* sp. However, most occur in damp habitats, for example *Agonum* sp. *Chrysolina polita* feeds on Labiatae, especially in marshes. Two of the beetles feed on various species of *Salix* (willow), *Phytodecta viminalis* being restricted to *Salix* spp. whereas *P. pallida* can also feed on *Corylus avellana* (hazel) and *Alnus glutinosa* (alder).

The entomological evidence suggests similar conditions to those suggested by the macroscopic plant remains and pollen. The insects are entirely appropriate to an early post-glacial date for these deposits.

General conclusions

Although full quantitative analysis of micro- and macro-fossils from this palaeochannel was not considered appropriate, assessment has indicated the approximate date-range of sediment accumulation and provided data on palaeoecology. An early post-glacial date (Pre-Boreal to Boreal) date is indicated for the lower fills, below about 85cm. The molluscs and insects produced no evidence for active channel flow: rather a slow seepage of water from springs, maintaining damp, marshy conditions. Pollen assemblages point to a generally open landscape, though with birch and pine in the catchment. *Salix* (willow) pollen was also noted, whilst leaves and stems of willow and two insects species known to feed on willow indicate that willow, at least was growing in the general vicinity.

The upper, more calcareous, fills included tufaceous sediments, likely to be of Late Boreal/Atlantic date. Mollusc assemblages indicative of a local environment of shaded swamp were present, though pollen data pointed to persistence of generally open conditions in the wider catchment. Alder pollen was noted at 20cm depth. In the topmost samples a wider range of tree taxa was present, including oak, elm and lime, and suggesting an Atlantic date for the final stages of channel infilling.

The channel thus significantly pre-dated the medieval site: it infilled mainly during the Mesolithic. Nevertheless, there were high frequencies of microscopic charcoal throughout the sediments, and at 145cm charcoal fragments up to 15mm were present. There was no artefactual evidence for a human presence in the vicinity, but the charcoal may well imply Mesolithic activity.

The medieval features

Introduction

Bulk samples for the retrieval of charred plant macrofossils, bone and shell were collected from archaeological features. In addition, samples for macrofossils and pollen were taken from several apparent cultivation trenches, infilled with redeposited peat, and samples from fills of features interpreted as latrines and cess-pits fills were obtained for pollen assessment.

Methodology

Macrofossils and molluscs: 64 bulk samples, each normally comprising 1-2 15 litre buckets, were collected from the fills of pits, ditches, gullies, postholes, hearths and larger features perhaps related to horticultural activity. The samples were processed by C. Forrest, using a bulk-sieving/flotation tank with 0.5mm collecting meshes. The flots from the first 38 samples to be processed were initially examined: these comprised samples from a representative range of contexts in all areas of the site. The flots were scanned under a binocular microscope at low power, noting the presence of charred plant material and other macrofossils. The results are summarised in Table 21, simply in terms of frequency. The three most prolific contexts were selected for quantitative analysis (see below).

Palyology: The same methodology was used as in the palaeochannel.

Discussion of results

Plant macrofossils

The first 38 samples proved to contain a low-density scatter of charred cereal grains - *Triticum aestivum*-type (short-grained free-threshing hexaploid wheat), *Hordeum* sp (barley), *Secale cereale* (rye) and *Avena* sp (oats). *T. aestivum* was by far the predominant cereal. Chaff fragments were exceedingly rare, but included a few hexaploid wheat rachis nodes: tetraploid nodes were not noted during this assessment. Some isolated cotyledons and fragmentary seeds of *Pisum*-type (pea?) were also present. A few weed seeds from a restricted range of taxa were seen, including *Anthemis comita*, a characteristic weed of heavy clay soils.

The results resembled, in general terms, those from the nearby medieval settlement at Roundwood, Stansted Airport (Murphy 1990): at that site, the main cereals were again short-grained, free-threshing hexaploid wheat and oats.

However, in view of the low density of material from Stebbingford and the short time available for assessment, further work was confined to a very rapid scan through the remaining samples. Of these just three (Sample 2: 1012, early 13th-century ditch; Sample 40: 1385, early-mid 13th-century gully; Sample 56: 1398, undated medieval posthole) included rather higher densities of charred cereals and weed seeds and were therefore selected for quantitative analysis (see below). In addition, a charred fruitstone of *Rubus* sp (bramble/raspberry) was noted in Sample 62 (1158: undated medieval gully).

Three samples (nos. 28, 29 and 58) were thought by the excavator to be from cess pits. However, these did not produce any plant material replaced by calcium phosphate, which would have confirmed the interpretation.

The 'horticultural' features (sample nos. 25, 44, 45) had markedly organic fills. The samples from these features proved to consist of highly humified peat with some scraps of degraded wood and very abundant but poorly preserved uncharred seeds of elder, *Sambucus nigra*. Sample 11, from gully fill 1072 was of a similar type, but also produced uncharred fruit/seeds of *Stellaria media* (chickweed), *Viola* sp (pansy), *Rubus idaeus* (raspberry), *Sambucus nigra* and *Carex* spp (sedges). A possible interpretation of these feature fills is that they were composed of wood peat, dug in the valley floor nearby, mixed with midden material perhaps including, (in view of the presence of fruit 'pips'), human sewage. In effect these fills seem comparable to plaggen soils. There is no indication, from the macrofossils, of the crop cultivated.

Terrestrial mollusc shells were common in all flots, but these certainly included some intrusive modern shells, and hence were not thought to be reliable for palaeoecological reconstruction. The presence of paired juvenile *Pisidium* valves and shells of *Lymnaea truncatula* in the deep pit fill 1135 (sample 13) does, however, suggest that it included shallow, impersistent standing water.

Quantitative analysis of plant macrofossils from three medieval features by V. Fryer and P. Murphy

Introduction: Three samples; sample 2 (context 1012, F5) from an early 13th-century ditch; sample 40 (context 1385, F136) from an early to mid-13th-century gully; and sample 56 (context 1398, F148) from an undated medieval posthole) were selected for quantitative analysis of charred plant macrofossils, following assessment. Other samples included only very low densities of charred plant material.

Methods: The flots were sorted under a binocular microscope at low power and the charred plant macrofossils noted are listed in Table 22. Terrestrial mollusc shells were present, but their potential for palaeoecological reconstruction was considered poor due to modern contamination. Only whole grains or embryo ends of cereals were counted. All charred seeds/fruits were quantified with the exception

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

Table 15: Palaeochannel sediments

STEBBINGFORD – PALAEOCHANNEL SEDIMENTS	
Cms	Description
0 - 6.5	Base of plough soil. Dark greyish-brown clay loam- diffuse boundary
6.5 - 10.5	Pale buff silt - sharp undulating boundary
10.5 - 40.0	Mottled light brown silt with pale buff silt merging down into pale buff silt with some brown laminations. Diffuse boundary.
40.0 - 57.5	Laminated silts: pale buff, brown and very dark brown. Diffuse boundary.
57.5 - 65.5	Brown to dark brown silt. Some pale laminations. Sharp boundary.
65.6 - 66.5	Orange sand. Sharp boundary.
66.5 - 72.0	Dark grey silt with pale laminations, sand lenses and wood fragments. Sharp boundary.
72.0 - 74.0	Pale grey silt with wood fragments. Sharp boundary.
74.0 - 75.0	Black sand. Sharp boundary.
75.0 - 81.0	Laminated grey silt with some sand and monocotyledonous plant remains. Merging boundary.
81.0 - 86.0	Very dark brown silt with pale and darker laminations. Merging boundary.
86.0 - 118.0	Greyish-brown silt with darker and paler laminations and wood. Sharp boundary.
118.0 - 120.0	Coarse grey sand with chalk fragments and wood. Sharp boundary.
120.0 - 149.0	Pale grey silty clay with twigs and chalk fragments and wood. Sharp boundary.
149.0 - 151.5	Coarse dark grey sand with chalk fragments up to 5.0mm. Sharp boundary.
151.5 - 152.5	Pale grey silty clay with dark brown laminations and wood. Sharp boundary.
152.5 - 155.5	Slightly darker silt with layer of <i>Salix</i> leaves on top surface. Merging boundary.
155.5 - 167.0	Very dark brown well humified peat. Sharp boundary.
167.0 - 168.0	Pale buff silt. Merging boundary.
168.0 - 168.5	Grey silt with very small chalk fragments. Merging boundary.
168.5 - 170.0	Pale brown sand. Merging boundary.
170.0 - 174.0	Orange/brown sand.

Table 16: Distribution of macrofossils in the sediments

Depth (cm)	20	35	45	62	68	73	85	107	119	139	145	154	160	166	168
PLANT MACROFOSSILS															
Fruits/seeds				x	x	x					x	xx			
Monocotyledonous stem fragments						x	x			x		xx			
Twigs									x			xx			
Budscales/catkin bracts								x			x	xx			
Leaves									x	x		xx			
Woody roots				x	x	x	x	x	x	x					
Charcoal											x				
Mosses					x	x					x	xx			
FUNGI															
Fungal sclerotia				x	x	xx									
ANIMAL MOLLUSCS															
Molluscs	xxx	xxx	xx	x	x					x	x	xx			
Fly puparia							x					xx	x		
Beetles					x	x	x	x			x	xx			
OTHER CONSTITUENTS															
Tufaceous concretions	xxx	xxx	xx												
Chalk and flint pebbles											x				

Table 17: Mollusca

Depth (cm)	13.5-20	20-30	30-40	40-50	50-57.5	61-63	67-69	139-141	130-140	140-150	152.5-155.5
Terrestrial/marsh species											
<i>Pomatias elegans</i> (Müller)	x										
Succineidae		x	x	x	x				x	x	x
<i>Cochlicopa</i> spp		x	xx	xx	x						
<i>Garychium</i> spp	xx	xx	xx	x							
<i>Columella</i> sp										x	x
<i>Vertigo antivertigo</i> (Draparnaud)					x						
<i>Vertigo substriata</i> (Jeffreys)	x	xx	x	x	x						
<i>Vertigo genesii</i> (Gredler)					x	x					x
<i>Vertigo angustior</i> (Jeffreys)		x									
<i>Vertigo</i> sp(p)	x	x	x	x	x		x	x	xx	x	x
<i>Pupilla muscorum</i> (L)									x	x	
<i>Vallonia costata</i> (Müller)	xx	x	xx		x						
<i>Vallonia</i> cf <i>pulchella</i> (Müller)									x	x	
<i>Ena obscura</i> (Müller)			x								
<i>Punctum pygmaeum</i> (Draparnaud)	xx	x	x								
<i>Discus rotundatus</i> (Müller)	xx		x								
Arionidae	x	x	x	x	x				x		x
<i>Nesovitreia hammonis</i> (Ström)	x	xx	xxx	x		x					
<i>Oxychilus</i> sp(p)	x										
Limacidae	x	x	x	x							
<i>Euconulus fulvus</i> (Müller)	x	x	xx		x						
<i>Trichia hispida</i> -group		x			x						x
<i>Trichia</i> sp		x							x	x	xx
Aquatic/freshwater slum species											
<i>Pisidium</i> spp	xx	xx	xx	xx				x	x	x	
<i>Lymnaea truncatula</i> (Müller)	xx	xx	x	x					x	x	
Sample weight (kg)	0.15	0.25	0.2	0.2	0.5	0.1	0.2	0.2	1	0.7	0.2

Table 18: Plant macrofossils

Depth (cm)	61-63	67-69	72-74	84-86	106-108	118-120	139-141	130-140	140-150	152.5-155.5
Fruits/seeds										
<i>Carex</i> s(p): bifacial			x						x	xx
<i>Epilobium</i> sp		x								
<i>Filipendula ulmaria</i> (L) Maxim.		x	x							
Poaceae (Gramineae)	x									x
<i>Potentilla</i> sp										x
<i>Ranunculus acris/repens/bulbosus</i>			x							
<i>Urtica dioica</i> L.	x	x								
Indeterminate							x			
Leaves										
<i>Salix</i> sp										xx
Indet fragments						x	x	x	x	
Bud scales/catkin bracts					x				x	xx
Twigs/woody roots										
<i>Salix</i> sp				x	x		x			
Unidentified	x		x			x		x	x	xx
Monocot stem fragments			x	x						x
Mosses		x	xx						x	xx
Charcoal									x	
Sample wt (kg)	0.1	0.2	0.2	0.1	0.2	0.2	0.2	1	0.7	0.2

	Palaeochannel														Medieval			
Depth (cm)/Context	9	20	35	45	62	68	73	85	107	119	139	160	166	168	1302	1420	1210	1060
Trees & shrubs																		
<i>Alnus</i>		x																
<i>Betula</i>	x	x	x	x	x			x	x	x				x				
<i>Crataegus</i> type		x																
<i>Corylus avellana</i> type	x				x											x	x	
<i>Pinus</i>	x	x	x	x	x	x		x	x	x		x	x	x	x			x
<i>Quercus</i>	x																	
<i>Salix</i>		x	x	x						x								
<i>Tilia</i>	x																	
<i>Ulmus</i>	x																	
Dwarf shrub																		
Ericaceae indet		x																
Herbs																		
Apiaceae undiff				x														
<i>Aster</i> type	x																	
Cereal type																x		
Asteraceae indet									x							x		x
Brassicaceae indet		x																x
Cyperaceae	x	x	x	x	x	x	x	x	x	x	x	x		x		x		
<i>Filipendula</i>			x	x				x										
Lactuceae	x			x		x			x		x					x		
<i>Mentha</i> type		x																
<i>Plantago coronopus</i>			x															
Poaceae	x	x	x	x	x	x	x	x	x	x	x	x		x		x		
<i>Prunella</i> type					x													
<i>Rumex</i> undiff			x															
<i>Sinapis</i> type												x				x		
<i>Thalictrum</i>			x	x	x	x	x	x										
<i>Urtica</i> type	x																	
<i>Vitis</i> (?)																x		
Spore formers																		
<i>Pteropsida monoete</i> indet	x	x														x		
<i>Ophioglossum</i>											x							
<i>Pteridium</i>					x				x						x	x		
Other palynomorphs																		
<i>Ascaris</i> egg																x		
Fungal spores and hyphae	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x
<i>Glomus</i> type	x	x	x	x	x					x						x	x	x
Iron pyrites framboids								x	x	x	x	xx	xx			x		
Iron pyrites microcrysts													x					
Microscopic charcoal	x	x		x	x	x			x	x	x				x	x	x	x

Table 20: Insects present in the palaeochannel

SPECIES	Depth (cm)						
	67-9	72-4	84-6	106-8	140-50	152-5	159-61
COLEOPTERA							
<i>Agonum</i> sp.	*						
Carabidae indet.		*					
<i>Helophorus</i> sp.						*	
<i>Olophorum</i> sp.			*			*	
<i>Lesteva</i> sp.					*		
Staphylinidae indet.	*						
Corticariinae indet.	*						
<i>Chrysolina</i> cf. <i>polita</i>					*		
<i>Phytodecta pallida</i>							*
<i>P. viminalis</i>				*			
Curculionidae indet.			*				
Hymenoptera indet.					*		
Diptera puparia						*	*

Table 21: Plant macrofossils from medieval contexts (initial 38 samples only)

Crop Plants	Frequency
Indeterminate cereal grains/fragments	18
Indeterminate cereal-type culm node	1
<i>Triticum aestivum</i> -type grains	21
<i>Triticum</i> sp(p) rachis internodes	4
<i>Triticum</i> sp(p) rachis internode fragments	1
<i>Hordeum</i> sp(p) grains	3
<i>Secale cereale</i> grains	4
<i>Avena</i> sp(p) grains	7
<i>Pisum</i> -type cotyledon/seeds	4
Weeds etc	
<i>Agrostemma githago</i>	1
<i>Anthemis cotula</i>	1
<i>Avioplex</i> sp	1
Chenopodiaceae indet	1
Poaceae (Gramineae)	2
<i>Ranunculus acris/repens/bulbosus</i>	1
<i>Rumex</i> sp(p)	2
<i>Sherardia arvensis</i>	1
<i>Vicia/Lathyrus</i> sp(p)	1
Other macrofossils	
Rhizome fragments	1
Total number of samples assessed	38

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

Table 22: Plant macrofossils

SAMPLE NO	2	40	56
CONTEXT NO	1012	1385	1398
Trees and shrubs			
<i>Rubus fruticosus</i> L.		1	1
<i>Rubus</i> sp.			1 cf.
<i>Sambucus nigra</i> L.		1	
Herbs			
<i>Anthemis cotula</i> L.	7	3	46 + 1shf
<i>Atriplex</i> sp.	1	1	1
<i>Bromus</i> sp.		1cf	
<i>Chenopodium album</i> L.	3	4	
Chenopodiaceae indet.	1		
Cruciferae indet.			1
<i>Fallopia convolvulus</i> (L.) A. Love	1		
<i>Medicago Trifolium Lotus</i> sp.	1cf	1cf	
Poaceae (Gramineae)	1	2	2
<i>Polygonum aviculare</i> L.	1cf		
<i>Rumex</i> sp.	1	2	2
<i>Sherardia arvensis</i> L.	1	1	
<i>Silene</i> sp.	1t		
<i>Vicia/Lathyrus</i> sp. (cotyledons) (seeds)	3cf	9 5+8cf	4 5
Crop plants			
<i>Avena</i> sp. (awn frags.) (caryopses)	1 2	6	
Cereal indet. (caryopses) (rachis internode frags) (sprouts)	22 32	62 7 1	31 4
<i>Hordeum</i> sp. (caryopses)	3	6cf	4cf
<i>Pisum sativum</i> type (cotyledons) (seeds)	2 2	12cf 9cf	
<i>Secale cereale</i> L. (caryopses)	1cf	2cf	2cf
<i>Triticum aestivum</i> type (caryopses)	36	110	65
<i>Triticum</i> sp. (rachis internodes) (rachis nodes) (rachis node frags.)	7 13	1 16	2 3
<i>Vicia faba</i> L. (seed)		1cf	
Other plant macrofossils			
Indet. buds		3	1
Indet. culm nodes		2	
Indet. seeds	5	9	1
Indet. thorns	3		
% flot sorted	100%	100%	100%

Key

fg = fragments

shf = seed head fragments

t = testa

of sample 2 which contained numerous testa fragments of indeterminate *Chenopodiaceae*. These do not appear on the table.

Charcoal was present at a moderate density in all samples. Modern contaminants including fibrous roots, seeds/fruits, mollusc shells and arthropods were also present in all samples.

Cereals and other food crops: Grains and chaff were present in all three samples. Seeds and cotyledons of *Pisum* (pea) type were noted in samples 2 and 40 and one seed, possibly of *Vicia faba* (field bean) was recovered from sample 40. Preservation was generally poor with common puffed and distorted grains and seeds and frequent abrasion and fragmentation of the cereal chaff. Wheat grains and chaff including rachis nodes and internodes, were present in all three samples. Rounded grains of *Triticum aestivum* (bread wheat) type were common throughout. Grains of *Hordeum* sp. (barley), *Secale cereale* (rye) and *Avena* sp. (oat) were also recovered. A single awn fragment of *Avena* sp. was noted in sample 2.

Wild flora: Seeds/fruits of common weeds were present in all samples at a low density. Segetal species were predominant and included *Anthemis cotula* (stinking mayweed), a characteristic weed of heavy clay soils, *Atriplex* sp. (orache), *Bromus* sp. (brome), *Chenopodium album* (fat hen), *Fallopia convolvulus* (black bindweed), grasses, *Medicago/Trifolium/Lotus* sp. (medick/clover/trefoil), *Polygonum aviculare* (knotgrass), *Rumex* sp. (dock), *Sherardia arvensis* (field madder), *Silene* sp. (campion) and *Vicia/Lathyrus* sp. (vetch/vetchling). Seeds/fruits of *Rubus fruticosus* (bramble) and *Sambucus nigra* (elderberry) were also noted along with indeterminate thorns, buds, culm nodes and seeds.

Discussion: These samples were selected as they were moderately cereal rich and to date there is a paucity of information from rural medieval sites about crop production. Wheat, principally *Triticum aestivum* type, was the predominant cereal with barley, oats and rye present but at a far lower density. Chaff was moderately common but preservation was very poor: the wheat chaff was not identifiable to species. It is probable that there has been differential preservation of grains and chaff during charring, and for this reason interpretation of the assemblages in terms of stages of crop processing is not appropriate. Similar assemblages came from the near-contemporary Roundwood site at Stansted Airport (Murphy 1990).

Palynology

Cultivation plots (context 1210 (F82) and context 1060 (F23)): Microscopic charcoal and fungal remains (including *Glomus*) were abundant in both samples. Pollen and spores were virtually absent; a single *Corylus avellana* type (c.f. hazel) grain was found in 1210 and single *Pinus* (pine) and *Brassicaceae* (e.g. *Capsella* - shepherd's purse) in 1060. With such poor pollen preservation it is impossible to ascertain the function of these features. However, it is clear that they contained (or received) bioactive soil.

Latrine and cess pit (context 1302 (F95) and context 1420 (F52)): Context 1302 contained microscopic charcoal and fungal remains, and a single grain of *Pinus* (pine) and a spore of *Pteridium* (bracken) were also found. There was no palynological evidence for faecal material having been deposited in this feature.

Palynomorph preservation was better in context 1420, the putative cess pit. Again, fungal remains (including *Glomus*-type) and microscopic charcoal were abundant. Spores of *Pteridium* (bracken) and *Pteropsida* monolete indet (undifferentiated ferns) were present along with grains of *Pinus* (pine), *Asteraceae* (e.g. *Bellis* - daisy), *Cyperaceae* (sedges), *Lactuceae* (e.g. *Sonchus* - sow thistle), *Poaceae* (grasses), and *Sinapis* type (e.g. *Cardamine pratensis* - lady's smock). Any of these plants could have derived from plants growing in the environs of the site and they simply indicate an open habitat, perhaps dominated by damp grassland.

An egg of *Ascaris* (an internal parasitic nematode worm) was found; *Ascaris* parasitises large mammals, including man. Iron pyrites framboids were abundant, and cereal-type pollen and a sin-

gle, rather crumpled grain of (possibly) *Vitis vinifera* (grape) pollen were present. Unfortunately, the "grape" pollen was not well enough preserved for identification to be absolute, but the surface sculpturing and overall structure resembled that of *Vitis vinifera*. The cereal-type pollen could have been derived from crops being grown and/or processed locally; but it could also have been present in faeces since pollen appears to survive the baking process (Greig 1994). If the "grape" pollen identification is correct, it is probable that the grain was also derived from faeces. The nematode egg almost certainly came from coprolitic material although it must be reiterated that the parasite is common in mammals other than man. The presence of iron pyrites framboids indicates a highly sulphidic, anaerobic environment which would be consistent with conditions in a "water-logged" cesspit.

There is no palynological evidence for features 23 and 82 having been cultivation plots, or for feature 95 having been a latrine. However, there is tentative evidence that feature 52 might have functioned as a cesspit.

Animal bone

By Alec Wade

Introduction

A total of 1,920 fragments of bone weighing 8.287 kg was recovered by hand and by wet sieving from 136 contexts. In general these bones were badly preserved and very fragmentary. These factors, combined with the enhanced collection of tiny bone fragments produced by sieving resulted in only 12.24% of the sample being identified to species level by number (235 pieces) and 61.16% by weight (5.068 kg).

The two medieval phases produced over 95% of the animal bone examined, with the late 12th/mid 13th century phase accounting for over half of the assemblage. The bone from this phase was also the least eroded of the sample. The material from the second medieval phase was slightly more eroded, with the poorest preserved bone coming from the post-medieval phase. This trend could be the result of more efficient disposal of the bone waste in the late 12th/mid 13th century than in the later phases.

All of the main domesticated species were represented including cattle, pig and sheep/goat (no distinction being made). Horse, dog, cat, chicken, goose, pheasant and fish bones were also present. Native mammals and amphibians identified included deer, hare, vole, shrew, mole and frog.

Evidence of butchery was noted on some bones of the larger species consistent with techniques for dismemberment and filleting.

The assemblage is divided amongst the four site phases as shown by the following table:

Table 23: Animal bone assemblage by phase

Phase	Number of Fragments	Weight (g)
Pre-medieval	22	1268.50
	1.15%	15.31%
Late 12th / Mid 13th	1324	5344.20
	68.96%	64.49%
Mid 13th / Mid 14th	541	1436.20
	28.18%	17.33%
Post -medieval	33	238.00
	1.72%	2.87%
Grand Total:	1920	8286.90

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

Methodology

The system used to record the animal bone assemblage is based upon one devised and used by A.J Legge at the University of London (the complete database print-out is included in the site archive).

Results

The results of the analysis are presented phase by phase, beginning with the pre-medieval and ending with the post-medieval contexts.

Pre-medieval: The pre-medieval phase is the smallest of the four groups, yielding just 22 fragments of bone. Preservation was poor. The following table shows the breakdown of the bone by species.

Table 24: Breakdown of pre-medieval phase by species

Taxon	Number of Fragments	Weight (g)
<i>Bos</i> (domestic)	1	140
	4.55%	11.04%
<i>Cervus elaphus</i>	2	980
	9.09%	77.26%
Large Mammal	13	146
	59.09%	11.51%
Unidentified Mammal	6	2.5
	27.27%	0.20%
Grand Total:	22	1268.5

Mesolithic context 1182 in the palaeochannel produced most of an eight-point red deer antler in very poor condition. It appeared to have been shed and there were no visible signs of working.

Late 12th / Mid 13th century. This phase was the most prolific in terms of the quantity of bone and diversity of species identified, though only 168 fragments could be identified to species level. Material from these contexts was also the best preserved of all the phases.

Table 25: Breakdown of late 12th/mid 13th-century phases by species

Taxon	Number of Fragments	Weight
<i>Anser</i> (domestic)	2	0.75
	0.15%	0.01%
Bird (indet.)	37	45.35
	2.79%	0.85%
<i>Bos</i> (domestic)	75	1520
	5.66%	28.44%
<i>Canis familiaris</i>	4	19
	0.30%	0.36%
Cervid	3	22
	0.23%	0.41%
<i>Cervus elaphus</i>	2	182
	0.15%	3.41%
<i>Equus</i>	37	1230
	2.79%	23.02%
<i>Felis</i>	1	0.1
	0.08%	0.00%
Fish (indet.)	16	1.3
	1.21%	0.02%

Taxon	Number of Fragments	Weight
<i>Gallus</i>	2	1.5
	0.15%	0.03%
Large Mammal	297	1714
	22.43%	32.07%
<i>Lepus</i>	1	0.25
	0.08%	0.00%
Medium Mammal	107	270.5
	8.08%	5.06%
<i>Ovis/Capra</i>	18	106.5
	1.36%	1.99%
Pheasant	1	0.25
	0.08%	0.00%
<i>Rana</i>	2	0.25
	0.15%	0.00%
Shrew	2	0.1
	0.15%	0.00%
Small Mammal	76	4.95
	5.74%	0.09%
<i>Sus</i>	16	125
	1.21%	2.34%
<i>Talpa</i>	2	0.2
	0.15%	0.00%
Unidentified Mammal	623	100.2
	47.05%	1.87%
Grand Total:	1324	5344.2

This phase also produced 82.35% of the immature bone, 65.22% of the dog gnawed bone, 83.33% of the cut bone and 78.26% of the burnt bone recovered on site. The MNI is calculated as 1 for each species except for cattle 3, sheep/goat, dog and pig 2.

Mid 13th / Mid 14th Century. This phase produced less than half the quantity of material of the earlier phase. The overall condition of the bone was also worse. The following table shows the breakdown of the phase by species:

Table 26: Breakdown of mid 13th/mid 14th- century phase by species

Taxon	Number of Fragments	Weight
<i>Anser</i> (domestic)	1	0.25
	0.19%	0.02%
Bird (indet.)	6	2.6
	1.13%	0.19%
<i>Bos</i> (domestic)	16	379
	3.01%	27.99%
<i>Canis Familiaris</i>	11	38
	2.07%	2.81%
<i>Equus</i>	5	96
	0.94%	7.09%
Fish (indet.)	2	0.2
	0.38%	0.01%
Large Mammal	200	628
	37.59%	46.37%
Medium Mammal	55	95.5
	10.34%	7.05%

Taxon	Number of Fragments	Weight
<i>Rana</i>	2	0.25
	0.38%	0.02%
Small Mammal	33	2.3
	6.20%	0.17%
<i>Sus</i>	8	74
	1.50%	5.46%
<i>Talpa</i>	1	1.25
	0.19%	0.09%
Unidentified Mammal	186	36.6
	34.96%	2.70%
Vole	6	0.25
	1.13%	0.02%
Grand Total	532	1354.2

This phase produced 11.76% of the immature bone, 33.70% of the dog gnawed bone, 16.67% of the cut bone and 21.74% of the burnt bone recovered on site. The calculated MNI is 1 in all species.

Post-medieval. The post-medieval phase bone was in the poorest condition of all the bone recovered from the excavation. The following table shows the breakdown by species for the phase.

Table 27: Breakdown of post-medieval phase by species

Taxon	Number of Fragments	Weight
Bird (indet.)	1	1
	3.03%	0.42%
<i>Bos</i> (domestic)	5	66
	15.15%	27.73%
Large Mammal	11	118
	33.33%	49.58%
Medium Mammal	6	25
	18.18%	10.50%
<i>Sus</i>	2	25
	6.06%	10.50%
Unidentified Mammal	8	3
	24.24%	1.26%
Grand Total:	33	238

The phase produced 5.89% of the immature bone and 1.09% of the dog gnawed bone.

Conclusions

The small and fragmented nature of the assemblage renders any statistical observations regarding the local diet or economy of doubtful value.

The early 12th/mid 13th-century phase produced the largest quantity of animal bone and the greatest diversity of species. The bone was also in better condition than that of the other phases, perhaps indicating a better managed system of waste disposal than in the later medieval phase. This perceived decline in organisation may also be reflected in the reduced quantity of material from the mid 13th/mid 14th-century phase and a reduction in the variety of identified species, although it should be stressed that the sample is small and may not accurately represent the true situation.

The majority of immature bone recovered was also from the earliest medieval phase as was the largest quantity of butchered, dog gnawed and burnt bone. Analysis of the distribution pattern of the late 12th / mid 13th-century butchered bone showed it to be mainly concentrated in the ditches and gully's to the south of and between buildings B and C. Over 50% of the gnawed bone was also located in this same area, suggesting the presence of a midden. To the west of the site a smaller group of chewed and butchered bone was found in the depressions, gullies and planting beds. This may be the result of organic waste from the building area being distributed around the site for manuring purposes. By the later phase the presence of gnawed bone is restricted to pits and structural features (notably the "cellar" of building D) in the east and to horticultural features in the west. The sudden inclusion of this bone in structural features and pits may indicate a period of deliberate waste clearance from around the site.

Acknowledgements

I would like to thank Mr Gerry Heath of the Colchester Natural History Museum for his help in identifying the small mammal and bird bones.

Marine mollusca

By Dr J.M. Winder and Katherine Reidy

Thirty six features across the site produced marine mollusc shells including the common flat oyster *Ostrea edulis* L., common whelk *Buccinum undatum* L. and the carpet shell *Tapes rhomboides* (Pennant). Oysters were the commonest species and for this reason were studied in the greatest detail. Characters such as size, age and evidence of infesting or encrusting epibiont organisms, as well as other features like degree of wear, presence of chalky deposits and chambers, and man-made notches or cuts were recorded. These characters were used to make intra-site comparisons between selected samples from the Stebbingford Farm site. Inter-site comparisons were also made between these samples and those from other sites in East Anglia and further afield.

A total of 4423 left and right oyster valves were collected, producing a minimum number of 2373 individuals from 36 features. Oyster shell made up 96.8% of the total number of marine molluscs, 3% were whelks and there was a single carpet shell. The vast majority of oysters (99%) came from the mid 12th-early 14th-century occupation and was present primarily in features centred around the structures. The shell was concentrated in five particular features (beam slot 40, ditch 42, gully 127 (aka 60), pit 136 and spread 1350) which were situated in the area of structure B: 95% of the shell came from these features. These features, although all from the same date range, represent at least three different phases of activity, of which features 40 and 136 are the latest. The most likely source for the Stebbingford oysters would have been Colchester, along Stane Street to the east.

The physical characteristics of the Stebbingford Farm oyster shells provide some clues to the surroundings in which they developed. Examination revealed a high level of chalky deposits and chambering in the shells. Chalky deposits are opaque and porous cushions of soft microcrystalline construction which are apparent as raised areas on the inner or nacreous layer of the valves. Chambers are cavities in the shell, originally containing mud or sea-water, which are usually noticed on the inner surface of shells when the fragile wall of the chamber becomes broken. Both these features result from the oyster's need for the animal to remain in contact with the shell surface at all times. The oyster is enveloped in a fleshy mantle which secretes the shell. There are two processes which cause the oyster to lose weight suddenly: the first is the act of spawning and the second is a change in the salinity of the surrounding water to a higher concentration. When the animal becomes smaller for either of these reasons, the mantle quickly lays down a thin layer of organic conchyolin followed by some sub-nacreous material, forming a chamber.

The presence of chambers in up to 19% of shells in some of the Stebbingford samples is an indicator of the combined ideal breeding

conditions in the vicinity of the exploited oyster beds and the shallow waters subject to concentration of salts by evaporation in the summer months. The latter perhaps suggest intertidal beds in creeks rather than deeper water on the open coast where salinity levels would be constant. This would be consistent with the idea that the Stebbingford oysters came from creeks in or near the River Colne.

The quantity of shell recovered from Stebbingford Farm seems quite large but it only represents about two bushels or tubs of oysters. Individual purchases of oysters could have been by the barrel of one hundred or small barrel of fifty, as they have been until much more recent times, in which case the shells represent about twenty four barrels. It is always possible that much of the bulky waste from eating these molluscs was discarded elsewhere but on the actual evidence present it would seem that these farmsteaders only ate oysters occasionally. This might have been on special occasions such as feast days or as a much needed supplement to the food supply towards the end of winter when times were hard. Certainly oysters would have been readily available and presumably cheap. The earliest price recorded locally was one and a half pence for one hundred oysters in 1375 (Bell 1921, 302).

The oysters at Stebbingford were eaten raw and alive. Many of the discarded shells bore triangular notches at the edge opposite the ligament where pinchers were applied to break the shell or a knife was inserted to prise the valves apart. The position of these marks varied, indicating the hand of more than one person concerned with their opening. The smooth inner surfaces of the shells were often scored by knife cuts where the muscle had been severed and the meat loosened from the shell. As many as 23% of one sample (context 1356) had notches or cuts. If the oysters had been cooked, or destined for cooking, they would have been placed on the hot ashes of the hearth or in the oven to open naturally as the juices boiled within them; no knife would have been necessary.

Finally, the oyster shells would have been discarded. Some shells may have been scattered on the fields as fertiliser or as a liming agent, to break up the clayey soil. Many would have been tipped, out of sight, behind the wall of building B. Here the heap probably spread out over the years. This may have been done deliberately, for example, to consolidate a muddy yard surface or fill in ditches or gullies to assist drainage. Or the dispersal may have been accidental, caused by spillage and scuffing of the shells as people walked to and fro. The eventual preservation of the shells when the site was abandoned in the late 14th century has provided a valuable insight on the role of oysters in the lifestyle of a medieval household.

DISCUSSION

The discussion section of this text has been sub-divided into sections for ease of use; the internal morphology and development of the settlement is examined, an attempt made to place the site within its wider context and comparisons are drawn with other medieval settlements in Essex.

THE MORPHOLOGY AND DEVELOPMENT OF THE SETTLEMENT

Prehistoric and Roman periods

There is some evidence for prehistoric activity in the vicinity of the site, evidenced by residual flint and pottery in later features. There is rather more evidence for Roman activity on the site, and a couple of features may belong to this period.

Medieval period

The principal occupation of the site took place in the medieval period, from the mid-twelfth century to the mid-fourteenth century. The excavated area can be divided into four different areas; these are the buildings, their associated yard area, the fields and a horticultural area. Within the medieval period the ceramic evidence allowed for a dating division into an earlier (late 12th-early 13th-century) period and a later one (mid 13th-mid 14th-century), but this division is not thought to signify any break at all in the occupation of the farmstead. Within this broader framework based on the ceramic dating, it is possible to use the stratigraphic evidence (see above) to identify two further sub-divisions, leading to four phases of development in the layout of the farm (Figs 6, 12 and 26).

Phase 1

Field-system: This phase began in the mid-twelfth century (Fig.26.1). A trackway, bordered by ditches 47 and 48, ran northwest-south-east from Stane Street along the curve of the contour-line across the middle of the site. Ditch 47 was medieval in date, whilst 48 contained only Roman pottery and may be a relict feature from the Roman period. The trackway was 5m wide.

To the east of the track was what appears to have been a single large field (I), 80m wide, bordered by ditch 47/172 on the west side and ditch 8 to the east; it probably ran up to the edge of Stane Street to the north. The subsoil of this field consisted of gravelly clay, chalky boulder clay and boulder clay. On the western side of the trackway was ditch 107, running east-west at right-angles to the trackway. Abutting the trackway and on the same alignment as ditch 107 was a little enclosure formed by ditches 112 and 162, tentatively interpreted as a sheep or cattle fold.

To the north of 107, and parallel to the trackway was long narrow field (II), 30m wide by 780m long, bordered by ditches 48, 107, 118 and possibly the road. The sub-soil in field II was mainly a clayey gravel.

To the south of this were two smaller fields (III and IV); these were sited on a south-facing slope on a subsoils of clayey gravel, sand and white clayey silt. Field III ran parallel to the trackway, bordered by ditches 48, 107 and 149 and 29; it might have extended down to the stream immediately to the south of the site. Field IV was trapezoidal in shape, delineated by ditches 107, 149, 29 and 160.

Field V covered the lower portion of the site; it was delineated by ditches 118 and 160. The subsoil was a very heavy London clay with natural seams of gravel.

Buildings: Located on the small boulder clay plateau overlooking the Stebbing Brook valley within Field I were two buildings. Building A is post-built and has been interpreted as a kitchen on the basis of the presence of two hearths within it. During this period it is probable that A also functioned as the main dwelling-

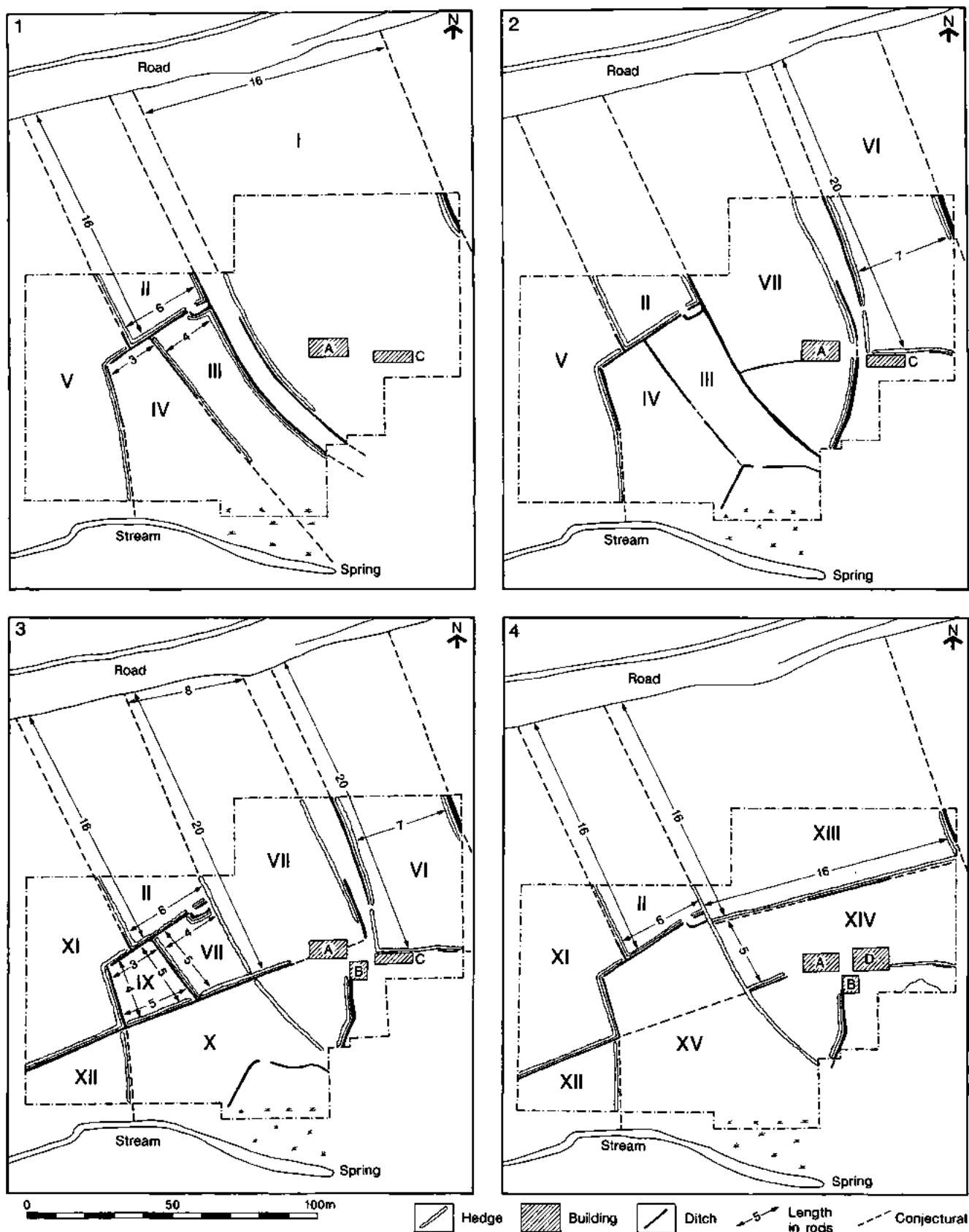


Fig. 26 Development of the site in the medieval period.

house, though it is possible that some of the features that preceded Building B represent another structure belonging to this phase. Building C was identified on the ground by shallow gullies, possibly for holding sleeper-beams or panels of wattle. It has been interpreted as an open-fronted byre or shed.

Phase 2

Field-system: Phase 2 dated to the late twelfth to early thirteenth centuries (Fig. 26.2). Field I was split in half by the creation of a new trackway running directly from Stane Street to the buildings; this cut the original trackway at its southern end putting it out of use. The new trackway ran along a line of naturally occurring gravel, bordered by ditches 3 and 6. The trackway was approximately 5m wide.

The two new fields (VI and VII) created by the division of Field I, were long and narrow, and ran probably from the buildings to the road. Field VI was 35m wide and thought to be 100m long, whilst Field VII was 40m wide and 100m long.

From this period, the area to the south of the buildings seems to have been delineated from the remainder of the field-system, forming two small enclosures, separated by ditch 16. This area was probably the *messuage*, containing all the ancillary activities such as cess-pits, stock yard and midden. The remainder of the field-system stayed the same.

Buildings: Buildings A and C continued in use; the eaves-drip gully for Building A may have been dug in this period.

Phase 3

Field-system: In the early to mid-thirteenth century (Fig. 26.3), substantial changes were made to the farm layout. Ditch 16 was back-filled along its northern half and re-cut as ditch 42 some 4 metres to the west.

Ditch 43 ran across the western half of the excavated area in a north-east south-west axis. It cut Fields III and IV in half forming three smaller fields (VIII, IX and X). Fields VIII and IX were very small, being approximately 25m long and 20m wide. They may have been used as paddocks. Field X is different in that there is evidence that it was used for a horticultural purpose. The sub-soil in this area was primarily a very loose sand or a friable clayey silt. Into this were dug planting-beds filled with a mix of re-deposited peat and cess. A number of features that might be tree-holes were also excavated, suggesting a possible orchard also in this area.

Ditch 43 also cut Field V into two (Fields XI and XII).

Buildings: Building B was erected beside Building A and Building C, its eastern foundations resting on the back-filled ditch 16. There is some evidence that there

might have been an earlier structure beneath Building B, but the later features have all but eradicated it. Building B was identified on the ground by shallow gullies, probably for holding sleeper-beams. The presence of daub pieces in the gully fill suggests that the walls were made of panels of wattle and daub. The midden appears to have accumulated during this period against the back-wall of Building B. The function of Building B is unclear but it could be either the dwelling-house or a store. The separation of dwelling-house and kitchen was common in the medieval period, however most examples are from tenements of a higher social status than ordinary villagers, so if this interpretation is correct it suggests that whilst Stebbingford Farm was not of high social status it was not of the lowest status either.

Phase 4

Field-system: The final phase of occupation was during the late thirteenth to mid-fourteenth century (Fig. 26.4). Ditch 10 cut across the trackway built in Phase 2, effectively putting it out of action. Fields VI and VII were combined to form one large field (XIII), 80m square, and one narrow strip field (XIV), 80m long and 25m wide. How the occupation area was reached is unclear; possibly there was a track along the present day field-boundary from Peets Lane to the east.

The horticultural area was expanded into Fields VII and IX, cutting the internal field boundaries.

Ditch 16 was re-cut on a dog-leg plan by ditch 42, which also obliterated the presumed western wall of Building B.

Buildings: Building B may well have been demolished during this period; certainly the southernmost room was demolished with the digging of ditch 42.

It also appears that Building C may well have been also demolished with the digging of the cellar of Building D. Building D is represented on the ground by a large rectangular cellar, 1.2m deep, with traces of wooden shuttering and a gravelled floor. What superstructure was erected over this is unknown, but it must at least have been roofed and may have had an entire building erected above it. The southern wall of Building D obliterates the back-wall of Building C, it is however possible that the wall of the new building formed an alternative back-wall to Building C. Building A and Building D are on the same alignment and it is possible that the new structure of Building D was an additional wing added to Building A. Alternatively it may have been an entirely separate structure. In either case it probably replaced Building B.

Abandonment

Demonstrable occupation within the excavated area ended in the mid-fourteenth century for unknown reasons. This period coincides with the various visitations of the Black Death, which killed approximately one-



third of the local population (Poos 1991). Whether the inhabitants of Stebbingford succumbed to this disease, to famine and murrain, or whether they simply moved elsewhere is unclear. The pottery, faunal and molluscan evidence suggests that the site was already in decline by the early fourteenth century; against the finds evidence must however be set the fact that a replacement building (Building D) was erected during the final phase of occupation.

Post-medieval period

What happened in the centuries following abandonment is unclear. It is known from the documentary records that the land was again under cultivation by 1562. By 1790 Stebbingford Farm house stood next to the road in the valley bottom. The fields where the twelfth-fourteenth century farm lay, had been re-modelled. The field-names record Hilly Field, Middle Common and Root Grounds as being the fields covering the area where the site once stood. The excavation revealed these boundaries and a number of minor features dating to the eighteenth to twentieth centuries. The land is currently under experimental arable cultivation for Dalgety Seeds.

Interpretation

Apart from Rahtz's excavations at the royal hunting-lodge at Writtle, which was of course a totally different form of site, Stebbingford is the largest and most complete excavation undertaken to date on a medieval rural settlement in Essex. As such, it allows us to undertake a degree of interpretation as discussed below. (An artist's reconstruction is shown in Plate I).

A degree of deliberate planning went into the layout of the farm. This layout is dominated by the geology and contours of the area, and by the presence of Stane Street to the north and the Stebbing Brook to the west. The field boundaries hug the contours or run at right-angles to them, thus making use of the lie of the land as an aid to drainage and ensuring that ploughing runs parallel to the contours rather than up and down hill. The fields themselves enclose specific soil-types and aspects, this is most noticeable in fields III and IV (the horticultural area) which are on a south-facing slope on the lightest soils, and field V which comprises the steepest slope and the heaviest and most difficult subsoil. Within these constraints the medieval inhabitants laid out a field-system based on multiples of 5m. Within Essex two sizes of medieval rod appear to have been in use, one measuring 4.65m and the other 5.03m (Ferne 1991; Huggins 1991). It would appear in the case of Stebbingford that the field-system was based on the 5.03m rod measurement.

The site layout was not however static with four phases of development, involving the expansion and sub-division of fields, the moving of the trackway and the demolition and construction of buildings, finally

culminating in the apparent abandonment of the site.

The morphology of the farm, particularly of the field-system gives some indication of the site economy. It is probable that the long, narrow fields leading up to the road-edge were being used for arable agriculture. This would equate with the field plans from other parts of the country (Muir and Muir 1989). The environmental evidence shows that wheat, barley, rye and oats were all being grown, with wheat the most prominent cereal by far. Other cultivated or edible plants included peas, field bean, orache (which was an early form of spinach), fat hen, elderberry, bramble, raspberry, pansy and a single grain of possible grape pollen. The weeds recovered are typical of Essex clay soils.

What was being cultivated in the horticultural area is uncertain, but it is possible that the non-cereal crops derive from this area. What is clear is that purpose-built planting beds were dug and filled with a peat/cess mix; numerous tree-holes were also found. On the basis of comparison with other medieval gardens and records, it is probable that it grew a range of fruit, vegetables and herbs, as well as flowers selected for their herbal or medicinal qualities as well as their appearance (Harvey 1981; McLean 1981). It is not known whether the possible grape pollen was grown on site or whether it was imported; grapes were grown in medieval England for eating, wine and verjuice (vinegar). The Stebbingford planting beds differ from those depicted in medieval illustrations in that they are not square or rectangular but are instead 'banana-shaped' in plan, curving around the contours of the slope.

Field V which lay on both the London Clay and a pronounced slope was most probably used as rough pasture; certainly the current farm manager says that the land is hard to cultivate and the crop very poor from this area (Leitch pers. comm.). The smaller paddock-sized fields may also have been in use for stock management. Building C which has been interpreted as an open-fronted byre also indicates that farm animals were kept. Beyond the limits of the excavation itself, the valley floor to the west would have been prone to seasonal inundations (despite having been drained this century, it flooded again during the winter of 1993). It seems probable that this area functioned as water meadow in the medieval period (Greig 1988); it is marked as meadow on the 1790 estate map.

The faunal evidence shows that all of the main domesticated species were represented in the inhabitant's diet (cattle, pig and sheep/goat). Other species recovered included horse, dog, cat, goose, chicken, deer and fish. There is evidence for butchery and filleting of the meat; which may well have taken place on site. Marine mollusca, principally oysters, were also eaten, but they do not appear to have formed a major component of the diet.

The pottery evidence consisted largely of cooking-pots, which were used for both the storage and cooking of food. Amongst the pottery was a perforated base sherd, possibly from a perforated bowl or cheese press.

Further indication that cheese may have been made on site is given by the presence of a number of wide shallow bowls which appear to have had a gentle heat applied, possibly for the warming of milk. A jug containing a white residue, possibly urine, suggests use either as a male urinal or as a storage vessel for that liquid. Urine is used in various manufacturing processes including dyeing, tanning or bleaching, as well as for medicinal purposes. Residue analysis also suggests that a coarse-ware jug was used for the storage of wine and had a secondary use involving salt water.

The inhabitants of Stebbingford must have produced a sufficient surplus in their agricultural produce to sell or exchange for the pottery, wine and the shellfish. The presence of several fine-ware jugs and the elaborately decorated curfew, as well as the distinction between kitchen and dwelling house, indicates that the inhabitants were of a status and financial standing above the most basic standard of living, and had aspirations towards the finer things of life.

THE SITE WITHIN A WIDER CONTEXT

The local landscape and economy

The Domesday book is the primary source of information about the local economy and settlement of the area around Stebbingford.

The Domesday settlement of Horstedafort has been tentatively equated with Stebbingford. It consisted of a holding of 15 acres with a land-owner (Godric 1066; Adam 1086) and 5 small-holders, the land was primarily under arable cultivation but with some woodland and meadow. The excavation found no trace of any Saxo-Norman settlement, with the earliest occupation being dated to the mid-twelfth century. The Domesday settlement must therefore have been located either further up or down the slope.

Felsted *vill* is recorded in the Domesday Book (Rumble 1983, 15.1, 72.2, 73.1). It was divided into three, belonging to Earl Algar, Wulfsi and a 'free man' in 1066. By 1086 it belonged to the Church of the Holy Trinity in Caen, Roger God-Save-Ladies and Gilbert son of Solomon. It covered a total area of approximately 600 acres. There was always enough woodland to sustain 650 pigs, 58 acres of meadow and 2 mills. Stebbing *vill* (Rumble 1983, 29.2, 32.20) belonged to Siward in 1066, and to Ranulf Peverel and Henry of Ferrers in 1086. It covered an area of approximately 660 acres in total. There was always enough woodland to sustain 750 pigs, 33 acres of meadow and two mills. By 1086, someone had also planted two and a half *arpents* of grape-vines, this is of particular interest because of the presence of possible grape pollen from the excavation, as well as the evidence for the storage of wine.

The documented evidence for the Saxo-Norman

period in the environs of Stebbingford illustrates a settled agricultural landscape, largely arable but with some woodland and meadow. In the later medieval period the landscape in Essex was one of small villages and market towns with isolated farms and farming hamlets, the classic Midland feudal pattern of the village open-field system appearing only in the extreme north-west corner of the county around Saffron Walden (Rackham 1986). The agriculture of the Stebbingford area of north-west Essex was primarily arable with subsidiary animal raising, although the precise proportions were of course dependent on local topography (Poos 1991). In rural Essex at that time there were three major occupational categories; agriculturalists (25%), paid labourers (52%) and craftsmen/retailers (23%), the latter being dominated by the textile-industry. Hinckford Hundred, which Stebbingford is in, had 5.5% of its workforce engaged in the textile-industry (Poos 1991).

In 1790, Stebbingford Farm covered 37 acres (ERO D/Cw P62). The area of the excavation itself consisted of 2.5 acres, whilst a minimum assessment of the actual extent of the medieval farm (as illustrated in Fig. 26) is 7 acres in area. Historians have calculated that the minimum area required for a medieval family to survive on agriculture alone was 10-15 acres (Poos 1991). In north-west Essex, one-third of the population held holdings of less than 5 acres. However, in the 1294 manorial rental for Stebbing (BL Add. Roll 66041) out of 42 tenancies, 60% held either a house-site or 0-5 acres, 36% held 5-25 acres, and only 4% held more than 25 acres. Again on this scale Stebbingford fell within the middle-ranking farms.

The question of the inhabitants of Stebbingford's links with the remainder of the world is problematical. They certainly imported pottery that originated from Mill Green, Sible Hedingham and Harlow, as well as oysters from the Colchester area; however, none of these commodities need have been purchased at their place of origin. Sited as it is on the main east-west route through Essex, the inhabitants were certainly ideally placed for travel, either for business or leisure. It is most likely however that the majority of journeys undertaken were within a 10-15 mile radius. This would encompass the two nearest villages, Felsted and Stebbing, and the towns of Braintree and Dunmow. Felsted in the 1381 poll-tax had 165 tax-payers, and a population made up of agriculturalists, labourers and ten different types of craftsmen/retailers including smiths, carpenters and fullers (Poos 1991, 75-7). At that time, it consisted of a market-centre and church with eight surrounding hamlets. Stebbing village had a church, a motte and bailey and again a mixed population of agriculturalists, labourers and craftsmen/retailers. The market towns of Great Dunmow and Braintree were also within easy reach; both had Roman antecedents and were present as settlements in the Domesday Book, but were replanned and granted market status in the beginning of the thirteenth century.

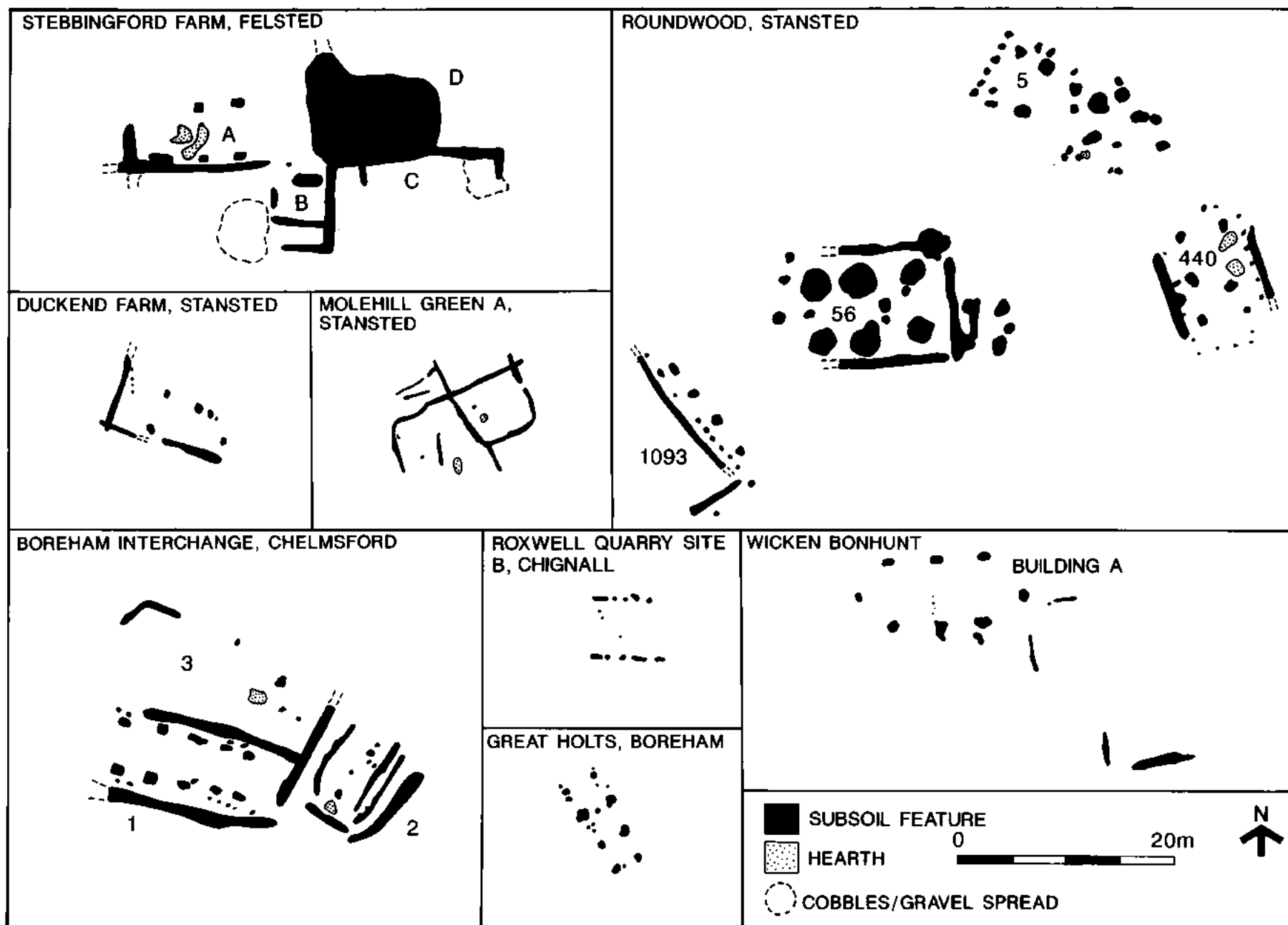


Fig. 27 Comparative plans of timber-framed buildings.

(Eddy and Petchey, 1983). If Stebbingford and Horstedafort are the same place, we know that William de Horstedeford had links with Stisted in 1248 and Godfrey de Horstedeford held land in Bocking in 1285. The possibility of the owners of Stebbingford also holding land elsewhere is of particular interest, in that it indicates that by the end of the thirteenth century, the farm income could have been supplemented from other sources, or indeed have paid for activities not directly relating to the farm.

Comparable Essex buildings (Fig. 27)

Useful comparisons can be drawn between the construction and layout of the four buildings at Stebbingford and those from other medieval sites in Essex. They most closely compare to those from Roundwood site, Stansted Airport and A12 Boreham Interchange site, Boreham, both recent field-projects not yet published.

Roundwood at Stansted Airport (Stansted archive) consisted of four buildings, divided by a series of drainage ditches. Building 56 was the most substantial structure, measuring 16m long by 11m wide, with what appears to have been a lean-to shed on its eastern side. It has been interpreted as either a barn or the hall-house. It was of sleeper-beam and aisle-post construction. Building 440 (14m long by 9.5m wide) was interpreted as the kitchen, containing as it did a total of five hearths and evidence that plant material was processed within the building. The linear gullies defining the long walls of the building contained numerous stake-holes (approximately 55 to each gully) suggesting that they were of wattle construction; much larger aisle posts supported the roof. Only half of building 1093 was extant, the remainder having been destroyed by the modern field ditch. It consisted of shallow linear gullies, and parallel rows of small post-holes and large post-holes. Building 5 was of earthfast posts; it measured 18m long by 7m wide and may have had two rooms, one wider than the other. The pottery dates the site to the second half of the thirteenth century, i.e. broadly contemporary with Stebbingford. It was abandoned at the end of the thirteenth century or beginning of the fourteenth. There is some evidence that the site was deliberately dismantled, particularly with the bigger posts in building 56 which appear to have been dug out. The excavator has postulated that the site was deserted so soon after it was built because of its predilection to flooding. It is possible that the disastrous weather and consequent famine of 1315-22 (Astill and Grant 1988) heralded the end of this particular site. The principal crop represented was wheat, with rye, oats, barley, peas and beans in smaller quantities. There was some evidence of cheese-making (and presumably other dairying activity), this is indicated by the finding of a possible ceramic cheese-strainer and milk-settling dishes.

The Boreham Interchange site (Allen and

Lavender, in prep.), had two, possibly three, houses closely grouped together. The most substantial of these, Building 1, was 13m long by 6m wide, and was post-built with a drainage ditch encircling it. At the end of this, at approximately 90° to it, was a second building (Building 2) 10m long by 6m wide, consisting of gullies (for sleeper-beams or wattle walls) with a central line of posts. It contained a hearth and may have been a kitchen. To the north of these buildings was some indication of a third building (3), suggested by the presence of a large hearth and right-angled gully. Three chimney pots were found on the site, their stratigraphic position suggesting that they come from a building pre-dating those excavated, but no trace of this was found. The site has been provisionally dated to the thirteenth to fourteenth centuries on the basis of the ceramic evidence, and again seems to have been abandoned thereafter.

The similarities between these sites and Stebbingford are obvious. All three sites consist of a self-contained rural unit, with the buildings performing specific functions (kitchen, barn, byre). Essex tenurial documents usually used the term *messuage* or *tenement* to describe the dwelling-house and out-buildings, as well as the site or farmyard in which they stood. Where the out-buildings were listed, there were usually two to five structures including the dwelling-house, these typically included a separate kitchen, as well as barns, stables, brew-houses and granaries (Poos 1991, 74-5). The Stebbingford, Roundwood and A12 Boreham Interchange sites all fit nicely into this pattern.

There are also a number of excavations on medieval rural sites in Essex, producing traces of just a single building (Great Holts, Boreham; Duckend Farm and Molehill Green A, Stansted Airport; Roxwell Quarry, Chignall; Wicken Bonhunt). These are discussed below.

At Great Holts, a single medieval building (9m x 3m) was excavated, formed of 8 large post-holes with a number of smaller post-holes and a possible cross-passage (Germany 1995). The pottery suggests a date between the twelfth to early thirteenth century. The charred crop remains from this site were interpreted by P. Murphy (in Germany 1995) as representing the remnants of a granary fire. The crops represented were wheat, rye, barley and oats, as well as field beans and peas.

The medieval building at Duckend Farm, Stansted, consists of a single structure set within a ditched enclosure (Havis, 1995b). The building is c.12m long by 7m wide of sleeper-beam and post construction. The pottery evidence suggests a mid-twelfth to thirteenth-century date. The building at Molehill Green A, Stansted (Brooks and Wall 1986) was more insubstantial. It consisted of a small D-shaped enclosure, possibly representing an eaves-drip gully around a building, it enclosed an area of 5 x 6m, with an internal hearth. There are two possible lean-to sheds attached to the main structure. The site has been dated to the late thirteenth century.

Roxwell Quarry Site B, consisted of a 5.5 x 6.3m wooden building of post-in-trench construction (Brooks 1992). It has been dated to the eleventh to twelfth centuries, although it must be emphasised that the dating evidence was a single sherd of early medieval shelly ware.

The Wicken Bonhunt building has been interpreted as an aisled hall, 16 x 6m; there is some indication of a doorway on the southern long side and possible internal division. It has been dated to the twelfth to thirteenth century (Wade 1980).

building. The demise of the site at Stebbingford in the mid-fourteenth century is echoed by other excavated examples in Essex. The possible reasons for this apparently widespread phenomenon of desertion are numerous. The famine and wet weather of 1315-22 (Astill and Grant 1988) may have contributed to the abandonment of Roundwood. The Black Death arrived in mid-Essex in 1349, killing approximately one-third of the population (Poos 1991), and it or the disruption caused by it may have accounted for Stebbingford itself. The Peasants Revolt of 1381 was also particular-

Table 28: Comparison of building construction methods

SITE	CONSTRUCTION METHOD					
	Earthfast posts	Beam-slots with internal posts	Beam-slots	Stake-holes with internal posts	Post-in-trench	Cellar
Stebbingford (A)		*				
Stebbingford (B)			*			
Stebbingford (C)			*			
Stebbingford (D)						*
Roundwood (56)		*			*	
Roundwood (440)				*		
Roundwood (1093)		*				
Roundwood (5)	*					
A12 Boreham	*					
A12 Boreham		*				
A12 Boreham			*			
Duckend Farm		*				
Roxwell Quarry					*	
Molehill Green			*			
Great Holts	*					
Wicken Bonhunt	*					

All the buildings were earth-fast timber buildings, with presumed infill of wattle and daub. A variety of means of construction were used (Table 28); beams with internal earthfast posts are the most common form of construction, followed by beams and earthfast posts on their own. It is presumed that the walls were infilled with panels of wattle and daub, as occurs in the later medieval houses still standing. Either thatch or shingles were used for roofing, as no roof-tiles have been found at any of these sites. Stebbingford is unusual in having a cellar dug in its final building phase.

Conclusions

In summary, Stebbingford represents a typical northern Essex farmstead, of middle status and of mixed agriculture. Its building-forms are similar, although not identical to those from other excavated sites from the area, the exception being the cellar of Building D which is to date unique for a rural medieval Essex

ly active in the north-west Essex area, and may have contributed to the dislocation and abandonment of other rural sites.

ACKNOWLEDGEMENTS

The excavation and publication were funded by the Highways Agency. English Heritage funded the field-walking and trial trenching. Thanks are also due to the Essex County Council Highways Department especially Brian Hoath and his colleagues for co-ordinating the work. The excavation team consisted of the author as Project Manager, S. Foreman was Site Supervisor, the site assistants were N. Armour, R. Clarke, T. Eccles, M. Edwards, D. Gadd, S. Gale, E. Gutterman, M. Hall, E. Hepple, L. O'Sullivan, D. Smith and D. Stump, V.W. Foo was the Site Surveyor. The specialist contributions are by D. Andrews, O. Bedwin, N. Brown, N. de Silva, K. Horsley, H. Major, P. Murphy,

K. Reidy, M. Robinson, P. Ryan, A. Wade, H. Walker, P. Wiltshire and J. Winder. The reconstruction painting is by Peter Froste, the plans and pottery illustrations are by I. Bell and the small finds illustrations are by N. Nethercoat. The site was stripped by D. Driver and Son. Finally and most importantly, thanks are due to the farm manager Mr Leitch and to the landowner Dalgety Seeds for their co-operation and practical assistance.

The Essex Society for Archaeology and History wishes to thank Peter Froste for kind permission to use his colour reconstruction of the site, the copyright of which remains with him.

Author: Maria Medlycott, Essex County Council Planning Department, County Hall, Chelmsford CM1 1LF.

Bibliography

Allen P.T. and Lavender N. J	forthcoming	"A medieval site at Boreham Interchange, Chelmsford". <i>Essex Archaeology Hist.</i>	Collard, A.O	1902	<i>The Oyster and Dredgers of Whitstable</i> , J. Collard: London.
Astill, G. and Grant, A.	1988	"The medieval Countryside: Efficiency, Progress and Change", in Astill, G. and Grant, A. (eds.) <i>The Countryside of Medieval England</i> , Blackwell: Oxford	Coppack, G.	1980	"Medieval and post-medieval pottery", in Christie, P.M. and Coad, J.G., "Excavations at Denny Abbey", <i>Archaeol. J.</i> , 137, 223-47
Bell, A.	1921	"British Oysters Past and Present", <i>Essex Naturalist</i> , 19, 183-221 and 300-302.	Cunningham, C.M.	1982	"The medieval and post-medieval pottery", in Drury P.J., "Aspects of the origin and development of Colchester Castle", <i>Antiq. J.</i> 139, 358-80
Benham, H.	1993	<i>Essex Gold: The fortunes of the Essex Oysterman</i> , Essex Record Office, Chelmsford.	Cunningham, C.M., 1983 P.G. and N.C. Farmer		"A horse and rider aquamanile from Harwich, and the significance of Scarborough ware in Essex", <i>Essex Archaeol. Hist.</i> 15, 54-67
Bennett, K.D., Simpson, W.D. and Peglar, S.M.	1990	"Fire and Man in Post-Glacial Woodlands of Eastern England", <i>Journal of Archaeological Science</i> 17, 1-8	Cunningham, C.M.	1984	"Summary of the pottery produced in the kilns", in Crummy, P., <i>Excavations at Lion Walk, Balmerne Lane and Middleborough, Colchester, Essex</i> , Colchester Archaeol. Rep. 3, 186-9
Bennett, K.D., Whittington, G. and Edwards, K.J.	1994	"Recent plant nomenclatural changes and pollen morphology in the British Isles", <i>Quaternary Newsletter</i> 73: 1-6: Quaternary Research Association	Cunningham, C.M.	1985a	"A typology for post-Roman pottery in Essex", in Cunningham, C.M. and Drury, P.J., <i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> , CBA Res. Rep. 54, 1-16
Biddle, M.	1990	<i>Object and economy in Medieval Winchester</i> , Oxford	Cunningham, C.M.	1985b	"The pottery", in Cunningham, C.M. and Drury, P.J., <i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> , CBA Res. Rep. 54, 63-78
Blair, W.J.	1988	"Minster churches in the landscape", in D. Hooke (ed.), <i>Anglo-Saxon settlements</i> . Oxford: Blackwell	Brooks, C.M.	1978-80	"Medieval pottery from the kiln site at Colstoun, E. Lothian" <i>Proc. Soc. Antiq. Scot.</i> 110, 364-403
Brooks, H.	1989	"The Stansted Project: A report on the second and third years work", <i>Essex J.</i> 24, 1, 6-10	Davis, S.J.M.	1987	<i>The Archaeology of Animal Bones</i> , Batsford
Brooks, H.	1992	"Two rural medieval sites in Chignall St. James: excavations 1989", <i>Essex Archaeol. Hist.</i> , 23, 39-51	Dimbleby, G.W.	1985	<i>The Palynology of Archaeological Sites</i> , Academic Press: London
Brooks, H. and Wall, W.	1986	<i>The Stansted Project: Fieldwalking and excavations at Stansted Airport</i> , First Interim Report, ECC internal report	Dowsett, D.C.	1975	<i>Dunmow through the Ages</i> , Letchworth
Brown, N.	1988	"A late Bronze Age settlement on the boulder clay plateau: excavations at Broad Green, 1986", <i>Essex Archaeol. Hist.</i> , 19, 7-15	Drewett, P.L.	1975	"Excavations at Hadleigh Castle, Essex", <i>J. Brit. Archaeol. Ass.</i> , ser 3, 38, 90-154
Buckley, D.G. (ed.)	1980	<i>Archaeology in Essex to AD 1500</i> , London: CBA Res. Rep. 34	Drury, P.J.	1993	"The later Saxon, medieval and post-medieval pottery", in Rodwell, W.J. and Rodwell, K.A., <i>Rivenhall: Investigations of a villa, church and village, 1950-1977</i> , Chelmsford Archaeol. Trust Rep. 4.2, Counc. Brit. Archaeol. Rep. 80, 78-95
Buckley, D.G. and Hedges, J.D.	1987	<i>The Bronze Age and Saxon settlements at Springfield Lyons, Essex: an interim report</i> , Chelmsford: ECC Occasional Paper 5			
Buckley, V. (ed.)	1990	<i>Burnt Offerings, International Contributions to Burnt Mound Archaeology</i> , Wordwell Ltd: Dublin			

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

Dunning, G.C.	1977	"The Chimney Pots", in Williams, F. <i>Excavations at Pleshey Castle</i> Brit. Archaeol. Rep. 42, 124-143	Hooke, D. (ed.)	1988	<i>Anglo-Saxon settlements</i> , Blackwell:Oxford
Dymond, D.	1968	"The Suffolk landscape", in L. Munby (ed.), <i>East Anglian Studies</i> , Cambridge: Heffer, 17-47	Huggins, P.J.	1991	"Anglo-Saxon Timber Building Measurements: Recent Results", <i>Medieval Archaeol.</i> 35, 6-28
Eddy, M. and Petchey, M.	1983	<i>Historic Towns in Essex: An Archaeological Survey</i> , Essex County Council	Huggins, P.J.	1976	"The excavation of an eleventh-century Viking hall and fourteenth-century rooms at Waltham Abbey, Essex, 1969-71", <i>Medieval Archaeol.</i> 20, 75-133
Evans, J.G.	1972	<i>Land snails in Archaeology</i> , Seminar Press: London	Huntley, B.	1993	"Rapid early-Holocene migration and high abundance of hazel (<i>Corylus avellana</i> L.): alternative hypotheses", in Chambers, F.M. (ed.) <i>Climate Change and Human Impact on the Landscape</i> , Chapman and Hall: London, 205-215
Eyton, T.C.	1858	<i>A History of the Oyster and the Oyster Fisheries</i> , London, Van Voorst.	Hurst, J.G.	1956	"Saxo-Norman pottery in East Anglia", <i>Proc. Cambridge Antiq. Soc.</i> 49, 50-69
Farmer, P.G. and Farmer, N.C.	1982	"Symposium on Scarborough ware: summary and conclusions", <i>Medieval Ceramics</i> , 6, 100-110	Hurst J.G.	1976	"The pottery", in Wilson, D.M. (ed.) <i>The Archaeology of Anglo-Saxon England</i> , 283-348
Fernie, E.C.	1991	"Anglo-Saxon Lengths and the Evidence of the Building", <i>Medieval Archaeol.</i> 35, 1-5	Kerney, M.P. and Cameron, D.	1979	<i>A field guide to the land snails of Britain and north-west Europe</i> , Collins: London
Foreman, S.	forthcoming	"A medieval settlement site at Buxted Chicken Factory, Boreham", <i>Essex Archaeol. Hist. Great Holts, Boreham, Essex; Phase II Assessment Report</i> , ECC Int. Pub.	Laver, H.	1916	<i>The Colchester Oyster Fishery: Its antiquity and position, method of working and the quality and safety of its products</i> , Colchester.
Germany, M.	1995	"Pollen analysis and forest history in England and Wales", <i>New Phytologist</i> , 39: 370-400	Lewis, J.S.C., Wiltshire, P.E.J. and Macphail, R.	1992	"A late Devensian/Early Flandrian site at Three Ways Wharf, Uxbridge: environmental implications", in Needham, S. and Macklin, M.G. (eds), <i>Alluvial Archaeology in Britain</i> , Oxbow Monograph 27
Godwin, H.	1940	<i>History of the British Flora</i> (2nd edn.), Cambridge University Press:Cambridge	Luff, R.M.	1994	<i>Animal Remains in Archaeology</i> , Shire Archaeology
Godwin, H.	1975	<i>The Mansio and other sites in the south-eastern sector of Caesarmagus: the Roman pottery</i> , CBA Res. Rep. 62	Macdonald, G.M., Larsen, C.P.S., Szeicz, J.M and Moser, K.A.	1991	"The reconstruction of Boreal forest fire history from lake sediments: a comparison of charcoal, pollen, sedimentological and geochemical indices", <i>Quaternary Science Reviews</i> 10, 53-71
Going, C.J.	1987	"The countryside around Great Dunmow", in N.P. Wickenden (ed) <i>Excavations at Great Dunmow, Essex</i> , E. Anglian Archaeol. 41, 86-8	McCarthy, M.R. and Brooks, C.M.	1988	<i>Medieval pottery in Britain, AD 900-1600</i> , Leicester University Press
Goodall, I. H.	1990	"Locks and keys", in Biddle, M. <i>Object and economy in Medieval Winchester</i> , Oxford, 1001-1036	McLean, T.	1981	<i>Medieval English Gardens</i> , Collins: London
Greig, J.	1988	"Plant resources" in Astill, G. and Grant, A., <i>The Countryside of Medieval England</i> , Blackwell: Oxford	Meddens, F.M. and Redknap, M.	1992	"A group of kiln waste from Harding's Farm, Mill Green, Essex", <i>Medieval ceramics</i> , 11-43
Greig, J.	1994	"Pollen analyses of latrine fills from archaeological sites in Britain; results and future potential", in Davis, K.O. (ed.), <i>Aspects of archaeological palynology: methodology and applications</i> , American Association of Stratigraphic Palynologists, Contributions Series 29, 101-114	Medlycott, M.	1990	<i>The A120 Project: Fieldwalking Survey</i> , ECC Int. Pub.
Hagen, A.	1995	<i>A Second Handbook of Anglo-Saxon Food and Drink: Production and Distribution</i> , Hockwold cum Wilton: Anglo-Saxon Books	Medlycott, M.	1992	<i>A120 Trunk Road: Archaeological Evaluations, 1991-1992</i> , ECC Int. Pub.
Harvey, J.	1981	<i>Medieval Gardens</i> , Batsford: London	Monaghan, J.	1987	<i>Upchurch and Thameside Roman Pottery: A ceramic typology for northern Kent, first to third centuries AD</i> , Brit. Archaeol. Rep. 173
Hindle, B.P.	1982	<i>Medieval Roads</i> , Aylesbury: Shire Archaeology	Moore, P.D., Webb, J.A. and Collinson, M.E.	1991	<i>Pollen analysis</i> 2nd edn. Blackwell Scientific Publications: Oxford
			Muir, R. and N.	1989	<i>Fields</i> , Macmillan

ESSEX ARCHAEOLOGY AND HISTORY

- Murphy, P. 1990 "Stansted Airport, Essex: carbonised plant remains", *Ancient Monuments Laboratory Report* 129/90. English Heritage: London
- Newton, E.F. and Bibbings, E., 1960 "Seventeenth-century pottery sites at Harlow, Essex", *Trans. Essex Archaeol. Soc.* 25, (2nd series) 358-77
- Page, F.M. 1934 *The Estates of Crowland Abbey*, London
- Payne-Gallwey, Sir R. 1958 *The Crossbow*, London
- Pearce, J.E., Vince A.G. and White, R. 1982 "A dated type-series of London medieval pottery part one: Mill Green ware", *Trans London Middlesex Archaeol. Soc.*, 33, 266-298
- Pearce, J.E., Vince A.G. and Jenner, M.A. 1985 "A dated type-series of London medieval pottery part 2: London-type", *Trans London Middlesex Archaeol. Soc.*, special paper no. 6
- Pearce, J.E. and Vince A.G. 1988 "A date type-series of London medieval pottery part 4: Surrey Whitewares", *Trans London Middlesex Archaeol. Soc.*, special paper no. 10
- Pennington, W. 1970 "Vegetation history in the north-west of England: a regional synthesis" in Walker, D. and West, R.G. (eds), *Studies in the vegetational history of the British Isles*, 41-79, Cambridge Univ. Press: Cambridge
- Poole, C. 1984 "Objects of Baked Clay", in Cunliffe, B. *Danebury. Vol. 2: the excavations 1969-1978: the finds* CBA Res. Rep. 52, 398-407
- Poos, L.R. 1991 *A rural society after the Black Death: Essex 1350-1525*, Cambridge Studies in Population, Economy and Society in Past Time 18, Cambridge Univ. Press, Cambridge
- Rackham, B. 1972 *English Medieval Pottery*, London: Faber and Faber
- Rackham, J. 1994 *Animal Bones*, British Museum Press
- Rackham, O. 1986 *History of the Countryside*, Dent: London
- Rahtz, P.A. 1969 *Excavations at King John's Hunting Lodge, Writtle, Essex, 1955-57*, Soc. Medieval Archaeol. Mono. 3, 91-111
- Rahtz, P.A. 1976 "Buildings and rural settlement", in D.M. Wilson (ed.) *The Archaeology of Anglo-Saxon England*, 61-63. Cambridge: University Press
- Reaney, P.H. 1935 *The place-names of Essex*, Cambridge: University Press
- Rumble, A. (ed.) 1983 *Domesday Book: Vol. 32, Essex*, Chichester: Phillimore
- Salaman, R.A. 1986 *Dictionary of leather-working tools c. 1700-1950: and the tools of allied trades*, London
- Schmid, E. 1972 *Atlas of Animal Bones! Knochenatlas*, Elsevier
- Schweingruber, F. 1978 *Microscopic wood anatomy*, F. Fluck-Wirth: Teufen
- Smith, A.G. 1984 "Newferry and the Boreal-Atlantic Transition", *New Phytologist* 98, 35-55
- Sparkes, I.G. 1976 *Old Horseshoes*, Aylesbury
- Stace, C. 1991 *New flora of the British Isles*, Cambridge University Press: Cambridge
- Steer, F.W. 1969 *Farm and Cottage Inventories of Mid-Essex 1635 to 1749*, Chichester
- Taylor, C. 1983 *Village and Farmstead*. London: George Philip
- Vince, A.G. and Jenner, A. 1991 "The Saxon and early medieval pottery of London", in Vince, A. (ed.) *Aspects of Saxon and Norman London 2: Finds and Environmental Evidence*, London and Middlesex Archaeol. Soc. Special Paper 12, 19-119
- Wade, K. 1980 "A settlement site at Bonhunt Farm, Wicken Bonhunt, Essex", in D.G. Buckley (ed.), *Archaeology in Essex to AD 1500*, London: C.B.A. Res. Rep. 34, 96-102
- Walker, H. 1991a "The pottery", in Andrews, D., "Pentlow Hall", *Essex Archaeol. Hist.* 22, 178-9
- Walker, H. 1991b "Medieval pottery", in Priddy, D., "Medieval pottery from Maplecroft, Sudbury Road, Castle Hedingham", *Essex Archaeol. Hist.* 22, 175-6
- Walker, H. 1992 "Brooks Wood, Sible Hedingham, Southey Green" in Bennett, A. "Work of the Essex County Council Archaeology Section 1991", *Essex Archaeol. Hist.* 23, 94
- Walker, H. 1995 "The Medieval and Post-Medieval pottery", in Wymer, J.J. and Brown, N.R., *Excavations at North Shoebury; Settlement and Economy in South-East Essex*, E. Anglian Archaeol. Rep. 75
- Walker, H. forthcoming a "The medieval and post-medieval pottery", in Brooks, H. and Havis, R., *Excavations at Stansted Airport*, E. Anglian Archaeol. Rep. 00
- Walker, H. forthcoming b "The medieval and post-medieval pottery", in Harris, A.P. and Isserlin, R.M.J. *Excavations in Medieval and Post-Medieval Chelmsford*, E. Anglian Archaeol.
- Walker, W. 1981 *Essex Markets and Fairs*, Essex Record Office Publication No. 83
- Ward Perkins, J.B. 1940 *Medieval Catalogue*, London Museum
- Warner, R. 1987 *Greens, commons and clayland colonisation: the origins and development of green-side settlement in East Suffolk*, Leicester: University Press.
- Williams, F.W. 1977 *Pleshey Castle, Essex: Excavations in the Bailey, 1959-63*, Brit. Archaeol. Rep. 42
- Williamson, T. 1986 "The development of settlement

STEBBINGFORD; A MEDIEVAL FARM AND ITS LANDSCAPE

Williamson, T.	1988	in north-west Essex. The results of a recent field survey", <i>Essex Archaeol. Hist.</i> 17, 120-32 "Settlement chronology and regional landscapes: The evidence from the claylands of East Anglia and Essex", in D. Hooke (ed.), <i>Anglo-Saxon Settlements</i> , Oxford:Blackwell, 153-75	Wiltshire, P.E.J. and Edwards, K.J.	1993	"Mesolithic, early Neolithic, and later prehistoric impacts on vegetation at a riverine site in Derbyshire, England", in Chambers, F.M. (ed.): <i>Climate change and human impact on the environment</i> , Chapman and Hall, London, 157-68
Wiltshire, P.E.J.	1989	"Interim report on the micro analysis of buried sediments associated with Palaeolithic and Mesolithic artefacts at Uxbridge, Middlesex", <i>Ancient Monuments Laboratory Report 18/89</i> English Heritage	Wiltshire, P.E.J., Edwards, K.J. and Bond, S.	1994	"Microbially-derived metallic sulphide spherules, pollen and the waterlogging of archaeological sites" in Davis, O.K. (ed.) <i>Aspects of archaeological palynology: methodology and applications</i> , American Association of Stratigraphic Palynologists, Contributions Series 29, 207-221

The Society is extremely grateful to the Highways Agency for a generous grant towards the cost of publishing this article.

Further light on the design of the Great Barns at Cressing Temple

by Adrian Gibson

Introduction

My previous paper in this journal (Gibson 1994) on the design of the Cressing Temple barns has aroused considerable interest. Of the number of people who have kindly offered me information and ideas, Laurie Smith of Powys has made a significant suggestion that demonstrates a deeper level of integration and precision in the designs, which he presents in the following paper in this journal.

I am most grateful to him for pointing out that the plan of both the Cressing Barns can be obtained from a row of intersecting circles. This second article modifies some of the assumptions of my first paper, which could be said to have been published prematurely. However it was the existence of that first account that stimulated discussion with Mr Smith, demonstrating the value of publishing an idea to reach a wider audience with a broad range of knowledge and experience, individuals of whom are often working in isolation.

This article is a conflation of Laurie Smith's ideas with developments of my own particularly with regard to the derivation of section designs.

My previous article demonstrated that :-

1. Multiples of the medieval rod (pole or perch) occur in the basic measurements.
2. In plan, the rectangle based on a 90°, 60°, 30° triangle was used as the proportion of the two bay unit of the barns' naves.
3. The overall lengths of the barns were adjusted to be an exact number of rods.
4. The sections across the principal trusses were based on equilateral triangles with simple subdivisions of the rod used to determine heights above ground of horizontal members.

It is now clear that by deriving the plans of both barns from intersecting circles, the use of a series of individually measured lengths is eliminated as only one original measurement is needed – the radius of the first circle. The rest follows by repetition using straight edge and compass (or in construction, pegged and rotated cords). Even the total lengths of the barns, apparently straightforward in the Barley Barn, and slightly more elaborate in the Wheat Barn, 'drop out' from simple geometry.

The cross-sections of the barns can also be derived from the plan. In both barns the plans are such that the two outer bays at each end will accommodate an equilateral triangle, that is, the basic figure from which the cross-sections are derived. This is obvious in the Barley Barn but more subtle in the Wheat Barn. The construction of heights of tie-beams, aisle-ties and collars can be determined by compass construction to give the distances already shown to be fractions of the rod system. There is room for refinement in our interpretation. I demonstrate here, compass constructions that may have been used, though there are possible alternatives. What is clear is that a compass method was used rather than straight measured heights as suggested in my previous paper.

The great advantage of the use of strict geometry as opposed to a system based on measurements, whether on a parchment, a tracing floor or in a framing yard, is the precision of intersecting circles and arcs. Also, the design can be done at any size based upon the module used for the first circle radius. This module can then be expanded to whatever size is appropriate for the actual building. However, random modules were not used, as the radii of the construction circles were based on the rod (16½ feet). The Barley Barn uses a basic module radius of 1½ rods but the Wheat Barn is related to the rod unit indirectly by having a radius of half the diagonal of a 2 rod square. It is therefore not surprising that the resulting measurements of the barns are sometimes easily seen to be multiples or divisions of the rod. Others though are more obscure and may be irrational numbers because they are derived from diagonals and circle intersections. Only by re-creating the geometry involved can the system of design be seen to be totally logical yet, paradoxically, highly sophisticated and simple to apply.

That such a strict geometrically integrated system was used in barn design seems to demonstrate that in the medieval period the fundamental principles of design as stated by Vitruvius, the Roman architect, were very much in use, not just in church architecture but in large functional buildings commissioned by the religious orders. In Book 1, Chapter 2 of the *Ten Books on Architecture*, Vitruvius writes '*Eurhythmy is beauty and fitness in the adjustment of the members. This is found*

when the members of a work are of a height suited to their breadth, of a breadth suited to their length, and in a word, when they all correspond symmetrically'.

Symmetry, to Vitruvius, does not mean what it does today. He goes on to state 'Symmetry is a proper agreement between the members of the work itself and relation between the different parts and the whole general scheme, in accordance with a certain part selected as standard symmetry may be calculated from the thickness of a column, from a triglyph, or even from a module.'

In the Cressing Temple Barns this is exactly what has been done with great geometrical precision, all measurements and proportions being part of a totally integrated system ultimately based on a circle radius module.

It is little wonder that medieval master designers, whoever they were, usually kept such knowledge to themselves. Certain geometrical principles of design were clearly known to work and innovation would, no doubt, have been a step-by-step process within the constraints of the prescribed tenets. It is likely that the master designers of great barns had a set of geometrical procedures that they knew would produce complete designs of differing proportions. Also, if the constructing module was correctly chosen it would produce plans of exact multiples of rods in length and width, whether desirable for practical or canonical reasons.

Constructing the plans of the barns

The measurement used in the barns was the rod (R)

pole or perch equivalent to $16\frac{1}{2}$ feet or 5.03 metres. For this article I have kept to imperial units as they enable us to comprehend medieval theory and practice. Metres would obscure the argument.

BARLEY BARN (Fig. 1)

1. On a horizontal centre line, construct a circle, radius $1\frac{1}{2}$ R.
2. Within this circle draw a central vertical axis and construct a hexagon with vertices central at top and bottom using simple arcs of same radius.
3. Construct a similar circle alongside, intersecting the original circle through the two hexagon corners each side of the horizontal centre line (centre struck from the hexagon corners)
4. Repeat with another circle and hexagon along the row.
5. Draw verticals through the intersections.
6. Construct 3 more similar circles at the half circle intervals with centres lying on the verticals between the intersection points of the first row. Hexagons can be added but are not strictly necessary except for the one finishing the sequence.
7. Add 2 semi-circles at each end using the standard centre points.
8. Draw the barn outline, tangentially through the circle edges and vertically through the terminal hexagon intersection points.
9. Delineate the aisles by drawing 2 horizontals each through the intersection points.

As a result of this construction, each two-bay nave

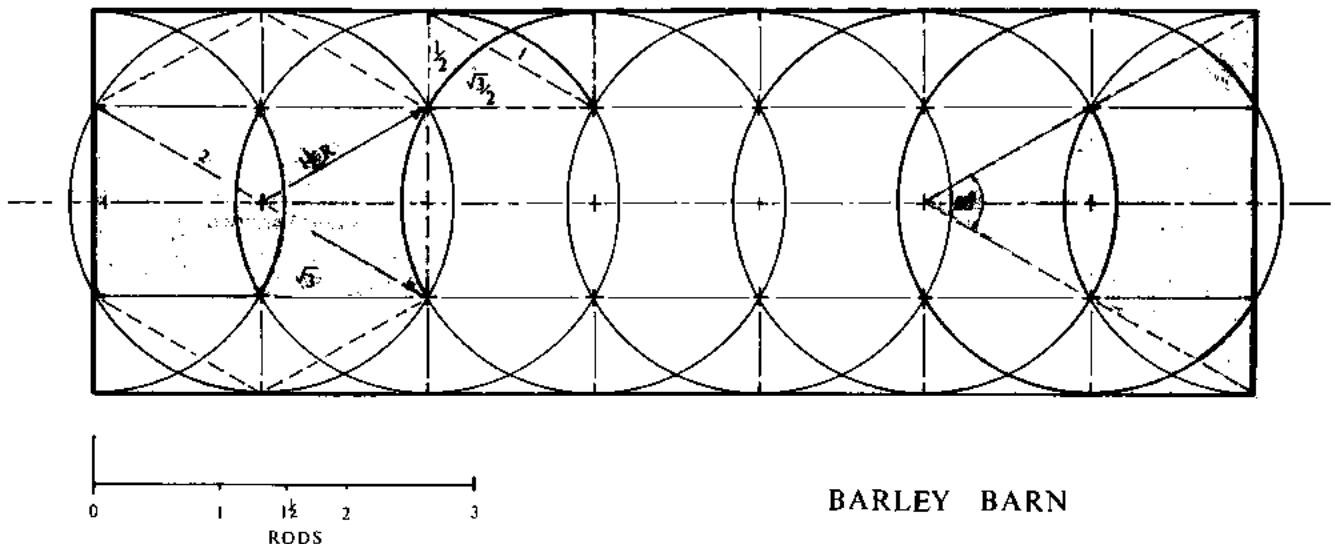


Fig. 1. Barley Barn plan, derived from 6 intersecting circles and 2 half-circles of radius $1\frac{1}{2}$ rods. Shaded areas show, left to right, 2 nave bays of $1:\sqrt{3}$ proportion within an inscribed hexagon, circles intersecting at hexagon sides. 1 aisle bay of similar length:width ratio of double nave bay rectangle, but of half linear size ($\frac{1}{4}$ area), the equilateral triangle upon which the cross-section of the barn can be constructed, itself set upon the outer edge of the terminal hexagon delineating the length of the barn. Barn width is the full circle diameter.

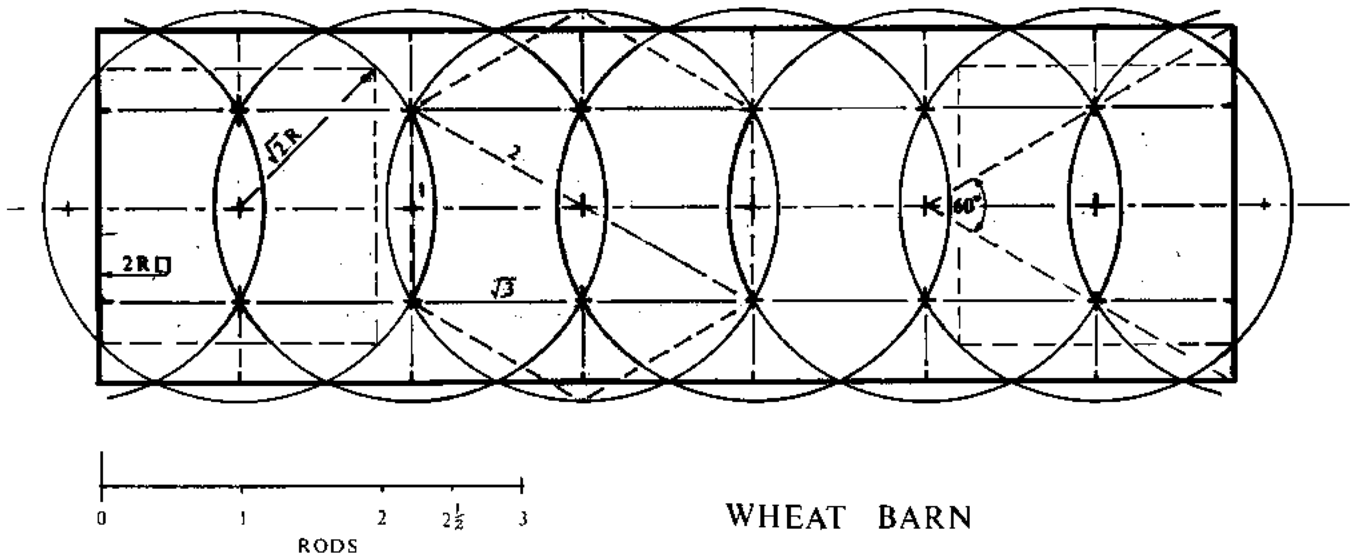


Fig. 2. Wheat barn plan, derived from 6 intersecting circles and 2 half circles of radius $\sqrt{2}$ rods. Shaded areas show, left to right; primary 2 rod square around which the first circle is constructed, inscribed circle hexagon giving circle intersection points and $1:\sqrt{3}$ proportion double nave rectangle, the terminal equilateral triangle upon which the barn cross-section of the barn can be constructed, itself set upon the outer edge of the dashed 2 rod square delineating the length of the barn. The width of the barn is set at the circles' outer intersections.

space will be of $1:\sqrt{3}$ proportion and so will each single side aisle bay. A rectangle of side proportion $1:\sqrt{3}$ is the 'medieval rectangle' identified by Smith in his paper. The barn plan will be 3 rods wide by 9.09 rods long, a close approximation to 3×9 , a 'perfect' proportion.

Wheat Barn (Fig. 2)

1. On a horizontal centre line draw a square of side length $2R$ together with its central vertical axis.
2. Construct the circumscribing circle radius being half the diagonal of the square, equivalent to $\sqrt{2} R$.
3. Within this circle construct a hexagon with vertices at the top and bottom of a line set at right angles to the centre line. (Use simple arcs of same radius as circle.)
4. Construct 2 further circles in a row intersecting at the hexagon corners (as with the Barley Barn). Hexagons can be constructed for clarity.
5. Add intermediate circles and end semi-circles, their centres being obtained by the intersection of the centre line and the sides of the hexagons.
6. Draw the barn outline horizontally through the outer intersection points of the circles (not at the full diameter)
7. Delineate the nave and aisles by 2 lines each through the hexagon/circle intersection points.
8. Set one end of the barn at the outer face of the original square (not hexagon) and repeat for the other end.

As with the Barley Barn, each double bay nave space will be of $1:\sqrt{3}$ proportion except for the 2 end bays which will be 1 rod long precisely and shorter than the rest.

In each of the central bays, the nave plus one single aisle when combined are close to the proportion of a Golden Section, $1:1.618$. The total length of the barn in proportion to the width is very nearly divisible into two Golden Sections, one each side of the centre (already noted, Gibson 1994).

Constructing the cross-sections

Barley Barn (Fig. 3)

As a result of the circle/hexagon design on plan, any two bays together will exactly fit an equilateral triangle, here shown set out at one end in dashed lines. Set vertically, this triangle provides the apex of the barn roof. On the plan, the barn width and arcade posts spacing across the building are already defined. All that is needed to construct a cross section is to determine the heights of the aisle walls and ties, the main tie-beam and high collar and position of the passing braces. The tie-beam height is automatically found by the intersection of the roof pitches with the arcade posts and the only geometrical construction needed is:-

1. Aisle-ties. Strike an arc, centre on the outer edge of the first internal truss, set to aisle width and

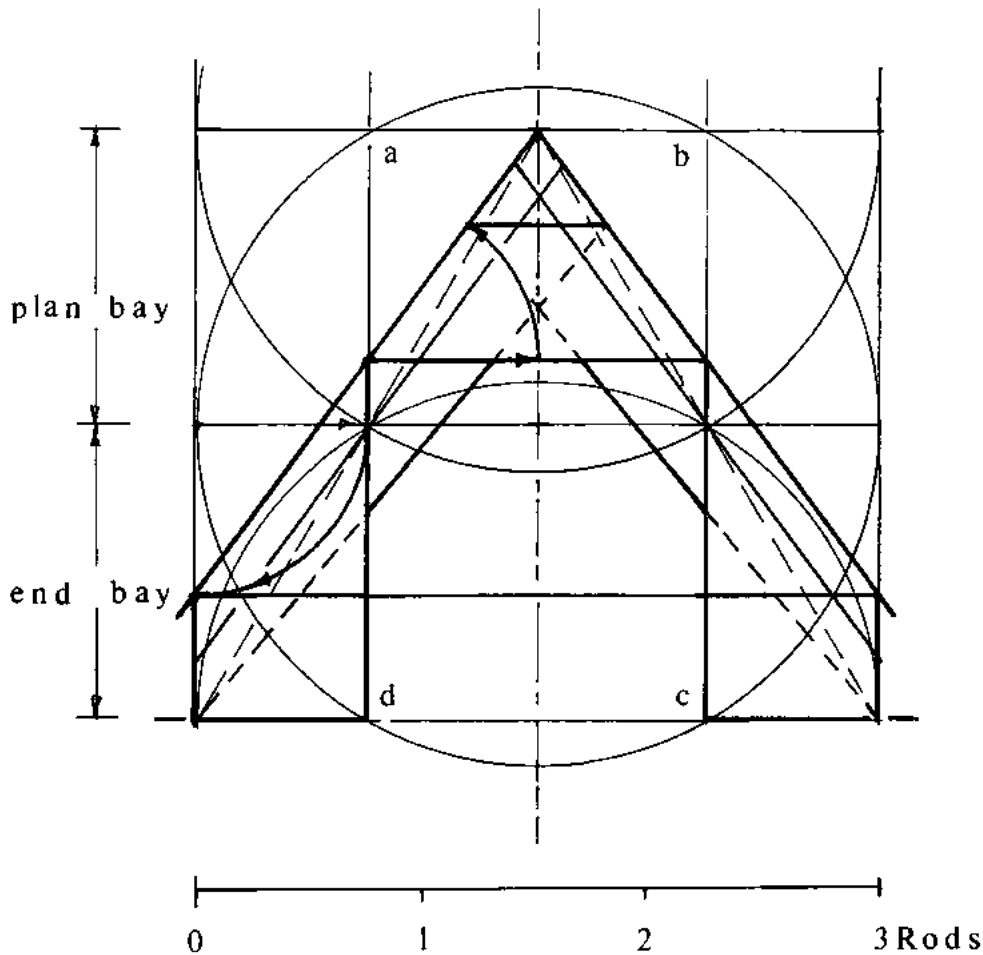


Fig. 3. Barley Barn cross-section derived from the 2 end bays of the plan. The primary equilateral triangle is shown dashed. The probable derivations of the height of the aisles and collar are indicated, also the position of the tie-beam braces. Note the importance of the plan bay junctions intersecting with the equilateral triangle to position passing-braces and to set off an arc for the aisle heights.

intersect outer aisle wall. This will denote the junction of roof, wall and aisle-tie.

2. Collar. Sweep an arc of half tie-beam length from the end point of the tie-beam, up to meet the roof pitch.
3. Passing braces. Through the intersection of the sides of the generative triangle with the arcade posts, draw braces parallel to the roof pitches.

The derivation of the section from two bays of the plan, dictates that the ratio of the total height to the nave width, fig 3 a,b,c,d, will be $\sqrt{3}$, as well as the aisle width to the height of the passing brace where it crosses the arcade post.

This construction model fits the building we now see slightly better than the simple rod measurement previously suggested (Gibson 1994). All the horizontal lines now lie on the upper surface of their members. This leads to a better fit for the construction lines of the principal tie-beam braces as they are now intersecting a slightly higher collar construction line than in the rod measurement model.

Wheat Barn (Fig. 4)

As with the Barley Barn, the plan provides the framework for a cross-section. Although the final pair of bays at each end of the barn are of unequal length, combined, they add up to a rectangle that is a very close approximation to one that fits an equilateral triangle. Shown in the diagram, (Fig. 2) as 60° , the true theoretical apex angle of the included triangle is 59.52° with base angles of 60.24° , making an actual vertex inaccuracy of 7 inches. Total width and arcade post positions with passing-brace intersection points are denoted. Like the Barley Barn section, all that is needed to be constructed is the aisle-tie and collar heights.

1. Aisle-tie. From the centre point of the final semi-circle sweep arc from the basic 2 rod square and full circle junction to meet the arcade post construction line.
2. Collar. From the centre point of the final full circle strike arcs from one end of the tie-beam up to the centre line.

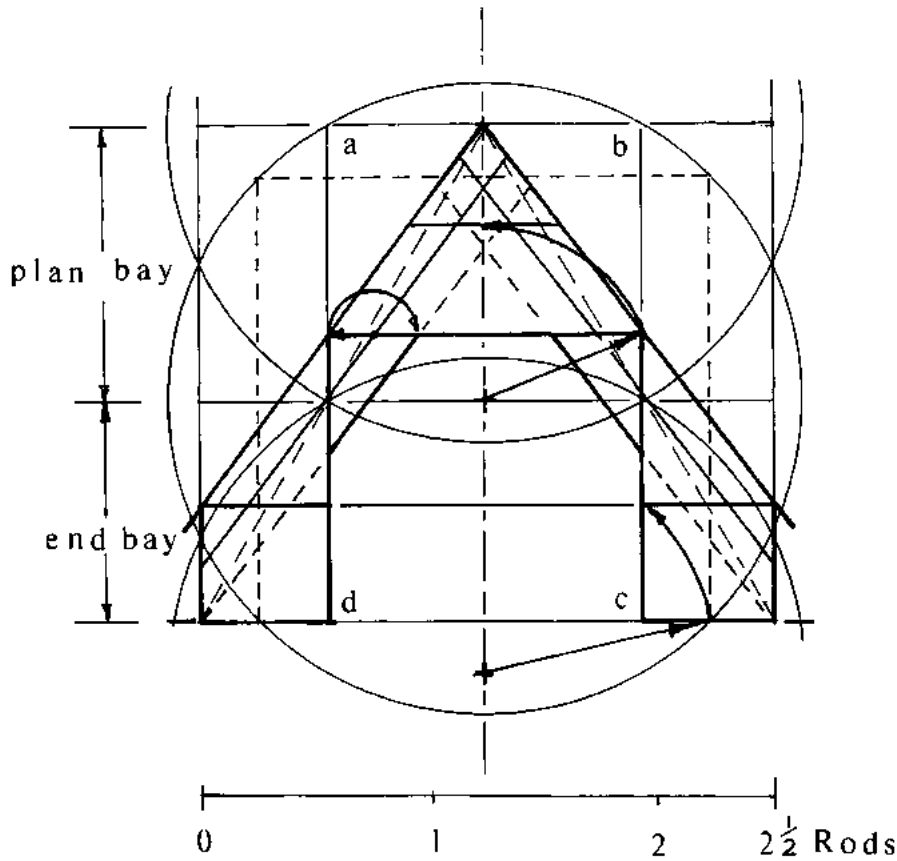


Fig. 4. Wheat Barn cross section derived from the 2 end bays of the plan. The primary equilateral triangle fits the 2 bays although they are unequal and it defines the passing-brace/arcade post intersection. The probable construction for the heights of aisles and collar are indicated, also the setting out of the tie-beams braces.

3. Passing-braces. Through the intersection of the sides of the generative triangle with the arcade posts, draw braces parallel to the roof pitches.

The subsequent details of construction have been outlined in the previous article. In the Wheat Barn the horizontal lines are aligned to the soffits of the members and not the upper surfaces as with the Barley Barn. Also, the datum surface for the arcade posts is on the outer side of the posts in the Wheat Barn and on the inner face in the Barley Barn.

The full height rectangle between the arcade posts (a,b,c,d) has a width to height proportion of 1:1.573, an approximation to the Golden Section, noted to occur in the plan.

Discussion

If this interpretation of the derivation of the cross-sections of the barns is correct, then it is a demonstration that 'Eurhythm and Symmetry' were of major importance in the design of the barns.

A simple examination of the plans and cross-sections of other great medieval barns confirms that geo-

metrically derived plans, often from circle intersections were normal and were the basis of their associated cross-sections. The barns described below, although different from each other, no two probably ever being quite the same, serve as examples.

The Great Barn at Harmondworth, West London

Tree ring date 1417 +, and probably after 1432. Description in Horn (1970).

The plan is derived from intersecting circles, diameter $\sqrt{5}$ rods. Hexagons within the circles touch each other providing bay divisions and arcade post positions. The section is based on a combination of both 'ad triangulum' and 'ad quadratum' triangle and square figures to give the framing height together with the frame height and stone dwarf walls.

The Grange Barn, Coggeshall, Essex

Dated by tree rings to soon after 1235. Drawings from Planning Department, Essex County Council (Andrews and Boutwood 1984-5)

The plan is derived from circles of 3 rods diame-

ter intersecting and touching on the sides of squares within each circle instead of hexagons to provide bay lengths and arcade post positions. The final bays were apparently shorter but geometrically constructed. The section is based on two end bays, creating not an equilateral triangle but a segment of a pentagon and consequently a lower roof pitch, as it now is, although much rebuilt.

The Great Barn at Cholsey, Berkshire

This was stone walled and the biggest barn known anywhere. Although demolished in 1815 it was meticulously recorded before demolition by John Buckler. It probably dated from the fourteenth century (Horn 1963).

The plan uses a grid of 0.75 rod x 1 rod rectangles, 1:2:1 aisles to nave ratio (as found in a hexagon division of 3 rods e.g. Cressing Barley Barn). Each bay was 1 rod long and the 18 bays, made it 297 feet in interior length. Within the nave area between the stone piers, the bay length and arcade pier positions can be located by intersecting hexagon circles defining the $1:\sqrt{3}$ 'medieval rectangle' ratio. This second relationship suggests that a 'wheels within wheels' geometrical system was employed. The section used a 0.75 rod x $\frac{1}{2}$ rod grid in a 3 rod 'ad quadratum' square with 6 vertical x 4 horizontal modular rectangles.

The Barn at Little Wymondley, Herts

The wind-braced side-purlin roof suggests a late medieval date (early fifteenth century?). It is possible a

rebuild on an earlier plan as it has some reused rafters and the central midstrey bay is slightly wider than the rest. Some information with plan and elevation is included in the Cholsey Barn account (Horn 1963).

The geometry is apparently based on 32 foot diameter circles, not rod multiples. This small difference between a 32 foot diameter circle and one of 2 rods diameter which is 33 feet may seem too small to detect with accuracy. If though, the geometry is constructed for the whole length of the barn, 32 feet diameter circles give the right length but 33 feet ones create a plan that is too long. Each circle is divided into 4 bays by 'vesica piscis' construction to give transverse $1:\sqrt{3}$ units which also denote the total barn width. The nave width was apparently constructed by medieval rectangle hexagons. The section was based on a very close approximation to an equilateral triangle found within the end 3 bays.

General

How far down the social scale this applied geometry was used for building design will have to be seen. A recent examination by the author of a late medieval house of small size but of manorial status, incorporated in the subsequent larger house at Great Easton Hall, Essex, shows its designer to have used the rod as the basic module and the units within the plan and elevation to be determined by geometrical relationships that integrate the whole design.

Author: Adrian Gibson, 43 Basbow Lane, Bishop Stortford CM23 2NA.

Bibliography

Andrews, D.D. and Boutwood J. 1984-5	Coggeshall Barn. Notes on discoveries made during the 1983-4 restoration. <i>Essex Archaeology and History</i> 16, 150-153
Gibson, A.V.B. 1994	The constructive geometry in the design of the thirteenth century barns at Cressing Temple, <i>Essex Archaeology and History</i> 25, 107-112

Horn, W. 1963	The Great Tithe Barn of Cholsey, <i>Berkshire Journ. of Soc of Architectural Historians</i> Vol 22, No.1 13-23
Horn, W. 1970	Radiocarbon: the art historian's view. In R.Berger ed. <i>Scientific methods in Medieval Archaeology</i> UCLA 43-46
Vitruvius	<i>The ten books on Architecture</i> Dover edition 1960

The geometrical designer at Cressing Temple

by Laurie Smith

Introduction

In 1994 *Essex Archaeology and History* (25) published a paper by Adrian V. B. Gibson on 'The constructive geometry of the thirteenth-century barns at Cressing Temple'. By May 1995 a copy of this paper had found its way into the hands of Michael Goulden, an architect practising in Mid-Wales who, having just completed a measured survey of my house, a box-framed hall house of c. 1500, knew of my interest in geometrical building design and passed a copy to me.

This brief paper, in response to and built upon the foundation of Adrian Gibson's, details a process of design development that leads to a complete geometrical blue-print for the ground plan of each of the Cressing barns.

I would like to acknowledge with gratitude the generosity of Adrian Gibson for his enthusiastic support of this theory, his continuing dialogue on the topic and for his kind invitation to, and enlightening guidance around, the two great barns themselves.

A geometrical clue

Reading Adrian Gibson's paper I was excited by his discovery of a ratio of 1:2 between transverse and diagonal alignments of the arcade posts in the Cressing barns, for my own research had revealed an identical ratio between the short side and diagonal of a rectangle

commonly used as a unit of proportion in medieval buildings. This rectangle is geometrically constructed within a circle. Unlike the well known 'golden rectangle' it has no name so, for convenience of recognition, I refer to it here as the 'medieval rectangle'.

The fact that the ratio 1:2 can be found in both the circle-based medieval rectangle and the Cressing barns suggested that a deeper stratum of geometrical construction might underlie the actual floor plans. There seemed a strong probability that a circle-based design system was employed at Cressing.

Figure 1 shows the simple construction of the medieval rectangle and Figure 2 shows its characteristic ratio in the Cressing barns.

Geometry in general

Geometry is a language of precision. The structure of this language begins with the point, the line and the plane, the three basic elements of two-dimensional grammar, from which a harmonic lattice of geometrical inter-relationships can be constructed. Three tools, the compass, straight edge and scribe, are all that is necessary for geometrical drawing. The geometrical design sequence leads to three related drawings, the plan, section and elevation, from which structural work in the third dimension can proceed. The flow of work moves through the three metamorphic phases of

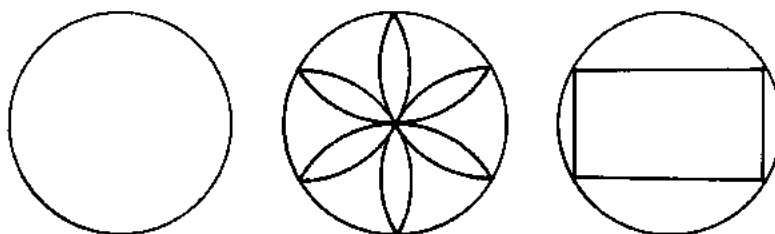


Figure 1 A circle is drawn. Using the same radius, the construction of the familiar 'daisy pattern' generates six equidistant points around the circle's circumference. Four of the equidistant points are connected to form the medieval rectangle. The short side of the rectangle equals the circle's radius and its diagonal equals the circle's diameter, giving a ratio of 1:2 between the rectangle's short side and diagonal

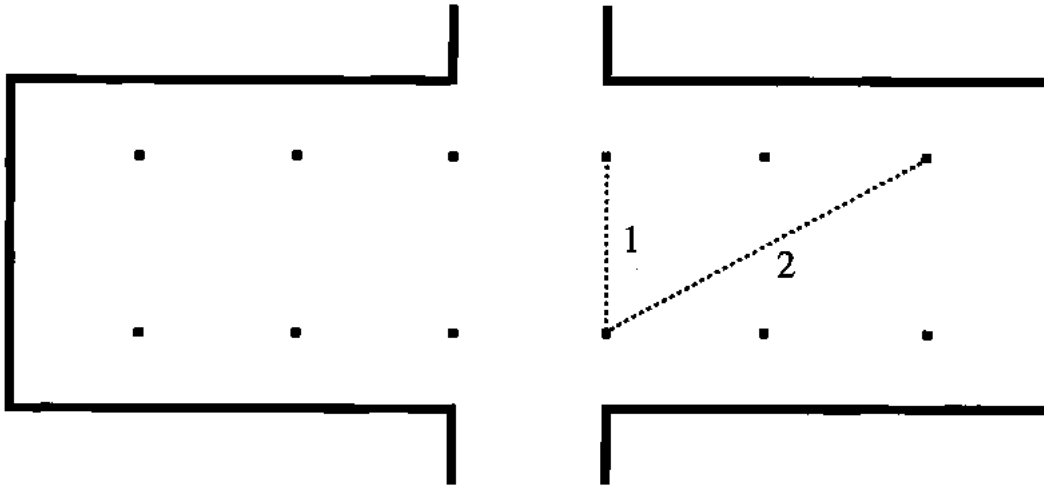


Figure 2 The floor plan of the Barley Barn showing the ratio 1:2 discovered between transverse and diagonal alignments of the aisle posts by Adrian Gibson. Only one such alignment is shown here but it can be seen that many others exist within the nave of the barn. Smaller examples can also be found in each bay between the aisle posts and the barn's long outer walls.

design, preparation and, finally, construction of the building. Because the plan, section and elevations spring from the same geometrical lattices there is a harmonic spatial unity in buildings designed in this way. In geometrical designing the plan informs the structure but the structure, expressing the spatial harmonics inherent in geometry, transcends the plan.

The circle is the fount of all geometry and echoes circles found in nature, the iris of the human eye, the sun and full moon being obvious examples. A single line with neither beginning nor end, the circle symbolises perfection and eternity. The angular geometries of triangles, the square, rectangles and other polygons, whose geometries are found in the crystal formations of minerals, can be constructed either within or around the circle. The opposing characteristics of circularity and angularity can be viewed as a matriarchal and embryonic relationship in that the circle is mother to the geometries that grow within it. Alternatively, the circular and angular geometries can be seen as expressive of female and male principles. Further, circularity in nature can be seen as a symbol of life and movement as opposed to the rigid and static characteristics of the polygons.

In geometrical design circularity and angularity are often juxtaposed and can be seen clearly in this relationship at Durham where the alternation of massive cylindrical and angular piers forms a procession along the nave of the Norman cathedral. Often, in geometrical designing, a stratum of geometrical construction may serve only as temporary scaffolding upon which others may be built. Thus, though the circle may govern the initial phases of a design its presence may be hard to discern within the subsequent geometrical skeleton of a building. At Cressing this was a significant consideration.

Other critical but transitory constructs are governed by the 'invisible' geometry of diameters or diagonals and the specific loci indicated by the intersections of lines or arcs. A simple example of this process is evident in figure 1 where the 'daisy pattern' serves only to locate six equidistant points on the circumference of the circle and is then eliminated. However, the precise proportions of the medieval rectangle can only be derived from four of these points and this indicates the pre-existence of the pattern which, in turn, reveals the presence of the circle that gave it form. The ratio discovered in the Cressing floor plans by Adrian Gibson was the upper stratum of an identical sequence.

Circle based geometry

My own research has found considerable evidence of circle based design in the medieval period with units of proportion being defined either within a single circle or within a linear development of overlapped circles drawn along a centre line. The simplest example of overlapped circles is the *vesica piscis*, composed of only two circles. The term *vesica piscis* literally means 'fish's bladder' (signified by the overlapped area of the two circles) and refers to the early use of the fish as a symbol of Christ. In its primary form it is the product of each circle passing through the centre of the other, on a centre line, to give two points of intersection and a central vesica. It has two functions, one practical, the other symbolic. In its practical capacity the *vesica piscis* gives four accurate right angles at its centre by connection of its intersections across the centre line (Figure 3). In its symbolic function the *vesica piscis* is found frequently in ecclesiastical architecture containing the figure of Christ, fine examples being found above the

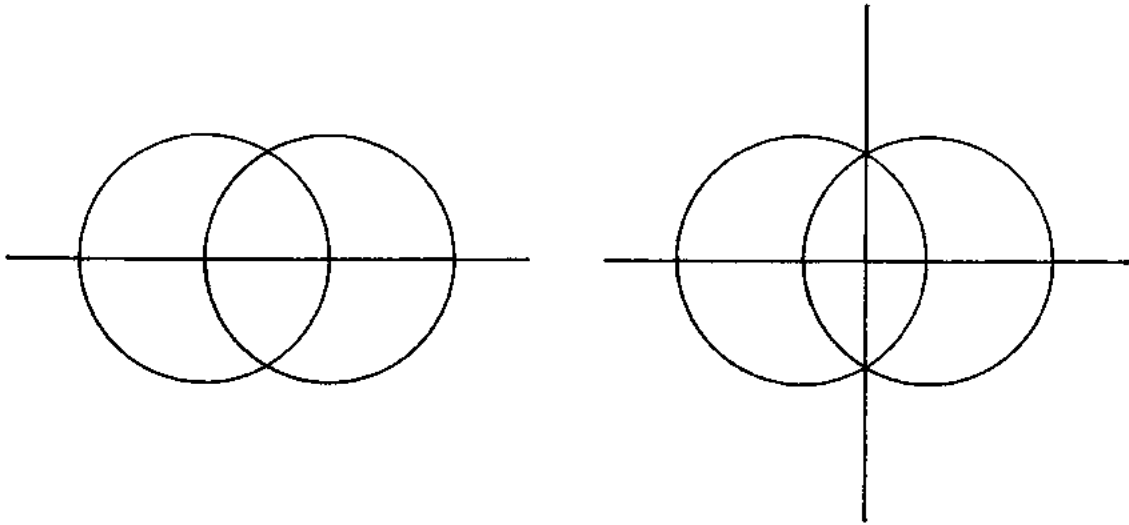


Figure 3 A horizontal centre line is drawn and two circles, each passing through the other's centre, are drawn upon it to produce the vesica piscis. A vertical line drawn through the intersections produces four right angles as it bisects the centre line.

Prior's door at Ely cathedral and, in a modern context, on Graham Sutherland's great tapestry in Coventry cathedral. Other *vesicas* can be drawn from different centres but all exhibit similar forms and the geometrically unique property of containing an area within two lines. In this the vesicas are second only to the circle which contains an area within a single line.

Figure 3 shows the construction of the *vesica piscis* and its division into four right angles.

The capacity of the *vesica piscis* to give right angles is very important for if the principle is applied to a sequence of circles overlapped along a centre line it follows that connecting the intersections will give a series of parallel divisions and perpendiculars with a potential for establishing wall alignments and bay rhythms. It can be seen from such a drawing that it only requires scaling up for each point of intersection to literally 'pin-point' a crucial datum in reality on the ground.

It might seem that the overlapped circles would give a repetitive range of proportions but this is not so. By varying the degree of overlap between circles a variety of bay widths can be designed whilst wall alignments can be made not only through the intersections but also as tangents to the circles themselves.

The design of the ground plans of the Cressing Barns

The principles of design are common to both barns and commence identically, evolving along parallel paths until their final stages when they conclude in related but slightly different ways. Figure 4 shows the evolution of this process.

A centre line is drawn and a sequence of three circles of equal radius overlapped along it, the degree of overlap conditioned by the short sides of medieval rectangles formed within the circles (figure 4a). This sequence of three circles is then duplicated and the second overlapped upon the first to give a further sequence of six circles (figure 4b). The reason for this second overlapping becomes clear when the two stages are analysed for intersections, the second stage having twice that of the first. The second stage of the design, therefore, has the capacity to define the bay rhythms and wall alignments of a multi-bayed building such as a church or, in this case, a barn. In the final stage of the design the ends of each building are defined by rectangular sub-geometries formed within the first and last circles of their six circle sequences.

At this final stage the barn designs diverge slightly for in the Barley Barn (figure 4c) the medieval rectangle that defines the degree of circle overlap is also used in the outer circles of the sequence to define the barn's ends. In the Wheat Barn (figure 4d) the outer circles of the sequence are host to squares and these define the barn's ends. Although apparently different the medieval rectangle and the square share a geometrical relationship with the circles they inhabit for in each case their diagonal is equal to the host circle's diameter. A further slight difference occurs in wall alignments for whilst the Barley Barn walls are tangential to the circle sequence those of the Wheat Barn run through intersections.

It is worth mentioning that the ends of the barns can be defined by other geometries, such as the hexagon or equilateral triangle, within the outer circles of the circle sequence. This merely leaves the designer with a choice. In the 'excavation' of these designs my

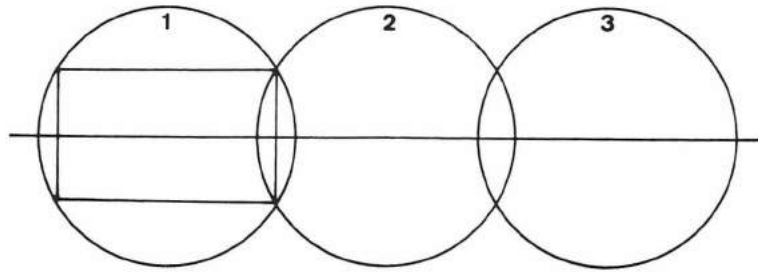


Figure 4a A sequence of three circles is overlapped along a centre line, the overlap governed by medieval rectangles within the circles. For clarity only one rectangle is shown.

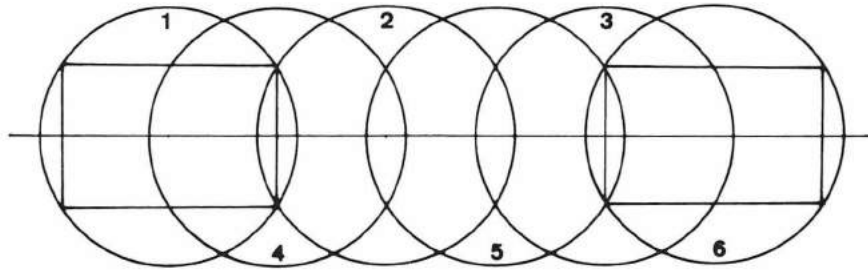


Figure 4b The three circle sequence is doubled and the second overlapped upon the first to give a new sequence of six circles. For clarity rectangles are only shown at each end of the sequence.

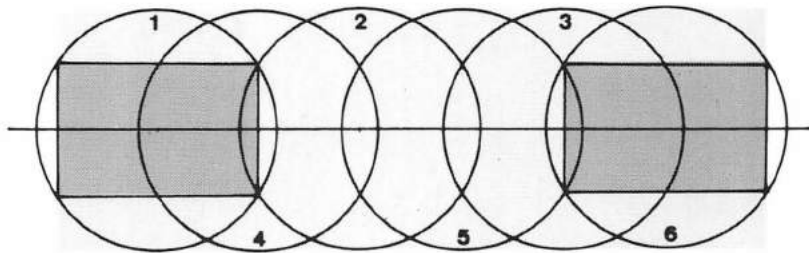


Figure 4c The outer ends of the medieval rectangles and the outer arcs of the circles define the floor plan of the Barley Barn. The inner intersections define the positions of aisle posts. This geometry fits exactly the proposed original floor plan for this barn as shown in Adrian Gibson's paper.

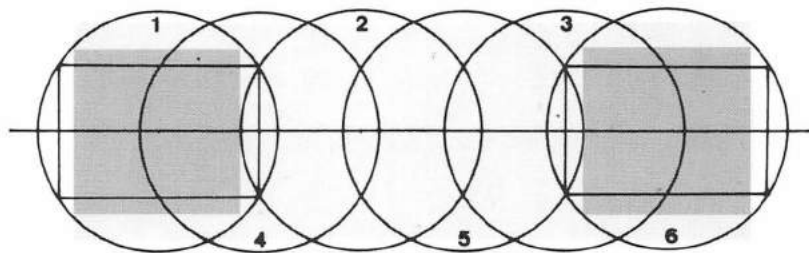


Figure 4d The outer edges of squares introduced into the first and last circles define the short walls of the Wheat Barn and the outer intersections of the circles define its long walls. The inner intersections define the positions of aisle posts.

first solution to the Wheat Barn floor plan came from the use of a square within the outer circles of the circle sequence, the geometrical construction being carried on tracing paper overlaid upon Adrian Gibson's plans. For this reason I retain the use of a square here whilst recognising that the original designer may well have used another geometry giving the same result.

Conclusion

There seems little doubt that the design process outlined above was that used to define the floor plans of the two great Cressing barns. It seems beyond the realms of chance that all elements of the buildings' structures at ground level should otherwise correspond so accurately with the geometrical model.

The two designs are extremely close in both character and execution and this, bearing in mind the proximity of their dendro-chronological dates, suggests that they are either the work of a single master or that they represent the methodology of a distinct school of geo-

metrical thought. Whichever is true the careful 'excavation' of these geometries reveals a singularly clear and rational mind at work. This should not come as a surprise for in the medieval period the 'core curriculum' included tuition in both geometry and music. Indeed the two subjects were seen as indivisible for both were concerned with the harmonic intervals and rhythms of sounds or forms poised with eloquence in time or space. This understanding is evident at Cressing and there is a distinct presence in these simple, imaginative and elegant designs. In the medieval period the related functions of craftsman, designer and architect were unified in a single discipline and knowledge was acquired progressively from initial apprenticeship on the shop floor. Though anonymous today it is possible, through the evidence of these functions, to detect the confident intellectual signature of a 'master craftsman, designer and architect' of the highest calibre.

Author: Laurie Smith, Gwernfyda, Llanllugan, Llanfair Caereinion, Powys SY21 0AQ.

The Counts of St. Pol in Essex and Kent

by the late J.H. Round, revised and completed by W.R. Powell

[NOTE. This is the fourth paper to be published under the arrangements described in *Essex Archaeology and History* 24 (1993), 153. Round began to draft it some time after 1921, under the provisional title 'Mascallsbury in White Roding,' but left it unfinished. Bishop Stubbs once remarked that Round had 'the gift of seeing what is worth seeing: is that historical genius? I dare say.' This paper demonstrates Round's gift of perception, for the counts of St. Pol make a fascinating subject. They sprang to prominence as Crusaders and mercenaries in the 12th century, when the Angevin empire of Henry II stretched from the Scottish border to the Pyrenees. Selling their services to the kings of both England and France, and making successful marriages, they built up estates on both sides of the Channel. They mortgaged their English manors, lying in Essex and Kent, to finance their Crusading ventures. They lost control of those lands in 1226, but retained a reversionary interest in them for another generation. Most of the counts of St. Pol seem to have been strangers to England, but one of them served here under Henry III in the Barons' war.

In completing the paper I have indicated new sources of information by means of asterisks in the footnotes. Some of these sources - particularly the Pipe Rolls - were well known to Round. Others were not available to him. In its final form the paper is probably somewhat wider in scope than he originally intended, for it seemed desirable to relate the international adventures of the counts of St. Pol to their fortunes as English lords. It should be added, however, that the paper does not attempt to provide a full study of the St. Pol family in France, for which there is much material in such works as the *Catalogue des Actes de Philippe Auguste*, ed. Leopold Delisle. W.R.P.]

Several years ago I contributed to our *Transactions* a paper on 'Gaynes in Upminster',¹² in which I showed that problems raised by the descent of an Essex manor could sometimes be solved by studying the history of one in another - possibly a distant - county. In that instance I found the manors of which the descent was parallel so far afield as in the counties of Northamptonshire and Somerset. In the present paper I hope to show that Morant went seriously wrong in tracing the early history of a group of Essex manors, and that when we substitute their true descent for that which he has given us, it proves to be of peculiar interest and of more than local importance. Happily I had put my paper aside, in case I should come across some further information on the subject. This I have now done, in an unexpected quarter. The Oxfordshire Record Society, founded a few years ago, issued in 1921 a volume of *Newington Longeville Charters*, edited by the Rev. H.E. Salter, fellow of Magdalen College, who has made a special study of cartularies. The

Cluniac priory of Newton Longville (Bucks) was a cell of the Norman priory of St. Faith at Longueville, near Dieppe (Seine Inferieure). In that volume are a few deeds relating to tithes from Great Dunmow and Farnham, the evidence of which has been useful in this paper.¹

My attention was first drawn to the group of Essex manors held in the 12th century by the count of St. Pol' (*de Sancto Paulo*) when I was trying to identify a place named 'Manewode' in a final concord of 1235 relating to Matching.⁵ We there read of '4 acres of wood, with appurtenances in Manewode extending in length from the gate of the said wood of the count of St. Pbl.' Again, in a recent volume issued by the Public Record Office,⁶ the name 'Manewodesgrene' has similarly baffled the editor. The recovery or identification of an old Essex place-name must always have an interest for the members of our Society, and this instance, I hope, will prove no exception.

Although there is no Manwood in Matching the name of that parish affords a clue. On its eastern side Matching parish, in Harlow hundred, adjoins White Roding, which forms a western projection of Dunmow hundred. 'Man Wood' is shown on Greenwood's fine *Map of Essex* (1824) as in White Roding, near the western boundary of the parish. Adjoining the wood, but just outside the parochial and hundredal boundary, is 'Manwood Green,' in the south-eastern corner of Hatfield Broad Oak. On Chapman and Andre's *Map of Essex* (1777) Manwood Green appears, corruptly, as 'Manners Green' while 'Man Wood' itself is found as the northernmost part of a strip of woodland about a mile in length, the central part being 'Marks Wood,' and the southernmost 'Bury Wood.' Marks Wood was probably named from the family of Mark (or Merk), which held White Roding manor.

I propose to show in this paper that the count of St. Pol named in the fine of 1235, as holding part of Manwood, held Mascallsbury in White Roding, with other Essex lands.⁷ In September 1226 the king entrusted the count's lands in England to Raymond de Burgh.⁸ It is clear from later evidence that Raymond was merely a custodian, for on 14 September 1230 the king had to confirm his grants of the count's Essex lands to four knights, as follows:⁹ to Bertram le Gros,

land in Great Dunmow (i.e. Southall, later called Clapton Hall); to Baldwin de St. Martin, land in Alfriston¹⁰ (in Great Dunmow, later called Bigods); to William Pucyn land in (White) Roding (later called Mascallsbury); and to William Blangernun land in Farnham. On 8 October 1230 the sheriff of Essex was ordered to convey these lands to the four knights, as those which Raymond de Burgh had assigned to them for their support in his service, and which the king had now assigned to them during pleasure, for their support in his own service.¹¹ In 1233 the count's land in Alfriston, which Baldwin de St. Martin had held, was committed to William de Crepping, Robert de Musters, and Bertelot le Bigod, king's knights.¹² This shows how Alfriston came to be divided, and how the first Bigod settled there.

The count of St. Pol's Essex lands have not previously been properly identified. Of his two manors in Great Dunmow there can be no question as to Alfriston – the 'Alferestuna' of Domesday – for the name is unique in Essex, and gives us the best example in the county of a place-name formed from the name of an old English holder being changed to one which still preserves the famous name of its post-Conquest lord.¹³ To 'Bigods,' as it is still called, Morant devotes a column and a half.¹⁴ It was quite possibly, as he states, a 'hamlet belonging to Great Dunmow,' and therefore of quasi-independent status. In his account of this manor he deals with the lands of the count of St. Pol, citing the *Red Book of the Exchequer* and the Patent Roll.¹⁵ In 1253 the Charter Roll records the gift to Bartholomew le Bigod of half of all the lands which Baldwin de Martin sometime held in Alfriston of those late of the count of St. Pol, 'to be held until the lands of the English and the Normans are one.'¹⁶ This formula refers to the loss of Normandy under King John; for in the case of its hoped-for recovery, foreign lords such as the count would be able to recover their English lands.

Morant's account of the manorial descent of Alfriston and its Bigod lords down to 1398 can be supplemented by a royal charter of 1270 confirming Bartholomew le Bigod's grant to his grandson Ralph Bigod of all his land in Alfriston.¹⁷ Among the witnesses to the charter are Sir Matthew de Luveyne (lord of Little Easton), Sir Simon Fitz Richard (lord of Great Dunmow) and Sir William le Monk (lord of Great Easton).

Morant also deals with the manor of Southall in Great Dunmow, telling us that about 1263 it was held by Jolland 'de Durmers' [*recte* Durham] of the King in chief, of the honour of the count of St. Pol.¹⁸ An entry in the Charter Roll tells us that Southall, formerly held by Bertram le Gros, had been granted in 1240 to Thomas de Durham, citizen of London, to be held by annual render of a pair of gilt spurs or 6*d.*¹⁹ Jolland, son of Jolland de Durham, died in the winter of 1314-15.²⁰ It is remarkable that he and Ralph le Bigod, the two holders of the count of St. Pol's former lands in Dunmow, were in 1312-13 returned together as

knights of the shire for Essex.²¹ Jolland de Durham and Ada his wife occur in a Huntingdonshire final concord of 1315, along with Nicholas, parson of Leaden Roding.²²

Turning now to Mascallsbury, we find that manor, described as 'Blanche Roing late of the Count of St. Pol,' granted in 1233 to 'William son of Humfrey, clerk, who stood faithfully in the service of King John and of the present King,' until the king provides him with a suitable benefice.²³

The count of St. Pol's remaining holding was at Farnham, on the Hertfordshire border. In the great Inquest of 1212 it was found to consist of half a hide 'of the gift of the same king [Henry II] of the fee of the earl of Essex.'²⁴ Now this statement that Farnham was held of the earl of Essex's fee is of considerable interest. According to Morant Farnham comprised, at the time of Domesday, two portions only, which were held by Geoffrey de Mandeville – ancestor of the earls of Essex – and Robert Gernon respectively, but eventually formed three manors: Farnham, Walkefares, and Hertisham (later Hassobury).²⁵ Of the count of St. Pol he says nothing.

Now that I have thus identified the four Essex manors held by the Count of St. Pol it will be possible to trace their history, and to show how and why they came into his hands. But we must first correct Morant's statement on the subject. Taking Mascallsbury, as the manor with which this paper is more especially concerned, we find that he was not able to identify it in Domesday, because, as I first showed in 1903, he imagined that the entry relating to it referred to the manor of Marks in Margaret Roding.²⁶ He guessed, therefore, that it may have been originally part of White Roding manor.²⁷ His knowledge, however, of the Inquisitions *post mortem* showed him that Henry de Broke, on his death in 1320, was found to have held his land in White Roding of the King in chief, as of the honour of the count of St. Pol.²⁸ John de Broke, his son and heir, died in 1348 holding Mascallsbury (so styled in the Inquisition), of the King in chief for half a knight's fee.²⁹ [J.H. Round's paper breaks off at this point.]

*

The county of St. Pol lay in north-eastern France between Artois and Picardy.³⁰ Its counts were vassals of the kings of France and also of the counts of Flanders.³¹ They traced their ancestry back to Roger (d. 1067) whose son and successor, Hugh I, was surnamed Camdeveine (*de Campo Avene*). The first count who has been noticed in England was Anselm Camdeveine, who in 1166 was holding of the king in chief three knight's fees in Essex formerly held by William Maskerel (Makerel) as tenant of Geoffrey de Mandeville, earl of Essex.³² From other evidence it is clear that these three fees comprised the four Essex manors mentioned above: Alfriston (later Bigods) and

Southall (later Clapton Hall), both in Great Dunmow; Farnham (alias Little Farnham); and (White) Roding (later Mascallsbury). The fact that the fees had previously belonged to the Mandevilles makes it possible to trace all four manors back to Domesday. In 1086 Alfriston, Southall, and Mascallsbury were all held by [Geoffrey] Martel as undertenant of Geoffrey de Mandeville (d. c. 1100), ancestor of the earls of Essex.³¹ The relationship between Geoffrey Martel and the later tenant William Maskerel is not known; their surnames are quite distinct. The Maskerel family, from whom Mascallsbury took its name, were already associated with Geoffrey de Mandeville in the period 1085 x 1097.³² They were among the early benefactors to Newton Longville priory (founded c. 1080), to which they gave tithes from their lands in Great Dunmow and White Roding.³³ In 1086 Geoffrey de Mandeville also held, as tenant-in-chief, a manor in Farnham listed in Domesday Book as an encroachment; his undertenants were four anonymous knights.³⁴ Part of that estate became Farnham (alias Little Farnham). Here, also Newton Longville acquired tithes, which were said in 1262 to come from the demesne of the count of St. Pol.³⁵

Anselm Camdeveine, count of St. Pol, must have been high in the favour of Henry II, for in 1169 the king granted him the great Crown manor of Dartford in Kent.³⁶ The descent of that manor in the following years can be traced in the Pipe Rolls.³⁷ Anselm (d. 1174) was succeeded by his son, count Hugh IV, who had a long and colourful career. He was a staunch adherent of Philip Augustus (king of France 1180-1223), and in consequence was sometimes in trouble with the kings of England. In 1188, when Philip was at war with Henry II, count Hugh's manors in Essex and Kent were seized and placed in custody of the sheriffs of those counties.³⁸ Henry's death in 1189 transformed the situation. The new king, Richard I, immediately restored Hugh's English lands, and by a charter of 5 July 1190 confirmed him in possession, with the added privilege that Hugh should not be obliged to plead or be impleaded for the lands, except before the king or his chief justices.³⁹ In the same year both Richard and Philip Augustus set out for Palestine on the Third Crusade. Count Hugh accompanied Philip, distinguished himself at the siege of Acre and, after Philip had returned home, served under Richard until the end of the crusade.⁴⁰

In 1194, back in France, Philip Augustus granted count Hugh lands in three places near Paris, 'for his faithful service.' But in the same year war broke out between Philip and Richard I, and Hugh's English manors were again seized by the king, who entrusted them to William of St. Mary Church.⁴¹ The 'farm' of Hugh's four Essex manors was £13 for half the Exchequer year, which means that they had been confiscated in or about April 1194. It was in May of that year that Richard I crossed the Channel to engage Philip in a struggle which lasted, with brief interludes,

until Richard's death in 1199. Hugh of St. Pol seems to have recovered his English lands (with the possible exception of Little Farnham) in 1196, when Philip and Richard concluded the treaty of Louviers.⁴² In that year the sheriff of Kent accounted for £24 15s. 'for the rent of Dartford of the count of St. Pol for a quarter of the year, for the pledge which he made for the King of France with the Lord King.'⁴³ This probably means that the count stood surety for Philip's adherence to the Treaty of Louviers. By 1198, however, the war had been resumed, and Hugh's English manors were seized yet again.⁴⁴

The accession of king John was followed by another brief period of peace with France. In 1201, having recovered his English lands, count Hugh obtained the king's licence to mortgage them for three years,⁴⁵ and in 1202 he set off on the Fourth Crusade, along with count Baldwin of Flanders. That crusade, though originally destined for the Holy Land, resulted in the capture of the Christian city of Constantinople, and the enthronement of count Baldwin as Latin Emperor there. Baldwin appointed Hugh as his High Constable and gave him the large and wealthy town of Demotica in Thrace.⁴⁶

Hugh IV died in Constantinople in 1205, and was given a splendid funeral there before being taken back to France for burial. He left as heir his elder daughter Elizabeth (or Isabel), wife of Gautier (Gaucher, Waucher) de Chatillon. Gautier, who now became count of St. Pol, sprang from a noble family of Chatillon-sur-Marne, near Reims, and was first cousin to Philip Augustus. In 1204 he had served with Philip against king John in the conquest of Normandy. In 1205 the count's English manors were in the king's hands; the four in Essex, including Little Farnham, were being let to William of Wrotham, archdeacon of Taunton, a prominent servant of the king.⁴⁷ In March 1206, however, Wrotham, along with the sheriffs of Essex and Kent, were ordered to restore all the manors to the count's bailiff, Walter de Baillolet; if they still had any money received from the lands during the previous Michaelmas and Christmas terms which had not been paid into the Exchequer, they were to keep it safe until further orders.⁴⁸

During the later years of John's reign count Gautier's tenure of his English manors was precarious. It would not have been surprising if he had lost them, since he was one of Philip Augustus's generals in the continuing war against John. But John, always active in diplomacy, had reason to placate him. Gautier's French lands bordered on the Low Countries, where John, in alliance with the Emperor Otto IV and the Flemings, was preparing to invade France. Gautier himself may well have been skilled in diplomacy as well as fighting, for even the battle of Bouvines (1214), where he commanded a division in the victorious French army, did not lead to a final breach between him and John.

The Exchequer and the Chancery records -

though defective for the period - tend to support the suggestions made in the previous paragraph. Feudal returns for Essex in 1210-12 list the count of St. Pol as holding two knight's fees at Mascallsbury, Southall, and Alfriston, and 1/2 hide land in Farnham.⁵¹ In November 1212 the king confirmed the count's possession of his lands in Kent.⁵² In June 1213 the sheriffs of Essex and Kent were ordered to put a discreet man in charge of the count of St. Pol's lands, with orders not to remove anything from them.⁵³ They were further ordered on 25 June to ensure that the count's goods were not tampered with, and on the 26th to give him possession of his lands.⁵⁴ No Pipe Roll survives for 1213, but that for 1214 shows the count of St. Pol holding Dartford.⁵⁵ On 23 October 1215 king John commanded the sheriff of Kent to deliver to Walter de Bailliolet 'all the lands of the King's enemies which were of the fee of the count of St. Pol' in that shire.⁵⁶ In March 1216 the king authorized the payment of £50 to Bailliolet against the first revenues which he, or any other bailiff of the count of St. Pol received from the count's English lands.⁵⁷ On 15 August in the same year Herbert, the count's clerk, was given safe conduct to go overseas.⁵⁸ Taken together, these records of 1213-16 suggest that count Gautier, though subject to forfeiture as one of the king's enemies, had struck a bargain with king.

Gautier's biographer says that he was '*toujours avide de gloire*.' As a young man he had taken part in the Third Crusade. As count of St. Pol he was prominent in three crusades against the Albigensians of southern France: in 1209, 1215, and 1219. In 1209, after the capture of Carcassonne, he was offered, but declined the lordship of the conquered territory. In the two later crusades he served under Philip Augustus's son, prince Louis. Gautier's services to the French monarchy included also the suppression of a rebellion in Brittany; and in February 1219 he received from Philip the grant of Torigni in Normandy. He died in the following October, leaving his widow Elizabeth and two sons. The younger son, Guy de Chatillon, succeeded him as count Guy II of St. Pol.

In 1219-20 count Guy paid the king £100 relief for having all the lands in Essex 'which Isabel [i.e. Elizabeth, his mother], countess of St. Pol, granted and quitclaimed to him.'⁵⁹ This reference helps to explain why Guy, rather than his elder brother Hugh, obtained the title, since Elizabeth, who survived until 1233, was countess in her own right, as heiress of the Camdeveines. In 1222 the king confirmed Guy's tenure of Dartford,⁶⁰ and in 1223 he ordered Richard de Montfichet, chief forester of Essex, to allow Guy's servants to have reasonable estovers in the count's woods, to repair buildings and hedges.⁶¹ But in 1224 Louis VIII of France attacked Poitou, and the English manors of St. Pol were sequestered once more. Dartford was in 1225-6 in the king's hands and in the custody of John de Vyse.⁶² By December 1226 it had been committed to Raymond de Burgh.⁶³ Meanwhile

the manor of Farnham, which in 1218 had been let by count Gautier to John Travers of London, was in May 1226 leased by the king to Travers.⁶⁴ In the following September the count's Essex lands, including Farnham, were also granted to Raymond de Burgh.⁶⁵ By that time count Guy was dead. Earlier in the year he had joined the latest crusade against the Albigensians, and in mid-August 1226, while besieging Avignon, he had been killed by a stone from a mangonel.

Guy II was succeeded as count of St. Pol by his elder brother, Hugh V, to the exclusion of Guy's infant son Gautier, who, however, became lord of Chatillon. In 1244 Hugh and Gautier both took the Cross, along with king Louis IX of France (Saint Louis).⁶⁶ This Seventh Crusade, which went to Egypt, set out in August 1248. Hugh V had died in the previous April, but Gautier served with distinction until 1250, when he was killed near Mansourah, during the disastrous retreat in which Louis IX and most of the crusaders were captured by the Egyptians. Joinville quotes an eye-witness account of Gautier's heroic end.⁶⁷

The counts of St. Pol never regained control of their English manors after 1226. Since king John's loss of Normandy in 1204 feudal tenants with lands on both sides of the Channel had been in a particularly awkward position. Until 1259 Henry III continued to style himself also duke of Normandy and count of Anjou, and his English vassals were bound to follow him when he sought to regain those provinces. But if, like the counts of St. Pol, they were also vassals of the king of France, they were similarly bound to take his side in war time. The problem is described by Sir Maurice Powicke.⁶⁸

Every knight's fee or hide of land which a Norman held in England in John's time was in theory, and generally in practice, held in trust for the time when the kingdom and the duchy should be reunited under one lord. Both St. Louis and Henry [III] allowed favoured persons to hold lands on both sides of the Channel, though the normal practice seems to have been to arrange for a division of lands in Normandy and England respectively between different members of the family. The Gascon war in 1242-3 helped to bring this kind of acquiescence to an end, for Henry took measures against those persons who had fought for Louis in France and also had lands in England, while in 1244 Louis insisted that any one who held lands in both countries should chose which lord he would follow, and surrender lands held of the other.

The earlier history of the counts of St. Pol has shown that this problem of divided loyalties existed long before 1204, and that it was not confined to those whose continental estates lay in Normandy.

Although the English manors sequestered from the counts of St. Pol in 1225-6 were immediately granted to others, the reversionary rights of the Chatillon family were recognized, and they eventually received compensation. In 1227, when Raymond de Burgh was confirmed in possession of the count of St.

Pol's lands in England, the king reserved the right to restore them to the count's heir 'of his free will or by a peace.'⁶⁹ Later grants of the St. Pol lands to third parties, in 1230, 1240, and 1253 contain similar provisions.⁷⁰ Meanwhile count Hugh was involved in diplomatic negotiations at a high level. In 1235, when a truce was being arranged between England and France, following Henry III's invasion of Poitou, Henry expressed a wish that the count of St. Pol, along with Robert, brother of Louis IX, should swear to induce the king of France to observe the truce.⁷¹

Count Hugh seems to have transferred his interest in Dartford, the most valuable of his English manors, to his nephew Gautier de Chatillon. On 20 November 1247, shortly before Gautier set out on the Seventh Crusade, Henry III took his homage for the manor, granting him £100 a year until he obtained possession of it.⁷² On the following day Henry requested the Master of the Templars in France to let Gautier have a lump sum of £400, which the king would repay in four annual instalments.⁷³ It was probably at the same time that Gautier quitclaimed the reversion of Dartford to Henry III's half-brother Guy de Lusignan, to whom the king later transferred the £100 stipend for the manor.⁷⁴ The purpose of these transactions was no doubt to finance Gautier's crusading venture.

Hugh V (d. 1248) was succeeded as count of St. Pol by his younger son, Guy III.⁷⁵ Like his forbears, Guy was a professional soldier. Unlike them, however, he is known to have spent considerable periods in England. In May 1255 Henry III ordered all the foresters of the realm to show honour to Guy when he travelled through their districts.⁷⁶ Between 1261 and 1267 Guy visited this country at least twice in command of mercenary troops in the king's service during the Barons' War, receiving an annual fee of £200 from 1262.⁷⁷ In 1263-4 he served in France along with Queen Eleanor.⁷⁸ At that period the restoration of the count's English manors was still envisaged, as can be seen in the grant of Alfriston in 1253, quoted above, which contains the proviso 'until the lands of the English and the Normans are one.'⁷⁹ The treaty of Paris (1259), by which Henry III surrendered his claim to Normandy, Maine, Anjou and Poitou, rendered that formula obsolete, but it did not extinguish Guy III's claims to the English lands held by his predecessors. In 1261 Henry III gave him an annual stipend of 300 marks (£200) 'until the king provides for him in wards or escheats.'⁸⁰ That grant was elaborated in 1263, as follows.⁸¹

Whereas the king granted Guy, count of St. Pol, that he would restore to him his hereditary rights in the realm which William de Forz, count of Aumale, sometime held, as soon as the king could release them from the heirs of the count, and the said heirs are minors, whereby the king cannot by law release the inheritance, he has granted the count £200 from the Exchequer until he receives the said lands or others of equal value.

These grants of 1261 and 1263 must relate to the

manor of Dartford, which had been held by the counts of Aumale since 1233.⁸²

A curiously worded record of 1265 sheds light on Guy III's activities during the Barons' War. The government of England was then being carried on, in the king's name, by Simon de Montfort, earl of Leicester, who on 1 February ordered the bailiffs of Ipswich to permit Henry de Montfort, the king's nephew, to remove wool and merchandise belonging to men from St. Omer, followers of the count of St. Pol, 'an adversary of the king,' which Henry had previously seized.⁸³ The specious references to the king had obviously been included to emphasise the legitimacy of the regime. Henry de Montfort was indeed Henry III's nephew, but he was also earl Simon's son; while the count of St. Pol, though regarded by Simon as an enemy, was an adherent of the king, as shown by the fact that he was still in high favour with Henry in December 1265, after both Simon and Henry de Montfort had died at the battle of Evesham.⁸⁴ Earl Simon's mandate to Ipswich is also interesting as evidence that Guy III was trading in wool through that port. St. Omer, from which his agents came, is about 60 km. north of St. Pol.

While trading was no doubt a valuable sideline, Guy III's main business was fighting. In 1270 he accompanied Louis IX on his last crusade, to Tunis. In 1276 he joined Philip the Bold, Louis' successor, on an expedition against Aragon, and in 1288 he took part in a successful campaign in the Low Countries in support of the duke of Brabant, his wife's nephew. He died in 1289. By then the English manors of St. Pol were firmly established in other hands. It now remains to trace their descent since 1226.

The Manors of the Counts of St. Pol after 1226

After 1226, when the counts of St. Pol lost control of their English manors, those to whom manors were granted came to be regarded as holding them of the king in chief, as of the 'honour of St. Pol.'⁸⁵ While that terminology must have been useful for the royal officials operating the feudal system, it does not mean that the counts of St. Pol had ever had baronial status in England.⁸⁶

The manor of ALFRISTON, later called BIGODS, was in Great Dunmow parish, north of the town. In 1227 it was one of the four Essex manors of the count of St. Pol in the custody of Raymond de Burgh.⁸⁷ Alfriston, Southall and Mascallsbury together were then worth £34 a year. The custody of Alfriston alone was granted in 1230 to Baldwin de St. Martin.⁸⁸ It had been taken from him by October 1232, and in 1233 the king committed the manor to three of his knights, William de Crepping, Robert de Musters, and Bertelot (Bartholomew) le Bigod.⁸⁹ In 1235 the king granted Crepping's share of Alfriston to Bigod and Musters; the annual value of the manor was then £14.⁹⁰ Bigod and Musters still held it in 1237, when it was rated as two carucates.⁹¹ Bigod's land in Alfriston was in

1244 valued at £5.⁹² In 1253 he received a royal charter granting him half of all the land which Baldwin de St. Martin had held there.⁹³ Robert de Musters had died by March 1241, when the king committed half of Alfriston to his widow Eve.⁹⁴ Bartholomew Bigod in 1257 served with the king on the campaign in Wales against Llywelyn ap Gryffydd; during his absence his house at Dunmow was damaged by fire, and he received a grant of £10 towards the repairs.⁹⁵ He died in or before 1270, having previously vested his land in Alfriston in his grandson Ralph Bigod.⁹⁶ Ralph granted it for life to his uncle William Bigod, who in 1274-5 was holding two carucates of land in Great Dunmow by charter of Henry III, together with gallows, view of frankpledge, and the assize of bread and ale.⁹⁷ William died in 1278 holding half the manor of Alfriston of the king in chief for a quarter of a knight's fee.⁹⁸ The estate then reverted to Ralph Bigod.⁹⁹ In 1291 Ralph's right to Alfriston was challenged as 'of lands of the Normans pertaining to the king,' valued at £10 a year, but he produced a charter from Henry III proving his title.¹⁰⁰ By then, it seems, he had acquired all or most of the estate granted to the three knights in 1233. Alfriston descended in the Bigod family until c. 1400.¹⁰¹ Bigods Hall manor house is in Bigods Lane.¹⁰² North of it is Bigods Wood.

The manor of SOUTHALL, later called CLAPTON HALL, was in Great Dunmow parish, south of the town. It descended along with Alfriston and Mascallsbury until 1230, when the king committed it in custody to Bertram le Gros.¹⁰³ The manor was taken away from Bertram in 1232 but was restored to him in 1233.¹⁰⁴ It was assessed in 1237 as one carucate, worth £10 a year.¹⁰⁵ In 1239 Bertram, 'going to the Holy Land,' surrendered Southall to the king, receiving 40 marks (£26.66) compensation.¹⁰⁶ In the following year the king gave the manor, for homage and service, to Thomas of Durham, in exchange for land of the same value at Hilton (Hunts).¹⁰⁷ The grant contained the usual proviso protecting the reversionary rights of the count of St. Pol, adding that Thomas was not to be disseised without a reasonable exchange. Jolland of Durham (Dureman, Durame) died holding Southall in 1263, leaving an heir of the same name, aged five.¹⁰⁸ Jolland, son of Jolland of Durham, died in 1314-15.¹⁰⁹ Southall was known from the 15th century as Clopton Hall, later corrupted to Clapton Hall.¹¹⁰ The ancient manor house lay in Clapton Hall Lane, where a home-
stead moat survives.

The manor of FARNHAM, alias LITTLE FARNHAM, which is not mentioned by Morant, was in Farnham parish, probably south of the village. It is first recorded as one of the count of St. Pol's manors in 1194.¹¹¹ In 1212, as noted above, it was described as half a hide, held 'of the fee of the earl of Essex.'¹¹² It can thus be traced back to the manor in Farnham held in 1086 by Geoffrey de Mandeville I, grandfather of the first earl of Essex.¹¹³ But since Geoffrey's manor com-

prised 3 hides and 3 virgates, the count's manor was only a fragment of it. In 1227 Farnham, by now in the custody of Raymond de Burgh, comprised one carucate, worth £5 a year.¹¹⁴ It was later taken from Raymond, but in July 1229 the sheriff of Essex was ordered to restore it to him, so that he could deliver it to Jolland de Evermue.¹¹⁵ Farnham was in 1230 committed in custody to William Blangernun,¹¹⁶ but he seems to have been implicated in the rebellion of Richard Marshal, earl of Pembroke, and in 1234, after a series of conflicting orders, it was committed to Ralph Haket or Haketton.¹¹⁷ Haket still held the manor in 1237.¹¹⁸ In 1246, however, it was granted to Stephen de Salines.¹¹⁹ This was confirmed in 1253.¹²⁰ These charters stipulated that Stephen was to hold Farnham for homage and service, rendering to the king a pair of gilt spurs or 6d. a year. In 1253 Stephen de Salines acquired from William Lovel and his wife Gunnore 8 acres of land in Farnham.¹²¹

Stephen de Salines had died by 18 August 1262 leaving as heir his brother Gerard. A royal charter of that date granted his land at Farnham to Richard de Ewell, king's serjeant, stating that Gerard had previously quitclaimed it to the king for Richard's use.¹²² Ewell, like Stephen de Salines, was to hold the land for a pair of gilt spurs or 6d. But in 1280 he surrendered Farnham to Edward I and queen Eleanor, receiving in return only a life interest.¹²³ The queen alone granted the manor in 1281 to her knight Sir John Frere, again for life.¹²⁴

This small manor has not been exactly located. Since it was originally part of Geoffrey de Mandeville's Domesday manor it was almost certainly near Earlsbury and Walkers (formerly Walkefares), both of which were held of the honour of Mandeville,¹²⁵ but it cannot be identified with either.

The manor of MASCALLSBURY, in White Roding parish, lay south of the village. It passed along with Alfriston and Southall until 1230, when the king granted it in custody to William Pucyn.¹²⁶ It was taken away from Pucyn in 1232, and in 1233 was entrusted to William son of Humphrey, a veteran royal official.¹²⁷ William was still holding it in 1235-7.¹²⁸ The manor was in 1251 granted for life to Wilmyne de Attelis, the queen's lady-in-waiting.¹²⁹ Wilmyne may already have been holding it in 1242, when the sheriff of Essex was ordered to postpone until her return from overseas his demands upon her in respect of the count of St. Pol's debts.¹³⁰ A charter of 1256 confirmed the grant to Wilmyne, adding that her executors should receive the income from the manor for five years after her death, to pay her debts.¹³¹ In 1258 Wilmyne, 'who from the queen's childhood had served her, and who is now worn out by old age,' received a pension on retirement, out of the Crown manor of Melksham (Wilts.).¹³² She was dead by May 1260, when Mascallsbury was conveyed to her executors.¹³³ By 1291 the manor was in the hands of Henry de Broke (d. 1320), who held it in chief as of the honour of the count of St. Pol.¹³⁴



Plate 1 Mascallsbury Farm, White Roding. Photograph c. 1970, Essex Record Office.

Mascallsbury Farm house stands on a moated site a mile south-east of the church.

The rich manor of DARTFORD, lying south of the Thames opposite Purfleet, was the only St. Pol manor in Kent. It had been committed to Raymond de Burgh by December 1226, when the sheriff of Kent was ordered to deliver to him all the corn and livestock belonging to the count.¹³⁵ Soon after that Dartford was taken from Raymond because he had attended a tournament at Strigull (Chepstow), contrary to the king's order; but it was restored to him in October 1227,¹³⁶ and in the following month he was granted all the St. Pol lands in England, to hold until the king restored them to the count 'of his free will or by a peace.'¹³⁷ In that year Dartford, described as an escheat of the king, was valued at £67, including the hundred belonging to it.¹³⁸ Raymond de Burgh mortgaged the manor in February 1228 to the bishop of Chichester for £150.¹³⁹ In January 1229 the king requested the men of Dartford to help Raymond pay off his debts.¹⁴⁰ Raymond was later deprived of the manor once again, but he recovered it in January 1230.¹⁴¹ By the following July Dartford had passed to John de Burgh.¹⁴² But in 1233 it was granted to William de Forz II (d. 1241), count of

Aumale, and his heirs.¹⁴³ Dartford descended with the honour of Skipton to William de Forz III, count of Aumale, who died in 1260 leaving a son Thomas and a daughter Aveline, both under age.¹⁴⁴ Thomas and Aveline de Forz were the heirs mentioned in Henry III's grant in 1263 to Guy III of St. Pol as barring the restoration of the count's land in England.¹⁴⁵ The custody of the honour of Skipton, including Dartford, was given in 1260 to the Lord Edward, Henry III's son.¹⁴⁶ The heirs were still under age in 1268.¹⁴⁷ Thomas de Forz died in 1269, leaving Aveline as heir. In the same year she married Edmund, earl of Lancaster, the king's younger son. She had seisin of the lands of her inheritance in 1273, but died in 1274, when they escheated to the Crown.¹⁴⁸ In 1277 Dartford was committed to Walter de la Mare at a rent of 110 marks (£73.33).¹⁴⁹ The manor was in 1280 assigned by Edward I to his mother, queen Eleanor, who was to receive from it an agreed annual income of £71 14s. 1d.¹⁵⁰ In 1290 Eleanor was awarded an additional income of £30 from Dartford.¹⁵¹ She died holding the manor in 1291.¹⁵²

Author: W.R. Powell. 2 Glanmead, Shenfield Road, Brentwood CM15 8ER.

Notes

1. * E.R.O., D/DRh F15, W. Stubbs to J.H. Round, 14 Sept. 1894.
2. *E.A.T. N.S.* xii, 98.
3. * I have quoted these deeds below. W.R.P.
4. The town of St. Pol-sur-Ternoise is now in the department of Pas-de-Calais.
5. *Feet of F. Essex*, i. 112.
6. *Cal. Inq. Misc.* i. (1916), 643, 767.
7. *Bk. of Fees*, 123, 590, 615; *Red Bk. Exch.* (Rolls. Ser.), 505, 804.
8. * *Rot. Lit. Claus.* (Rec. Com.), ii. 136b, 138b; cf. *Cal. Chart. R.* i. 64.
9. *Cal. Close* 1227-31, 372-4, 418.
10. Wrongly printed here as 'Abberton'.
11. *Cal. Close* 1227-31, 376.
12. *Cal. Close* 1231-4, 179, 180, 220. Bertelot (whence the surname Bartlett) was a diminutive of Bartholomew. * Cf. P.H. Reaney, *Dictionary of British Surnames*, s.v. Bartlett.
13. * Cf. *P.N. Essex*, 475.
14. Morant, *Hist. Essex*, ii. 425.
15. *Red Bk. Exch.* 505; *Rot. Lit. Pat.* (Rec. Com.), i. 4.
16. *Cal. Chart. R.* i. 422.
17. *Ibid.* ii. 139.
18. Morant, *Essex*, ii. 426. See *Cal. Inq. p.m.* i, p. 179, no. 573, which states that Jolland's heir, at his death in 1263, was his son and namesake, then aged five.
19. *Cal. Chart. R.* i. 250. Cf. *Red Bk. Exch.* 804, where Bertram is found holding Southall as worth £10 a year.
20. *Cal. Inq. p.m.* v, p. 280, no. 503, summarized by Morant, *Essex*, ii. 426.
21. Morant, *Essex*, i. p. xii. Cf. *E.H.R.* xxxiv (1919), 35, where Mr G. Lapsley reckons Ralph Bigod and Jolland de Durham among those who attended Parliament under Edward II, and were knights and tenants-in-chief. Bigods and Southall, however, were only held of the king *ut de honore*.
22. *Hunts. Feet of F.* 55. * This fine relates to Stanton and Hilton (Hunts). The parson must be Nicholas Convers, who resigned in 1329: P.H. Reaney, *Early Essex Clergy*, 139.
23. *Cal. Pat.* 1232-47, 13; cf. *Red Bk. Exch.* 804.
24. *Bk. of Fees*, i. 123.
25. Morant, *Essex*, ii. 623-6.
26. *Ibid.* ii. 473; cf. *V.C.H. Essex*, i. 511 note.
27. Morant, *Essex*, ii. 470.
28. Morant gives the date of Henry de Broke's death as 1314, but cf. *Cal. Inq. p.m.* vi, p. 376, no. 602, which gives it correctly as 1320.
29. Morant, *Essex*, ii. 470. Cf. *Cal. Inq. p.m.* ix, p. 424, no. 617, which again corrects the date of death given by Morant.
30. * *Times Atlas of World History*, ed. G. Barraclough (1981), 151/4 Cf. 125.
31. * Unless otherwise stated the following account of the counts of St. Pol is based on *L'Art de Vérifier les Dates*, Part ii, vol. 12 (1818), 381 f. I am grateful to Dr C. Lewis for drawing my attention to this valuable source.
32. * *Red Bk. Exch.* 345. The name Camdeveine, if Anglicised, would be Oatfield.
33. * *V.C.H. Essex*, i. 510, 511. For the Mandevilles see: I.J. Sanders, *English Baronies; Complete Peerage*, v. 113. For Geoffrey Martel see *V.C.H. Essex*, viii. 126.
34. * *Early Medieval Miscellany for Doris Mary Stenton* (P.R.S. N.S. xxxvi), 151.
35. * *Ibid.*; *Newington Longeville Charters*, ed. H.E. Salter, (Oxford Rec. Soc. 1921), pp. xxxiii, 13, 66, 68.
36. *V.C.H. Essex*, i. 568.
37. * *Newington Longeville Charters*, 84.
38. * *Pipe R.* 1169 (P.R.S. xiii), 160; *ibid.* 1170 (P.R.S. xv), 156. In 1086 the king's manor of Dartford had a recorded population of 153, with 55 ploughteams: *V.C.H. Kent*, iii. 208.
39. * In the sheriff of Kent's allowances under 'lands granted' or 'escheats'.
40. * *Pipe R.* 1188 (P.R.S. xxxviii), 39, 209.
41. * *Cal. Documents in France*, ed. J.H. Round, no. 1430.
42. * *Itinerarium Regis Ricardi* (Rolls Ser.), 213, 292-3, 298.
43. * *Pipe R.* 1194 (P.R.S. N.S. v), 2, 3, 20, 242-3.
44. * *Ibid.* 1195 (P.R.S. N.S. vi), 1, 52-3; 1196 (P.R.S. N.S. vii), 119, 213.
45. * *Ibid.* 1196, 289.
46. * *Ibid.* 1199 (P.R.S. N.S. x), 60. *The Book of Fees*, 1330 states that in 1198-9 Alfriston, Dunmow (Southall), and Roding (Mascallsbury) were in the king's hand, and were worth £34, including stock. Farnham is not mentioned there, but it was still being tallaged as an escheat in 1198: *Pipe R.* 1198 (P.R.S. N.S. ix), 132. Sir Maurice Powicke states that between 1196 and 1198 the count of St. Pol was allied with Richard I against Philip, and that in 1198 he received a payment of 500 marks from Richard: *Loss of Normandy* (1961), 111, 118n.
47. * *Rot. Lit. Pat.* (Rec. Com.), i. 4. The mortgage licence (24 Dec. 1201), refers to 'Hugh, Count of St. Pol, who has taken the Cross'.
48. * For Hugh's prominent part in the Fourth Crusade see *Memoirs of the Crusades... Villehardouin* (Everyman edn.), 15, 24, 88 etc.
49. * *Pipe R.* 1205 (P.R.S. N.S. xix), 196 (Essex), 112 (Kent). Dartford was in the king's hand for half the Exchequer year ending at Michaelmas 1205. Since count Hugh died in October 1205 the manor must have been seized before his death. For William of Wrotham see: W.R. Powell, 'The Administration of the Stannaries and the Navy, 1189-1216', *English Historical Review*, April 1956, 177.
50. * *Rot. Lit. Claus.* (Rec. Com.), i. 67b.
51. * *Red Bk. Exch.* (Rolls Ser.), 505: 'Roding, Dunmow, Alfrestone'; *Bk. of Fees*, 123. The count also held 1/2 knight's fee at Morden (Cams.)
52. * *Rot. Lit. Pat.* i. 95. Cf. *Pipe R.* 1212 (P.R.S. N.S. xxxii), 11, which shows the count holding Dartford as usual.
53. * *Rot. Lit. Claus.* i. 135b.
54. * *Ibid.* i. 137.
55. * *Pipe R.* 1214 (P.R.S. N.S. xxv), 26.
56. * *Rot. Lit. Claus.* i. 232b.
57. * *Praestita Roll for 17 John* (P.R.S. N.S. xxxvii), 100.
58. * *Rot. Lit. Pat.* i. 193.
59. * *Pipe R.* 1220 (P.R.S. N.S. xlvii), 118. In the 13th century Isabel and Elizabeth were variants of the same name.
60. * *Rot. Lit. Claus.* i. 488b.
61. * *Ibid.* 549b.
62. * *Rot. Lit. Claus.* ii. 66, 135b.
63. * *Ibid.* ii. 160.
64. * *Ibid.* 117.
65. *Rot. Lit. Claus.* ii. 136b, 138b, as quoted by J.H.R. (above).
66. * *Memoirs of the Crusades... Joinville* (Everyman edn.), 163.
67. * *Ibid.* 232-3.
68. * F.M. Powicke, *Henry III and the Lord Edward*, 169-70.
69. * *Cal. Chart. R.* i. 64.
70. * *Ibid.* i. 186, 250; *Cal. Close* 1227-31, 372, 374, 419; *Cal. Chart. R.* i. 435.
71. * *Cal. Pat.* 1232-47, 116.
72. * *Cal. Chart. R.* i. 327.
73. * *Cal. Pat.* 1247-58, 2.
74. * *Ibid.* 170, 210, 250.
75. * Hugh V's eldest son, John, succeeded him as count of Blois.
76. * *Cal. Pat.* 1247-58, 436.
77. * *Ibid.* 1258-66, 152; F.M. Powicke, *Henry III and the Lord Edward*, 420, 544.
78. * *Cal. Pat.* 1258-66, 516.

79. *Cal. Chart.* i. 422: as quoted by J.H.R.
80. * *Cal. Pat.* 1258-66, 153.
81. * *Ibid.* 261.
82. * *Cal. Chart.* i. 186.
83. * *Cal. Pat.* 1258-66, 402.
84. * *Ibid.* 516.
85. * *Cal. Inq. p.m.* i, no. 573 (dated 1263); *ibid.* vi, no. 602 (dated 1320); *ibid.* ix, no. 617 (dated 1348).
86. * There is no mention of St. Pol in I.J. Sanders, *English Baronies* or in the *Complete Peerage*.
87. * *Bk. of Fees*, 1349, 1350.
88. * *Close R.* 1227-31, 372-3, 376, 418. For Raymond de Burgh's custody of St. Pol's manors see also under DARTFORD, below.
89. * *Close R.* 1231-4, 121, 179, 180, 220.
90. * *Ibid.* 1234-7, 56; *Bk. of Fees*, 1360.
91. * *Bk. of Fees*, 590.
92. * *Ibid.* 1152.
93. *Cal. Chart. R.* i. 422: as noted by J.H.R.
94. * *Close R.* 1237-42, 283.
95. * *Cal. Lib. R.* 1251-60, 392. For the Welsh campaign see F.M. Powicke, *The Thirteenth Century*, 402.
96. * *Close R.* 1268-72, 211; *Cal. Chart. R.* ii. 139.
97. * *Rot. Hundr.* (Rec. Com.), i. 157.
98. * *Cal. Inq. p.m.* ii, no. 278.
99. * *Cal. Fine R.* 1272-1307, 97.
100. * *Cal. Close* 1288-96, 168.
101. * *Morant, Essex*, ii. 425; *Feud. Aids*, ii. 152, 174.
102. * *R.C.H.M. Essex*, i (1916), 121, dates the house from the 16th century.
103. * *Close R.* 1227-31, 372, 418.
104. * *Ibid.* 1231-4, 113, 204.
105. * *Bk. of Fees*, 615, cf. 1360.
106. * *Cal. Lib. R.* 1226-40, 400.
107. * *Close R.* 1237-42, 166; *Cal. Chart.* i. 250.
108. *Cal. Inq. p.m.* i, no. 573: as noted by J.H.R.; *Morant, Essex*, ii. 426.
109. *Cal. Inq. p.m.* v, no. 503: as noted by J.H.R.
110. * *Reaney, Place Names of Essex*, 476. The form 'Clapton' goes back to Chapman and Andre's *Map of Essex* (1777).
111. * *Pipe R.* 1194, 24; cf. 1195, 52. The prefix 'Little' in the name of the manor has been found only in the Pipe Rolls.
112. * *Bk. of Fees*, 123.
113. * *V.C.H. Essex*, i. 568.
114. * *Bk. of Fees*, 1350. A carucate was usually reckoned as 80 to 120 acres.
115. * *Cal. Close* 1227-31, 193.
116. * *Ibid.* 372.
117. * *Ibid.* 1231-4; 195, 482, 510.
118. * *Bk. of Fees*, 618.
119. * *Cal. Chart. R.* i. 305.
120. * *Ibid.* 435.
121. * *Feet of F. Essex*, i. 194. The 'fee of William Lovel in Farnham' is mentioned in 1254: *E.A.T. N.S.* xviii, 127.
122. * *Cal. Pat.* 1266-72, 729. In June 1262 Gerard de Salines and Richard de Ewell had been parties in a conveyance of 56 1/2 acres of land, meadow and pasture in Farnham: *Feet of F. Essex*, i. 248.
123. * *Feet of F. Essex*, ii. 28.
124. * *Cal. Chart. R.* ii. 256.
125. * *Morant, Essex*, ii. 623-4.
126. * *Cal. Close* 1227-31, 372-3, 418.
127. * *Close R.* 1231-4, 114; *Cal. Pat.* 1232-47, 13.
128. * *Bk. of Fees*, 1360, 590, 615.
129. * *Cal. Pat.* 1247-58, 109.
130. * *Close R.* 1237-42, 458.
131. * *Cal. Pat.* 1247-58, 474. The charter describes Wilmyne as 'majorissa' of the queen chamber, i.e. principal lady-in-waiting.
132. * *Ibid.* 613. For Melksham see *V.C.H. Wilts.* vii, 95.
133. * *Close R.* 1259-61, 50.
134. *Morant, Essex*, ii. 470. Cf. *Cal. Inq. p.m.* vi, no. 602, which dates Henry's death correctly as 1320: as noted by J.H.R.
135. * *Rot. Lit. Claus.* ii. 160.
136. * *Ibid.* 202b, 203.
137. * *Cal. Chart. R.* i. 64.
138. * *Bk. of Fees*, 1343.
139. * *Cal. Pat.* 1225-32, 178, 179; *Cal. Lib. R.* 1226-40, 69.
140. * *Cal. Pat.* 1225-32, 236.
141. * *Close R.* 1227-31, 286.
142. * *Ibid.* 419, cf. 374, 376.
143. * *Cal. Chart. R.* i. 186: 'until the king restores the said manor to the right heirs of the said count [of St. Pol].' For the counts of Aumale see I.J. Sanders, *English Baronies*, 142.
144. * *Close R.* 1237-42, 335; *ibid.* 1242-7, 470; *ibid.* 1251-3, 83; Sanders, *op. cit.* 142.
145. * *Cal. Pat.* 1258-66, 261 (and see above). The counts of Aumale are not known to have acquired any of St. Pol's lands in England except Dartford.
146. * Sanders, *op. cit.* 142; *Close R.* 1259-61, 307.
147. * *Cal. Pat.* 1266-72, 216.
148. * Sanders, *op. cit.* 142; *Complete Peerage*, vii. 386.
149. * *Cal. Fine R.* 1272-1307, 89.
150. * *Cal. Pat.* 1272-80, 386, 419, 439; *Cal. Close* 1279-88, 441.
151. * *Cal. Pat.* 1281-92, 368; *Cal. Close* 1288-96, 85.
152. * *Cal. Pat.* 1281-92, 444. For the later descent of Dartford see Hasted, *Hist. Kent*, ii. 296. I am grateful to Mrs Pamela Studd for checking this source.

Part of the cost of publishing this article has been met with the interest on the Publications Development Fund.

The topography and social structure of a small soke in the middle ages: The Sokens, Essex¹

by Rosamond Faith

Introduction

One of the largest properties of the canons of St Pauls Cathedral in the middle ages was the manor called in Domesday *Ældulfesnasa*, Adulfesness, in Tendring hundred, rated at twenty-seven hides.² This is the area now known as The Sokens in eastern Essex. It now consists of the Naze promontory and its hinterland: the modern parishes of Walton on the Naze (formerly Walton le Soken), Thorpe le Soken and Kirby le Soken, but in the twelfth century the manor of Adulfesness contained five separate villis: Walton, Thorpe, Kirby and 'the two Horlocks' – the last represented in the sixteenth century by a customary holding in Kirby and in the nineteenth only by a family name.³

In the Anglo-Saxon period Essex was brought and remained under the hegemony of Wessex. However, its coastline, rivers and estuaries must have been particularly vulnerable to Danish raiders and in this north east corner of the county there was enough permanent Danish influence to give rise to a handful of surviving Scandinavian place-names, of which two, Thorpe and Kirby, are in The Sokens. 'Adulfesness' is itself a hybrid, combining the Scandinavian element – *ness* for headland, with an Old English personal name EAdwulf or EAldwulf (Reaney 1935, 354-5; Crummy 1981). The name 'The Sokens' may itself also be a sign of Danish influence, for the Scandinavian term *sogn*, a parish, could have been given to the early district served by the church at Kirby, the 'church settlement'.

A cognate word, *socn*, in Old English came to denote an area over which someone had jurisdiction and within which he had rights to certain renders and services: 'soke' is also used to denote these rights (Murray 1888-1928, s.v. *soken*; Joy 1972). The more usual form is 'soke', and it is as The Soke that the manors of Thorpe, Kirby and Walton were collectively known in the sixteenth century and possibly well before that, while the form 'The Sokens', or 'the Sookins' as it was pronounced locally, persisted and has ultimately proved the survivor (Morant 1768, 481). The nature of the unit which The Sokens was has changed over time, but a strong sense of the identity of the area lasted into the eighteenth century at least. The fact that St Pauls

owned and administered The Sokens from the tenth century may have been a factor in preserving this ancient integrity through eras when such units normally broke down into their constituent parts. In the period discussed here it is possible to descry how the social structure and settlement pattern of a particular kind of land unit, a soke, underlay and influenced the development of quite another kind of land unit, a manor.

It is not certain when St Pauls acquired Adulfesness, for only a fabricated charter of 939 records its donation to the cathedral but it was in their hands by 1066 (Sawyer 1968, no.453; *D.B.* ii.13b). Ownership of the land brought with it rights. Three pre-conquest writs, of Ethelred, Cnut and Edward the Confessor, grant to St Pauls the rights known as sake and soke over all their lands (Sawyer 1968, no.453; Harmer 1952, 235-43; Gibbs 1939, no.3 p.10). The Sokens formed an area of privileged jurisdiction within this wider franchise. In the middle ages the soke court was the forum for lay civil and criminal cases and no bailiff but that of the lord could make any arrests within The Sokens, or arraign its tenants in another court. Gallows, pillory and tumbrell were kept 'in the accustomed places' and regularly inspected. The soke court was held at Kirby in the fifteenth century, in a 'small building with a small solar in which is held the court of the soke (*curia del sokne*)'.⁴ In 1509 the Dean and Chapter's tenants drew up a list of the customs of the soke. These show that as well as being an area of jealously preserved private jurisdiction for the lord, it was also an area whose manorial tenants claimed exceptional freedoms of their own – indeed the document seems nearer to a local bill of rights than a traditional manorial customal. They were able to alienate their lands for fifty years without the lord's permission, to exclude strangers from purchasing land, to fell timber and kill game and fish, to receive due warning of boon works to be performed and to receive a fortnight's warning of when the court was to be held. The court records were to be kept in Kirby church under lock and key, only the lord, the steward and the tenants having a key.⁵ A special enquiry was ordered in 1290 into the way that tenants in the Soke were disposing of their

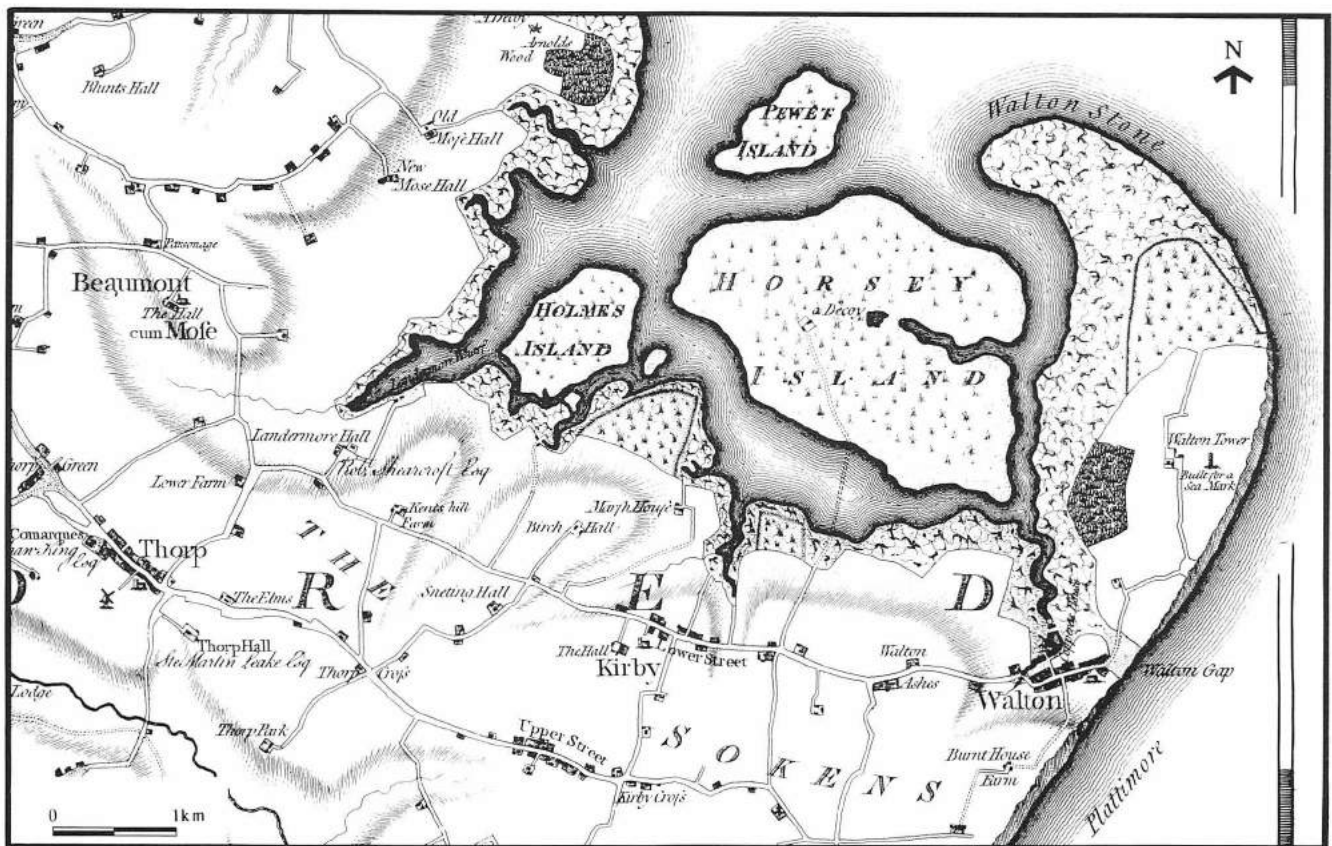


Fig. 1 Area of the Sokens on Chapman and Andre's map of 1777

land without regard to the customary claims of heirs, and the canons' visitation reports of 1335 show that they did indeed buy and sell customary land without any apparent need for a licence.⁶ This was an exceptional degree of freedom: Morant's view was that it meant that Sokens customary tenants were akin to freeholders and, as we shall see, there was much about them that is reminiscent of pre-conquest free farmers. The soke became a peculiar of the Dean and Chapter of St Pauls and Morant recognised in the peculiar court, held once a year at Kirby in his time, the old court of the soke (Morant 1768, 481-2; Wood 1954).

Topography

Like Holderness or Amounderness, Adulfesness derives its name from the kind of land unit which has an obvious topographical rationale, being composed of a promontory – a 'ness' or nose – and its hinterland. In the middle ages there were two main physical characteristics of the area: inland was heavy fertile London clay which needed large ploughteams to work it and could be broken up by marling. On the coast and in the coastal inlets were large areas of valuable marshland grazing, used mainly for sheep in the middle ages – Essex sheep cheese was famous.

The sea has robbed The Sokens of much of its land. The coast was subject to the erosion which can still be seen in rapid progress, only the most recent of a series of radical reshapings of the local topography. The inroads of the sea have forced several shifts in settlement which can be traced in the archaeological and historical record, and no doubt others of which we know nothing. As with other parts of the Essex coast there was considerable prehistoric settlement in areas which due to subsequent lowering of the coastline are now under water offshore, or have become tidal marshland. Hut-dwellers who produced an 'enormous number of extremely well-made tools' once lived around the area now known as Stone Point (Fig. 2) but this prehistoric episode of occupation of the former land-surface 'came to an end with the onset of salt-marsh conditions' (Hazzledine Warren *et al.* 1936, 182, 209).

Early medieval settlers in this region seem to have sought out land with an underlying rocky base which would resist the work of the sea. The original medieval vill of Walton, known as 'The Town', was said to have been in the area marked as West Rock on modern maps, a point now some five miles off the present coastline. (Fig. 2) The Town and its surrounding land must have been part of a true promontory or 'ness', a feature which must still have been in existence when

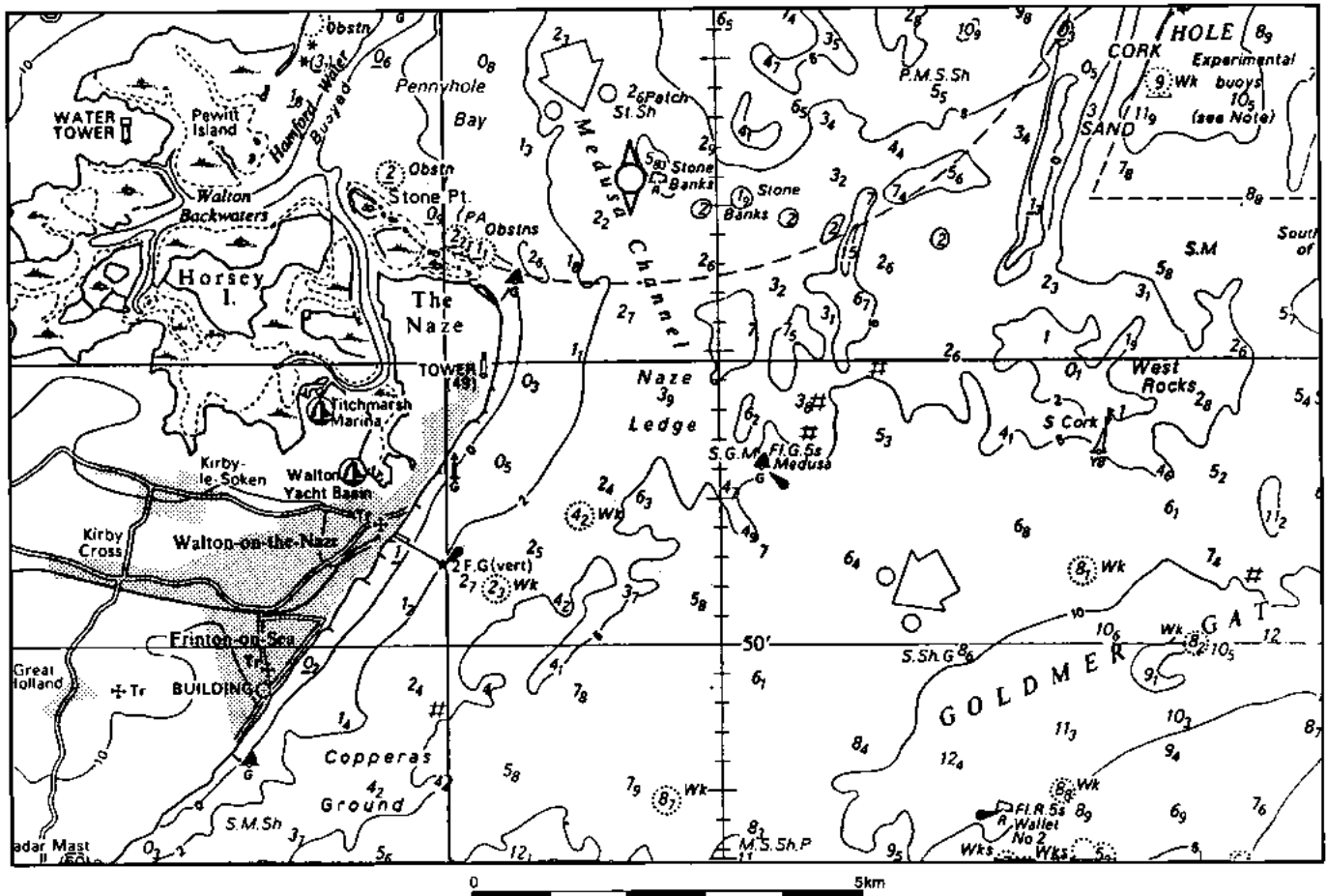


Fig. 2 Hydrological chart of the coast off Walton, reproduced from Admiralty chart 1183 by permission of the Controller of H.M.S.O. and the Hydrographer of the Navy. (North to the top).

the area received this name. The name *weala-tun*, 'British settlement', which came eventually to be applied to present-day Walton, may indicate that The Town was the primary settlement among the Sokens villis (Morant 1768 i. 484). There was a harbour, (location unknown), perhaps an important one, in the late eleventh century, which was still functioning in the fourteenth (Boyden 1971-2, 18).

As part of the same processes which have worn smooth the coastline of the Clacton peninsula, 'at one time indented with bays and headlands', the sea has shorn away the 'ness' of 'Adulfesness' and another promontory called Horsness, both visible on sixteenth century maps.⁷ Two processes were at work: the springs in the clay cliffs, freezing in winter, caused large sections to break away and slide down to the shore, and rising sea levels flooded marshland unprotected by sea walls or natural features (Walker 1955, 103,107).

The late sixteenth century seems to have been the time when the local coastline changed most dramatically (Hewitt 1844, 78). The remains of the Ness were still considerable in 1586 when Camden's *Britannia* recorded that 'the shore shooting out, buncheth forth

as farre as to the Promontory Nesse'. A coastal chart of 1584 shows a marked point of land, although nothing which would justify the term 'promontory' (Fig. 3). By this time The Town itself was under water, for this is probably the area of rocks in very shallow water carefully marked by cross-hatching on the chart. The cross-hatching may indicate that the remains of buildings could be seen from a vessel, perhaps that they were a danger to shipping. (This cross-hatching does not appear anywhere else on the map.)⁸ When Morant visited the area in 1768 local people reported seeing the ruins of buildings at West Rocks at ebb tides (Morant 1768 i.484). West Rocks is now an area of very shallow water and a danger to shipping.

Perhaps well before The Town became uninhabitable there had been a substantial shift of settlement: in the middle ages the main vill of Walton was a linear nucleated settlement in the area of the eastern part of the present town. A sixteenth century map shows this village well inland, but the wearing away of the Naze has left it on the coast.⁹ The seaward end of the main street, its houses and the church were eventually submerged between 1798 and 1803 - when the church

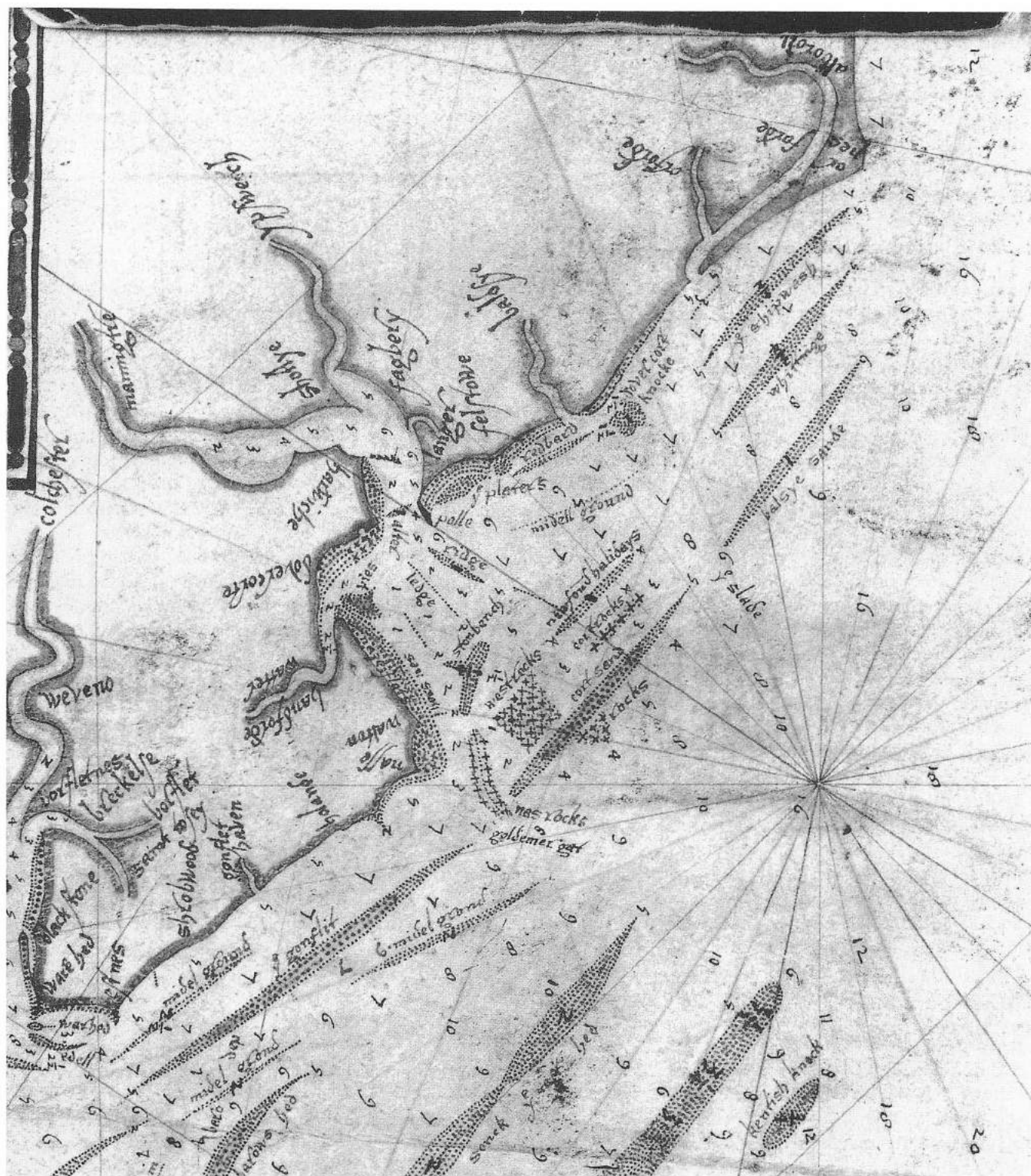


Fig. 3 Coastal chart of 1584, reproduced by permission of the British Library.
BL ms Cott. Aug. I 1, fo. 44. (North to the top)

bells could reportedly be heard at certain tides – and were still visible at low water in the mid-nineteenth century. The remains of the old roads and the church, by then below the high water mark, can be seen on a plan of 1843.¹⁰

In the middle ages, however, erosion had not yet

proceeded so far, and the part of the Naze peninsula that remained above water was valuable land, although virtually separated from the medieval village. No pre-conquest evidence for the process of erosion is to be had, but it may be significant that Domesday Book records a considerable reduction of the number of

peasant plough teams at work at Adulfesness between 1066 and 1086, from sixty to thirty, while the manorial population had declined overall by only eleven people. This suggests a loss to the arable area, but other factors, such as the transfer of land to another manor, may also explain it.¹¹ Erosion was certainly making itself felt by the twelfth century, when a prebend at Adulfesness was known as *Consumpta per mare* and rent reductions were made in 1222 *propter vastum maris* (Hale 1858, iv, 9).

Between the area around West Rock and the present coastline was an area of marshland known in the thirteenth century as 'the Strode'. The narrow isthmus which nowadays joins the area around Walton Hall to the rest of the parish may be the last remnant of this marsh. The canons' tenants rented land, and possibly lived, both 'this side of the Strode' and 'beyond the Strode'.¹² The marsh was crossed by 'the main Strode way' (*magna strata de Strode*) – possibly this was a stone causeway built by the chapter (see below).¹³ A linear feature marked by cross-hatching on the 1584 chart may indicate the sunken remains of this road. References in field names of the thirteenth century to 'upland' and 'doune' and 'the upper part towards the sea' suggest that east of the Strode marsh was an area of higher land, perhaps of similar height to the area around the present Walton Hall, which lies about seventy feet above sea level.¹⁴ It may have been the incursion of the sea behind this higher and more solid ground into the marshland that was eventually to cut off and finally destroy the original Walton.

Marshland was a valuable asset of the medieval manor. In combination with the upland pasture (*terra susenna*) the Strode provided grazing for the flocks of the manorial lord – the canons and their lessees – and their tenants, whose customary marshland grazing was known as Tunmenmersche.¹⁵ There was a manorial flock of at least 300 sheep in 1086 and the flock was increased in the following century (*DB* ii.13b; Faith, 1994, 661). Mills, (perhaps tidemills), saltpans, and fowling and fishing were other marshland assets.¹⁶ Local people must have been adept at managing this resource to its best advantage, adapting their pasturing regime to the fact that the land regularly flooded. The canons' lessees, often not local men, did not understand it so well and their attempts to keep the sea out of parts of the marsh in the late thirteenth century proved ineffective. Eventually they were forced to listen to local opinion. A sea wall which Fulk Lovel, archdeacon of Colchester and one of the canons' lessees, had constructed to enclose the 'new marsh' had in 1292 been recently broken down by floods. An inquiry was held and a jury of local people reported that such enclosure was 'more damaging than useful to the dean and chapter' and if rebuilt would be swept away by the next inundation. The only construction worth preserving, in their opinion, was the bridge or causeway (*pons*) which Lovel had had built by which sheep and other stock could be driven onto the marsh. This *pons* may

have been the Strode way.¹⁷ The enclosed marshland Lovel had intended to create may have been at the north end of the present-day Walton peninsula where a substantial sea wall was in place in 1778.¹⁸ Access to this marsh must be the rationale of the road passing Walton Hall.

Fields

The canons put their more substantial properties at lease in the middle ages in return for a cash sum and a set amount of grain yearly. Their close supervision of their leased assets has given rise to a large amount of documentation.¹⁹ Leases from the twelfth to the late fifteenth century, a summary survey of the manors of 1181, a set of detailed surveys of 1222 known as the 'Domesday of St Pauls', and a survey of 1297 for The Sokens provide a deal of topographical information. However, it is by no means easy to locate fields and buildings, and what follows must necessarily be a very conjectural picture of the medieval Sokens.²⁰

There were three main fields at Walton in the middle ages. *Home Field* was partly near the manorial curia, partly near the marsh. It seems to have lost land by the late fifteenth century. What remained of *Home Field* may be represented by the land surrounding Walton Hall in the late eighteenth century: it all belonged to the Hall and is likely to have been medieval demesne land. Ridge and furrow indicated on an eighteenth-century map in the arable fields nearest the sea comes to an abrupt halt where the land has broken away. *Cross Field* was also in this area, its 'upper' and 'lower' part may have been respectively land on the high ground of the Naze headland and land near the Strode. It presumably took its name from a now lost Walton Cross – possibly at the crossroads still just visible on nineteenth century maps from which the stump of a roadway, apparently heading out to sea, can be seen. (The *East Field* which appears in 1279 but not subsequently, may be the same as *Cross Field* which does not appear in that year.) *Bancroft* (Beancroft?), with part near the Strode and an upper part towards the sea, was perhaps on the far side of the Strode. *Great Field* or *Middle Field* was probably a common field, and it is tempting to identify it as the land of the Old Town settlement. A *Grove Field* appears in 1468 but not earlier.

All these fields, with the exception of the part of *Home Field* nearest the curia, were subject to destruction by the sea. The leases give us the acreages sown on demesne land: the two fields whose demesne sown acreages are known for both the late thirteenth and the late fifteenth century – *Home Field* and *Middle Field* – show considerable shrinkage. *Middle Field* had lost all but 92 of its 218 acres between 1279 and 1468. Nevertheless a comparison of the surveys indicates that the demesne arable at Walton was very considerably increased overall between 1181 and 1222, from 180 to

720 acres and, in view of the keen interest that the canons took in investigating and recording any damage to their manors, it must be significant that a local jury found none to report to a visitation in 1335, when it was recorded that 'the demesne land is well cultivated and no damage (*vastus*) has been done to arable land or meadow'.²¹ Three local men, presumably knowledgeable about local conditions, were willing to lease the Walton demesne land in 1468, although they were assured that their rent would be reduced if 'le Inmersshe' – probably the Strode – were flooded.²² The estate map of 1778 shows the demesne arable at Walton confined to the area between Walton Hall and the Naze cliff top, not far beyond the present coastline, an area of about 400 acres in contrast to the 720 of the early thirteenth century.

The manor of Adulfesness

There were important differences between the four townships or divisions of the manor of Adulfesness. (The terms 'vill' and 'township' are used interchangeably here for these divisions and are not meant to imply physically nucleated settlements.)

At medieval Thorpe, probably at the site of what is now Thorpe Hall, there was in the twelfth century a well-appointed gentry farm. We should bear in mind that the canons' lessees were often canons themselves, men of considerable fortune and standing in the church. Even if, as is likely, a lessee put in a bailiff to run his property, that bailiff may himself have lived very comfortably. The domestic buildings – a hall with a detached chamber (*aula et camera*), passage, two privies and a kitchen – were of the type that John Blair has recently characterised as typical of late Anglo-Saxon and early post-conquest domestic seigneurial buildings (Blair 1993). There was a small range of farm buildings: a brewhouse, malthouse, dairy, oxhouse, three small chicken houses, a barn 64' x 35' x 13' high at the ridge and a threshing shed. Thorpe also had a park by 1222 – the canons were apparently very fond of parks as they appear on several of their manors, and were presumably for deer. There was a church in 1181, and a mill at Landemere, possibly a tidal mill. The demesne farm at Thorpe was small by St Pauls' standards: eighty seven acres arable, and sufficient oxen (ten) for a single plough team. There were small numbers of pigs and poultry and a flock of 124 sheep (as well as a cat and two kittens).

The scale of agricultural operations at Thorpe was dwarfed by those at Walton which was the main manorial agricultural centre of the manor. An exceptional amount of information is available about the buildings of the manorial curia but none which positively locates it. It was possibly in Walton village itself, but the assumption made here is that it was at or near the site of the eighteenth century Walton Hall. A 'Bury Field' near the Hall in 1778 goes some way to support this, as

burh is often found denoting the ruins of occupied sites. The earliest of two twelfth century leases required there to be ten ploughteams on the manor as a whole, and the majority are likely to have been at work on the Walton arable: there were nineteen oxen present in the twelfth century besides ten work horses (*stouti*) as well as the priest Leofstan's riding horse, and a sheep flock numbering nearly 400. There was a hall, chamber and pantry and possibly a chapel 'with five glass windows' within the *curia* and near the chamber.²³ An impressive range of farm buildings included the 'great barn' 168' x 56' x 21' high at the ridge, a 'long stable', two other barns 96' x 16' x 16' high and 117' x 16' x 16' high. The *curia* at Walton was effectively a stackyard: it had four buildings (*domus*) and stacks of wheat, beans, peas and hay. New land was added at both these townships during the twelfth century, the demesne at Thorpe growing from 87 to 180 acres, at Walton from 180 to 720 (Faith 1994, Table 2, 662).

Although Kirby was the 'headquarters' of the soke there was apparently no agricultural centre of this type there in the twelfth century. No manorial buildings are mentioned in the twelfth century leases and no demesne land was recorded in 1222 (it may have been merged with Thorpe's). However, there were 120 acres demesne in 1297 and there were two barns and a granary, a hall and solar by the mid-fourteenth century. No separate leases survive for the Horlock vills, and one of them was grouped with Kirby in the 1222 surveys: they may simply have been small hamlets.

Hides and hidation

A major difference between the vills, and one which may reflect a longstanding and important division in the estate of Adulfesness as a whole, was in the allotment of its hidage: its total assessment for geld. A peculiarity of the 1222 survey of Adulfesness, which drew Frederic Seebohm's attention when he was writing *The English Village Community*, were the tenancies at Thorpe, Kirby and the Horlocks expressed in terms of hides, whose tenants are called *hidarii* (Seebohm 1896, 52-3). There were nine hides at Thorpe, ten at Kirby and ten at Kirby with Horlock. There were none at the township of Walton. These hidated tenancies together add up to twenty-nine hides, approximately the original hidage of the manor before the three hides of Birch Hall were subtracted from it between 1002 and 1066 (Boyden 1972, n.3). In other words, the overall assessment of the manor in hides had been divided among its vills in such a way as to exclude or exempt the main agricultural centre at Walton. Parallels for the practice of dividing the hidage of an estate among its component parts can be found as early as the seventh century: it was a common-sense solution to the problem of ensuring that the burden of providing renders in food and service were allotted among the inhabitants. There are parallels too for the exemption

of a certain proportion of the estate from taxation: this exempt portion was known as 'inland' and it is a common, though not a universal, characteristic of inland that it is not hidated (Faith, forthcoming, ch.2). By this criterion the entire vill of Walton seems to have been counted as inland. Common though these allotments and exemptions of hidation must have been, not very much is known about how they worked at the local level. The Sokens thus represents an exceptional opportunity to examine the implications for the local economy and social structure of the division between inland and hidated land.

The hide is both a measure of land and a fiscal assessment, the unit on which the payment of public burdens such as royal food rents and eventually geld was based. Although it ceased to be used as the basis for public taxation in the late twelfth century, the hide evidently continued in local use as the basis for allotting responsibility for other public burdens and services such as attending courts. Land assessed in hides at Kirby and Horlock was noted in the survey as 'geldable to the king's aid', and 'defends itself to the king', expressions which meant that its owners were responsible for public obligations. If the hide had ever been 'the land of one family', as it may have been in early Anglo-Saxon England, the process by which it had been split up among several families may well have begun before the conquest and was far advanced by 1222. Most of the hides, originally 120 acres, had broken down into fractions. In spite of this fragmentation, their original identity was clearly indicated by the compiler of the survey by marginal marks, and whether they held a whole hide or a fraction of one, their tenants are called *hydarii* or *hidarii* (the latter spelling is adopted here).

at Thorpe there were nine hides. Forty five *hidarii* held tenancies of between five and thirty acres, two held half hides and one an entire hide (120 acres),

at Kirby thirty four *hidarii* held holdings of fifteen to seventy two and a half acres, totalling 10 hides,

there were thirty seven *hidarii* 'of Kirby and Horlock' one with two hides, the rest with regular fractions of hides, totalling 10 hides.

Neither the holdings of the Sokens *hidarii*, nor the *hidarii* themselves, are described as 'free', and the categories of free and unfree scarcely appear at all in the whole of the 'Domesday of St Pauls' survey. An exception is the two hides at Kirby with Horlock held by Elias de Viliers 'by ancient inheritance' and described as 'free'. They were 'geldable to the king's aid' with the rest. It is probable that hide tenancies were normally hereditary and had originally been held jointly by heirs, for some groups of heirs appear as joint tenants. Only one hide is named, 'Haring hide' at Kirby. If these were originally hereditary family holdings it is clear that by

1222 there had nevertheless been much alienation away from the family. Tenancies had been combined to make composite holdings, some extremely large: de Viliers' land must have been much more like a minor gentry landholding than a peasant farm, while others were smallholdings of five acres. The most commonly occurring fraction of a hide is fifteen acres – what would in other parts of the country be called a half-yardland. This variegation in size may be the result of the active market in land characteristic of early East Anglia, and in fact a few tenancies are described as having been bought from other tenants. This wide range of size is typical of free tenancies (Kosminsky 1956, 220-8).

While the hide had originated as the basis for the assessment of tax, the surveys show it being used as in the guise in which it most often occurs in medieval manorial documentation, as a unit on which rent was reckoned. Some obligations were laid on the hides collectively and they are referred to as if it is the hide itself that is responsible, even in those cases where it had in fact fragmented into smaller holdings. Together they must keep certain of the curia buildings in repair. The hides of Thorpe were responsible for the barn, oxhouse and *bateria* there. Those at Kirby and Horlock, where there was probably in 1222 no curia, were assigned to building work at Walton. As well as fencing the curia they were obliged to fell and prepare the timber to repair the barn at Walton, receiving the old timber as a perk, and construct an oxhouse there, except for the ridge pole, which would be done by the 'lord' (ie by the canons' lessee). Each hide makes four hurdles for the fold, the lord providing the wood. Ploughing rent was charged on the hide and measured in acreages: each hide at Thorpe was obliged to plough eight acres a year, harrow and sow them with seed provided by the lord. Each hide at Kirby and Horlock owed winter ploughing of three acres for wheat, plus winnowing and sowing two acres. In spring each owed three acres ploughed, sown and harrowed, and an acre's mowing hay. The Kirby and Horlock hides had to thrash enough grain to provide seed to sow the amount of land ploughed by one plough for the whole demesne at the winter and spring ploughings – it is not clear what this means – and enough seed for four acres after Michaelmas. The hide at Thorpe owed an acre of hay-making. It is also notable that the level of ploughing service that the *hidarii* owed was low in relation to the size of their tenancies. While at the other townships each hide of 120 acres owed only eight acres ploughing, at Walton, by contrast, three acres ploughing was owed from each tenancy of five acres.

What is distinctive about these arrangements is that the hide tenants were evidently responsible for virtually the entire cultivation of a small fixed acreage of the demesne. Similar obligations of a small yearly acreage to be ploughed are found in Domesday, owed by the comparatively free and independent tenants known as radknights (Lennard 1959, 368-71). This is a form of labour rent also found in late Anglo-Saxon

contexts and it sometimes continued long after the conquest to bear its Anglo-Saxon name, *gafol yrðe* or rent paid in the form of ploughing (Vinogradoff 1892, 280; Liebermann 1903-16, 444-453 (*Rectitudines Singularum Personarum*); Neilson 1910, 43-4).

Hides also owed carting service. Each hide at Kirby provided three carts at harvest and the hide at Kirby with Horlock lent a harrowing horse at Lent and carted four and a half loads 'from the barn to the boat', possibly to the small inland port at Landemere, rather than to the coast. Each hide was responsible for the provision of fourteen loaves and *companagium* for the 'messing' (*ad mescingam*) of the people carrying corn at harvest. Each hide owed a cash sum, five shillings at Thorpe, six shillings at Kirby and Horlock. Obligations of this sort look as if they had been imposed at a period when the hide was still a recognisable farming unit, one from which ploughs, carts, money and men could be demanded.

A possible early context for the origins of these services is suggested by their resemblance to the characteristic obligations owed by the inhabitants of a kind of land unit that pre-dates the manor – the area of 'extensive lordship' over which a ruler of some kind had hegemony, rights to services, and the profits of jurisdiction, but not ownership. Such land units are often known as small *scirs* or sokes and The Sokens may represent the survival of an early unit of this type. The services the hide tenants owed – flat-rate payments, repairing and building services at a seigniorial centre, the comparatively small acreages of ploughing, and the obligation to cultivate a fixed area of the demesne at the central place of the *scir* – are all characteristic obligations of these 'small *scirs*' (Jolliffe 1926, 1-42; idem 1933; Stenton 1910, 3-96; Douglas 1927; Barrow 1973, ch.1). Most studies of these early land units have only been able to reconstruct them retrospectively, compiling from post-conquest evidence a picture of structures that may have originated in the era of Anglo-Saxon settlement if not earlier still. The semi-public obligations of the inhabitants of the *scir* became indistinguishable from rents owed to landlords, and it is mainly in the records of rents and services that we have to search for them (Douglas 1927, 96-113). The same is true for The Sokens. By the time that the services due from the hides at Thorpe, Kirby and Horlock were recorded they were part of a bundle of rents and services that were owed to the then owners, the canons. Nevertheless, they represented a very early layer, so to speak, in this bundle.

Another, perhaps later, layer, of the evolution of rent may be represented by the obligations owed by each *household* of the hide. The work owed was mostly taken at the periods of the farming year – ploughing, harvesting and haymaking – when a concerted labour input over a relatively short period could be crucial to a landlord. These obligations, which came to be known as 'boons', the periodic communal turning out of the concerted labour of the district to work on the lord's

land, may be only the recorded part of a more general communal effort in which neighbour helped neighbour.

At Thorpe each household of the hide weeds three times, reaps four acres and lends a cart at harvest with one man, reaps or mows a further three half-acres, and lends a man until terce if work remains to be done, lends its best man at harvest boons, who receives two meals. 'All men both of hides and of the demesne' lend their ploughteams at the lord's plough boons, with food provided. At Kirby each household of the hide lends a man until terce for weeding, thrashes 27 quarters of grain, shears sheep, reaps three half acres of oats and picks a selson of beans, provides one man at the first harvest boon and two at the second, both provided with food. As we have seen, the hides provided bread and *companagium* for the reapers.

The demands of harvest and haymaking meant that boons were virtually a universal obligation: the Walton tenants who held small holdings 'from the demesne' (see below) also owed boons: one boon weeding, and two harvest boons, and tenants 'of the demesne' at Thorpe lend their best man at boons. It is a characteristic of boon works that the lord was often obliged to provide food and drink and other perks in minutely defined quantities, and these obligations often suggest that a process of bargaining has gone on between lord and tenants (Homans 1941, 260-8; Vinogradoff 1892, 281-4, 308; Jones 1977). Boons seem to have developed as a form of obligation in circumstances when lords had to bargain for labour. The basis on which they were charged on the Sokens tenants, on each household of the hide rather than on the hide itself, show that they originated when the hide had become fragmented, and thus in different circumstances, and probably at a later date, from the more ancient *scir* obligations. They may have been part of an attempt to extend labour rent in a period when increased pressure on land had begun to subdivide large farms of a hide among several families. A period of population growth would have put pressure on landlord and peasants alike to increase production. It is difficult to calculate the number of households there were on the hide tenancies, as many were held in joint occupation. Sons shared tenancies but we cannot tell if they if they shared a house. There were 126 tenancies on the twenty-nine hides: there may have been 126 households. To charge labour on each household rather than on each hide would undoubtedly have made a considerable increase in the labour supply.

It seems likely that the hide tenancies as we see them in the 1222 survey are fragmented relics of the landholdings of the relatively free and independent Anglo-Saxon farmers of the area which became known as the soke of Adulfesness. They had public obligations towards the state and owed strictly limited agricultural services. Not all the *hidarii* were well-provided with land, and the working of the land market had dissolved the link between many families and the fam-

ily holding. The comparative freedom which Morant noted in the tenures in The Sokens was a very attenuated vestige of this former independence, but it was striking enough for him to remark that the local copyholders 'do most things contrary to the customs of other copyholds'.

The hides must originally have been large-scale farms, with draught stock and carts, whether for ploughing and harrowing, carting or hauling the massive timbers needed for the barns and other farm buildings at Thorpe and Walton. Their owners were responsible for skilled building work at the curia: very likely they had farm buildings and houses of their own which employed the same skills. Joint holdings could draw on the combined workforce of the group of heirs, but some *hidarii* with large holdings must have employed labour and/or had tenants of their own: one of the privileges of tenants of the Sokens, still preserved in Morant's time, was that they were allowed to grant leases of their own for fifty years without permission (Morant 1768 i. 481-2).

Demesne tenancies

A second type of tenancy consisted of small amounts of land leased *de dominio*, from the demesne or manorial farm, on tenancies for life. These demesne leases are principally found at Thorpe, where thirty-six tenants held small holdings *de dominio* for money rent. They were obliged to lend their plough teams at plough boons and provide men at harvest. Ten of them, including seven people who held only messuages, also owed week work, that is to say regular unspecified work of so many days a week. This work was essential to service the enlarged demesne arable at Thorpe. Demesne land was leased at Walton as well: there were four tenancies *de dominio* for money rent, and nine holdings which consisted only of a messuage, that is to say a house and its yard or garden, with no agricultural land attached. There were no holdings like this at Kirby and Horlock.

Operarii

The last principal category of tenants are the work-tenants, the *operarii*. They are found on nearly all the manors of the St Pauls estate in 1222 but of the Adulfesness townships only at Walton. At Walton there were thirty tenancies of *operarii* and eleven holdings for cash rent and labour combined, ranging from five to twenty acres, held by forty-one tenants. Although some had combined these into larger holdings, the largest of these composite holdings was 47½ acres. The larger were multiples of five acres and it was on the basis of a five acre holding that the labour rent was assessed, increased in the case of larger holdings on a *pro rata* basis. These work-tenants owed for each five acres a

day's work a week, they ploughed and harrowed 2 acres as well as their week work, those who had horses lending them for one day. It is likely that they made up plough teams by combining their stock rather than owning entire teams. They owed one day's weeding as a boon work. Each household owed three half acres' reaping beside their week work, picked a selion of beans, and owed two reaping boons. They sheared sheep, for which they were paid. Together as a group (*communiter*) they paid 5 pence. Both absolutely and relative to the amount of land they held they were much more burdened with labour rent than the hide tenants at Thorpe and Horlock. This work force was essential to the running of the large Walton demesne, and was part of the manorial assets: a twelfth-century lease notes that at Walton: '69 works each week belong to this curia.' There were seven labour tenancies held from the demesne at Thorpe, whose tenants performed much the same function there.

This group of smallholders owing considerable amounts of week work were probably represented in Domesday Book by *bordarii*, smallholders who were generally associated with demesnes, and sometimes were actually resident in or around the manorial curia. There were forty *bordarii* at Adulfesness in 1066, fifty twenty years later (*D.B.* i.13b). *Bordarii* must have been general estate workers who could have been put to any work, for the labour needs of the demesnes at Thorpe and Walton could not have been met by the tasks individually specified in the survey. Some of the most labour-intensive jobs of the farming year, weeding, ditching, marling and muck spreading, are very under-represented and although it is difficult to work this out, haymaking and harvesting also seem very under-supplied. At Thorpe it was probably only by exacting labour rent from each household on the hides that enough harvest work could be found. As for threshing, hardly any work was owed at either place. Thrashing and winnowing are only provided at Thorpe by the limited amounts owed by the hides there, and are not mentioned at all at Walton where the large demesne must have produced considerable amounts of grain. It is possible that the *operarii* from Walton could be assigned to thresh at Thorpe when required: it was at Thorpe that a threshing barn is found in a twelfth-century lease. The likely explanation is that these essential jobs on the Walton demesne were done by the week work of the *operarii* and possibly also by paid labour. Walton was the most 'demesne-oriented' manor, and it seems probable that the class of worker-tenants had been brought into being to meet the demands of an expanding demesne agriculture. If they were indeed like the *bordarii* of Domesday, they were already present in growing numbers on the pre-conquest manor, and they expanded considerably in the following two centuries. Specialist or particularly responsible work such as caring for stock may have been done by permanent estate workers, living around the curia at Walton and

Thorpe. They do not appear in the surveys and very likely had rent-free holdings.

Social structure

The four townships must have had very distinctive appearances and been very different little societies, in ways which derived from the history and nature of their populations as well as from the constraints of geography. Kirby was the original centre of the soke of Adulfesness. There had probably been a church at 'Kirk-by' in the ninth century – hence the name – and there was certainly a church with ten acres of glebe land by 1181, but there was no manorial curia, superior status residence, or separate demesne recorded in 1222 – these were later developments. Almost all its forty-five tenants had holdings which were fractions of hides, twelve of them being substantial farmers with fifty acres or over, seventeen yardlands or half-yardlands (thirty acres, fifteen acres). Kirby with Horlock had much the same kind of population, with the largest of its fifty-six tenants holding half-hides (sixty acres) and two hides. The involvement of these farmers with the economy of the manorial demesne at Walton, although it had increased since the early days of the soke, was still not very extensive: the ploughing they owed could be completed in a few days, and even at the peak of harvesting and haymaking their contributions were limited to providing three man-days' labour. It was probably the obligation to repair the manorial buildings which made the heaviest demands on their time, skills and resources.

At Thorpe the effects of the presence of a manorial demesne can be seen. The needs of the curia and the existence of the demesne arable had given rise to about thirty demesne tenancies, and ten tenants owed week work on the demesne. The extension of the manor by assarting had benefitted eight tenants, who held portions of this new land. The dominant element however among Thorpe's eighty six tenants were still the hide tenants. Nine had very large holdings, two of over a hide. Of forty tenancies of between ten and fifty acres, so many were of regular size to suggest that they were in fact holdings in some kind of common field system. This must have been associated with a nucleated settlement, for with a total tenant population of about ninety, including sixteen smallholders with under ten acres, there does not seem to be room for in the parish for this number of people to have had discrete farms. That there were twelve tenants with only a house or yard also supports the impression of a village, perhaps even something resembling present-day Thorpe: a nucleated street-village, with the curia and its park set some little way off. A church was in place by 1181 with four acres of glebe land (Hale 1858, 149).

Walton, the 'inland' or demesne of the manor of Adulfesness, was functionally different from the other villis, and this had given rise to profound physical and

social differences. Its church and village were the largest nucleated settlement in the locality. Its range of huge farm buildings must have been visible for miles across the flat claylands, its extensive demesne arables were laid out in large fields and worked by the ten-head plough teams that were needed on the heavy clay. Its population of some eighty households were mostly tenants of small holdings who worked part-time on the manorial demesne: in effect they were agricultural labourers with allotments. It may be of significance that there was a much higher ratio of female to male tenants recorded at Walton than at the other villis: at Walton it was twenty-five female to fifty-seven male tenants, at Thorpe eighteen females to seventy males. This may have to do with the large number of small holdings. Many tenancies, even those as small as five acres, or consisting solely of a messuage, were in multiple occupation. These small holdings could not have supported a family by agriculture, and their tenants must have resorted to by-occupations such as fishing and fowling to eke out a living, or worked for wages in agriculture or the cloth industry. Women may have been more able to support themselves independently in this milieu, and women with little or no land were less likely to be married. The messuages and cottages of this crowd of smallholders probably formed a more clearly nucleated settlement than at the other villis. A church was in place by 1181, subordinate to the church at Kirby. (Morant 1768, 485) The Lay Subsidy returns for 1327 show variations in wealth between the villis. Although in 1222 it had had about the same tenant population as Thorpe, Walton in 1327 had fewer people with taxable moveable wealth than the other villis, and fewer taxpayers in the upper ranges of assessment (over 2s.) (Ward 1983, 11-14).

The contrast between the social structure of Walton and the other villis of the manor may be of more than local significance. Adulfesness' original rating of thirty hides was a very common rating for an Anglo-Saxon manor, and many manors of this size, or approximately so, may have consisted as Adulfesness did of a scatter of different villis. If, as here, there was a functional division between the vill or villis of unhidated inland – that is to say the principal demesne sector – and those of the hidated remainder of the manor, there may also have been, as here, a social and physical division too. Moreover, in the social structure of Walton, and the heavy involvement of its tenants with the manorial economy, we may be seeing an example of a widespread and important type of settlement. Places called Walton were common in Anglo-Saxon England, often found in association with major minsters. Debate continues as to whether their name, derived from OE *weala-tun*, denotes a settlement of Britons or a settlement of slaves (Cameron and Todd 1979-80), (1-47, 47-50). Whatever their origin, 'Waltons' may be a type of settlement whose form and location is determined by their function: demesne-oriented villis consisting mostly of worker-tenants. The 'serf village' associated

with a seigneurial, royal or monastic inland may prove to be an important element in our developing picture of the social structure of early medieval England. In contrast are the larger holdings and comparative independence and self-sufficiency of the farmers of the hidated land. Their relationship with the manor derives

from a looser, older form of lordship, preserved and represented by the continuing existence and sense of identity of the soke.

Author: Rosamond Faith, Wolfson College, Oxford.

Bibliography

Barrow, G.W.S.	1973	<i>The Kingdom of the Scots</i> (London)	1933	<i>Pre-Feudal England: the Jutes</i> (Oxford)
Blair, J.	1993	'Hall and chamber: English domestic planning 1000-1250' in G. Meirion-Jones and M. Jones, eds., <i>Manorial Domestic Buildings in England and Northern France</i> , Society of Antiquaries of London Occasional Paper 15	Jones, A.	1977 (a)
Boyden, P.H.	1971-2	<i>History of Walton</i> (2 vols.)		1977 (b)
Boyden, P.H.	1972	'nemus de Eduluesnasa in 1127', <i>Essex Arch. and Hist.</i> 3rd. series 4, 146-7	Joy, C.A.	1972
Cameron, K.	1979-80	'The meaning and significance of Old English <i>walh</i> in English place-names'; Todd, M. 'The archaeological significance of place-names in <i>walh</i> ', <i>Journal of the English Place-Name Society</i> xii	Kosminsky, E.A.	1956
Crummy, P.	1981	<i>Aspects of Anglo-Saxon and Norman Colchester</i>	Lennard, R.V.	1959
<i>Domesday Book</i> ii, cited as <i>DB</i> ii			Liebermann, F.	1903-16
Douglas, D.C.	1927	'The social structure of medieval East Anglia', in P Vinogradoff, ed., <i>Oxford Studies in Social and Legal History</i> ix (Oxford)	Morant, P.,	1768
Faith, R.	1994	'Demesne resources and labour rent on the manors of St Pauls cathedral, 1066-1222' <i>Econ. Hist. Rev.</i> xlvii.4, 657-678	Murray, J. et al. eds.,	1888-1928
	forthcoming,	<i>The English Peasantry and the Growth of Lordship</i>	Nielson, N.	1910
Gibbs, M.,		ed. <i>Early Charters of the Cathedral Church of St Paul, London</i> . (Camden Third Series LVIII. London, 1939)	Reaney, P.H.ed.,	1935
Hale, W.Hale, ed.	1858	<i>The Domesday of St Pauls of the year MCCXXII or registrum de visitatione maneriorum per Robertum decanum</i> (Camden Society)	Round, J.H.	1926
Harmer, F.E.	1952	<i>Anglo-Saxon Writs</i> (Manchester)	Sawyer, P.H.	1968
Hazzledine Warren, J., et al.,	1936	'Archaeology of the submerged landsurface of the Essex coast' <i>Proceedings of the Prehistoric Society</i> n.s.2 (1936), 178-210	Seeböhm, F.	1896
Hewitt, W.	1844	<i>An Essay on the Encroachments of the German Ocean along the Norfolk Coast</i>	Stenton, F.M.	1910
Homans, G.C.	1941	<i>English Villagers of the Thirteenth Century</i> (Cambridge, Mass.)	Vinogradoff, P.	1892
Jolliffe, J.	1926	'Northumbrian institutions', <i>English Historical Review</i> xli, 1-42	Walker, K.	1955
			Ward, J.C. ed.,	1983

- Warren, S.H. 1915 Office Publication 88. (Chelmsford)
'The opening of the Romano-British barrow on Mersea Island' *Trans. Essex Arch. Soc.* n.s. xiii. 117-39

Unpublished sources

Chelmsford, Essex Record Office (cited as E.R.O.) D/DHw M1 (extent of 1297)
Wood, E.A. 1954 *The End of the Soken Court: a study of an ecclesiastical peculiar jurisdiction* (typescript)
Colchester, Essex Record Office (cited as E.R.O. Col.): D/DFI E1 (maps of Mistley Park Estate 1778)
London, British Library (cited as B.L.): mss Cott. Aug. I.1. fo. 44 (chart of 1584)
London, Guildhall Library: St.Pauls Cathedral Dean and Chapter (cited as D&C) mss 25,122/1112-1035 (leases, visitation reports), 25,315 (customs, 1509). I am grateful to Dr. John Blair for showing me his translations of the sections in the leases relating to manorial buildings.)
Oxford, Balliol College: ms C.19.36 (map of part of Walton 1843)

My thanks are due to the archivists of these repositories for allowing me to consult the manuscripts in their keeping, and to the Walton and Frinton Yacht Club for providing Fig.2, which is reproduced with the permission of the Controller of H M Stationery Office and the Hydrographer of the Navy.

Footnotes

1. I should like to thank Dr.Ray Powell for his help and advice, and the members of the Birmingham University Medieval Graduate Seminar for their comments on an earlier version of this article
2. D.B. ii.13b. Birch Hall, rated at three hides, was detached from Adulfesness between 1002 and 1066 as one of the church properties held as a separate prebend by one of the canons (Boyden 1972, 146 and n.3, 147)
3. ERO D/DE M1 9 ; Round 1926
4. London, Guildhall Library, St Pauls Cathedral Dean and Chapter (cited as D&C) mss. 25122/1027
5. D.&C. ms 25,315

6. Hale 1858, 159-60; D.&C. ms. 25,122 mm 1112, 129,130,131,133.
7. Horsness was the north part of what is now the Walton peninsula and reached as far as 'The Pyis', now marked only by Pye Sands. Incursion of the sea into the area west of Stone Point has turned part of this promontory into Horsea Island. The channel now known as Hamford Water must thus once have been much narrower and shallower, and was perhaps crossed by a ford to the northern shore towards Little Oakley.
8. B.L. ms Cott. Aug. I.1. fo 44. I am grateful to Dr Owen Bedwin for carefully examining the map and confirming my impression.
9. B.L. ms Cott. Aug. I.1. fo.44
10. Oxford, Balliol College ms C.19.36
11. DB ii. 13b. The manor had been reduced by the loss of three hides at *Birchou* (Birch Hall): Boyden 1972
12. E.R.O. D/DHw M1
13. D.&C.ms.25,122/1022 . For the term 'Strode': Reaney , *Place-Names of Essex*, 321; Warren 1915, 119; 'Strode' is an Old English term for marshland and seems to have been extended to mean a road or causeway crossing it: the causeway crossing from the mainland to Mersea Island once known as the Strode way is now The Strode. I am grateful to Dr.Ray Powell for his help on this point.
14. D.&C. ms 25,122/1023
15. Hale 1858, 48; E.R.O. D/DHw M1
16. Mills: D.B. ii. 13b; D.& C. ms 25, 122/1022; salt pans: D.B. ii. 13b; fowling and fishing: E.R.O. D/DHw M1
17. D.& C. ms 25, 122/1026
18. E.R.O. (Col.) D/DFI E1 fo.27
19. Hale 1858, 122-39 (leases); 140-6 (enquiry of 1181); 1-107 (surveys of 1222); ERO D/DHw M1. Unless otherwise noted, all references in what follows are to the survey of 1222: Hale 1858, 38-43 (Thorpe),43-8 (Kirby and Horlock),48-52 (Walton)
20. Topographical information in what follows is taken from D.&C. mss 25,122/1112-1035 (leases); E.R.O./DHw M1 fo. 27 (survey of 1297); Hale, *Domesday*, 1-107 (survey of 1222). I am very grateful to Dr Richard Britnell for lending me his transcript of the 1297 survey
21. Faith 1994, Table 2 p.662; D.&C. ms 25,122/1112
22. D.&C.ms 25, 122/1028
23. D.&C.25, 122/1022 v (1249 X 1251)

The oldest part of the King's Head is identified as a semi-detached pair of Wealden buildings identical to those found lower down the High Street in 1988. The buildings date from the 15th century and may represent speculative development by the Bourchier family. It is suggested that Wealden buildings are in origin an urban phenomenon. Towards the rear of the site, the King's Head also incorporates a 17th-century malings.

The King's Head is a rambling old building on the south side of Maldon High Street which in its time was one of the principal hostelries in the town (Figs. 1 and 2). The street frontage comprises a three-storey cross-wing element with canted bay windows located to the east of a symmetrical two-storey block with bow windows either side of the front door. The cross-wing does not project in front of the rest of the building, and it will be seen that it does not originate as a true cross-wing. In 1994 the building ceased to function as a



214

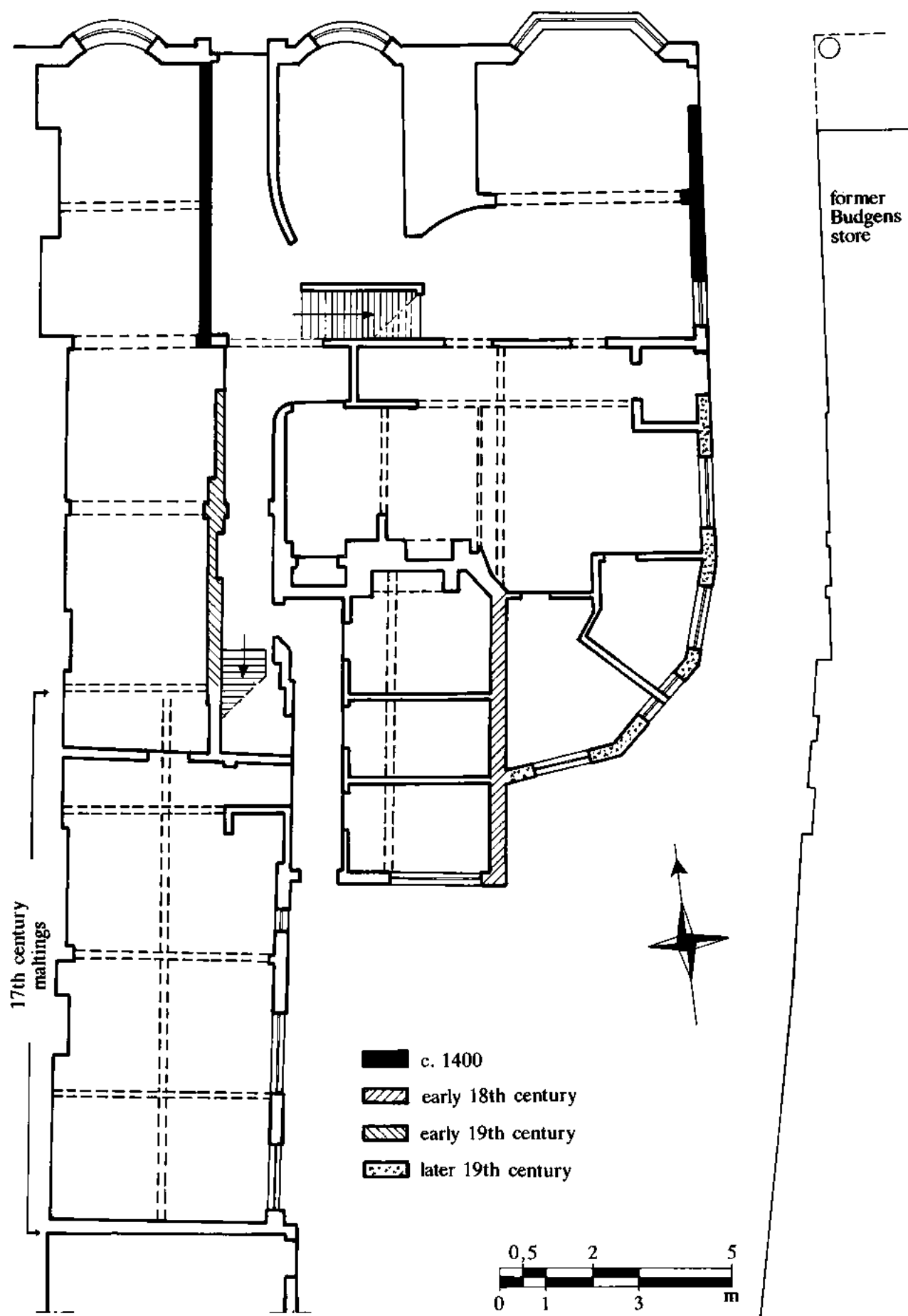


Fig. 2 Ground plan of the King's Head

public house and was extensively refurbished, much of its fabric being exposed in the process.

Apart from the chimneys and some of the modern accretions, the building is timber-framed. It originated as a late medieval building on the High Street frontage which was of four bays, though of these the westernmost no longer survives. This early core of the public house is the most interesting and important part of it, and it is on this, and a later building to the rear, that this paper concentrates.

The Late Medieval Building on the Frontage

The timbers of the late medieval building are roughly finished, and of only moderate quality and scantling. They tend to be curved and knotty, with a lot of sapwood and wane, as a result of which today they are very worm-eaten superficially. Studs and joists are about 150mm deep and 180mm wide. The storey posts are substantial timbers 280mm wide and 240mm deep.

At the ground floor, the studwork of the walls survives only fragmentarily. The easternmost room (within the cross wing) measures about 6m deep by 4.7m wide. Only the framing of the east wall is at all intact (Fig. 3). There survive a few studs and the storey post, with evidence for a four-light diamond mullion window immediately to the south of it. The south-east corner post survives, but the girt in the south wall has been totally removed. The corner post and the storey post had slight jowls below the girts.

The room is spanned by an east-west bridging joist, with common joists running north-south (Fig. 3). The joists, which have centre-tenons with the soffit of the joist housed, are longer to the north of the bridging joist, from which it can be inferred that the front of the building was jettied. Mortices and wattling grooves in the soffit of the joists show that the room was divided below the bridging joist into two units 2.7-2.8m square, with a passage about 1.8m wide along the west side. This passage must relate to the doorway into the building from the High Street. Interruptions in the wattling groove indicate the position of doors into each of the rooms. Mortices in the sides of two of the joists mark the position of a trimmer for a staircase in the back room. The north half of the west side of the room is occupied by a chimney stack in neat small bricks (230-235 x 105-110 x 50-55mm, somewhat distorted, kiss marks) suggestive of a late 16th or early 17th-century date. This stack originally did not have a hearth on its east side, though one has been formed at a later date. At ceiling level the stack has a vaulted projection in 18th-century brick for a hearth which was added at this level.

At the first floor above this room, the north and south walls have been rebuilt but the east wall is largely intact. The studs (1.94m high) are set at centres of about 600mm or slightly less and have been painted dark grey, an arcaded pattern in the same colour extend-

ing on to the infill panels between them. There seems to be only about one or two layers of limewash below this decorative scheme which must therefore be almost original to the building. At two points the painting is interrupted, presumably for fixtures or furniture that stood against the wall. Pegholes in the storey post indicate the existence of external arched bracing. The wall plate has been cut down in height, removing any evidence of how the roof was built. The existing studwork above it all relates to a raising of the ceiling height probably in the 18th century. Nowhere in the building does any of the original fabric of the roof survive.

The west wall at this level is fragmentary. It preserves most of the original plate, reduced in height for some of its length, and some original studs. The top of the beam is intact, but the evidence for the framing of the gable above it is confused by the insertion of studs for a raised ceiling. There seem to have been central crown post with studs at 600mm centres, but this is not entirely certain.

As virtually nothing is left of the middle bay, it is simplest to turn to the westernmost surviving bay which resembled the eastern, with a floor built in the same way. Of it, only the east wall separating it from the middle bay is at all well preserved (Fig. 3). The feet of the studs continue below the level of the suspended floor where possibly there are the remains of the original sole plate. These studs were at least 2.08m high. They are only well preserved north of the storey post. They are set at approximately 500mm centres, more narrowly spaced than those at the first floor. This fact, together with a mortice for a bracket at the end of the girt, are further evidence for a jetty on the street frontage. The original floor in this room no longer exists, but the mortice for the bridging joist can be seen in the storey post. Above this is another empty mortice indicating that the floor level was raised once before it arrived in its present position. The existing joist has lamb's tongue chamfers indicative of a late 16th or 17th-century date.

The girt on the south side has also been raised above its original position. Most of the wall above and below it has been renewed or removed, but the original studwork is reconstructable from the pegholes, the studs being in the same position at each floor at centres of 450mm. An interval in the studs in the west half of the girt indicates there was a window about four feet wide at ground level. The holes in the soffit of the girt for this window show that it had rectangular mullions with rods set between them. Windows of this type are 17th century in date, which indicates that the girt must be a replacement, presumably dating from when the floor was raised. The presence of this window is important, indicating an open space to the rear of the building. This is confirmed by the existence of the remains of weatherboarding on this side of it, attached to and contemporary with the renewed girt.

The west wall of this bay, which forms the west side of the public house, is in brick (235-240 x 110-115

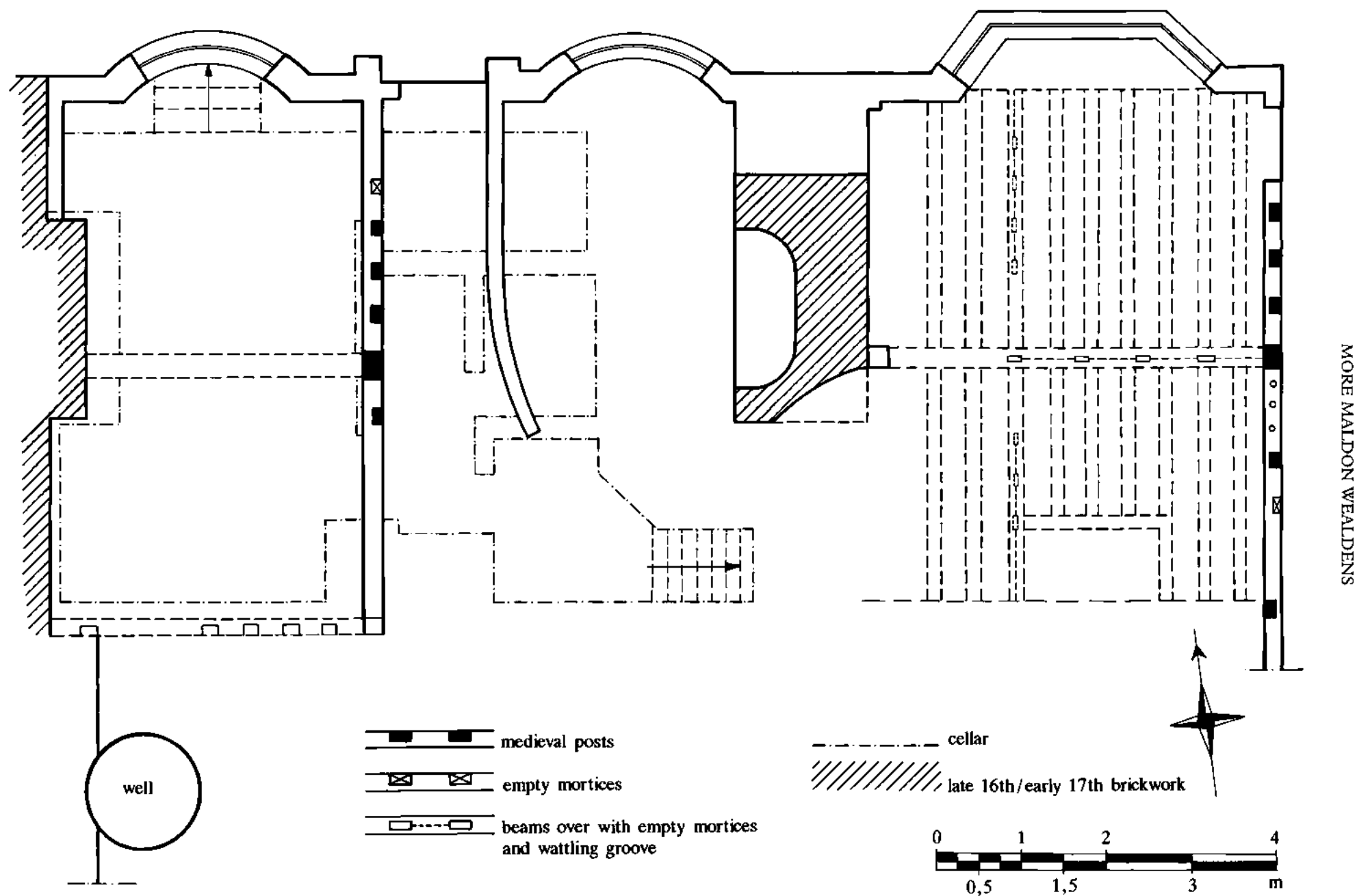


Fig. 3 Plan to show the surviving elements of the Wealden houses on the High Street

x 50mm, slightly distorted, arrises not very square), is only half a brick thick, and incorporates a chimneystack, now rather altered and rebuilt in 18th-century brick. There is a void behind this wall, which is located several feet inside the original western edge of the late medieval building. The neat small bricks indicate a 17th-century date, and suggest that this wall and the chimney are contemporary with the bridging joist with the lamb's tongue chamfer stops, the replacement girt on the south side and the weatherboarding applied to it.

At the first floor, the framing of the wall between the middle and western bays is well preserved, with the bracing either side of the storey post surviving. Only at this point is it possible to obtain unambiguous information on the roof construction. A mortice over the storey post was for a crown post, either side of which are angled mortices for down-braces. The gable was fully framed, with relatively widely spaced studs which were not pegged.

None of the original fabric of the middle bay has survived, except for its west wall which has been described above. There is no evidence in that bay for a floor built like that in the other two bays. The existing floor is built off an inserted softwood joist with quarter-round mouldings at its corners. A number of other joists of this type exist in the public house and relate to a major phase of 18th-century remodelling. This bay was also, as has been noted, served by the inserted chimney stack which is probably late 16th or early 17th-century in date. The presence of this stack, and the apparent very late insertion of a floor, argue that this bay was originally an open hall.

The Interpretation of the Late Medieval Building

The medieval structures preserved on the frontage are thus of three bays, two of which were jettied and had first floors. The middle bay, lacking a floor, was clearly a hall, open to the roof with an open hearth, replaced in the 17th century by the inserted stack. Although jettied, the two end bays were not true cross-wings, as they did not have a gable facing on to the street. Instead there was a single roof running parallel to the street over all three bays. This is clear because of the evidence for a crown-post on the tiebeam of the western bay. Since the cross-wings were not expressed externally, there can be little doubt that these remnants of the timber frame were part of a Wealden house (Fig. 4). Further evidence in favour of this view is the presence of a mortice on the east side of the tiebeam in the westernmost bay. This was for the attachment of the middle bay top-plate which was set back a little behind the line of the jettied fronts of the two end bays.

The ground plan of the easternmost bay shows that it was divided into two units on the ground floor: the front one would have been a shop, and the back one a parlour or service room with stairs to a solar or bed-

room. This arrangement is identical and even dimensionally very similar to that of a semi-detached pair of Wealden houses found lower down Maldon High Street in 1988 (Andrews and Stenning 1989). It is almost certain that the early timber frame at the King's Head represents another pair of Wealden buildings. If this was so, then the eastern cross-wing unit went with the adjacent hall, whilst the western cross-wing was linked to a hall in a missing fourth bay that stood on the site of the building immediately to the west of the King's Head.¹

Insufficient survives of the original timber frame for the date of its construction to be inferred with precision. A slice removed from the base of a storey post in the course of repairs was analysed for tree-ring dating, but as with the other Maldon Wealdens the exercise was unsuccessful.² The only diagnostic feature are the central tenons of the floor in the easternmost bay. The general character of the carpentry indicates that it was built in the 15th century, but two features suggest this building was rather later than the other Wealdens lower down the High Street. A jowled storey post reused in the later buildings to the rear indicates that it was built with jowled posts. Secondly, the braces are pegged not to cills or girts but to studs, a distinctive and widespread trait of 15th and 16th-century Essex carpentry sometimes known as Colchester bracing. In contrast, the other Wealdens lower down the High Street do not have jowled posts, a feature of some Maldon and Colchester buildings, and the braces are pegged to the girts.

The Cellar

Beneath the western half of the medieval frontage buildings, there is a large cellar (Fig. 3). Its brickwork is, typically, obscured by many layers of limewash, but it is clear that the western part of the cellar, corresponding exactly to the west bay of the Wealden buildings, is the oldest part. It is built of Tudor-type bricks, and is of one build with the brick wall and chimney forming the west side of the public house datable to the 17th century. The floor over the cellar is made with an east-west binding joist and two north-south bridging joists. The carpentry of the floor looks late medieval, and the chimney has clearly been built round the binding joist which lacks chamfer stops on its west end as a result. This makes it look as if the cellar is an earlier feature which has been relined in brick. The cellar was later considerably extended, with the addition on its east side of about four small store rooms probably dating from the 18th century, to which direct access was provided in the 19th century with the construction of a flight of stairs.

The 17th-century Outbuilding

The medieval buildings have been submerged in a

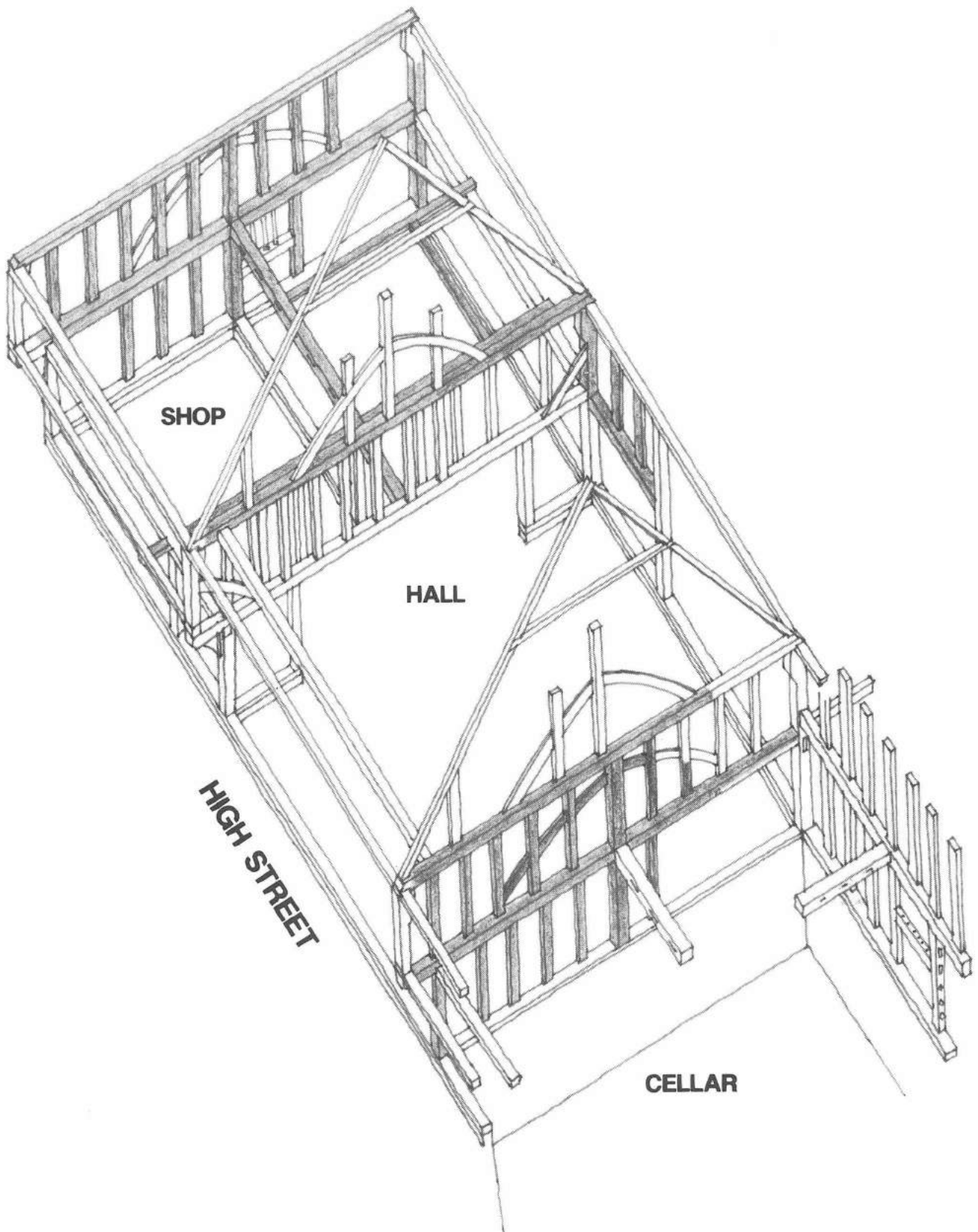


Fig. 4 The timber frame of the Wealden houses on the High Street frontage, with surviving timbers shaded solid.

typically confusing array of later structures which have been added at different periods to the rear of them (Fig. 2). The best defined, and coincidentally the oldest, of these is a rectangular unit originally of four bays, and located 7.5m behind the westernmost of the three bays on the frontage (Fig. 5). It was well built of good if somewhat knotty timber. A substantial part of this structure has been lost in later refurbishments: only the two northern bays are readily recognisable today, and these are best preserved at first-floor and roof level.

The roof is of clasped purlin construction with wind braces. The rafters are about 140mm wide and 80mm deep. The second truss from the north is an A-frame without a tiebeam, and has a very deep collar, nailed to which are timbers which support the purlins. At the middle bay there is at the first floor a partition wall with no door in it. A little of the framing of the east wall survives. The studs are pegged, and there is no wattling groove in the soffit of the plate and girt. There was an internal tension brace at the south end of the first floor, and, just above, a window. The studs are pegged, and there is a face-halved scarf joint in the wall plate.

The best preserved part of the building is the floor, which is made of timbers of substantial scantling, there being longitudinal bridging joists (270mm wide, 220mm deep) between the binding joists (270mm wide, 250mm deep) at the bay intervals. The common joists (100mm wide, 120mm deep) are jointed with housed soffit tenons. The binding and bridging joists have lamb's tongue chamfer stops. The floor is intact for four bays and leaves little doubt that this is the true extent of the building, which otherwise looks to be of only two bays. Other features that indicate that this was the case are the position of the scarf joint at the south end of the wall plate suggesting that this timber was originally longer; and the survival in the very rebuilt wall at the end of the fourth bay of a tiebeam identical with that of the partition wall of the second bay.

The floor has been raised in height. Today it is set about 19 inches (480mm) above the level of the girt (Fig. 5) and the ends of the common joists are supported on rails nailed to the studs. There are two possibilities: that the floor is the original one which has been raised, or that it has been inserted, in which case it may or may not replace a pre-existing floor. The good quality of the carpentry and the lamb's tongue chamfers support the former theory, pointing to a 17th-century date as do the rest of the features of the building, notably the face-halved scarf joint, the pegged studs, the absence of a wattling groove, the internal bracing, and the roof construction.

It has been observed that there was initially open space behind the late medieval frontage building because of the window in its back wall. Clearly the rectangular outbuilding enclosed one side of a yard. A clue to the use of this outbuilding can be found in the changing first floor levels. Despite the fact that ground level inside the building has probably risen, the floor

was originally very low, being at only 5 feet 3 inches (1.6m) above existing ground level. It would be typical of a maltings to have a low ceiling over a ground floor open for the entire length of the building. Some maltings also had their first floors divided into two units. A recently published maltings of about the same date, albeit a much larger building, is the Granary at Cressing Temple (Andrews, Ryan and Robey 1994). If this building was a maltings, two things follow from it: the King's Head was already an inn in the 17th century, and somewhere or other adjacent to it, and very likely originally at its southern end, there should have been a drying kiln. When the building ceased to be used as a maltings, presumably in the 19th century, the floor was raised in height to give greater headroom.

The Later History of the King's Head Buildings

The later structural history of the King's Head has not been analysed in detail, but some aspects of the development of the buildings are relatively clear (cf. Fig. 2). The western bay on the frontage was turned into a cross-wing in the 17th century, the in-line roof being replaced by one at right angles to the street (Fig. 6). It was probably at this time that the missing fourth bay on the west side was absorbed into the neighbouring property and passed into different ownership. The buildings were extensively remodelled in the 18th century, this work being recognizable from softwood joists with three-quarter round mouldings on their soffit corners. A large rectangular unit was built on to the back of the frontage building, partly flanking the east side of the maltings. It incorporates reused timber from the back wall of the Wealden house which was largely dismantled at this time. In the early 19th century, the courtyard north of the maltings was infilled with a single storey structure. Later in the century, the maltings was extended to the south to create a very long but not untypical range of outbuildings.

Archaeological Observations During the Building Works

Trenches dug in the course of refurbishing the building were checked for archaeological evidence for the history of the development of the site. The following observations were made:-

1. An east-west trench was excavated across the front room of the eastern Wealden. About 340mm below the existing concrete floor, there was a brown clay layer which looked like either a floor or a levelling layer for the building. This thinned out to the east where it was underlain by black earth containing abundant oyster shell.
2. A well was found about 1.2m from the south wall of the westernmost Wealden, almost adjacent to the mod-

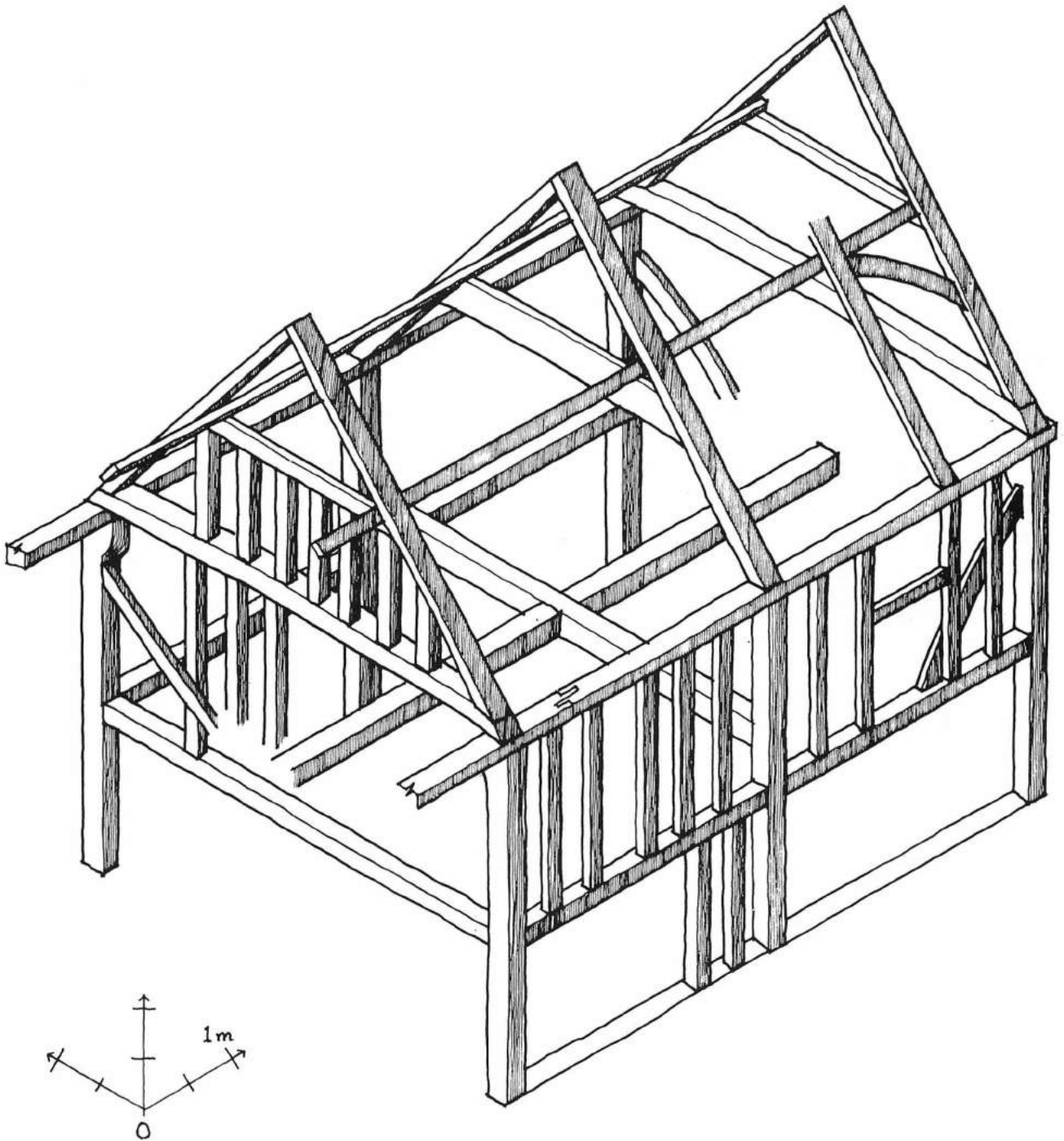


Fig. 5 Isometric drawing of the framing of the maltings at the rear of the King's Head.

ern property boundary (Fig. 3) and partially beneath a 19th-century hearth. About 1.35m in diameter, it had been sealed with a dome in late 18th-century brick, capped with a flagstone 420mm below the existing floor level. This flagstone and traces of lime at the same level probably represented an old floor, which was later raised with the laying of a flagstone floor of which there were remains at a higher level. A terracotta pipe incor-

porated in the brick dome was probably intended to vent the well. A small hole which had been opened in the dome revealed that the well shaft was made with Tudor-type bricks about 65mm high, mostly laid stretcherwise and some showing signs of vitrification. This brickwork looked later 16th century in date. The well was said to be about 25 feet deep, and apparently there is an offset part way down the shaft, raising the



Fig. 6 Reconstruction of the Wealdens as they might have been in the 17th century when the surviving bay had been converted to a cross-wing, and showing the location of the missing westernmost fourth bay which occupied part of what is now the National Westminster Bank.

possibility that the brickwork is the relining of an earlier feature.

3. In a north-south trench on the line of the east wall of the building connecting the back of the Wealden to the maltings, two small brick structures were found. They presumably relate to the use of the yard which seems to have existed between the two buildings until c.1800. The stratigraphic sequence was as follows:

I. a moist dark grey clay silt, stony with shell, at least 400mm thick, and 700mm below existing ground level

II. the layer described above had been cut by a brick structure which lay partly outside the trench but which seemed to be rectangular, at least 1.15m long and 450mm deep. It had been largely dismantled to the level of the brick floor on the bottom of it, but one side survived to a height of seven courses. The bricks were square and well made, measuring 220 x 103 x 50-55mm. They can be dated to the late 17th or early 18th century. Post-medieval rectangular

brick-lined pits are not an uncommon discovery in Essex towns, but their function is uncertain. A greenish deposit on the bricks suggests this example may have been a cess pit. This feature was not long-lived, as a collection of mid 18th-century clay pipes was recovered from its fill (see appendix).

III. set on the dark grey clay silt was an east-west wall half a brick thick built of 19th-century bricks and six courses high. To the south of it was a mid grey-brown silty clay with frequent brick and tile fragments and small to medium stones. To the north was a similar but less stony layer. The relationship of the wall to these layers was uncertain. It could be suggested that the stonier layer corresponded with the gravelly deposits found in the trench further south to the east of the maltings (see below), in which case the other layer could be a fill dumped against the wall.

IV. modern concrete over hardcore

4. In a north-south foundation trench just to the east of and parallel to the maltings, the following sequence was noted:

- I. 900mm below existing floor level, there was a very black and silty layer, albeit stony, suggestive of a midden or pond
- II. a dark grey-brown moist gravel 300mm thick, 600mm below modern floor level. This could have been metalling to consolidate the underlying silty layers.
- III. blackish clay 200mm thick, 400mm below ground level, which possibly represented an accumulation of rubbish in the metalled area
- IV. brown sandy angular gravel 100mm thick, 300mm below ground level, a very distinct looking surface
- V. dark brown clay, 150mm thick and 150mm below ground level, probably not a floor but a levelling or blinding layer for a building
- VI. existing concrete floor

5. Two east-west trenches were dug across the most southerly outbuilding. 500mm below existing ground level, there was a layer of mortar and roof tile, at rest on a clayey deposit which looked like an old land surface. Below this there was a mixed wet grey-brown clayey deposit containing some organic refuse and stones, including septaria. This could represent an open space where refuse was being dumped. Water seeped into the trenches at a depth of 850mm. The builders noted a concentration of horn cores along the west side of these trenches suggesting the presence of a north-south ditch. A ditch filled with horn cores was found in the 1990 excavations on the site of the Maldon Carmelite Friary.

In observations 3 and 4, to the south of the Wealden buildings, there was a moist dark earth-type deposit at a depth of 700-900mm, overlain and consolidated by browner stonier layers 300-450mm thick. East of the maltings, there was a layer of possible rubbish and debris on this metalling, followed by further metalling and finally a clay layer suggestive of a building. This sequence shows the progressive consolidation and occupation of the backlands on this side of the High Street, which in the Middle Ages seem to have been an open area in which rubbish accumulated. The black earth beneath the clay layer associated with the construction of the Wealdens raises the possibility that the site was vacant before the houses were constructed.

Discussion

This is the second pair of Wealdens that have been discovered in Maldon. Both are relatively early, datable probably to c.1400. In both cases dendrochronology proved unsuccessful. The ground plan of the eastern cross-wing and the framing of the partition walls of the King's Head buildings are almost identical to those of

the Wealdens found in 1988. It can be assumed that the King's Head buildings had the same shop front elevation at the ground floor of the cross-wings, with possibly similar gothic windows at the first floor, and wide tall windows in the halls. A wall plate from the Wealdens re-used in the buildings to the rear probably came from one of the halls, and suggests a window width of 1.65m.

That this Wealden building is dimensionally very similar to that lower down the High Street has already been noted. Each consisted of four bays about one rod (16 1/2 feet or 5m) long. This raises the question of the size of the house plots on the High Street frontage, since it implies the late medieval sub-division into two of tenements which were originally 4 rods (66 feet or 20.11m) wide. Units 4-5 rods wide were common in towns and elsewhere. In Newland Street, Witham, the planned town on the Roman London to Colchester road, Rodwell (1993, 90-91) has identified 4-rod units in the older Wulvesford settlement, and 5-rod units in the area of the town founded by the Templars in 1212. At Chelmsford, some of the plots in the town founded in 1200 are known from documentary evidence to have been 4 rods wide (Grieve 1988, 9). At Maldon, in the absence of the discovery of boundary ditches, it is uncertain whether the 4 rods represent just the width of the building or the full width of the building plot. The latter seems most probable, as the Wealdens lower down the High Street had almost contemporary structures attached to them on one side. Laying a scale ruler against the town map does suggest the existence of a series of 66 feet units. One plot the dimensions of which can be determined with some accuracy is that occupied by the 15th-century brick D'Arcy tower (now the town hall) which stands opposite the King's Head. In 1992 it was found that on the east side of the tower there was an ancillary brick building, and to the east of that the remains of a timber building the remains of which leave little doubt that it was a town house of the D'Arcy family.' The combined width of these three properties is about 66 feet. The existence of plots 4-rods wide implied an act of planned land allotment not only at the west end of the town near the site of the Anglo-Saxon burh, but also extending a long way eastwards down the High Street towards the port at the Hythe. The antiquity of this planning is for the moment uncertain: it may have occurred not long after the foundation of the burh in 912, or could have dated from the 12th or 13th centuries when there was so much new town foundation and replanning of older settlements.

It was suggested that the Wealdens at the eastern end of the High Street represented speculative development. Whereas speculative development seemed to make sense at the lower end of the High Street which it is assumed was less densely inhabited, it could have a different significance in the more central position in the town occupied by the King's Head. Here it implies redevelopment, possibly subsequent to a period of

decay or even abandonment. The black earth deposit glimpsed in the trench excavated within the eastern bay of the Wealden building could be interpreted as supporting this theory, and would be consistent with the conclusions drawn from small scale observations made on the site of the other Wealdens (Andrews and Stenning 1989).

The earliest documentary references to the King's Head are to be found in deeds relating to the adjoining property to the east, which until recently was Budgens store. In 1641, this property was described as abutting "an inn called the King's Head on the West" (ERO D/DWd 10). In earlier deeds of 1527 and 1496 relating to the same property, the property on the west is not described as the King's Head but the tenement of the earl of Essex (ERO D/DWd 1 & 2). Henry Bouchier had been made earl of Essex in 1461. His family had long held the principal manors of Maldon, and were landowners in the town. It would not be unreasonable to suggest that they were the owners of the site of the King's Head at the time that the pair of Wealden houses were built. If so, then we have an interesting glimpse of a gentry family acting as urban property developers.

It remains to consider the phenomenon of these urban Wealdens. They are amongst the earliest examples known of this type of building. It seems that twenty-eight semi-detached pairs have been identified in

Coventry and they are numerous in some Sussex towns (Barley 1986, 79). There is a concentration of them in Saffron Walden. Barley's inference that the owners of them did not need a shop is incorrect in the case of the Essex examples at least. Instead, they appear as a building type very cleverly adapted to the space constraints of urban sites. It would be reasonable to conclude that the Wealden house was developed in the medieval town and not in the countryside where there was no incentive to economise on space. It is to towns and not to the countryside that one would naturally look for major architectural initiatives of this sort.

APPENDIX: Finds from the brick-lined pit to the rear of the Wealden building.

A small group of 18th-century material was collected by the builders from the fill of this feature when it was cut through by a foundation trench. The majority of the finds were clay pipes, of which at least twelve examples were found. Ten of these are similar, datable to perhaps the mid or later 18th century in view of their shape, and bear the initials RW on the foot (Fig. 7). Often the R is barely legible. A pipe with the initials RW is included in the corpus of Maldon pipes assembled by Simpson (1982, 4). An identical but slightly smaller pipe is marked ID (Fig. 7), whilst another which is unmarked may not have come from the same feature as it both of a slightly earlier type and lacks the iron staining present on most of the other pipes.

The other finds were the reeded base of a stoneware tankard of London manufacture, and a high-kicked base from a small bottle in well preserved blue-green glass.

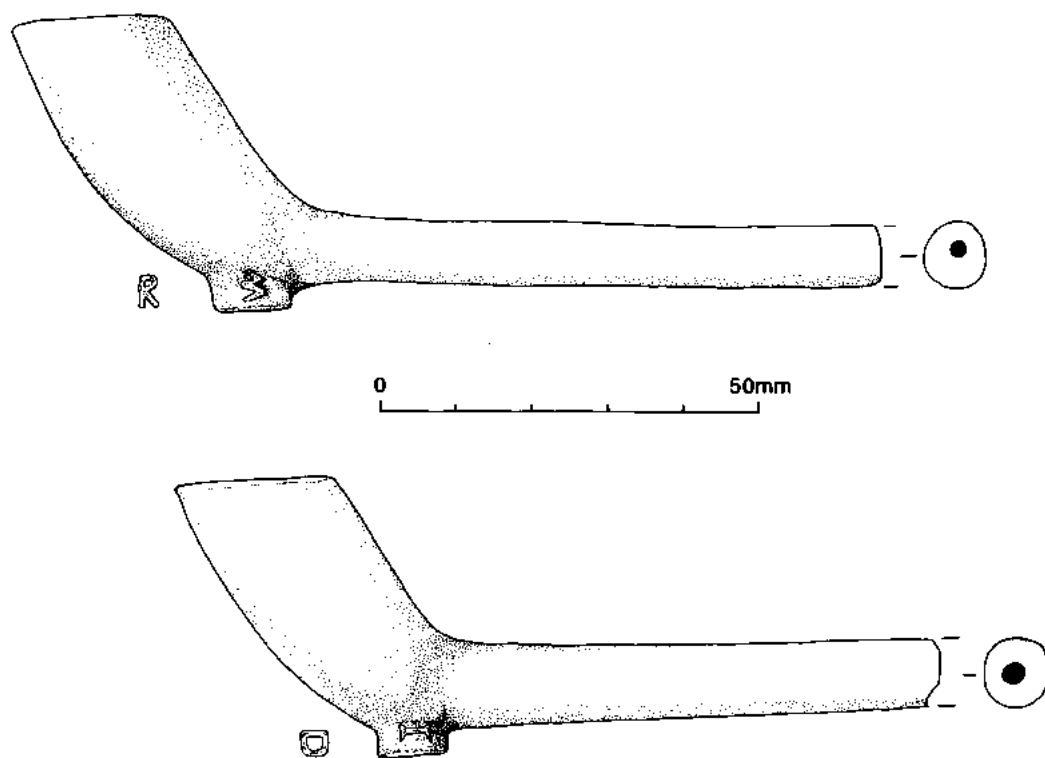


Fig. 7 Clay pipes from the brick-lined feature to the rear of the Wealden building.

Notes

1. The possibility cannot be excluded that the building was a three-bay Wealden house and that there is no missing fourth bay, but in view of the similarities with the semi-detached pair lower down the High street, this seems improbable.
2. Tree-ring dating was kindly carried out by Ian Tyers of the Museum of London Archaeological Service. So far, no timbers from Maldon which have been sampled for dendrochronology have been successfully dated.
3. See the Essex Chronicle *Essex Archaeology* supplement no.9, 1992 for details of the D'Arcy tower.

Acknowledgements

This survey could not have been carried out without the help and co-operation of the owner of the King's Head, Mr James Mann, his architect Mr John Fairhead, and his agent, Mr Lawrence Smith. We should also like to thank Pat Ryan for assistance with documentary sources; and Sarah Gibson and Shane Gould of the County Council Archaeology Section for help with the watching briefs. The drawing of the maltings is based on a survey by Richard Shackle. The figures have been drawn by the authors, Barbara Basini, Mary Walsh, and Natalie Drewett.

Bibliography

Andrews, D.D. and Stenning, D.F.S. 1989	'Wealden houses and urban topography at the lower end of Maldon High street', <i>Essex Archaeol Hist</i> , 20, 103-109
Andrews, D.D., Ryan, P. and Robey, T. 1994	'The Granary at Cressing Temple', <i>Essex Archaeol Hist</i> 25, 79-106
Barley, M. 1986	<i>Houses and History</i> , London: Faber and Faber
ERO	Essex Record Office
Grieve, H. 1988	<i>The sleepers and the shadows. Chelmsford: a town, its people and its past</i> , vol. 1, Chelmsford: Essex Record Office
Rodwell, W.J. 1993	<i>The origins and early development of Witham, Essex</i> , Oxford: Oxbow Monograph 26
Simpson, A.C. 1982	<i>Clay smoking pipes and pipe makers of Maldon</i> , Maldon: Maldon Archaeological Group
Stubbings, K. 1988	<i>Here's good luck to the pint pot. A brief history of Maldon's inns, alehouses and breweries</i> , Tollesbury: K. Brown Publications

'Temporal blessings' Poor women's employment in Essex during the French wars 1793-1815

by Pamela Sharpe

Introduction

The number of men actively involved in the French Wars was substantial, varying between a sixth and a tenth of the male workforce. As a result, historians like Ivy Pinchbeck argued that women came into agriculture and handloom weaving at this time in far greater numbers than they had been before (Pinchbeck 1930, 62-63, 164). Of course, one reason for this was that there was more work as farm employment grew because the war encouraged home food production and new acres were put into cultivation. In terms of handloom weaving, military orders for clothing may have also stepped up demand for weavers. Yet Emsley gives us the distinct impression that in the country as a whole there was not a great drive for women to do men's jobs (Emsley 1979, 52). It is important to remember that, in conditions of rising population, there was already a labour surplus and the number of militia recruits may have replaced otherwise unemployed workers. How far has our view of women's employment in the French Wars been affected by the experience of two world wars in the twentieth century which did see significant rises in women's employment? Is it the case that this view has been projected backwards? This article will consider several sectors of the Essex economy and explore the effect of the war on women's employment within these particular areas. It will consider in turn, agriculture, domestic industry, (particularly strawplaiting), and service. How did the war affect women's subsistence and family life? Patterns of vagrancy and prostitution will also be discussed.

Essex's position in the south east of England with a long coast line meant it was considered very vulnerable to invasion by the French. The fears of invasion reached a height in 1803 when plans were made to evacuate the county. The result of Essex's position near to the continent was that many troops were garrisoned in the area; initially in inns in towns and tented camps in the countryside, and later in new barracks buildings (R.E.G. Wood 1977; C.A. Wood 1984). This had a

direct effect on the areas of the local economy which supplied militia provisions – food and clothing in particular. The army and navy did not have the sort of mass provisioning we are accustomed to with modern forces. In terms of food, only bread was supplied. There was no communal mess; soldiers spent their wages on food to feed themselves and their families if they were with them. Army uniforms were the responsibility of the colonel who would contract local tailors to do the job. The mother of John Carter, the Colchester tailor who left his autobiography, did trade at the barracks, seemingly in the knitted stockings her young son was forced to knit at the same time as he did his school learning (Carter 1845, 21). The barracks also created an increased demand for laundry work and mangling. Both the barracks in Colchester and huge encampments like that at Weeley gave the opportunities for women to set up stalls to supply the militia with beer and food. These were often women travelling with the army. In 1797 Sarah Garland, whose husband was a private in the Suffolk militia, had her red cloak thrown out of the window of an inn in Elmstead Market when she was selling cakes there at two in the morning (Essex Record Office, hereafter ERO P/LwR 10 16/5/1797, see also ERO Q/SBb 426/77).

Agriculture

The general impression running through the literature about the Wars is that they created more agricultural work for women, hence the reports of 'petticoat harvests' in some parts of the country. This idea is substantiated by the writings of the Rev. Thomas Malthus regarding the national situation. He associated population rise partly with increased employment of women and children, particularly in the period 1793-1813 (Malthus 1820, 190 & 232-233). It was mentioned in the Pole family correspondence that labourers were reported to be scarce in Essex in 1803-05 'in consequence of the drafts for the army' (Emsley 1979, 111).

For the country as a whole, the agricultural historian Mingay has argued that 'Exact calculation of the increase of female employment in the years 1780-1815 is impossible, but there is widespread supporting evidence in the sources' (Mingay 1989, 684).

A major difficulty is, of course, that we do not know the extent to which women were engaged in agricultural employment before the Wars. Keith Snell argues that due to technological changes, women harvesters disappeared in the south-east of England during the second half of the eighteenth century (Snell 1985, 15-66). Although Essex falls squarely into the area which he is discussing, his views do not seem to apply in this county. If we look back into the early modern period through the evidence for the northern half of the county, where women were involved in wool spinning, we do not find women engaged in harvest tasks, but rather in a set of different well defined agricultural jobs such as planting and weeding. In the southern part of the county, in the area known as the hundreds of Essex, by contrast, female agricultural labourers persist until the end of the nineteenth century. This area also maintained live-in farm servants for far longer than north Essex and some of these were women (Sharpe 1996a). These regional differences must be borne in mind when we ask how the specific conditions of the war affected women's role.

It is possible to look at women's employment on farms in Essex during this period by examining farm account books. On the evidence available, such accounts show a rise in women employed on farms immediately after the outbreak of war and for the first few years of wartime conditions. However, they also show that farmers increasingly employed a contract system of labour using men and boys for the harvest. Already in 1795, Vancouver said that the harvest was usually brought in by a certain number of men who received a fixed sum (Vancouver 1795, 162). Emsley quotes Dundas in 1798 being reminded 'of the necessity of permitting the different corps of military having permission to assist the farmers not only in their Corn, but in their Hay Harvest'. The commanding officers were authorized to allow soldiers in regular and militia regiments six weeks leave for no more than a third of their men to help with the harvest (Emsley 1979, 74). Thus while there seemed to be a rise in women workers in the early years of the Wars on some farms, on the whole farmers rather tried to ensure a male labour supply by contracting men, including soldiers.

Most women at work on farms during the Wars were working in areas which were traditionally considered 'women's work'. These were weeding, stonepicking, haymaking and turnip singling in the arable fields. More of them were brought into the labour force at the start of the Wars to facilitate an increased arable output. While wheat prices had been rising for some time, the continental blockade stopped imports and put a great premium on home grain production. During the Wars corn prices were incomparably high. For an 1801

clergy survey of the main harvest crops, 52% of Essex parishes sent in returns. At this point over three quarters of their total land area was under cereal crops and wheat predominated (Ward 1973, 185-201). The women who did most of the agricultural tasks associated with the arable crop, and aside from the harvest, were generally the wives of farm labourers. For example, the Tabor family of Bocking employed the same group of women each year for weeding (ERO D/DTA A1-8). Later parliamentary reports indicate that what farm work there was was preferentially allocated to married women.

It seems likely that at harvest time, women and children's attention remained concentrated on gleaning, which could be of enormous benefit to the family budget during straitened times. Gleaning possibilities would have expanded with increasing concentration on the arable crop. King has estimated that the average gleanings could provide an eighth to a tenth of a labouring family's annual income (King 1991, 461-76). Other evidence of women working in Essex during the Wars comes from the prizes agricultural societies gave for the days women worked, from 102 to 200 days in 1801 by the Essex Society for the Encouragement of Agriculture and Industry, for example (Armstrong 1988, 51; Anon Account of the Essex Society, 1793). Such measures, and the indications of women and children 'dibbling' wheat by making holes for the seeds rather than it being sown broadcast, seem more like efforts to reduce the poor rate by artificially creating work for labourers' families than evidence that women's agricultural work was plentiful. Wheat dibbling, for example, was advocated both by authorities who encouraged agricultural improvement such as writers in the *Annals of Agriculture*, who urged that it was more profitable than sowing broadcast, and those who were concerned about the rising number of poor in rural parishes, such as the Society for Bettering the Condition of the Poor (Young 1795, 18-51; Young 1813, 65-66; Glasse, 'Extract from an account of the superior advantages of dibbling wheat, or setting it by hand' 1802).

We can get an impression of women's farm work by looking at two geographically separated farms; the Joslin farm at Upminster and the Kempton farm at Brightlingsea. On the Joslin farm, women were weeding and haymaking at the start of the Wars (ERO D/DJN E5). Located near to the great butchery market in London, the Joslins had a significant hay sector associated with their interest in suckling calves. This diminished after hedging, ditching and fencing took place in 1794, marking greater concentration on grain production in line with war-time prices. At the same time, their harvest labour force became the contracted 'Mr Webster and Company', a group of Joslin's own labourers. In 1795 the company started in August and were still around in January thrashing clover. In another account from the closing years of the Wars and the other side of the county, Mr Kempton of Brightlingsea similarly had women weeding and haymaking (ERO

D/DNM1/1). The harvest was also contracted to a group of men here. Indeed Kempton also seems to have been enforcing an agreement to work with his own labourers. The Wars saw the first significant replacement of men by machinery. In 1811 Kempton hired a threshing machine and man at £7.0.0 for 7 days work and paid women to assist with it. Similarly, a typical tenant farmer Samuel Watkinson of Black Notley in 1811 'Hired & used a threshing machine for the first time' (ERO D/DU 224/2). In 1812 he reported 'The threshing machine came & worked 4 days & did it well'. For the harvest it was usual for him to employ men from neighbouring parishes but he increasingly had to resort to 'Strangers and Odd Men' as well, but no women.

In the accounts of another farm, Stanstead Hall near Halstead, the only women employed in the harvest were in the hop harvest. This was one of the few farms still growing this crop which had formerly been important in the county but was now increasingly replaced by wheat (ERO D/DE/A5). In economic circumstances favouring wheat production, hops were too liable to crop failure and required too much manure (Shrimpton 1977). No women at Stanstead Hall were involved in the wheat harvest, which had a labour force of 'month' men up to 1805 and 'odd' men thereafter. The hop harvest was contracted to women and children in the Wars, the workers being given a payment for enlisting. The Skinnerswick farm in Tolleshunt d'Arcy shows the pattern more often found in the southern region of the county in the war years. A few women, again generally wives of agricultural labourers, were employed here, even through the winter but not in the harvest. Harvesters from Thaxted and Felsted cut the harvest here, and professional reapers from Suffolk were engaged (ERO D/DU 623/183).

The lack of employment for women in a typical grain growing parish, Terling, near Witham, is obvious from the listings made by poor law officials in the 1800s (ERO D/P 299/12/4). There, single or widowed women's wages derived from agriculture were very small, providing only a third of the women's livelihood with the other two thirds of their income being derived from poor relief. In terms of occupation, many women were described as doing 'nothing'. In the 1809 listing, Hannah Tyrell, a 51-year-old widow's occupation is described as 'husbandry'; however she is not mentioned as earning money, but is relieved 5s per week, presumably because the list was made in February and no winter work was available. In May 1811 she earned 2s from husbandry and was relieved 1s 6d. She was employed by John Strutt esq. of Terling Place, the local landowner (ERO D/P 299/12/5). The vestry noted in 1811 that their latest investigation into reduced price flour doles to the poor had shown up just how little was earned by the wives and children of labourers and that the committee must look into measures to employ labourers' families (ERO D/P 299/8/3 30/12/1811). Although there is little evidence that agriculture had provided a lot of employment for women and children

in such parishes before the Wars, however, the most significant alteration to their livelihoods was the disappearance of domestic spinning.

During the Wars in the Essex heavy clay area, which so benefited from inflated wheat prices, farmers appear to have made efforts to ensure that they had a male labour force available, and to have continued to employ some women, generally the wives and families of their own agricultural labourers, in their traditional roles as casual labour at certain points in the agricultural year. At the same time, with the extremely high bread prices of the war years, gleaning at harvest time became vitally important for labouring families. There were regional differences, however, and in the south of the county which suffered from severe labour shortages, the female farm worker seems likely to have been a far more common sight. In general, however, the effect of the Wars was to confirm existing patterns of women's work. Casual involvement in agriculture combined with domestic industry was the predominant pattern.

Domestic and fashion industries

The traditional employment of women in rural central and north Essex was spinning for the 'bay and say' trade of the towns. The woollen industry dated from medieval times and was given extra impetus by the arrival of Dutch clothworkers in the mid-sixteenth century. From what had been a buoyant industry, opportunities for spinning yarn rapidly diminished over the second half of the eighteenth century. While historians like Pinchbeck have commented on the removal of the female wage from the rural family budget in the late eighteenth century, we lack the sources to explore the precise effects that this had on female livelihoods (Pinchbeck 1930, 4). Essex spinners faced competition from both cheap Irish yarn, imported in increasing quantities from the 1740s, and from machine-made yarn produced in the north of England from the 1770s. Since the local invention of the one-handed loom, an adaption of the flying shuttle in the 1730s, and a decline in traditional apprentice regulations, women moved into weaving which paid better than spinning. In 1784 Arthur Young reported that many women wove in Colchester and earned nearly as much as the men (Young 1784, 109).

Markets for woollen cloth had been badly affected by wars in the eighteenth century, yet had always managed to stage a peacetime recovery. However, the industry virtually disappeared during the French Wars. The main markets, in Spain and Portugal, were disrupted by the hostilities and clothiers failed to find new ones. Unlike the expanding worsted industry of Yorkshire, they did not capitalise on the demand for low quality cloth for military uniforms but, particularly in Colchester, continued to produce the traditional product, high quality bays and says. Failure to keep up with fashion trends may have hastened their decline.

Many of the clothiers had also been putting their profits into land for some time, and in conditions of rising rent found this very profitable. During the second half of the eighteenth century, towns of the wool area like Colchester, had emerged as fashionable provincial centres providing services for the gentry farmer (Brown 1968; Sharpe 1994a). The Wars saw the height of agrarian profits, and the final transition of a place like Colchester, from an industrial to a gentrified social centre, was reinforced by the arrival of military gentlemen. As such the dirty workaday needs of producing a 'staple' for export no longer suited the social milieu. However, some new industries emerged in Essex at this time. To what extent did they constitute 're-industrialisation' providing employment opportunities for women?

For weavers in the former cloth towns a new industry emerged in the 1770s and 1780s as silk weaving moved out of Spitalfields, the traditional silk centre in the east end of London. Many weavers went over to silk and by 1796 there were a hundred looms weaving silk in one parish in Colchester (Eden 1796, 178). In contrast to the worsted trade, the British silk industry benefited from the war-time conditions. It had survived prior to the Wars only due to government protection. While tariffs were extremely high in the early eighteenth century, complete protection was brought in during the period 1765-1826 (Hertz 1909). During the Wars smuggled silk from France was not only difficult to obtain, but also politically unacceptable. British manufacturers had unrestricted access to the home market, particularly the London middle classes. Yet Colchester did not become a Macclesfield. The reasons for this may, again, lie in the way in which Colchester's commercialization during the Wars was as a service and social centre. Only during the agricultural depression of the 1820s did silk become more important. Throughout the Wars weavers dealt with London houses; only after the Wars did these businesses establish a more local base and some worsted clothiers turned to silk manufacture. Johnson and Rudkin, the last of the Coggeshall clothiers started to weave silk in 1816, for example. The war period also sees the development of silk throwing mills in Essex, first in rural and later in urban locations. Silk had previously been imported in a ready-spun condition from Lyon but due to war-time conditions silk manufacturers were forced to obtain it directly from the Far East in its raw state. The early silk throwing mills employed almost entirely children with a preference for females. They drew as much labour as possible from workhouses and, after that, resorted to advertising. An advertisement in *The Times* in 1813 for example, read 'TO PARISH OFFICERS. Wanted immediately, 10 or 12 HEALTHY STRONG GIRLS, for a silk manufactory in the country, from the age of nine to twelve years - the utmost care will be taken of the children's morals and health. School will be kept of a Sunday, for their education; 20 or 30 more will be wanted soon. Enquire at No.18 Paternoster-row' (Warner 1921,

638). Coggeshall tambour lace was a development associated with the silk industry, again appearing in the immediate aftermath of the Wars (Sharpe and Chapman, 1996a).

The origins of a new domestic industry for women appeared during the Wars. This was the tailoring of military uniforms (Emsley 1979, 82-83). John Carter worked for an extensive tailor who got most of his trade by being contracted to supply clothing to entire regiments. This tailor was also a wool merchant and wholesale woollen draper who was obviously successfully branching out from the troubled trade (Carter, 1845, 161). As Barbara Taylor, among others, has argued, the structure and organisation of the tailoring trade changed in London during the Napoleonic Wars with government contracts for military clothing (Taylor, 1979, 28). This period laid the basis for a system of wholesale warehouses from which small masters got work, for which they employed both largely untrained men and women in their own homes, and in sweat shops doing 'slop work'. Piecework, subcontracting and female employment became established and the rising demand for cheap goods meant the ready-to-wear clothing trade was set up by capitalist clothing merchants who also controlled retailing. One such was Hyam Hyam whose clothing manufacturing firm survived well into the twentieth century. His business became established in Colchester in the aftermath of the French Wars, although his entry into large scale manufacturing came only when the railway reached the town (Sharpe 1995).

Shoemaking on a wholesale basis probably also started during the Wars in Colchester. As a craft industry it had expanded over the eighteenth century to supply a country market as well as the town. Newspaper advertisements suggest that the transition to making ready-made shoes locally was accomplished in the French Wars. In a new era of mass production women found work as shoe binders - sewing the top of shoes - first of all in the home and then within family run workshops. The emergence of Colchester as a commercial centre with luxury shops on the High Street also saw the late eighteenth century expansion of various fashion trades which employed primarily women, such as millinery and mantua making. Trades like millinery could mean either sweated labour or opportunities for female training and apprenticeship (D'Cruze, 1986, Simonton 1988). Charlotte Blatch, a Colchester servant, who by 1804 had earned six guineas a year had saved enough to be trained as a mantua maker paying a premium of £2.10.0 a year (ERO P/CoR 26 4/8/1806).

Both the direct needs of the military forces and the process of import substitution created new forms of employment during the French Wars. But unlike the extensive rural industry created by wool spinning, these war-time employments tended to concentrate in towns. However, the most successful wartime industry for women, straw plaiting, was rural.

Straw plaiting

Straw plaiting deserves to be examined as a special category of domestic industry because of its importance in wartime Essex (Sharpe, 1994b). Straw plaiting was established in part of the former wool area in the early 1790s. Charles Vancouver reported in 1795 of the village of Gosfield near Halstead 'A straw hat manufactory has lately been established under the patronage of the Marchioness of Buckingham which affords ample employment for the women and children of the neighbourhood' (Vancouver 1795, 27). The Buckinghams appear to have cast around for a suitable form of employment for the poor which would replace the worsted spinning which had now withdrawn from country villages. They chose an industry which was protected from overseas competition by the war since supplies of leghorn hats were usually imported from Italy. Indeed until the war, Dunstable in Bedfordshire, then the main hat producing centre, had supplied the market fully ('AB', *Observations on the Detriment...* 15). Like the silk industry, straw plaiting created employment by a process of import substitution.

According to the agricultural writer, Arthur Young's, account of its introduction, the first 'miserably coarse bungled hats' did not gain a market among the local populace of Gosfield until the Marchioness decorated one with ribbons and wore it in the sight of the whole village and the Marquis went to church in one and laid it down during the service in full sight of the whole congregation (Young 1807, 306). Arthur Young took a personal interest in the hat manufacture at Gosfield and in 1801 went to Dunstable to arrange for a teacher to go to the village to give instruction on improving the quality of the hats, saying 'I shall be able to introduce the most excellent fabric among our poor' (A. Young quoted in B. Hill, 212). Girls were then brought into Gosfield from Weathersfield and Halstead for instruction. According to Young the introduction of plaiting was 'one of the greatest of temporal blessings to that place' (Young, 1807, 395; *Victoria County History of Essex II* (1907) (hereafter VCH) 375-379).

A straw splitting 'engine', a handheld tool usually made of wood and bone, was invented in London about 1798 and by 1800 was in use in the Essex straw-plait area. This meant that the straw could be split into several fine lengths before being passed through a flattening mill or hand roller to make the straw pieces flat. This process made it possible to plait fancy straw patterns, and from then onwards the industry seems to have concentrated on plaiting the straw rather than hat making which was done in straw hat centres like Luton. At first farmers supplied the straw either for free, or at nominal cost, having first cut off the heads. As demand for straw grew, however, they began to sell cut lengths of straw ready prepared into bunches (Chalkey-Gould 1906). Straw plaiting then perfectly complemented the emphasis of local agriculture on cereal production. As the Society for Bettering the Condition of the Poor said in 1803 'It is calculated to supply occupation for all the

recesses of the most sequestered cottage, and is exempt from all those dreadful and disastrous evils which have too fatally accompanied the rapid and alarming increase of our extensive and populous manufactories' (Bernard 1803, 111). A group of factors had now emerged who conveyed the finished product to straw markets in towns such as Hitchin and obtained the straw for the plaiters, sometimes grown especially for plaiting in North Hertfordshire, and delivered to plaiters ready split (Chalkey Gould 1906, 186). This meant that plaiters did not have to wait for the weekly market. In 1803 a commission warehouse was set up in London at the request of the Society for Bettering the Condition of the Poor to ease seasonal variations (Bernard 1803, 84-7).

Very large earnings were soon to be made (Bernard 1803, 33-37). The highest prices for the plait were immediately after the introduction of the engine and early patterns fetched as much as 12s a score in 1801 (Pinchbeck 1930, 220). Women who had previously spun had three or four times their previous level of earnings. In 1803 any plaiter could earn a shilling a day, a good one from 10s. to 15s. a week (VCH 1907, 375). This soon rose to the amazingly high sum of a guinea (21s.) a week (Chalkey Gould, 184; Bernard 1803, 103). By 1806 sales of straw from Gosfield had reached £1,700 a year even though the population was less than 500 souls. In 1807 familiar complaints were being voiced that women did not want to go into domestic service, plaiting earnings were so high. Young remarked 'As in Hertfordshire so here also, a cry has been raised against it, the young women earning so much, that maids for domestic purposes are not easily to be had' (Young 1807, 395; Pinchbeck 1930, 220). The high earnings suggest why in this part of Essex, few women did agricultural work in the Wars. An old man is supposed to have remarked 'When the wives would earn ten or twelve shillings a week, their men wouldn't work, now they must' (Chalkey Gould 1906, 192). The figure of a guinea a week is confirmed by an 1812 case where two twenty yard pieces of straw plait were stolen from a Bocking grocer. They were worth 15s 7d (ERO Q/SBb 426/95). It was thought that a good plaiter could make three of these pieces in a week. The trade was a seasonal one, however: the demand for hats was confined to the summer and plait was not sought after beyond July. Furthermore, the strawplaiting area remained a fairly localized part of north Essex, increasingly concentrating on Halstead, but also established in Braintree and Bocking and Coggeshall by 1807.

Straw plaiting proved to be a war-time industry benefiting from the protection the continental blockade gave to home production. At the peace in 1815, easy access to better quality Italian leghorn plait meant earnings dropped markedly. It was no longer profitable to go through the rather laborious process necessary to prepare the straw for plaiting. It was also claimed that by the end of the Wars the supply of plaiters exceeded the demand. Plaiting, or 'braiding' as it was locally

known, was certainly being carried out by paupers in Writtle workhouse in 1816. Both braiding and making hats was done from March to May there (ERO D/P 50/18/1-2). Despite the fact that profits had fallen dramatically, the poor were still able to make some money out of it. In a list of paupers in Sible Hedingham made around 1818 plait prices ranged from 6d to 16d a score. The family of John Stand who had a wife and five children, one a baby, were able to make 10s a week from plait. The children were aged from four to twelve (ERO D/P 93/18/2). This was a level virtually equivalent to an agricultural labourer's weekly wage. Horn has shown that it was common for the combined income of the women and children to exceed that of a man in farm work (Horn 1974). Sarah Bacon, a seventy four year old widow, earned 16d a week at plait and also worked in a brickyard (ERO D/P 93/18/2). Profits were declining however, and it was claimed in the 1820s that there was no money to be made in braiding. The radical writer, William Cobbett, made a determined effort to revive the 'advantageous kind of labour', as he described it, in his famous volume *Cottage Economy* (1822) in which he argued that the leghorn, which was a type of grass picked green, could be produced in England at a superior quality than the Italian. Not split, it was both tougher and a better colour. From 1820 leghorn hats, not just the straw-plait, were being imported into England. A poor woman, Susannah Rising, writing to the Chelmsford overseers from Halstead about her family's claim for poor relief in 1824 said 'Braiding is of no use For it Fetches Nothing when tis Done Worth Speaking on'. She wrote in August at the end of the plaiting season (ERO D/P 94/18/42).

Straw-plait manufacture was the most successful wartime industry. Like silk and lace, and later tailoring and shoes, it catered for a London fashion market. However, its impact on female unemployment, in the context of the decline of spinning, was both limited and localised.

Service, vagrancy and prostitution

Domestic service was the largest field of women's employment in Essex and by far the most common reason for women's mobility. Yet the documents relating to women's lives as servants are difficult to come by, and as a result there has been little research done on them, indeed Ivy Pinchbeck barely touched the subject (see Hecht 1956; Marshall 1929). As the historian Eric Richards has written, in many ways service was a form of 'disguised underemployment' (Richards 1974). Many servants were little more than children, willingly dispatched by parents who were overburdened by trying to maintain their family (Cunningham 1990; Cunningham 1991). Indeed family security frequently depended on getting a girl a place. As a result, the majority of servants were girls in their early teens who

presented themselves as 'maids of all work'.

Rising demand for servants was a result not just of urbanisation but of an expanding middle class and came not just from country towns or from London: the gentrification of the rural world also created a huge need for servants. The farmers who benefited from agricultural improvement in Essex required a small army of servants to maintain their domestic reputations. As is apparent from the records, these servants had to be respectable and well-behaved girls. It is clear time and again in the records that the middle classes, and, as a result, labouring girls, were obsessed with dress. Every letter concerning a servant's employment makes a comment about their clothing. It is usual to find in the Essex poor law accounts payments being made for girls to be bought a set of clothing so that they were decently attired to go out to a service position. Needless to say such demands stimulated the production of cheap working clothing and shoes. Servants who could not be placed in the locality by overseers would be sent to London. Sometimes this was in the hope that a girl would find a situation for some years, and perhaps even learn a trade.

The demand for servants was high for much of the eighteenth century, yet it seems to have become saturated towards the end. Although the service sector had generally expanded in towns like Colchester, when spinning disappeared, the number of young single women who moved into towns looking for work seems to have exceeded demand (for example ERO D/P 203/12/39). It is possible only to get some idea of the patterns by looking at wage levels in poor law and court material. Domestic servant's wages were subject to a wide degree of variation to a point which almost defies analysis. While the extent to which they were paid in kind is an obvious problem, it is very difficult to compare the wages of servants of different ages, since wages were paid on a sharply graded scale. Servants were subject to widely varying terms of hiring. For example, while some wages include clothing others include a tea allowance. Some servants were paid according to the tasks they carried out. In the case of servants who worked in inns or lodging houses for instance, it was common for wages to vary according to the number of rooms they had to clean. Some servants appear to have been paid at a purely arbitrary level, others got no wages at all. For example, Sarah Hughes, the widow of a soldier, went in 1803 to reside with a victualler in Coggeshall and was there for four years being fed, given board, washing and lodging but no wages (ERO D/P 36/13/4A). For her, work clearly just meant a roof over her head.

Domestic servants wages, within the county of Essex, changed little during the eighteenth century but were higher in rural areas than in urban areas. This was likely to be a result of demand for servants from farmers on large country estates as well as competing demand for girls from spinning. This point was repeatedly made in the eighteenth century, that competition

with rural industry drove servants' wages up. The higher wages in the countryside also hold despite the fact that rural domestic servants were likely to be better provided with board than servants in towns. However, the rural wage could still be more than doubled in London especially as the cost of living appears to have been higher in Essex in the late eighteenth and early nineteenth centuries (Richardson 1991 69-90). From the mid 1780s to the mid 1790s wages appear to have fallen in both town and country and this coincides with the collapse of worsted spinning after a final, post-American war boom in the early 1780s. Wages rose significantly from 1800, and remained at this raised level after the Wars, especially in towns, which may be indicative of the effect of agricultural depression in the countryside. London wages also rose but not to the same extent. However, in real terms wages in no way kept pace with prices. For most servants, the time when this really mattered was if they became unemployed. As most servants came from the country they had to find lodgings if they lost their job and sometimes resorted to prostitution (George 1925, 119). While domestic service offered a livelihood for many young girls, for those who failed to make the mark and did not get a good enough reference or 'character', there would be many more waiting to take their place.

Single women living 'out of service' became a problem to the late eighteenth century authorities as the criminal records reflect. By the outbreak of the French Wars there was already a serious vagrancy problem in Essex (see, for example D/P 203/18/2). In 1795, new legislation was brought in which meant that justices could order a general search for vagrants at the same time as, through a tightening up of the settlement law, parishes closed in on those they were actually prepared to relieve. Women prosecuted well outweighed men in Essex and the problem reached a height in 1798 and continued through the Wars. A breakdown of the numbers of males and females in the different parishes of Colchester borough in the 1801 and 1811 censuses shows that there were far more females in the centre of the town, but more men in the outlying agricultural parishes at the edge of town. In the parishes identified by Eden in 1796 as associated with textile making, females predominated. In St Mary Magdalene, which had a declining baize trade, and also contained the barracks, 70% of the population were female. All Saints parish, the centre of silk weaving, had a sex ratio of 145 women to 100 men in 1801 and 162 women to 100 men in 1811. These many women, largely immigrants from the countryside, provided the labour force for the needlework trades which so proliferated in the town.

While some of the women prosecuted under the 1744 Vagrancy Acts were 'idle and disorderly' most of them were also 'lewd', in other words, prostitutes. They congregated in Colchester because thousands of soldiers were garrisoned in the town, usually in inns and their activities were explicit in their prosecutions – 'going with soldiers', 'lying in a guardhouse with sol-

diers' or 'lying at the barracks'. Most of the women prosecuted were in the age range twenty to forty. They had often been in service for just a year. Elizabeth Harrison was apprehended in 1811 'wandering about and exposing herself as a Common Prostitute. Sent back to Bishopsgate where she had previously been a servant' (ERO Colchester Quarter Sessions Bundle 1811). Roughly equal numbers were single, married (usually separated from soldiers) or widows. Many wives and children of militia men from elsewhere in the country came as far as Colchester when the army marshalled to go on campaign. By custom only six women could be chosen by ballot to travel with the soldiers (Fitchett, 1976 241-57). Some women were found wandering around in the town in a distressed state after the death of their husband in the militia.

The unorthodox background of these women often perplexed the authorities. One example was Mary Forster arrested in Coggeshall in 1806 'that she was sometime ago married to one George Inshaw a soldier of the staff corps who had then a wife living' (ERO D/P 36/13/4C 28/1/1806). Some of the women were prostitutes who travelled with the militia like the influx of Yorkshirewomen who came with the North Yorkshire militia. Indeed their numbers fell off in 1802 with the cessation of war. Sarah Priestly was convicted in spring 1797 for lying in a hay house with soldiers in St Nicholas parish, Colchester and sent back to Leeds. Two weeks previous to her conviction she had married Joseph Priestly a private soldier in the North Yorkshire militia. She came back and was convicted three more times in 1797 until in October she was imprisoned for a month for 'cohabiting with soldiers and other lewd persons' (ERO Colchester Q/S Bundle 1797). In court on the 14th July 1800 she was judged incorrigible and ordered to be transported. Another example was Elizabeth Brooks who, also in 1797, was found sleeping on a dunghill by the constable at Maryland Point, West Ham 'On Thursday Night last about eleven o'clock he saw...Eliz. Brooks go into a Field adjoining Stratford Green... with some soldiers and there remain in such Open Field till near Two in the morning' and on the same night he saw her laying on Stratford Green...in the open air with different men and that he then attempted to take her up and secure her as a common prostitute and disorderly person but then one of the soldiers with whom she then was drew a bayonet and attempted to stab him' (ERO Q/SBb 369/66). There were military camps at both Brentford and Stratford.

Apart from the 'professional prostitutes' who followed the military around there were a number of women, 'with no visible means of maintenance' becoming prostitutes who had their origins in the eastern arable area – rural Cambridgeshire, Suffolk, in particular, or rural Essex. Charlotte Allen, from Little Bromley a Tendring village, was put in the common gaol in Colchester in 1813 'confined with Venereal Disease, required Broth, Tea etc.' (ERO Colchester Q/S Bundle 1813). In West Bergholt in 1804, Ruth Byfleet, a

widow, originally from Wakes Colne had been cohabiting with soldiers and 'by enticing Young Women from their homes' the overseer of the poor was concerned that 'the said Ruth Byfleet will creat a great expense and charge to..... West Bergholt' (ERO P/LwR 14).

Although some of these women seem to be failed servants who had often had a spell in the workhouse, others 'worked at their own hands' in something like needlework, suggesting that they had already lived in Colchester for some time. Eighteen year old Mary Cummings, arrested in 1791 and sent to Chelmsford House of Correction, left her father who lived in Ryegate in Surrey a year before: 'the greater part of the time since she had maintained herself with needlework, but for the last three months has lived by walking about the streets and picking up men - particularly for about 3 weeks past she had frequented the forest during that time she lodged several nights in the open air but... usually at one Mrs Wilkies an old cloath woman in Widigate Alley, Shoreditch' (ERO Q/SBb 345/85). Sarah Hyams came from Haverhill in Suffolk and was 21 or 22. When her parents died, the spring before she had nothing to do but go into the workhouse. In the month before her arrest in January 1798 she had no settled home but had 'maintained herself by the wages of prostitution' (ERO Q/SBb 371/68). From the mid 1780s to mid 1790s the drop in both female servant and spinning wages coincided with a rise in average male wages (Hunt 1976, 167-170). This situation could have increased prostitution even apart from the militia build up. Although difficult to analyse, prostitution could certainly be worthwhile in an economic sense for desperate women. In one recorded encounter at Colchester, a cabinet maker seems to have paid Grace Rogers a shilling in 1773 as well as wine and ale (ERO P/CoR 4). Several other young men had been with him at her house. Grace Rogers, also a convicted thief, of St Mary in the Walls, Colchester was committed for being lewd, idle and disorderly and 'frequently inciting young Men to her House' and had no other way of getting her maintenance (ERO Colchester Draft Minutes of Session 1775).

It is less easy to find out about local women who became prostitutes since they were not usually homeless. Certainly in the Wars, some Colchester people took to running brothels. The activity was seemingly condoned by the army as in 1801 it was revealed in petty sessions that prostitutes were living in the deputy barrack master's house with him acting as pimp. Thomas Inman, the constable of St Giles, reported that the deputy barrackmaster let in and out the men of various regiments and 'appears... to encourage the sd Idle and disorderly women in entertaining men in the same house in a very idle and disorderly way' and felt himself under threat for reporting this. He also reported that a carpenter in St Botolph's paish was 'taking in divers disorderly and Idle women & there suffering men to meet' (ERO P/CoR 23).

While much of the evidence for a rise in prostitu-

tion suggests that this was directly connected with the presence of the militia in Essex, it should not disguise the fact that, in conditions of rapidly rising population, there were a large number of unemployed women. Available opportunities in domestic service could not adequately meet the demand for them.

The old poor law, marriage and women's subsistence

Women faced great economic difficulties during this period, especially if they were single or widowed. Agricultural work was done by men, soldiers if necessary, and there is evidence that if done by women at all it was allocated to married women. There had been a dramatic decline in spinning. Straw plait, while prosperous from 1795 to 1815, provided restricted employment opportunities. Other fashion trades did not yet produce a marked rise in work. For the parishes of Braintree and Ardleigh in the 1790s it is argued that women could provide no more than ten per cent of total family earnings (Sokoll 1993, 42). While common land was scarce in Essex, what little there was had provided opportunities for labourer's wives to graze a cow or gather wood or berries. During the Wars 'self-employment' opportunities reduced as all available land was brought under cultivation (Humphries 1990). A thousand acres of Tiptree Heath were enclosed by parliament in the period 1801-05, for example.

Furthermore, poor relief was being allocated almost exclusively to families through the male breadwinner. While the poor laws defined a statutory scheme of poor relief based on the parish, the way in which the system operated also captured shifts in ideological stance. It mirrored gender and class attitudes at the time, often by who was not paid as much as who was paid. The second half of the eighteenth century sees a major change in the attitude of poor law overseers, presumably reflecting the attitudes of wider society, to the way in which women were to be maintained. Before this time, relief was distributed on an individual basis reflecting women's involvement in employment. Women were expected to earn their own subsistence by work. Poor relief was the temporary resort of poor women when work was difficult to obtain. Vestiges of this system survived in small rural parishes into the wartime period. For example, in Great Tey married women were given payments in the winter of 1797 for 'no work' (ERO D/P 37/12/3). By the late eighteenth century many parishes show a change in policy to poor relief being allocated on a family basis through the breadwinner. As wage levels would no longer support large families a greater number of people than ever before developed a measure of dependence on the poor relief system.

This move to allocate relief to families pre-dates the famous Speenhamland judgement of 1795. Family desertion and the economic support of the family had

become an increasingly important issue in the second half of the eighteenth century with a large number of soldiers and mariners being recruited and the rates to be paid to families being agreed by the quarter sessions (ERO Q/SBb 220/15 1759). An act of 1803 (43.Geo III cap.47) consolidated previous acts to support the families of militiamen out of poor relief. The allowance to a wife and family were to be equal to one day's husbandry labour in the district but not less than a shilling per week. If there were more than three children in the family, a man with no children would be found to substitute for the balloted soldier to avoid placing too great a burden on the parish poor relief system.

The Speenhamland judgement at the Pelican Inn, during the first high price year of the Wars, deemed that labourer's pay in this area of Berkshire was to be adjusted according to price of bread and size of family. Separate payments were to be made 'for his own support' and 'for the support of his wife and every other of his family' who were given half or less the amount each. Similar systems, some allowances in aid of wages and other family allowances, came into use in about 80% of parishes in Essex at around the same time (Boyer 1990). The Speenhamland judgement became so well known because it was seen as an identifiable precedent, establishing wage subsidies based on family size and food prices. Both Speenhamland and Speenhamland type decisions made elsewhere confirmed the principle that a breadwinner would support his family. Other measures confirm this, for example, from 1809 the fathers of illegitimate children were required by law to pay all the charges whereas previously the mother had frequently taken a proportion of family responsibility.

George Boyer has associated the poor relief policy of family allowances with areas that specialized in grain. He argues that the decline of cottage industries such as spinning, forced grain farmers to find a new solution to the problem of seasonality after they had embarked on cereal specialisation, due to the prolonged increase in wheat prices starting in the early 1760s. They would pay allowances to maintain their labourers over the winter dead season, when there was little employment, in order to secure the necessary harvest labour. However, the loss of spinning with little obvious way to replace it still had had fundamental effects on women who were not married – the single, separated and widowed women. Although access to relief was supposedly statutory, these women were maintained with increasing reluctance by parishes, relief sometimes only being made available in the workhouse, for example, or to military widows. Ivy Pinchbeck argued that single women's relief in the period 1795–1834 was in many areas less than 6d a day (Pinchbeck 1930, 80). In Cambridgeshire, Hertfordshire and Essex the First Report of the Poor Law commissioners for 1835 stated that it had been the practice 'to consider them neither as members of families maintained by allowances, nor entitled to relief as distinct claimants on the grounds of lost time' (Pinchbeck quoting P.P. First Report of the

Poor Law commissioners for 1835 XXXV p.136). As a result their only resort was pauperised service. These policies were, in fact, rigorously applied from the start of the French Wars when several single women appeared in Essex petty sessions claiming overseers were denying them relief (for example, ERO P/LwR2).

The analysis of listings of the poor of Terling in the Napoleonic Wars shows how relief was being allocated in this highly regulated rural parish. While the lack of employment for women and children was noted, three households headed by single women were not relieved at all (ERO D/P 299/8/2-3 especially 30/12/1811; a comparison of ERO D/P 299/12/3 and ERO D/P 299/12/4). Only a minority of single women were relieved. Esther White in 1810, 23, single with 2 children under 6 was allowed 3s. Women were either given very minimal amounts, or more likely put in the workhouse. Thus in 1811 it had two males and ten females in it (ERO D/P 299/12/5). Most significant may be that single women were not included in the reduced price distribution of flour, rice and herrings in 1801 or in the 1811 reduced price flour applications (ERO D/P 299/12/3; D/P 299/12/5). Yet if a woman was either a military wife or widow, her status certainly enhanced her claim for relief. Not only was she more likely to be relieved in the first place, but she was also likely to get more relief either in kind or in money. In relief allocation the parish of Tillingham, in the south of the county, provides a contrast with Terling. There it is apparent that children, single women and widows are being relieved in lieu of farm work (ERO D/P237/12/1-3).

Boyer goes on to argue, supporting Malthus, that the favoured system of family allowances, in this period, led to population growth since it was rational for couples to maximize their income by having the largest number of children in the shortest possible time. There are some problems with this argument however. If the aim was to secure a labour force by the cheapest means surely single men should have had a higher value. There are cases where single men were certainly being paid lower wages than their married counterparts and were being denied poor relief (see ERO P/LwR 2). Moreover, family allowances should have led to low marriage ages for both men and women. In Terling male marriage ages actually rise in the period 1775–1849 whereas women's marriage age falls to an average of just 22.63 which is lower than the average for both Essex and nationally (David Levine's Cambridge Group for the History of Population and Social Structure reconstitution of Terling).

The age of marriage for women in Essex was always low but it seems to have fallen even lower during the French War period. More women married than they had before. Rising illegitimacy rates also indicate the number of women who had been promised marriages which failed (Levine 1977; Levine and Wrightson 1980). Not only did prevailing ideologies stress the virtues of domesticity and maternity but sheer economic pressure caused women to marry with

war-time prices pressing hard on their ability to make ends meet (Hall 1979; Davidoff and Hall 1987). Marital separation and bigamy probably increased in the French Wars (Sharpe 1994c). It was not until 1797 that commanding officers had to report the dead by name and there was no way of officially informing the family of the fatalities even by the end of the Wars (Emsley 1979 p.93, p.164). As a result women often remarried when their husbands were missing. Martha Bright appeared at the Chelmsford petty sessions in the 1820s. She married a soldier from Colchester barracks in 1808 and he left her shortly afterwards. She went looking for him and saw him at a military camp but 'he set off from there and told her he thought he should not see her anymore'. In 1821 she was cohabiting with one John Shipman but appeared as a pauper and said 'that she is at this time with child and is not able to maintain it herself when born' (ERO P/Ca 9). A poor woman, Mary Rabey wrote from London to St Botolphs, Colchester, her maiden settlement in 1816 where she had previously been a widow. She had married an Irish soldier and got the living of her two children aged four and six by going out washing three or four days a week. She said 'when i married I did it in a view of bettering myself Likewise my Family but my Husband was called away on Foreign Service where he has been 2 years' (ERO D/P 203/18/1 16/3/1816). Marriage was an economic necessity for labouring women in this period. A woman like Rabey had little else to resort to.

Conclusion

We tend to think of war-time industries as those producing armaments, fuel and growing food for the nation. Women involved themselves in these sectors in the first and second world wars but not in the French Wars in Essex. The most significant changes to the local economy concerned the rise of new industries, many of them, like strawplait and silk, as import substitutes. Other work had to do with provisioning and clothing the army. The sweated industries established at this time, such as wholesale uniform production and shoe manufacturing formed major employments and set the scene for industrial production in Colchester for the next century. The Wars tended to confirm trends which were already underway in late eighteenth

century Essex, such as concentrating the focus of towns like Colchester on being service centres for external agencies be they farmers or military personnel, and in linking both the county and the towns to a national market in a far greater way than they had ever previously been.

However, Emsley's pictures seems substantially correct for Essex. In terms of work opportunities, the overall impression is of unemployed rather than employed women in the war era. The new industries did not provide nearly as much employment as had been available when spinning was widespread. Moreover, once the war was over and these industries were placed in a peacetime context, they either floundered, like strawplaiting, or became more precarious due to their seasonality and dependence on fashion trends. Men also faced a high level of both unemployment and underemployment and harvest needs were met by restructuring of the available labour force. The conditions of rapidly rising population and labour surplus meant that there was not a widespread introduction of women into men's jobs. Indeed, the war period saw a confirmation of the existing sexual division of labour with women carrying out more of the 'nimble fingers' tasks of plaiting or sewing along with other manifestations of housewifery. As far as wages are concerned, apart from a few exceptional years of seasonal high prices for straw plait, women's wages lagged well behind price rises. Customarily set at a level of around half the male wage, the relative increase fell short of that given to men. Not only did the wage differential between men and women increase but when poor relief was being allocated to breadwinners, it is not surprising that employment in the French War era for most women in the labouring classes meant household tasks and raising a large family.

Acknowledgements

I am grateful to Essex County Council for provided the financial support for this research. I thank Arthur Brown for comments, and Eliza Kentridge for editing an earlier draft, and Jane Pearson for the reference to Great Tey.

Author: Pamela Sharpe, Dept. of Historical Studies, University of Bristol, 13-15 Woodland Road, Bristol BS8 1TB.

Bibliography

AB,	'Observations on the detriment that it is supposed must arise to the family of every cottager from the loss of spinning by the introduction of machines that work' (1794)	Armstrong, A.,	<i>Farmworkers: a social and economic history</i> (London, 1988)
Anon,	'An account of the Essex Society for the encouragement of Agriculture and Industry' (Bocking 1793)	Bernard, T.,	'Extract of an account of the introduction of Straw Platt at Avebury', <i>The Reports of the Society for Bettering the Condition of the Poor</i> , IV, (1803)
		Boyer, G.R.,	<i>An economic history of the English poor law 1750-1850</i> (Cambridge, 1990)

- Brown, A.F.J. 'Colchester in the eighteenth century' in L.M. Munby (ed.) *East Anglian Studies*, (Cambridge, 1968), 146-173
- Carter, J., *Memoirs of a working man*, (London, 1845)
- Chalkey Gould, L., 'Strawplaiting - a lost Essex industry' *The Essex Naturalist*, XIV, (1906), 184-192
- D'Cruze, S., 'To Acquaint the Ladies: women traders in Colchester c. 1750-1800' *The Local Historian* 17:3 (1986), 158-162
- Cunningham, H., 'The employment and unemployment of children in England c.1680-1851' *Past and Present*, 126, (1990), 115-150
- Cunningham, H., *The children of the poor: representations of childhood since the seventeenth century* (Oxford 1991)
- Davey, C., 'Reconstructing local population history: the Hatfields and Bobbingworth districts of Essex 1550-1880' (unpublished Cambridge PhD thesis 1990)
- Davidoff, L. and Hall, C., *Family Fortunes: men and women of the English middle class 1780-1850* (London, 1987)
- Eden, F.M., *The State of the Poor*, Vol 2. (London 1797)
- Emsley, C., *British Society and the French wars* (London, 1979)
- Fitchett, W., *Wellington's men: some soldier autobiographies* (London, 1976)
- Glasse, Rev. Dr., 'Extract from an account of the superior advantages of dibbling wheat, or setting it by hand' (1802)
- Hall, C., 'The early formation of Victorian domestic ideology' in S. Burman (ed.) *Fit work for women* (London, 1979), 15-32
- Hecht, J.J., *The domestic servant class in eighteenth century England* (London, 1956)
- Hertz, G.B., 'The English silk industry in the eighteenth century' *English Historical Review* XXIV, (1909), 710-27
- Hill, B., *Eighteenth century women: an anthology* (1984)
- Horn, P., 'Child workers in the pillow lace and straw plait industries of Victorian Buckinghamshire and Bedfordshire', *Historical Journal*, 17:4, (1974), 779-96
- Humphries, J., 'Enclosures, common rights and women: the proletarianization of families in the late eighteenth and early nineteenth centuries' *Journal of Economic History* li, (1990), 17-42
- Hunt, E.H., 'Industrialisation and regional inequality: wages in Britain 1760-1914', *Journal of Economic History*, xlii, (1986), 935-66
- King, P., 'Customary rights and women's earnings: the importance of gleaning to the rural labouring poor 1750-1850' *Economic History Review* xlii:3, (1991), 461-76
- Levine, D., *Family formation in an age of nascent capitalism* (New York 1977), 125-147
- Levine, D., and Wrightson, K., 'The social context of illegitimacy in early modern England' in P. Laslett, K. Oosterveen and R.M. Smith (eds.) *Bastardy and its comparative history* (London 1980) 158-175
- Malthus, T.R., *Principles of Political Economy* 1836 edn. (1st edn 1820, ed. E.A. Wrigley and D. Souden, *The Works of Thomas Robert Malthus*, Vol 5, London 1986)
- Marshall, D., 'The domestic servants of the eighteenth century' *Economica*, 9:25, (1929), 15-40
- Mingay, G.E. (ed) *The Agrarian History of England and Wales 1750-1850* (Cambridge, 1989)
- Pinchbeck, I., *Women workers and the industrial revolution 1750-1850* (London, 1930; 1981 edition)
- Richards, E., 'Women in the British economy since about 1700: an interpretation' *History*, LIX, (1974), 337-357
- Richardson, T.L., 'Agricultural labourers and the cost of living in Essex 1790-1840: a contribution to the standard of living debate' in B. Holderness and M. Turner (eds) *Land, Labour and Agriculture 1700-1920* (London, 1991), 69-90
- Sharpe, P., 'De-industrialisation and re-industrialisation: women's employment and the changing character of Colchester 1700-1850' *Urban History*, 21:1, (1994a), 77-96
- Sharpe, P., 'The women's harvest: strawplaiting and representations of labouring women c. 1793-1885' *Rural History*, 5:2, (1994b), 129-142
- Sharpe, P., 'Bigamy among the labouring poor in Essex 1754-1857' *The Local Historian* (1994c), 24:3, 139-144
- Sharpe, P., 'Cheapness and economy': manufacturing and retailing ready-made clothing in London and Essex 1830-1850', *Textile History* (1995) 26:2, 203-13
- Sharpe, P., *Adapting to capitalism: working women in the English economy 1700-1850* (London, 1996a)
- Sharpe, P., and Chapman, S.D., 'Women's employment and industrial organisation: commercial lace embroidery in early 19th century Ireland and England', *Women's History Review*, 5:3 (1996b), 325-50
- Shrimpton, C., *The landed society and the farming community in Essex in the eighteenth and early nineteenth centuries* (New York, 1977)
- Simonton, D., 'The education and training of eighteenth century English girls with special reference to the working classes' (unpublished PhD thesis, University of Essex 1988)
- Sokoll, T., *Household and family among the poor* (Bochum, 1993)
- Snell, K.D.M., *Annals of the Labouring Poor* (Cambridge, 1985)
- Taylor, B., 'The men are as bad as their masters.....' 'Socialism, feminism and sexual antagonism in the London tailoring trade in the early 1830s' *Feminist Studies* 5:1, (1979), 7-40
- Vancouver, C., *General view of agriculture in the county of Essex* (London, 1795)
- Ward, G.A., 'Essex Farming in 1801', *Trans Essex Arch Soc*, 5 (3rd series), (1973), 185-201
- Warner, F., *The silk industry of the United Kingdom: its origin and development* (London, 1921)
- Wood, C.A., 'Essex during the French wars 1793-1815' (unpublished MA thesis University of Loughborough 1984)
- Wood, R.G.E., *Essex and the French wars 1793-1815* (Essex Record Office, SEAX series of teaching portfolios 9, 1977)
- Young, A., 'A five days tour to Woodbridge etc' *Annals of Agriculture* II (1784), 105-170
- Young, A., 'A Fortnight's Tour in East Suffolk' *Annals of Agriculture* XXIII (1795), 18-51
- Young, A., *General view of the agriculture of the county of Essex* (1807)
- Young, A., *General view of the agriculture of the county of Suffolk* (1813), 65-66

The enclosure of Old Heath Common 1811-18

by Patrick Denney

Introduction and historical background

The area known as Old Heath is situated about 2 miles from Colchester town centre on the road leading to Rowhedge and East Donyland. It extends to about 700 acres all lying within the former parish of St. Giles, although latterly under the auspices of St. Barnabas. In the early 1800s this was little more than a straggling hamlet surrounded by fields and common land. By the end of the century, however, and with an expanding population, agriculture was in decline and the area fast becoming urbanised. Since then it has grown to become what is now a sprawling suburb of Colchester, well populated with a mix of residential housing and light industry. The object of the present study is confined to the period 1800-1818, a time which brought lasting changes to both the local community and landscape. For this was the age of enclosure, and although this part of north-east Essex was little affected by such changes, the community at Old Heath suddenly found themselves in the thick of the fray. For what began as a seemingly straightforward exercise in agricultural improvement developed into a battle between opposing manorial lords that attracted considerable interest from the county's landed gentry.

First, it is necessary to define the area under discussion, for the district of Old Heath has never been officially recognised as a village or parish in its own right. Prior to the 1920s, it was almost totally isolated from the main town and had over the years developed its own identity as a village community. The first official attempts at establishing any firm lines of demarcation were those taken by 19th-century census enumerators, and for the purpose of this study it has been decided to copy their lead in establishing the following boundaries: to the east, the river Colne and the Old Channel, Rowhedge and East Donyland to the south, Cavendish Avenue and part of Middlewick to the west and Barnhall Avenue and Distillery Lane to the north.¹

It is believed that a community, of sorts, has occupied this area since at least Saxon times, although the Domesday reference mentions only the nearby estate of Donyland from which the Old Heath or Battleswick manor is believed to have originated. Also, in numerous documents dating from the 13th century, the area is frequently referred to as The Old Hythe, a name which would appear to derive from the Saxon 'Hetha', signifying a harbour. Morant claimed that the area was

so named because 'wares and merchandises brought to this town by water used to be unloaded there.' And although he was of the opinion that the old harbour must have been out of use for some 500 years, he recited a case, just 100 years earlier, where a witness had sworn that he had passed by a small boat up the channel or creek where ships, anciently, went up to the Old Hythe.² This channel leading to the Old Hythe is clearly marked on an estate map of 1734 where it is described as 'The old channel that vessels went to Colchester Old Hithe with goods'.³ Further evidence in support of the Saxon harbour theory is seen in early references to the present Hythe or harbour district of Colchester. In court rolls and other records from the 13th century onwards, the area is frequently referred to as the New Hythe, in apparent contrast to an Old Hythe.

The earliest mention of the new harbour is found in an agreement concerning the tithes of St. Leonard's-at-the-Hythe, dated 1227, and it is shortly after this that the earliest reference to the Old Hythe occurs.⁴ Interestingly, on numerous occasions between the 13th and 19th centuries, both the names Old Hythe and Old Heath appear to have been interchangeable and used alternatively to describe both places. For example, in Bucke's 'Prospect' of the town (1741), which shows a picture of the Hythe, the church is described as St. Leonard's-at-ye-Heath, while in a series of 19th-century deeds relating to the Bell Inn public house, the property is identified as being at the Old Hythe.⁵

The manorial rights relating to Old Heath were divided between the manors of Battleswick and West Donyland, with the boundary separating the two manors following a similar line to the present Old Heath Road. Although the manor of West Donyland was by far the larger of the two, it held less land and enjoyed fewer rights in Old Heath than did Battleswick, the lands of which extended eastward from the main road to the river.⁶

Old Heath 1800-1810

By the onset of the 19th century, Old Heath had still experienced little commercial growth and remained a relatively obscure district of the town. Even so, it had developed its own identity as a small, but flourishing,

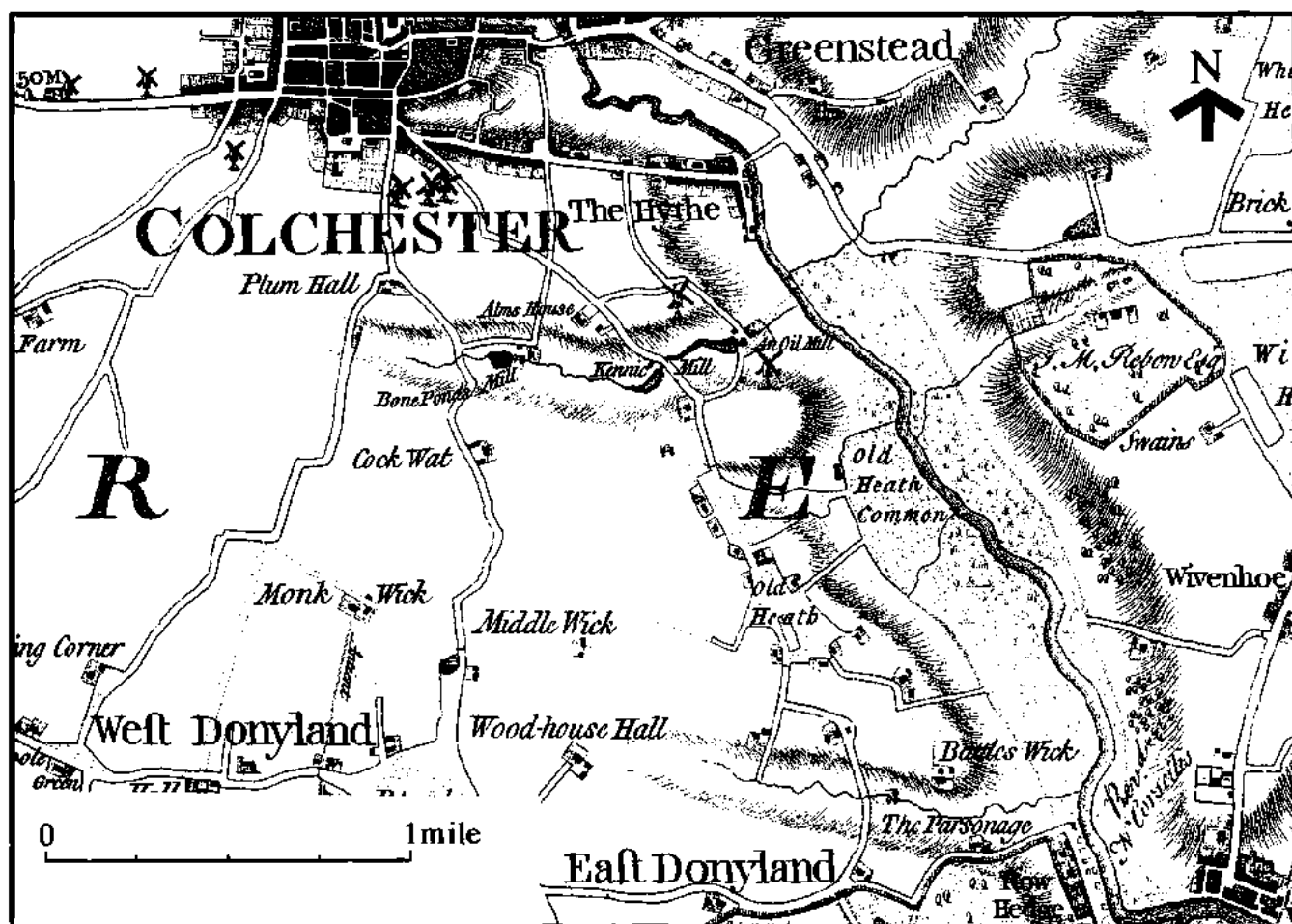


Fig. 1 The area of Old Heath Common on Chapman and André's map of 1777.

agricultural community. What is less certain, however, is the size of the community at this time. Because Old Heath had never existed as a parish or village in its own right, it had seldom figured as a separate entity in official records. Early census returns, for example, list population figures in complete parish or village order only. Thus the Colchester return for 1801 shows St. Giles parish to have a population of 1,106 but this is made up from residents of Old Heath and others living elsewhere in the parish.⁷ In fact, there are no official population figures for Old Heath until the 1841 census, so in order to arrive at a satisfactory figure for the earlier period it has been necessary to derive information from a variety of sources.

The land tax returns provide a comprehensive listing of the major property owners in the area, although in most cases the owners' names are listed alphabetically, giving no clue to their geographical location. However, from a study of other records, including property deeds and estate maps, it is possible to build up a fairly accurate picture of the local land owners and, by comparing these names with those included on the earlier returns, which are not listed alphabetically,

one is able to identify those relating to the Old Heath area, which in the main appear together as a separate block at the end of the return. For example, in 1778 the Old Heath landowners number about 35, and although the entries refer primarily to land ownership and not dwellings only, we can safely assume the number of occupied properties to be in the region of 25-30.⁸

Further evidence comes from early maps and plans of the area. The earliest detailed map of Old Heath is the 1777 Chapman and André survey.⁹ Buildings are clearly marked and total 38, including what are apparently a number of farmyard buildings. This compares with 46 on the first O.S. map of Essex in 1805.¹⁰ After making allowances for agricultural buildings, we can assume a figure of 25 occupied properties for 1777 and 32 for 1805. These figures compare favourably with a listing of manorial tenants from both the manors of Battleswick and West Donyland.¹¹ Assuming therefore a total of say 30 occupied properties for 1801, and using a multiplier of 4.5, this gives a population for Old Heath of around 135, or 12% of the parish total.

The approach to Old Heath was by the main

Colchester-Donyland Road, which led to a gate at the edge of the common. From here an ancient track wound its way across the heath before rejoining the Donyland Road.¹² Over the years this large tract of land, extending to perhaps 200 acres, had been gradually enclosed until finally being reduced to about 75 acres, comprising about one-third heath and waste, the rest marsh.

The bulk of the enclosed land was divided between 8 farms, ranging in size from about 40 to 140 acres. Those lying within the manor of Battleswick included the manor farm itself, extending to a little over 100 acres, Cleveland Farm, Place Farm and Burnthouse Farm, while in west Donyland there was Middlewick Farm, St. Runwald's Farm, Whitehall Farm and Old Heath Farm. It appears that the common lands, although lying chiefly in Battleswick, were enjoyed by proprietors and tenants from both manors.¹³ The rights to graze sheep and cattle on the common was apparently determined by the size of the individual holdings. This is borne out in a letter dated 1784 written by Alexander Carter, a tenant farmer of West Donyland, to the lord of the manor, Ralph Ward. It seems that a dispute had arisen concerning the grazing rights of the copyhold tenants, and a meeting to discuss the problem had been convened at the *Bell Inn*. The meeting confirmed various individual grazing rights ranging from about three head of cattle for a small cottager to 25 head for a farmer of 100 acres.¹⁴ Similar rights were extended for the grazing of sheep, with the cottager being allowed to feed about 15 and the larger farmer 85.¹⁵

In the early years of the century, thousands of acres of common land in Essex still remained unenclosed. For the most part this comprised waste land and heaths, although in the extreme north-west of the county there were large tracts of arable commonfields. In the borough of Colchester alone, hundreds of acres of commonfields lay scattered around the town walls. These, however, were known as Lammas or Half Year

lands, and were grazed and farmed in strict rotation. Grazing rights could only be enjoyed from Lammas Day, 12 August, to 13 February. Even then the right to graze the lands was only extended to the Free burgesses of the borough. Unlike the system used at Old Heath, where grazing rights were determined according to the size of an individual's holding, the burgesses each enjoyed the same right of commonage, that is 'three hedd of greate cattle, or in leue of everye of the said three head ten shepe'.¹⁶

According to Chapman and André's map of 1777, the county was littered with similar tracts of common and heath, although by the 1820s most had been enclosed. Vancouver's 1795 estimate of the amount of such land then remaining in the county was over 14,000 acres, which if enclosed would increase in value more than threefold. Figures taken from the same report show the average value of unenclosed common land in the Colchester and Tendring areas to be about 4 or 5 shillings an acre, while the price for enclosed arable land was nearer 15 shillings.¹⁷ It is well known that from about 1760, the rate of enclosure was beginning to accelerate; between 1760 and 1780 over 1,000 enclosure Acts were passed nationwide, and at the time of the Napoleonic wars, between 1793 and 1815, a further 1,500 Acts. These figures, of course, refer only to enclosure by private Acts of Parliament and take no account of the various Public Acts or enclosures by private agreement.¹⁸ Although the majority of Acts referred to above were concerned with the enclosure of open fields, about one third were devoted entirely to commons and wastes. This was particularly the case during the Napoleonic period when high cereal prices were encouraging farmers to convert more land to the plough. According to research carried out by W.E. Tate, of the 40 or so enclosure Acts passed in Essex between 1760 and 1840, 27 were concerned solely with commons and wastes, with about half that number being passed during the period 1800-1815 (Table 1).

Table 1 Enclosures by Private Act of Parliament
(compiled from W.E. Tate's *Domesday of English Enclosure Acts and Awards*)

County	Enclosure of common and waste land only							Enclosure of land including open fields						
	1700- 1760	1761- 1780	1781- 1800	1801- 1815	1816- 1830	1831- 1845	Total	1700- 1760	1761- 1780	1781- 1800	1801- 1815	1816- 1830	1831- 1845	Total
Beds			1	2		1	4	2	13	28	31	3	5	82
Berks	2	2		4			8	5	13	10	52	7	3	90
Bucks				5	3	1	9	3	34	30	23	9	4	103
Cambs	1	1	3	3		4	12		3	14	53	7	25	102
Cheshire		5	8	18	6	2	39				1			1
Cornwall				1	2		3							0
Cumberland		13	5	40	16	4	78		3		2	1		6
Derbys	4	17	13	13	9	6	62	3	21	22	18	6	1	71
Devon			2	18	6	5	31							0
Dorset		3	3	10	3		19	2	4	10	20	7	5	48
Durham	4	13	5	10	2	1	35		1	3	1			5
Essex		3		14	8	2	27			2	8	2	1	13
Gloucs	1	3	2	7	4	1	18	14	34	28	37	7	9	129
Hants	5		1	21	8	3	38	8	3	23	14	9	1	58

County	Enclosure of common and waste land only						Total	Enclosure of land including open fields						Total
	1700- 1760	1761- 1780	1781- 1800	1801- 1815	1816- 1830	1831- 1845		1700- 1760	1761- 1780	1781- 1800	1801- 1815	1816- 1830	1831- 1845	
I.o.W.				1			1							0
Herefordshire		4	2	9	5	1	21			5	20			25
Herts	1	2		5			8		4	7	13	3		27
Hunts			1				1	3	17	16	25	2	4	67
Kent	1	1		11	3	1	17							0
Lancs	7	12	19	22	8		68							0
Leics	1	1	1	2			5	22	81	35	10	2	1	151
Lincs	3	9	14	14	3	1	44	12	120	56	62	11	1	262
Middx		3		6			9		2	5	14	4		25
Monmouthshire				3			3		1					1
Norfolk	4	10	22	44	16	2	98	3	17	26	117	16	8	187
Northants		6	5	4	1	1	17	22	97	23	33	11	7	193
Northumberland	6	12	8	12	3	1	42	2	2	4	3		1	12
Notts		6	5	4	1	1	17	12	39	36	23	5	2	117
Oxfordshire			1	3	2		6	6	43	29	29	11	9	127
Rutland							0	4	8	9	2	1		24
Shropshire		8	10	16	4	4	42		2	2	1	2		7
Somerset	3	11	47	22	5	5	93			14	21	8	2	45
Staffs	6	12	15	25	6	3	67		6	10	6	1	1	24
Suffolk	1		7	23	4	1	36	1	2	6	29	7	3	48
Surrey		1	3	14	3		21		1	3	14	3		21
Sussex		3	4	4	2	3	16			1	17	7	1	26
Warwickshire		3	4	11	3	2	23	35	51	21	17	7	2	133
Westmoreland		13	1	23	6	4	46				3	1		4
Wiltshire	2	2	3	15	9	2	33	5	20	34	42	15	1	117
Worcestershire	1	8	6	7	8	1	31		30	8	27	4	1	70
East Riding	5	6	3	5	1		20	11	75	22	29	8	4	149
North Riding	6	16	14	28	5	1	70	7	16	11	17		1	52
West Riding	11	37	29	44	23	5	149	5	39	50	53	13	3	163
TOTAL	75	240	263	540	191	67	1376	187	818	639	887	200	107	2838

Part of the land enclosed during this period, without recourse to Act of Parliament, included several hundred acres of common fields or Lammas lands, already referred to, belonging to the borough of Colchester. The decision to sell off the lands, or to be more precise the rights of common over them, was first made in 1803 in a somewhat desperate attempt by the Corporation to offset its ever-increasing debt.¹⁹ In 1807, a team of 4 conservators was appointed to survey and assess the value of the land and to accept proposals from prospective owners. It had been agreed beforehand that the meadow land was to be sold for around £30 an acre and the arable land £20 an acre.²⁰

One of the men appointed was Henry Thorn, resident of the town, and described in a local directory as a silversmith. In 1800, after the death of his father James Thorn, he had received a legacy of £800 together with Checkleys Farm at Aldham, which extended to 117 acres, and was at the time let to a Mr Joseph Ward. He also owned property in the centre of Colchester and in numerous other documents is further described as a rag merchant, dealer and chapman.²¹ It is perhaps not too surprising, therefore, to learn that after spending less than a year immersed in the sale of the borough fields, and becoming fully acquainted with the procedure and profits to be made out of the conversion of such land to full arable use, we find that Thorn is negotiating with Mr Joseph Ward to purchase the lordship

of the manor of Battleswick at Old Heath which of course included a sizeable tract of common land, just ripe for enclosing.²² Unfortunately, the writer has been unable to confirm whether the Joseph Ward at Checkleys Farm, Aldham was the same Joseph Ward who was lord of the manor at Battleswick, but it must remain a strong possibility. Thorn concluded the purchase for the lordship of the manor in September 1808 for the agreed sum of £800, which he obtained by mortgage from Mr John Gosnall of Colchester. Joseph Ward had purchased the manor from the Godschall family in 1804 for the sum of £3,250. This included the manor farm and adjoining demesne lands, which were not transferred to Thorn.²³ In fact, as it stood, Thorn had little to show for his money, save the usual manorial fines and rentals, and, of course, the possibility of receiving a sizeable allotment of the common lands were they to be enclosed.

Enclosure of Old Heath common

In the event, it seems that Thorn wasted little time before proceeding in this direction, for by 25 May 1811 he had successfully petitioned for an Act of Parliament to enclose the common and waste lands of his new manor.²⁴ It is not clear, however, from the surviving evidence whether he had previously envisaged having

to go to the expense of obtaining an Act of Parliament to fulfil his ambitions, or whether he had simply intended striking up a suitable agreement with the other land owners and tenants. If this latter was the case, he had obviously misread the situation and failed to foresee a major stumbling block in the form of Ralph Ward, lord of the manor of West Donyland, who had laid claim to parts of the land to be enclosed.²⁵ It seems unlikely, however, that Thorn would have failed to enter into some kind of negotiations with Ward or his representatives at an early date, and one must therefore presume that he felt confident enough of achieving his aims even with the added expense of obtaining an Act of Parliament. The only clue suggesting some kind of confrontation in the early stages is found in the Enclosure Award of 1818 where, after mentioning that the dividing and allotting of land would be of great advantage to all concerned etc., it continues 'such a division could not be effected so as to answer the above purposes without the aid and authority of Parliament.'²⁶ However, judging by the number of other enclosures that proceeded in a similar manner, it cannot be considered unusual.

The Battleswick Act closely followed the procedures laid down in the General Enclosure Act of 1801, and named Benjamin Strutt, Esquire, of Colchester as the sole commissioner charged with executing its contents. Strutt was very much involved in local affairs and served as Chamberlain of the borough of Colchester. Thorn would undoubtedly have been quietly confident at this stage of the whole affair running a smooth course; the commissioner would have been well known to him in his dealings with the Corporation, and one of the major landowners supporting the enclosure, Jacob Verlander, was a fellow 'conservator' with Thorn, involved in the sale of the borough half-year lands. In fact, Strutt later appointed Verlander as the official surveyor responsible for establishing the new roads over the enclosures.²⁷ His first move, however, was to hold a meeting for interested parties 'at the house of Daniel Powell, known by the sign of the Bell at the Old Hythe,' on Monday, 29 July 1811.²⁸ There is also some evidence to suggest that Strutt might well have seen himself as a kind of professional enclosure commissioner, as his name appears on numerous other enclosure Acts in a similar capacity. Having established what he considered to be the official boundaries of the manor and lands to be enclosed, he proceeded to publish his findings on 20 August 1811.²⁹ Unfortunately, no record has yet been found respecting any of these early meetings, although the Act did stipulate that all meetings were to be advertised in a local newspaper and a notice affixed to the door of the principal church of the parish.

Neither has any evidence been found regarding the individual claims that would undoubtedly have been made to Strutt from persons seeking an allotment of land. The fact that there would have been a fair amount of correspondence can be deduced from the requirement that everyone making a claim respecting

any rights of common had to do so in writing. It appeared that Strutt continued to ignore any claims made by Ward respecting the boundaries of the manor, for on 30 September 1811, Ward officially notified Strutt of his intention to pursue the matter through the courts. The case was brought before a judge and full jury at the Essex Assizes, Shire Hall, Chelmsford, on 28 July 1812. The Enclosure Act had allowed for any person dissatisfied with the commissioner's decision to instigate proceedings through the courts whereby they would bring an action, upon a feigned issue, against the person in whose favour the decision had been made.³⁰

The hearing, which attracted considerable interest from the landed gentry, commenced at 2 p.m. and lasted until after midnight. Thorn had argued that the lands in question, with the exception of about 8 acres, had been adjudged by Mr Strutt as belonging to his manor of Battleswick, while Ward had claimed that the greater part of the land lay within his manor of West Donyland. The feigned issue had been contrived to determine the rights of both parties but, to be consistent with the Act, could not be framed in any other form than to claim an exclusive right to the whole, first for the plaintiff and second for the defendant. Ward had, in fact, earlier proposed that both parties enter into an agreement whereby they both exercise equal and joint control over the land. A vast body of documentary and verbal evidence was gone into, which satisfactorily established that tenants from both manors had jointly exercised manorial rights over the common for the previous 400 years, confirming the justice of the plaintiff's proposal for an equal division of them. After hearing the evidence, the jury found that neither party could claim exclusive rights to the whole, thereby reversing the adjudication of the commissioner and leaving the lords of both manors in the same equal undivided possession which had been enjoyed by their predecessors.³¹

It appears that Thorn had been ill advised over the whole matter; firstly by Mr Strutt and secondly by his attorney William Francis, who incidentally was also employed by Strutt as his clerk.³² The records show that by this time Thorn was heavily in debt. He had borrowed money to purchase the lordship of the manor in 1808, in 1810 he had secured a further mortgage on the property for £400, possibly to fund the obtaining of the Act, and now he was to be saddled with further, crippling litigation costs. It appears that his attorney's bill to bring the matter to court may well have been in excess of £400, for in 1814 he again had to mortgage his property, this time for the sum of £417 in favour of a William Francis, almost certainly his attorney. From hereon things appear to have gone from bad to worse and after getting even further into debt to the tune of another £600, Mr Samuel Blomfield of Brightlingsea successfully filed a petition to have him made bankrupt, in May 1815, over an unpaid bill of £100.³³

Following the court case at the Essex Assizes, Benjamin Strutt proceeded with the matter of enclosing Old Heath Common. After a delay of more than a

year, a notice was placed in the *Chelmsford Chronicle* on 14 August 1812 informing interested parties of a meeting to be held at the Bell Inn at the Old Hythe, pursuant to the Act of Enclosure and to receive claims from persons claiming rights of common. Strutt began by having the land accurately surveyed and found the total area to be enclosed amounted to 75 acres, 2 rods and 8 perches.³⁴ His first concern was to set aside a sufficient quantity of the land for making up two new public roads and one private road. The former were to follow the course of the ancient tracks across the common and were to be kept to a minimum of 30 feet wide. The private road, giving access on to Old Hythe marsh, was to be slightly narrower at 20 feet.³⁵

Following this allotment, the Act called for the commissioner to allocate a further portion of land to be set aside for getting stone and gravel for the repair of the new roads. The Award reveals that 'no piece of ground containing any gravel or stone in any quantity could be found so no such allotment was made.' Being aware of the geology of the site, and knowing that, over the years, thousands of tons of sand and gravel have been excavated from the area, this decision seems puzzling. However, less than 25% of the Awards inspected made such an allotment and one can only assume that they either did not expend too much energy in looking, or that the gravel was too deep or contained too much sand to be economically excavated.

After making allotments for the roads and any source of stone and gravel, the residue of the land was to be apportioned amongst the freehold and copyhold owners who could demonstrate legal entitlement to rights of common over the land in question. The first of these allotments was to be made to the lord of the manor in respect of his right of soil. However, in the Battleswick case, as neither party had been able to prove ownership of the soil, no allotment in this respect was made. Thorn did however receive a generous allotment in respect of various rights of common amounting to over 17 acres.³⁶ This was equal to about 22% of the area enclosed, and may have been Strutt's way of trying partly to redress the earlier upset. Although the majority of enclosure Acts stipulated the percentage, or value, of the land to be awarded to the lord of the manor by way of compensation, in practice the amounts varied considerably. This is shown in Table 2, where the percentage of land awarded to various lords of the manor varies from 5% to 83%. Of course, much would have depended upon the size of their individual holdings, but even so the imbalance is substantial.

The cost of effecting an enclosure was also a factor to be considered, and in many cases, particularly in the early 19th century, this was achieved by selling off a portion of the lands to be enclosed. This certainly appears to have been the preferred method in Essex, for of the twelve enclosures listed in Table 2, nine had opted for this arrangement. Alternatively, of course, the commissioner could simply have raised the money directly from those benefitting from the enclosure.

The former method had the obvious advantage of reducing the overall costs as far as the recipients were concerned, but had the disadvantage of also reducing the land available for allotment. With regard to the enclosures of open fields, this arrangement may not in fact have worked in favour of the local land owners, for

Parish	Date of Act	Date of Award	Acres enclosed	To Lord of manor	% of total	Roads (acres)	Gravel (acres)	Acres	Allotments	Claimants	Land sold to defray charges (acres)	Value (£)	Cost of enclosure (£)	Cost per acre (£)
Old Heath	1811	1818	75	17	22	6	0	34	14	10	18	?	?	
Bradfield	1814	1819	110	12	11	?	0	98	84	43	26	1144	4757	30
Gt Bentley	1812	1818	87	6	7	10	0	41	77	27	30	?	?	
Elmstead	1822	1843	71	21	29	?	0	22	33	22	28	?	?	
Pattiswick	1821	1826	94	6	6	9	0	79	31	24	70	1489	?	
Lexden	1820	1821	296	150	50	?	3	141	143	76		2111	?	7/5/0
Gt Bromley	1843	1846	323	51	22	?	0		199		93	?	?	
Gt Totham	1804	1805	427	222	51	?	11.5	193.5					592	1/7/6
Tolls Major	1801	1807	114	6	5	4	0	20	34	23	90	1813	?	
Laver Heath	1848	1849	42	20	48	?	0	17	21	13	5	300	100	2/7/6
Laver	1801		199	166	83	?	0	33	17	14			?	
Gt Leighs	1820	1822	229	49	21	10	1	103			66	1840	2728	12

Table 2 Details of Essex enclosures of common and waste land

while they would undoubtedly have benefitted from the creation of new, compact holdings, they may, at the same time, have ended up with less land than they started with. In most cases, detailed expenses of individual enclosures were rarely recorded, making it difficult to draw any firm conclusions either way.³⁷ However, the majority of historians are of the opinion that the full burden of the cost of enclosure fell upon the local landowners. This may or may not have been the case but it begs the question – just how many enclosures, open field or otherwise, were financed either wholly or partly from the sale of land, or by some other means, thereby reducing the financial burden on the landowners.

The Old Heath commissioner did however follow this procedure and, in accordance with the Battleswick Act, in order to defray all charges and expenses relevant to carrying out the enclosure did 'with all convenient speed, sell and dispose of such part of the said lands by public auction...'³⁸ In fact, 18 acres, nearly a quarter of the total, was eventually sold off in two separate auctions at the *Red Lion Inn* in October and December 1813.³⁹

The records are silent as to how much money was raised from the sales but in the absence of any further references to the matter, one can assume that the total sum raised was sufficient to cover the costs. From a study of similar transactions in other enclosure Awards, it would appear that the average price paid for land at this time was in the region of £26 an acre. On this reckoning, the sale of land would have raised about £470 and, if indeed it was enough to cover the total costs, would have meant the cost of enclosure being between £6 and £7 an acre which, although perhaps a little high, is comparable with other findings of the period.⁴⁰

After the sale of land to meet the cost of enclosure, and of setting aside a sufficient quantity of land for the new roads, there remained only 50 acres of so to be apportioned among 11 claimants, including the now bankrupt Henry Thorn (Table 3). The list reveals one or two surprises, both of people who, perhaps, should have been included but are not and vice versa. Rather surprisingly there is no representation from 4 of the 8 farms in Old Heath. Joseph Ward of Battleswick had of course relinquished his rights of common to Henry

Table 3
An Act of Parliament to inclose common and waste lands in the manor of Battleshall
(compiled from the *Battleshall enclosure award* E.R.O. Q/RDc 17a)

Date of Act – 25 May 1811				
Date of Award – 2 December 1818				
Commissioner – Benjamin Strutt Esq				
Acreage enclosed – 75 acres 2 roods 8 perches				
Lord of the Manor – Henry Thorn				
<i>Land sold to defray costs of enclosure</i>				
Name	Condition	A	R	P
Jacob Verlander	Marsh	10		
Joseph Cooke	Marsh	3	3	8
James Osborn Purkiss	Heath	1		22
James Osborn Purkiss	Heath		1	4
Benjamin Firmin	Heath	2	3	
TOTAL LAND SOLD		17	3	34
<i>Lands allotted</i>				
Henry Thorn	Battleshall	17	1	28
Ralph Ward	West Donyland	4		35
William Cook	West Donyland	1	2	20
William Cant	West Donyland		1	20
James Larter	West Donyland			20
Bawtree and Savill	(Battleshall/W. Donyland)	5	2	8
Jacob Verlander	Battleshall	8	3	
Jacob Verlander	Battleshall	2		2
Joseph Cooke	Battleshall	3	3	6
Joseph Cooke	Battleshall	1	1	27
Joseph Cooke	Battleshall	1	2	34
Mary Barnes	Battleshall		2	30
John Ward	Battleshall		1	10
James Waynman	Battleshall	2		29
James Waynman	Battleshall	1	1	3
TOTAL ALLOTMENTS		51	1	26
LAND FOR NEW ROADS		6		28
TOTAL ACREAGE		75	2	8

Thorn, but also there was no allotment in respect of Clevelands Farm, owned by Benjamin Firmin, the boundaries of which actually bordered upon the common. Neither are the owners of Middlewick Farm or St Runwalds Farm represented, and if one tries to justify their omission by the fact that both lie some distance from the common, the same could be said regarding Whitehall, which was represented. It is possible, therefore, that not all occupiers of land and buildings, even large farms, had rights of common attached to their tenancy or freehold.

One of the main criticisms of the enclosure movement, especially with regard to the division of the common and waste lands, was the fact that the lowly cottager, who more often than not depended upon having free access to the commons, perhaps to graze a few animals, suddenly found these ancient rights denied him. In fact, Young had much to say on the subject, and in 1801 proposed that all Acts of Parliament for the reclamation of wastes should attach enough land to every cottage to provide summer and winter keep for a cow.⁴¹ These recommendations were based on his own observations of the labouring classes who, in his estimation, suffered injury in 19 enclosure acts out of 20. Certainly, in most cases it would appear that the needs of the poor were given scant attention, while the richer classes increased their property.

This was the case at Old Heath, where most of the land was divided among the wealthier landowners. Even the smaller allotments, of half an acre or less, were made to those with some standing in the community. As far as the law was concerned, the cottager was often in a helpless situation, for unless he was an owner-occupier, any allotment made in respect of common rights attached to his dwelling would have gone to his landlord. Even in a situation where he was entitled to receive an allotment, it would probably have been too small to have been of much use, and he would most likely have sold out to a larger landowner, rather than incur the costs of fencing. The writer has been unable to draw any firm conclusions as to what effect the Battleswick enclosure had upon the poorer section of the community, for much would have depended on the use they made of the common beforehand. However, it would appear from the little evidence that has survived, that the common and wastes were seen by some as a valuable addition to their properties. In a letter, already referred to, written by Alexander Carter to Ralph Ward, lord of West Donyland, reference is made to one cottager who it would seem made extensive use of such rights. In fact, the letter reveals that in some cases the cottagers may have enjoyed substantially

more grazing rights than they were legally entitled to. In bringing the matter to his lord's attention, Carter illustrated his point by citing the following example: '...there was one Bennett, lived upon the common that used to buy and sell Cattell, he fed full three parts of it for many years, though it was suppos'd he had but a very small right ...'⁴² This mention of 'full three parts of it' probably refers to the three individual pieces of waste that the common consisted of, and may suggest that different owners exercised grazing rights over different parts of the common. The land tax return for 1781, three years before the above letter was written, reveals that John Bennett was an owner-occupier with a rental of just one shilling, indicating the probable occupation of a small cottage.⁴³

Apart then from a few poorer cottagers losing their right to graze the common, which in most cases would have been enjoyed by the grace of their landlords anyway, it would appear that the Old Heath enclosure made little or no difference to the farming community in general. The small owner-occupier or peasant farmer who would have eked out a living on a few acres simply did not exist at Old Heath, and in all probability had given way to larger, and in many cases absentee, landlords generations earlier. And as far as the cottager was concerned, it is unlikely that that he would have earned his living entirely from the common; he would more likely have been employed on one of the local farms. However, this was not necessarily the case in other areas, and of the examples in Table 2, it is of interest to note that all are seen to have divided and allotted their lands among a greater percentage of the population than was the case at Old Heath. This may well indicate a higher number of owner-occupiers, which could be confirmed from the appropriate land-tax records. For example, with regard to the cost of enclosure, less than half the Awards include this information, and when it is known, costs per acre vary from as little as £2 7s 6d to £30 an acre.

By the time the Battleswick Award had been finalised in 1818, seven years after its conception, time and unforeseen occurrence had left their mark. The Napoleonic Wars had ended, bringing a sharp fall in the price of grain, Henry Thorn, the instigator of the enclosure, had gone bankrupt and his opponent in court, Ralph Ward, had died. The years that followed brought a flurry of activity to the district; land was bought and sold, new maps drawn up and the scene set for a new generation of entrepreneurial activity.

Author: Patrick Denney, 247 Old Heath Road, Colchester CO2 8BN.

Appendix - Manorial History

The Battleswick manor seems to have derived from an estate in Donyland, formerly held with Tendring. According to Morant,¹ in the latter part of the 13th century, the Tendring manor passed from Sir Andrew Blunt to his daughter Catherine who was married to Richard Bataille, lord of Wivenhoe, and the man responsible for

naming the Colchester manor. The Battleswick estate, for it was not referred to as a manor until the 16th century, continued to descend with Wivenhoe until 1624, when it was sold to Robert Buxton of Colchester.² He was an alderman of the town and served as mayor in 1645. Following the siege of Colchester in 1648, when the town became embroiled in the civil war and was occupied by royalist

THE ENCLOSURE OF OLD HEATH COMMON

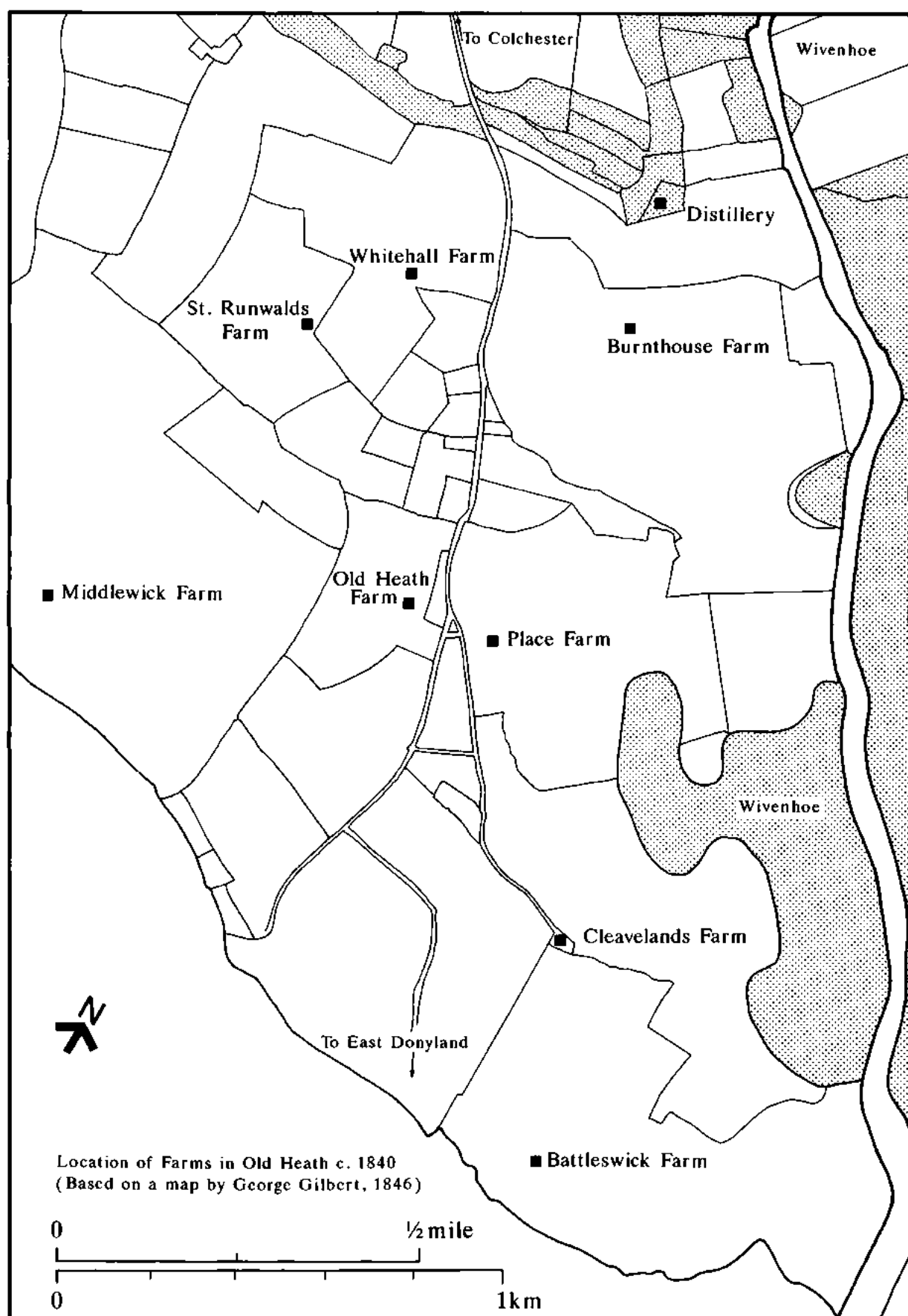


Fig. 2 Farms in Old Heath c. 1840 (based on map by George Gilbert 1846).

troops, Buxton's political career came to an abrupt end, no doubt the result of his royalist sympathies. He died in 1655 and by 1658 Battleswick had passed into the ownership of London merchant John Godschall. In 1693, he was succeeded by his son, another John, who was in turn succeeded by his son Nicholas in 1725. In 1748, the manor passed to Nicholas' daughter Sarah, whose husband, William Mann, assumed the name Godschall. Sarah died in 1792 and William Mann Godschall in 1803.

The neighbouring manor of West Donyland, although larger than Battleswick, held less land and enjoyed fewer rights in Old Heath.¹ Prior to the dissolution of the monasteries in 1539, West Donyland was held by the monks of St John's Abbey and the principal manor farm, Monkwick, was managed directly by the monks to supply the needs of the house. After the suppression, the manor passed into the hands of the crown. Henry VIII leased the lands to Robert Stepnie of Stratford, and in 1547 Edward VI granted the reversion to John Dudley, Earl of Warwick. From Dudley the manor passed to Sir Francis Jobson, whose family had long been resident, and prominent, in Colchester.² In 1592, the manor was purchased by Robert Barker, town clerk of Colchester, and continued with his family until 1718, when it descended to Thomas Perry. In 1735, Perry sold the manor to Knox Ward, late Clarancieux, King at Arms, and it remained with his family down into the 19th century.

Notes

Abbreviations

C.P.L.	Colchester Public Library
E.R.O.	Essex Record Office
V.C.H.	Victoria County History of Essex
O.S.	Ordnance Survey
K.U.L.	University of Keele Library, Raymond Richards Collection
H.L.L.	House of Lords Library, Houses of Parliament
Morant, Colchester	P. Morant, <i>The History and Antiquities of the most Ancient Town and Borough of Colchester</i> (1748)
Morant, Essex	P. Morant, <i>The History and Antiquities of the County of Essex</i> (2 vols, 1768)
Vancouver, Essex	C. Vancouver, <i>General View of the Agriculture in the County of Essex</i> (1795)

1. See for example – P.R.O. RG12/1407 Census for England and Wales 1891. Colchester, Enumeration District No. 11. Description and contents of Enumeration District.
2. Morant, Colchester, pp. 122-3.
3. E.R.O. D/DSm Map of Wivenhoe (1734), surveyed by Hayward Rush.
4. S.A. Moore, *Cartularium Monasterii Sancti Iohannis Baptiste de Colecestri*, (2 vols, 1897) I, pp. 545-6.
5. Samuel and Nathaniel Bucke, *The South East Prospect of Colchester in the County of Essex* (1741). Original copy in the library of the Essex Society for Archaeology and History.
6. The manor of Battleswick is frequently referred to as 'The manor of Battleshall otherwise Battleswick.' To avoid unnecessary confusion, the name Battleswick has been adopted throughout. For a detailed map of the manor, see Keele Library BW 240 (1818); see also E.R.O. Q/RDc 17, 'Battleswick Enclosure Award' (1818).
7. V.C.H. ii, 'Table of Population' (1801-1901), pp. 343-54.
8. For land-tax returns, see E.R.O. Q/RP1. There is a complete run of land-tax returns for Colchester, St Giles parish, for the period 1778-1832. From about 1790 onwards, the names of the owners are listed alphabetically, and from 1826, descriptions of properties are included.
9. C.P.L. John Chapman and Peter Andre, 'A Map of the County of Essex' (1777).
10. C.P.L. O.S. 1-inch 1st edition (1805).

11. For rentals relating to Battleswick manor see K.U.L. BW 163-99. For West Donyland, see E.R.O. D/DE1 M135-40.
12. E.R.O. Q/RDc 17 'Enclosure Award' (1818).
13. *Chelmsford Chronicle*, 31 July 1812, p.2. Report on the trial at Essex Assizes concerning enclosure of Old Heath common.
14. E.R.O. D/DSr F6/2. Letter to the lord of West Donyland bearing date 11 April 1784.
15. K.U.L. BW 190, 199.
16. Morant, Colchester, pp. 92-3.
17. Vancouver, Essex, p.185.
18. W.E. Tate, *A Domesday of English Enclosure Acts and Awards* (Reading 1978), *passim*.
19. E.R.O. Colchester Borough Assembly books, 10 vols, ix pp. 73-4.
20. *ibid.*, 'A Constitution for the sale of, and better regulating of, the commons or half year lands belonging to the burgesses of the borough of Colchester,' 18 August 1807.
21. K.U.L. BW 230 'Papers relating to Henry Thorn's bankruptcy' (June 1815).
22. *ibid.*, 'Indenture of Lease and Release dated 23, 24 September 1808.'
23. *ibid.*, 'Indenture of Lease and Release dated 16, 17 June 1804.'
24. H.L.L. 'Act of Parliament to Inclose Common and Waste Lands in the Manor of Battleshall, otherwise Battleswick,' (1811). See also the *Essex Herald*, 28 July 1812, p. 3.
25. E.R.O. Q/SBb 425/6. Letter written by Ralph Ward to Benjamin Strutt dated 30 September 1811.
26. E.R.O. Q/RDc 17a. 'Battleshall Inclosure Award,' (1818).
27. *ibid.*
28. *ibid.*
29. E.R.O. Q/SBb 425-6 (as above).
30. H.L.L. (as above).
31. E.R.O. 'Report of trial at Essex Assizes', *Chelmsford Chronicle*, 31 July 1812, p. 2.
32. E.R.O. Battleshall Inclosure Advertisement, *Chelmsford Chronicle*, 14 August 1812, p. 3.
33. K.U.L. BW 230. Papers relating to Henry Thorn's bankruptcy, June 1815.
34. E.R.O. Q/RDc 17a (as above).
35. *ibid.*
36. *ibid.* See also E.R.O. Q/RDc 17b. Plan of the Inclosure of the manor of Battleshall (1818).
37. See for example W.E. Tate, 'The cost of Parliamentary Enclosure in England', *Economic History Review* (1952/53), 67, part 2, p. 265.
38. H.L.L. (as above).
39. E.R.O. *Chelmsford Chronicle*, 15 October 1813, p.1; 24 December 1813, p.1.
40. For a comprehensive index of Parliamentary Enclosure Awards in Essex see E.R.O. Catalogue of maps in the Essex Record Office (1947); also second supplement (1964) and third supplement (1968).
41. Lord Ernle, *English Farming, Past and Present*, 4th edn (1927), p. 305, citing A. Young's inquiry (1801) into the propriety of applying wastes to the better maintenance and support of the poor.
42. E.R.O. D/DSr F6/2.
43. E.R.O. Q/RP1 1108.

Notes to Appendix

1. Morant, Essex ii, pp. 185, 470.
2. *ibid.*, p. 470.
3. For part of this information I am indebted to Dr J. Cooper (V.C.H.), who allowed me access to the draft section for Donyland. See also K.U.L. BW 230 'Abstracts of Title to the Manor of Battleswick.'
4. Morant, Colchester, p. 137.

Work of the Essex County Council Archaeology Section, 1995

Edited by A. Bennett

This annual report enables the Section to publish notes on a number of watching briefs and chance finds made during the year. Summaries of larger excavations, evaluations and intensive watching briefs can be found elsewhere in this volume (p. 261-76).

Reports are arranged in chronological order or, in the case of multi-period sites, under the principal period represented. 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:

Stewart MacNeil (Figs 2, 3, 4 and 5) and Nick Nethercoat (Fig. 1)

Full details of all sites can be found in the County Sites and Monuments Record (SMR).

Great Sampford (PRN 16436)

Peter Berridge (Colchester Museum) and Paul Gilman

A flint axe (Fig. 1) was reported to the Archaeology

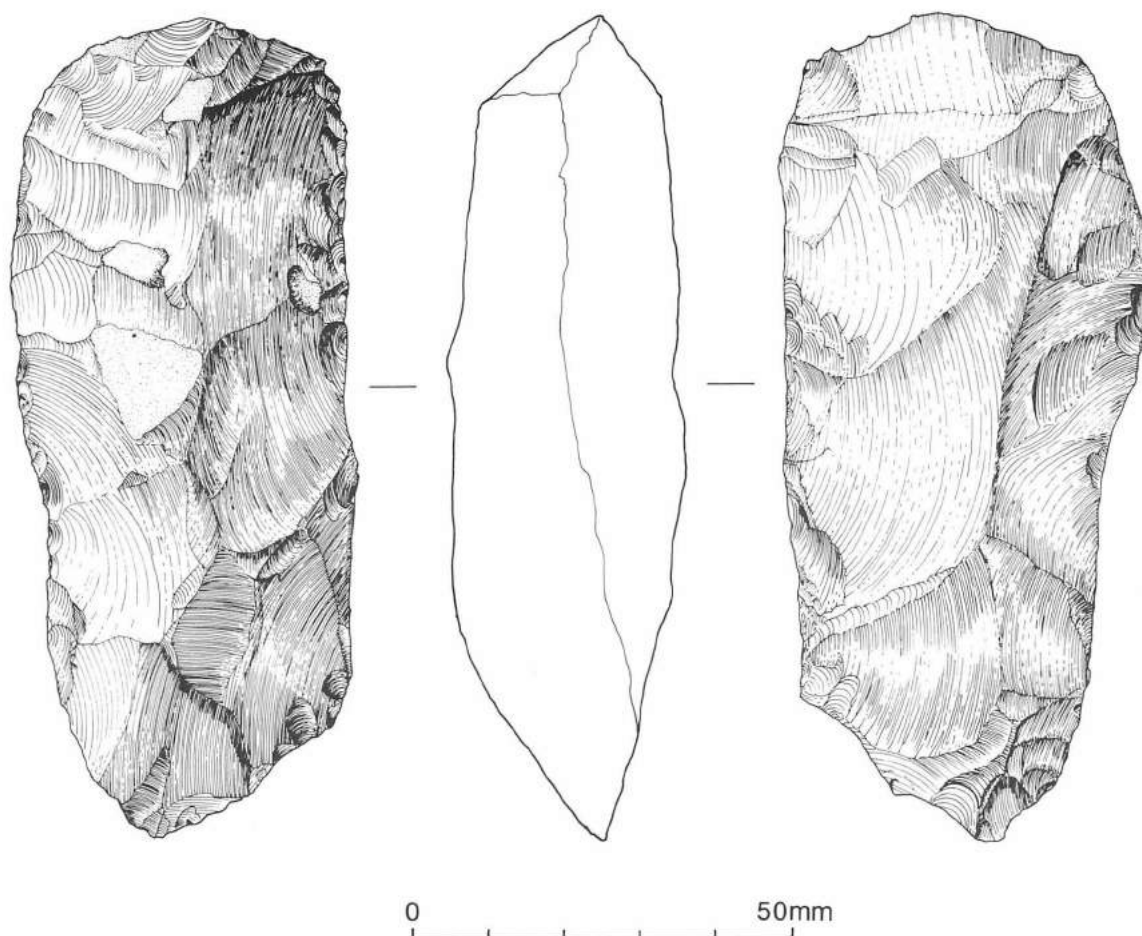


Fig. 1 Mesolithic flint axe from Great Sampford

Section by Mrs Bryning. The axe, which was found in the garden of her house near the parish church, is a core tool of grey-black flint with areas of blue-white patination. It is 105 mm in length, 45 mm at its widest point, and 30 mm at its greatest thickness. There is an area of post-depositional damage at the butt end of the piece, where a flake scar, revealing black flint, cuts through an area of patination. The small area of surviving cortex, unfortunately, does not provide definitive evidence of the source of the flint.

Form and patination indicate that the implement is almost certainly Mesolithic in date. Based on the general form of the piece it would be classified as an axe/adze. The cross section of the piece at the presumed working edge is D-shaped in section and this is more suggestive of use as an adze. The working end, however, has the typical form and retouch of a scraper. This scraping form has not been produced through a re-sharpening process but is clearly the original form of the piece, as is shown by patches of cortex on this edge.

It has to be considered whether this is possibly a heavy duty scraping tool. The relatively steep angle, c. 60° of the working edge, is consistent with a scraper, though this would not preclude its use as an adze. More suggestive is the abrasion and slight rounding of the leading edge which is certainly consistent with use as a scraper. It is of course possible, though less likely, that these traces were initially produced in the knapping process to form the working edge (e.g. deliberate abrasion of the edge of the striking platform). The function of the piece remains problematic and could perhaps only be resolved through microwear analysis.

This find is of interest since very few Mesolithic sites and artefacts are known from this part of Essex.

Finds: in private possession

Great Wakering, land north of Poynters Lane (PRN 16426 - 16428)

Shane Gould

A watching brief during topsoil stripping, in advance of brickearth extraction, revealed an uneven scatter of finds. These included a prehistoric worked flint flake, a single piece of Neolithic or Bronze Age pottery, fragments of Roman pottery and tile, and a piece of medieval pottery.

Finds: Southend Museum

Wrabness, Stone Point (PRN 3208)

Owen Bedwin

A further group of c.12 pieces of worked flint has been recovered from this site, which has produced examples of Mesolithic flintwork in the past. The recent finds were all made on fairly good quality flint from prepared cores. The flakes were probably Mesolithic or

Neolithic, and a thumbnail scraper was probably Neolithic.

Finds: in private possession

Waltham Abbey (PRN 16429 - 16430)

Louise Austin

A group of finds from the Waltham Abbey area, donated to Epping Forest District Museum, was examined. The finds consisted of worked flint and Roman coins. The flints included two rolled and abraded hand axes, at least one probable Mesolithic core, and other flakes and tools dating to the early Iron Age. The coins were not in particularly good condition.

Colchester, Shrub End Landfill Site (PRN 11626)

Sarah Gibson

A watching brief was undertaken during the course of ground reduction of an earth bank, lying along part of the boundary of this landfill site. Prior to the use of the site for landfill, this area was used for gravel extraction. The earth bank had been interpreted as a dyke relating to the dyke system around Colchester. The ground level was reduced by c.0.50 to 0.75m in total, and no archaeological material was located. However, landfill material was seen to abutt a narrow strip of light brown-yellow silty brickearth sub-soil. This narrow strip seems to represent a bund of natural sub-soil which was created adjacent to the property boundaries prior to landfill activities starting. It is considered highly unlikely that this bund has an archaeological origin or that any *in situ* archaeological deposits survive on this site.

Great Chesterford, Weavers Cottage, Carmen Street (PRN 14926)

Richard Havis

A watching brief was undertaken on the construction of a driveway, garage and extension. During construction of the driveway a complete human skeleton was found, just below the topsoil, as well as fragments of a second. The complete skeleton was uncovered and found to be in good condition, except for the skull which had been badly smashed, and the pelvis which had fragmented.

The skeleton was of the Roman period, and was orientated east-west with the head at the western end. It was laid on its back, head looking north, its arms straight and tucked in tightly to the body. This indicates that the body was wrapped in a shroud before burial. No sign of a coffin was identified. The skeleton has been identified as that of an adult female. There were no signs of pathological changes on the bones, all long bone epiphyses had fused, and all adult teeth were present and little worn, giving the impression of a young adult rather than an elderly one.

Loughton, Long Shaw and Broadfield Shaw (PRN 16431)

Rob Butler

These two linear woodland shaws were examined and revealed evidence of having been coppiced in the past. Former pollards indicate that this woodland probably once formed part of the former emparked or estate land of the manors of Loughton/Theydon. Each woodland has an internal bank, up to 0.80m high and 1.50m wide with ditches 0.60m deep and 0.90m wide. A larger ditch and bank survives partially on the east side of Long Shaw, and probably represents the parish boundary, though dense vegetation prevented further identification.

Waltham Abbey, Orchard Gardens, near. Townmead (PRN 16432)

Hilary Major

A bone weaving implement was found and lent by Epping Forest District Museum to the Archaeology Section for recording. It is a flat bone tool, rounded at one end, and with a blunt point at the other. It is very slightly curved lengthwise. The surface has a good polish, and there is some evidence of wear either side of the point, and slight damage to the point. It has staining on one side through contact with an iron object. It measures 157mm long, 23mm maximum wide, and 7mm maximum thick.

This is probably a type of weaving instrument known as a 'picker-cum-beater', associated with vertical two-beam looms in Winchester (Brown 1990), where they date from the 9th/10th century to the 14th century. The example from Waltham Abbey is slightly larger than any of those from Winchester, which are mostly less than 100mm long, but its general form is very similar, with a polished appearance and wear evident on the sides of the point.

Tollesbury, Old Hall Marshes (PRN 16433 - 16434)

Helen Walker

Eighteen sherds of pottery were found by the RSPB reserve warden, Paul Charlton, and lent to the Archaeological Section for identification. The sherds dated from the medieval to early post-medieval periods. Some of the sherds are fairly large and none are abraded, indicating they were found *in situ* and that there may have been occupation of the site during this period. The sherds are described as follows:

- Sherds of medieval coarse ware, including four cooking pot rims of types dating from the early 13th century to late 13th/14th century (Cunningham's sub-forms B2, D2 and E5A);
- Sherd of Colchester ware from a jug, showing slip-painted decoration under a partial plain lead glaze, 13th to 15th century;
- Sherd of plain Colchester ware;
- Sherds of sandy orange ware from the base of a

vessel, medieval or late medieval;

- Base sherd of post-medieval red earthenware, thick-walled with a partial internal glaze, probably from a large jug or cistern (vessel used for the storage of liquids, especially beer), possibly 16th century.

Finds: in private possession

Broomfield, Hospital Medical Records Store (PRN 16193)

Richard Havis

A watching brief was undertaken on six foundation trenches. All showed a large amount of boulder clay sub-soil. A spread of post-medieval brick and tile was visible on the edge of one trench but it was difficult to assess whether this was a feature or not.

Waltham Abbey, Powdermill Lane (PRN 15435)

Shane Gould

A watching brief was undertaken on this development site. An area to the north of the A238 had been stripped revealing a brick-lined structure and a mill stone from an incorporating mill.

The brick structure was circular and built of unmortared hand-made brick. The top was domed and a single lead pipe was inserted into it. The structure measured 1.05m in diameter and 1.4m in depth, and the pipe was 2m long by 0.002m across. Several other of these brick structures have been recorded on this development site and they may have acted as some form of vent.

The presence of the mill stone in this area was unusual as no incorporating mills are known within this particular area. The edge runner of the stone was in excellent condition and measured 2m by 0.44m. The square slot for the axle was 0.35m square, but had been infilled with concrete.

Essex Coast Environmentally Sensitive Area (ESA) monitoring

Shane Gould

This summer the Section, in conjunction with ADAS, carried out a programme of archaeological and historical monitoring of 30 archaeological sites within the Essex Coast Environmentally Sensitive Area. These sites were selected randomly from the total number of sites in the area and consisted mostly of redhill sites, with sites known from both soilmarks or as earthworks represented. These sites fell on both land subject to management agreements and on land with no such agreements. The object of the ground survey was to assess the condition of the sample sites. Each site will be revisited at four to five year intervals to assess whether their condition has changed, and whether this change

can be attributed to the ESA scheme. At each visit the site was recorded by fixed point photography and record sheets were completed by the ADAS fieldworker. Copies of the photography and record sheets are lodged with the SMR. As some of the sites could not be located on the ground or were in a poor state of survival, the Section has recommended that these be replaced with alternative sites. Where ESA agreements lead to reversion to grassland, this should help preserve the archaeological heritage of the Essex coastal zone.

Aerial Survey 1995

David Strachan

The objectives for the year were to continue reconnaissance with the primary aim of locating and recording new cropmark sites in the county, while developing the use of reconnaissance in the coastal area, and the inter-tidal zone in particular. The year proved excellent for cropmark development and there were good results from mid-June onwards and reconnaissance largely concentrated on this. Effort was also made to assess the usefulness of the medium for recording sites appearing in

other ways in the county, by targeting particular site types. In addition, the survey has continued to play an integral role in the evaluation and excavation processes.

Inter-tidal zone and the coast

Two flights were dedicated to recording the inter-tidal zone at the lowest tides feasible for photography. The first concentrated on the area around Foulness Island, access to which is usually restricted because of the Ministry Of Defence firing range. Despite a delayed take off, due to frost, which resulted in the lowest part of the tide being missed, the entire mudflats of the immediate inter-tidal area, and much of the vast expanses of the Maplin Sands were exposed. While major features, such as the inter-tidal road, known as "The Broomway" (PRN 2792) were visible, it was apparent that less of this feature was exposed than in some previous years, as noted from vertical photography consulted as part of the Essex Mapping Project (see below). This is probably largely due to shifting sands. The second flight, during the Spring equinoctial low tide, covered the inter-tidal zone of the Stour estu-

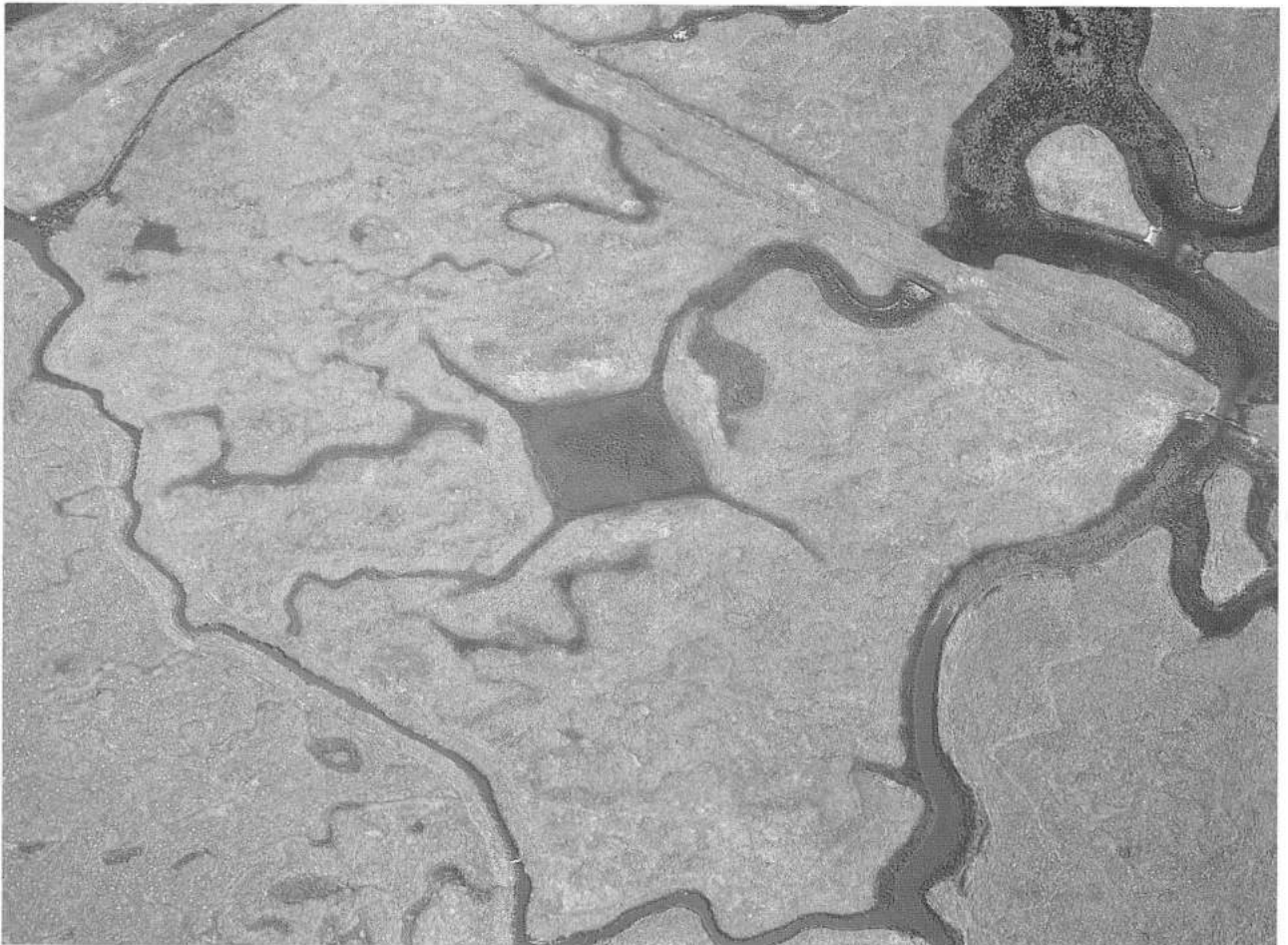


Plate 1 Pennyhole Fleet, Tollesbury. This square duck-decoy pond, with pipes extending from each corner, does not appear on either the Chapman and André or the OS 1st. edition maps.



Plate 2 Beaumond Moates, Chignall. This moated complex is clearly visible as a cropmark, and includes annexes (possibly gardens), trackways and associated field systems. In addition, the underlying pattern of polygonal peri-glacial frost-wedging is visible.

ary. A Y-shaped feature, appearing only at the lowest tides, had been reported by a local resident, at Holbrook Bay, on the Suffolk side. This site (PRN 16423) was partially visible on National Rivers Authority low-tide vertical photography, although these photographs lacked the control features necessary for location and mapping. The nature of the structure was confirmed, by low level obliques taken during this flight, to be a *kiddle*, of the type familiar in the Blackwater estuary (Crump and Wallis 1992). This site represents an important addition to the distribution of this type of site in the inter-tidal zone around Essex.

The survey of the coastal zone has continued to produce additional new sites largely relating to the exploitation of the coastal environment. The remains of the extensive oyster industry, in the form of pits, have been recorded throughout the coast with noticeable concentrations along the Rivers Crouch and Roach and the mainland and creek systems to the north of Mersea Island and the Brightlingsea area. A square duck-decoy pond on Old Hall Marshes, Tollesbury, (PRN 16282), had not previously been

recorded on the SMR (Plate 1), while other decoy ponds which survive as earthworks have been recorded for illustrative and monitoring purposes. At Wrabness an unusual, and as yet unique, site cut into the salt-marsh consisting of three circular clay-banked enclosures, roughly 10 m in diameter, has been recorded (PRN 16425). The function and date remain as yet unknown. Numerous wrecks of working vessels have also been recorded and added to the SMR. Aerial survey offers a rapid and cost-effective method of locating these sites and enhancing the SMR to form a good basis for any future research. Many working vessels, even from the recent past, have become outdated due to modern building materials, and are now eroding away.

Cropmarks

The development of cropmarks was monitored throughout May and June, and although good cropmarks appeared on the gravels by early June, their appearance in other areas did not occur until around mid-July. Areas where particularly good results were

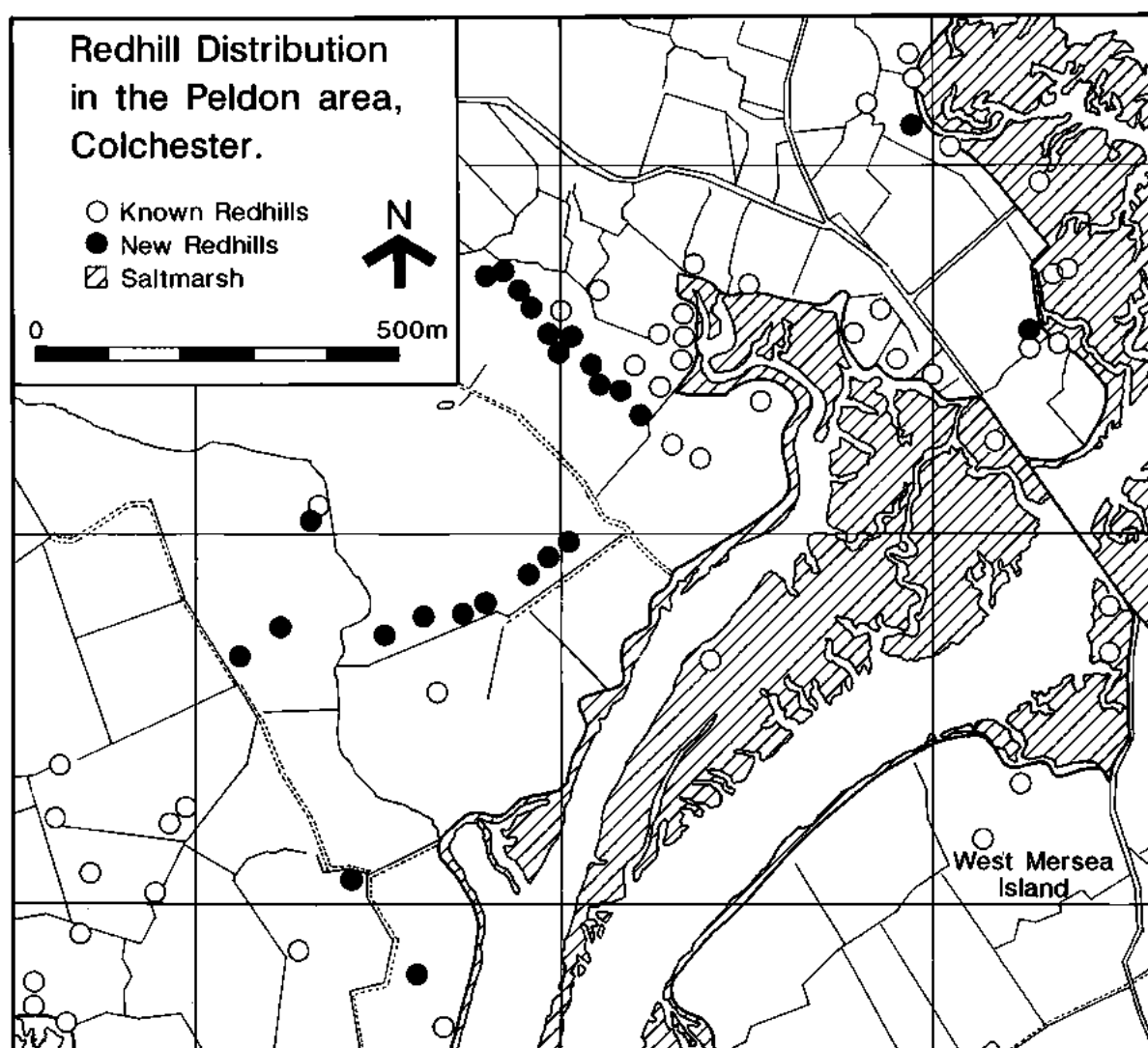


Fig. 2 Redhill distribution north of Mersea Island. Groups of the sites can be seen to form lines which represent the ancient coastline. © Crown copyright.

observed were along the Stour Valley; the gravels to the north of the Blackwater estuary; the Colne valley; the Chelmer Valley; and some areas of the dissected boulder clay plateau. A number of new sites have been added to the SMR, while many known sites recorded this summer have proved to contain additional features or greater detail. Of particular interest is a site near Chignall, known as Beaumont Moates from the John Walker the Younger map of 1599, who is credited for his accuracy. This (PRN 1035) appeared very clearly as a cropmark (Plate 2). While the site was known from this map, and had produced finds of late medieval pottery and tile, a detailed plan including the small annexes (possibly gardens), associated trackways and field boundaries can now be plotted. Many of these features do not appear on Walker's map, and may date from other periods of use. At Farnham Church, Uttlesford, a sub-rectangular enclosure (c. 70 x 60m) containing a

penannular ring-ditch was recorded for the first time (PRN 16424). Other new enclosures were recorded at Church End, Shalford (PRN 16247); Bretts Farm, Wakes Colne (PRN 16239); Butler's Grove, Great Yeldham (PRN 16241); Martins, Great Horkesley (PRN 16258) and Tilbury Juxta Clare (PRN 16240). In addition numerous ring-ditches and linear features were recorded across the county. At the time of the survey, the cropmark complex at Langford (PRN 7870) was subject to archaeological evaluation prior to destruction for reservoir development. The site, which has been recorded by the NMP, was photographed at various stages of the evaluation. Despite good cropmark definition around the site, only faint soil marks were visible in the stripped areas as the soil was so dry. A single flight, partly commissioned by the Hertfordshire County Archaeological Section, covered river valleys and boulder clay areas of North West

Essex, notably the River Stort, and North East Hertfordshire. Good results were recorded in both these areas, and it is anticipated that a significant number of new sites will be added to the Hertfordshire Sites and Monuments Record.

Soilmarks

A single flight in September targeted newly ploughed areas along the coast to locate redhills appearing as soil marks on areas of reclaimed marsh. The flight path was arranged to follow the known distribution of redhills, which often represents the former prehistoric coastline. Due to very dry soils after the drought conditions, ploughing occurred very late throughout the county, and, as result, many areas, such as the Dengie, proved to be disappointing as the majority of fields had only been harrowed. In these conditions the red earth had been slightly disturbed and sites were faintly visible. In areas where deep ploughing had occurred, however, good results were obtained and thirty-five new sites were recorded in this flight alone. The densest concentration of these was to the south-east of Peldon, north of Mersea Island (Fig. 2). The map shows the distribution of known sites, the vast majority of which were recorded by the Colchester Archaeological Group, by field-walking. In some instances, such as the field to the north-east of Sampon's Farm, it is probable that the known and new sites (PRN 16291 - 16297) are, in fact, the same, and that this years survey has afforded greater accuracy to the location of these sites. In addition to this, it is possible to map the extent of red earth exposed and hence monitor the erosive effects of ploughing over a number of years. The potential for the discovery of new sites, however, is evident. The Colchester Group's gazetteer (Fawn *et al.*, 1990) records 315 definite and possible redhill sites and the SMR previously contained 337 records relating to prehistoric salt-production. If similar numbers of sites await discovery, as were found in this instance at Peldon, there are significant implications for our understanding of the extent of past salt-production in the county.

Earthworks

A single flight targeted religious houses, with associated areas of pasture, hoping to record parchmarks of buildings. While the grass proved too dry to produce clear parch marks, a number of slight earthworks were recorded, as shadow marks, at Latton Priory Farm (PRN 23) and Hatfield Broad Oak Priory (PRN 4323-4324). To the north of Hatfield Boad Oak Priory, two very large avenues, with circular enclosures, possible gardens and other ornamental landscape features were recorded (PRN 16237). While these appear on the Chapman and André map of 1777, they are not recorded on the OS 1st ed. 6" series of 1885. The survey also continues to record extant moated sites when viewed along the flight path.

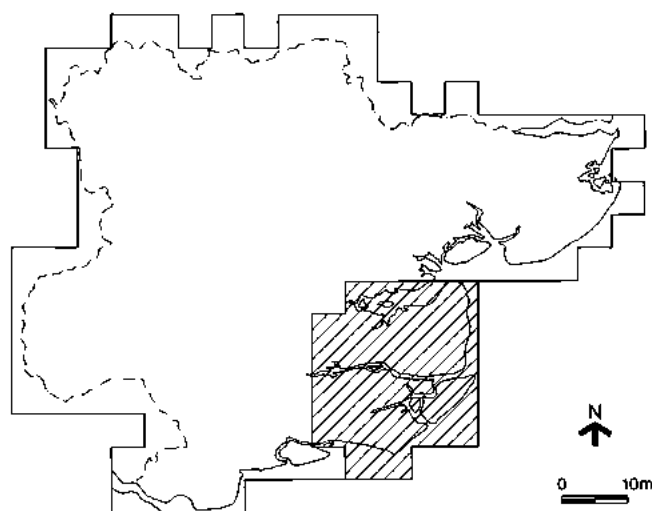


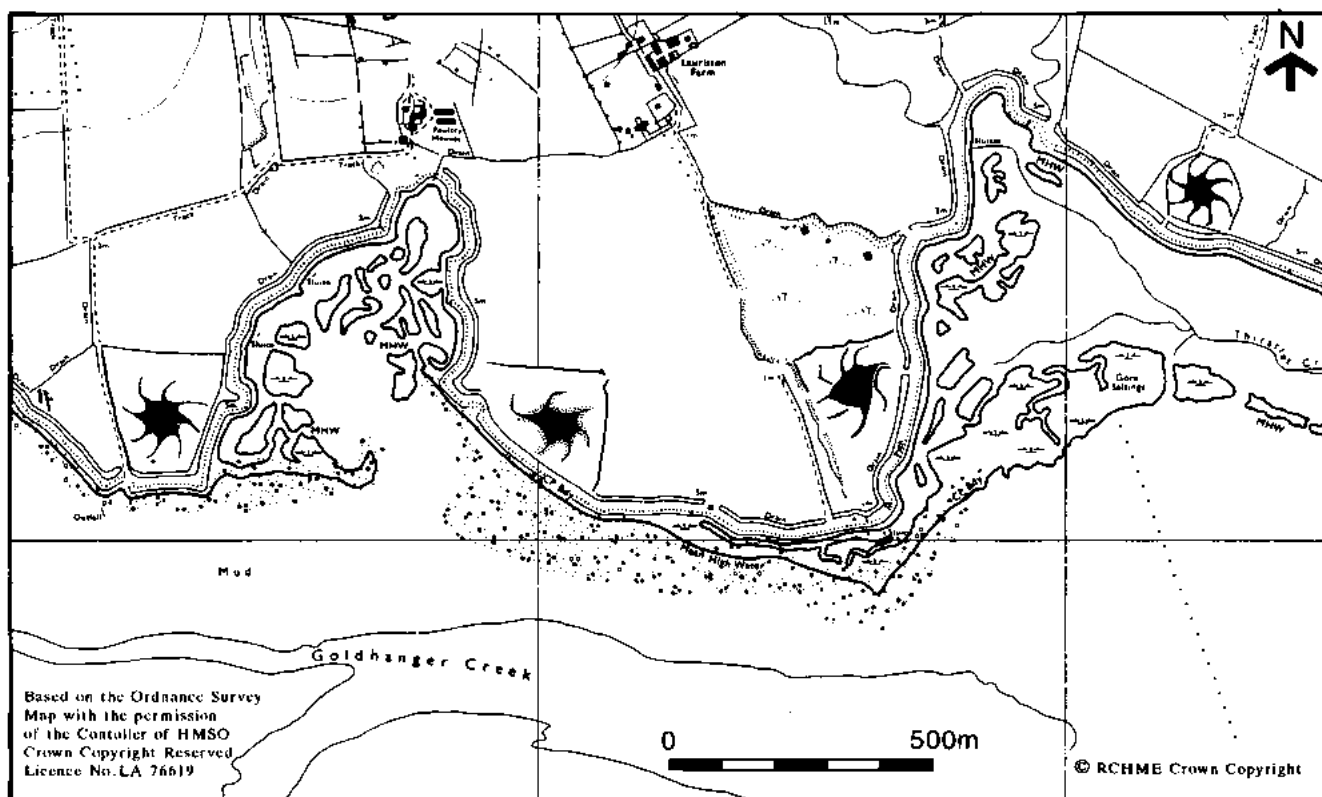
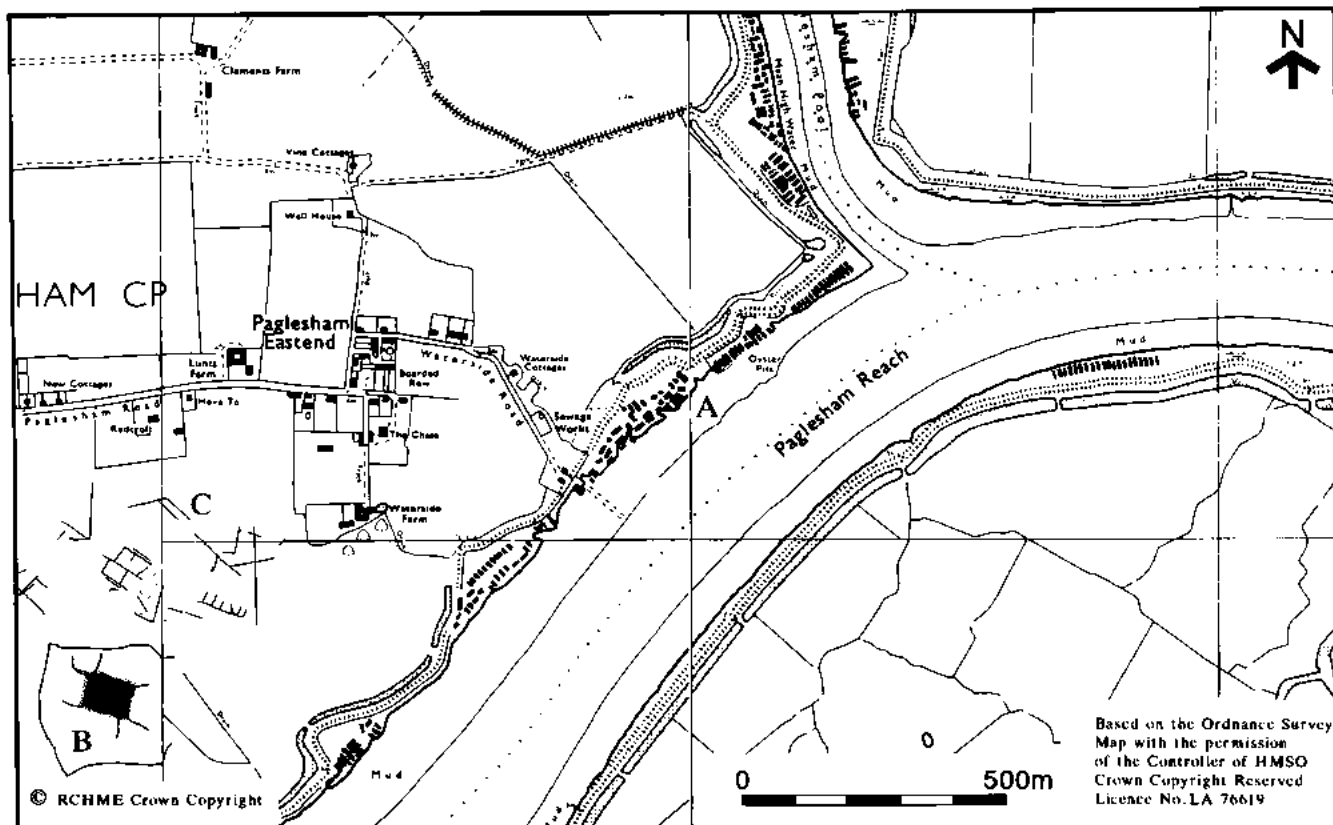
Fig. 3 The shaded area above indicates the extent of the sheets mapped by the NMP in 1995

Essex Mapping Project 1995

David Strachan and Caroline Ingle

Work has continued throughout 1995 on the Essex Mapping Project, as part of the Royal Commission on the Historical Monuments of England's (RCHME) National Mapping Programme (NMP) (Ingle and Strachan 1994 and 1995). The 32 sheets mapped in 1995 brings the total completed to 68 (Fig. 3). The number of records on the MORPH database now stands at 5635, with over a thousand individual records being added during the year. A total of 199 new sites have been added to the SMR over the year. Mapping continued with the completion of Block 5, in the south of the county, and progressed east and north along the coast. A slight re-ordering of the mapping blocks (Ingle and Strachan 1995, 230) has allowed the entire coastal zone to be mapped continuously.

Geologically, much of this area is underlain by London Clay, sands, gravels, and brickearths. In addition, there are large areas of alluvium and also coastal marshland which have been reclaimed since the Medieval period as grazing marsh and for cultivation. Due to the large areas of reclaimed marsh and London clay, cropmarks in these areas are restricted to the pockets of sands and gravels supporting the appropriate land-use. The coastal region has, as predicted, however, contained a variety of remains relating to the relatively recent exploitation of that environment. The rivers Roach and Crouch revealed, largely via the use of vertical photography, the extent of the oyster cultivation industry in that area. Numerous oyster pits, cut into the salt-marsh along the banks of the rivers were mapped, none of which had previously been recorded on the SMR. While many of these oyster-pit sites do appear on old maps (notably the OS 1st ed. 6" series),



some of the sites do not appear on any of the maps consulted. In addition, the value of consulting the early RAF vertical photography was reinforced on occasions where oyster pits could be recorded from photographs taken before the site was destroyed by salt-marsh erosion. In addition, numerous wharves and harbours cut into the salt-marsh, and a number of wrecks of working vessels were also recorded. It is likely that many of these are also related to the oyster industry. The concentration of oyster pits around Paglesham (PRN 14849 - 14852) (Fig. 4) reflects a well documented area of oyster cultivation (Benham 1993).

The north side of the Blackwater estuary has proved to contain a concentration of duck-decoy ponds (Fig. 5). These sites were originally constructed on the reclaimed marshes, often using stretches of natural creek as a basis of the central pond. While most of these sites have been destroyed with the conversion to arable fields of most of the marshes, it is still possible to view the sites on RAF photography from the 1940s and 1950s, which allows additional detail to be recorded from the site while it survived as an earthwork. Several duck decoy ponds were also recorded along the Dengie Flats, along with a new site, which is a significant addition to the spatial distribution of the site type, at Paglesham on the River Roach (PRN 14853).

Foulness island, and the eastern part of the Dengie peninsula, contained the first redhills, the prehistoric salt-production sites, to be mapped. These appear best as soilmarks in ploughed fields, although the lack of colour limits the use of vertical photography. The Aerial Survey (see above) has begun to compensate for this with colour oblique photography (Strachan 1995a).

Approximately half of the coast has now been mapped by the project, and this allows the study of various types of photography relating to the inter-tidal zone. Many of the timber structures on the inter-tidal mudflats only appear at the very lowest tides of the year, and only a very few at times which allow photography. Despite this, due to the Aerial Survey, the Essex SMR has good oblique coverage of several of the inter-tidal sites, including the fish weirs in the area around Collins Creek in the Blackwater (PRN 13815). Precise and accurate mapping of these sites remains highly problematic; oblique photographs which show the features in detail lack any control and vice versa (Strachan 1995b). The large rectangular fish-weir at Bradwell-on-Sea in the Blackwater (PRN 2055) was mapped using vertical photography to position the site and low-level oblique photography to add detail. Vertical photography also proved valuable in recording the inter-tidal road, known as "The Broomway" (PRN 2792), which runs along the coast of Foulness Island (Christy 1922). Various new stretches of the road, which was once considered Roman, were mapped. It is probable that the road provided access to the island while also proving useful to inter-tidal fishermen. Another common feature along the coast are the numerous stretches of former sea-walls relating to salt-marsh reclama-

tion and sea-defence. Again these often survive as earthwork features on early vertical photography, and have been subsequently destroyed.

Early RAF vertical photography continued to reveal WW II military sites throughout Blocks 5 and 6. At Shoeburyness, near Southend-on-Sea, various military features relating to the camp, including slit trenches which have since been destroyed, were recorded (PRN 14867). Along the Dengie flats, a number of late anti-aircraft batteries, known as Diver sites, have been identified for the SMR (PRN 16013 - 16017), although not plotted as part of NMP. Developed late in the war as defence against the V1 rockets, these sites can be identified by their layout.

In addition to these upstanding sites, cropmark sites new to the SMR are being continually recorded. Also, a number of special projects were carried out throughout the year. The cropmark complex at Ardleigh (PRN 3502) was plotted at 1:2,500 for the publication, by the Archaeology Section, of the excavations at Ardleigh, carried out by the Central Excavation Unit. The exercise recorded a number of new features, including a previously unidentified ring-ditch cutting through one of the excavated ring-ditches, and produced an accurate plot. A written report of the work, which was part funded by English Heritage, was produced. A plot of Tollesbury Wick Marsh was produced as part of a larger project involving ground survey by the RCHME Cambridge unit and excavation by the Field Archaeology Group of the Archaeology Section. In addition, two sheets (block 20A) were completed, out of sequence, to allow cropmarks around Great Chesterford, including various Roman sites, to be plotted and integrated with the Historic Towns Projects' GIS. These sheets produced noticeably high concentrations of cropmark sites new to the SMR, including numerous ring-ditches and enclosures. This may well indicate that the extreme northern boundaries of the county will produce further large number of new sites when mapped.

Industrial archaeology survey

Shane Gould

The methodology for the industrial survey was outlined in Gould (1995).

Thematic Survey

Most of this years work has concentrated on the completion of the thematic malthouse survey. Malthouses were identified as being particularly 'at risk'; the buildings were built for a specific purpose and it is often difficult to find an economic reuse without destroying much of the internal technological detail. Furthermore there was no existing database on which to judge the importance of any particular site. This information becomes critical if outright demolition or conversion of a surviving complex is proposed. The survey therefore aimed to redress this problem by systematically visiting

each site and then making a comparative assessment of the surviving remains. Those that retained their integrity would be identified, the Listing criteria could be critically reviewed and the recording priorities would be established. Survey data came from the Essex SMR, the catalogue of Listed Buildings and the results of John Booker's industrial survey which was undertaken between 1969 and 1974.

Of the 54 sites that were identified, 28 are Listed Grade II and the 16th-century malthouse at Boyes Croft, Great Dunmow is Listed II*. There were no standing remains at 11 sites and a further three had been partly demolished; 26 malthouses have been converted to alternative uses and one had been wrongly identified. This gave a final figure of 16 sites with potentially important technological remains. Examples include:

I The Boyes Croft Malting, Gt. Dunmow (PRN 15061)

This two-storey building is part brick-built and part timber-framed. A cement-rendered steeping pit stands on the ground floor and this was supplied with water from a small cast-iron pump. Beyond this lies a seven bay timber-framed drying floor which is possibly mid-16th century in date and a 19th century malt kiln stands at the east end. The malting is probably one of the earliest surviving examples of its type in Britain and it has

been fully recorded by the Essex Historic Buildings Group (EHBG 1994).

II Gowers Farm Malthouse, Stisted (PRN 15031)

A classic example and one of the best preserved mid 19th-century rural maltings in Essex (Plate 3); the building is brick-built, of two storeys and has six bays. It was subsequently used as dairy and the first floor has been lost, whilst the ground floor has been modified. Barley was delivered through a taking-in door at the east end and the steep probably stood in the end bay; the loading door for the kiln survives and a second door was used to take the malt from the kiln to a two-storey weather-boarded storage block. The building is in a good state of repair.

III Mistley Maltings No. 1 (ESMR No 15059)

Mistley emerged as a major centre of the late 19th/early 20th-century malt industry and it retains some of the best preserved and most technologically sophisticated malthouses in Britain. The settlement also includes a purpose-built quay, an architecturally ornate railway station, a school and workers' terraces. The huge No. 1 maltings stands beside the quay and has three storeys to the High Street, and eight on the quayside (Plate 4). The building has three light ventilator windows along both long axis and a pair of pyramidal kilns at the east end. Internal fittings include Robert Free's patent cast-iron self-empty-



Plate 3 Gowers Farm Malthouse, Stisted. Barley was delivered at the far end of the building and progressed toward the kiln; the finished malt was then stored in the weather-boarded range on the right.



Plate 4 The spectacular quayside frontage of Mistley Maltings No 1.
This building represents the absolute technological peak of a late Victorian floor maltings.

ing steeps, quarry-tile drying floors, wedge-wire kiln floors and *in situ* line shafting. It is Listed Grade II and only part of the complex is currently occupied, the remainder not having found a suitable reuse. Mistley Maltings No. 7 was in a similar situation after its closure in 1983, but a disastrous fire on April 27th 1995 destroyed the roof and the upper three floors.

Detailed site surveys

Detailed site surveys undertaken this year include:

- I The Old Barn, Harlow Wharf (PRN 15094)
A planning application had been submitted to demolish this building (Plate 5) and replace it with one in a similar style. It stands beside the River Stort and probably acted as a trans-shipment point between the Stort Navigation and the town of Harlow. Goods would have been off-loaded at the landing stage and stored in the warehouse before being distributed. Products manufactured in the town and destined for other centres may also have been stored here. No systematic survey of inland navigations in Essex has been undertaken and the warehouse may be a rare surviving exam-

ple; the results of this detailed survey will be consulted as part of a linear survey of surviving structural features beside the inland navigations and canals of Essex.

- II Spurriers Farm Malthouse, High Ongar (PRN 15036)

The malthouse (Plate 6) was identified during the thematic survey as an unusual example having the kiln and steeping tank at the same end. When proposals were submitted to convert it into a retail premises a photographic survey was undertaken.

- III The Walls Maltings, Manningtree (PRN 15001)

A total of seven malthouses survive on this site; a parallel range of four lie behind the street frontage with a further range of three to the southwest. Present knowledge suggests The Walls is the earliest surviving complex in the country marking the important transition from a low-investment industry to one where more capitalistic forms of production became increasingly dominant. Four of these malt-ings will be demolished and the remaining three converted as part of residential devel-



Plate 5 The Old Barn, Harlow Wharf.



Plate 6 Spurriers Farm Malthouse, High Ongar.
The kiln and steeping pit stood within the area of the present lean-to.

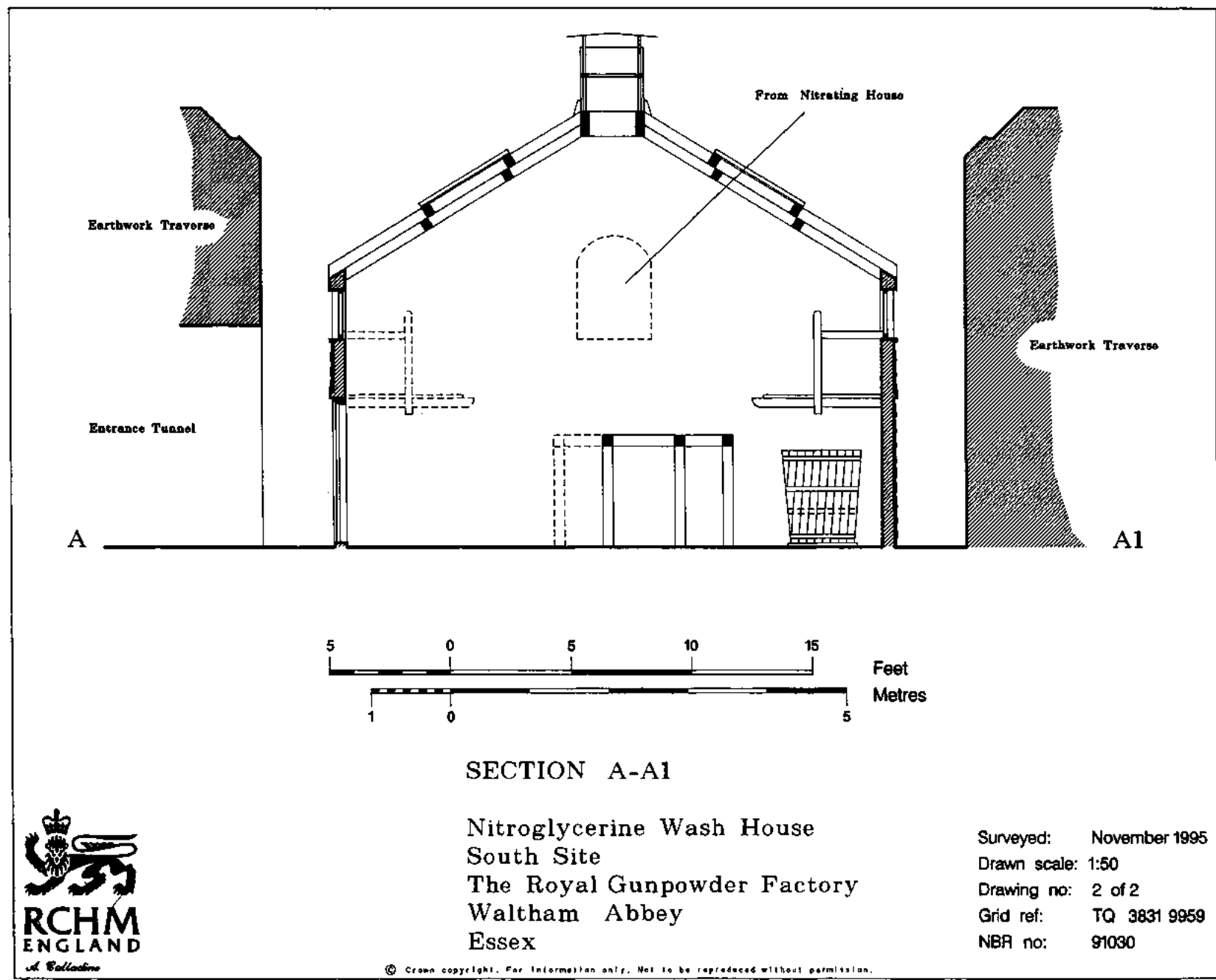


Fig. 6 Nitro-glycerine Wash-House, Waltham Abbey Royal Gunpowder Factory South Site.
Taken from a forthcoming joint publication on the explosives industry by the RCHME and English Heritage.

opment. Given the importance of the site the Royal Commission on the Historical Monuments of England was approached to undertake a measured survey and work is underway. This will be completed in 1996.

IV Waltham Abbey Royal Gunpowder Factory, South Site (PRN 15096)

Following the Scheduling and Listing of a large part of the North Site the Section was

notified that the South Site retained nationally unique examples of a timber nitro-glycerine wash house (Fig. 6) and gun cotton stove. Both buildings are surrounded by earthen blast banks. Given their uncertain future the Royal Commission on the Historical Monuments of England was approached and undertook a measured survey in December 1995.

Bibliography

Benham, H.	1993	<i>Essex Gold, The Fortunes of the Essex Oysterman</i> . E.R.O. Chelmsford.	Strachan, D.	1993', in Bennett, A. (ed.) 'Work of the ECC Archaeology Section 1993', <i>Essex Archaeol. Hist.</i> 25, 233-237
Brown, D.	1990	'Weaving tools', in Biddle, M. <i>Object and Economy in Medieval Winchester</i> Winchester Studies 7.ii, 227-228	Ingle, C. and Strachan, D.	1995 'Essex Mapping Project 1994', in Bennett, A. (ed.) 'Work of the ECC Archaeology Section 1994', <i>Essex Archaeol. Hist.</i> 26, 230-234
Christy, M.	1922	"A High-Road in the Sea", <i>Windsor Magazine</i> . October 1922.		
Crump, B. and Wallis S.	1992	'Kiddles and the Foulness Fishing Industry'. <i>Essex Journal</i> 27 (2), 38-42.	RCHM	1916 An Inventory of the Historical Monuments of Essex, vol 2, 155-157
EHBG	1994	<i>The Maltings, Boyes Croft, Dunmow</i> . Essex Historic Buildings Group	RCHM	1922 An Inventory of the Historical Monuments of Essex, vol 3, 147
Fawn, A., Evans, K., McMaster, I., and Davies, G.	1990	<i>The Red Hills of Essex, Salt-making in Antiquity</i> . Colchester Archaeological Group	Strachan, D.	1995a "Aerial Photography and the Archaeology of the Essex Coast." <i>Essex Journal</i> 30 (2), 41-46.
Gould, S.	1995	'Industrial archaeology survey', in Bennett, A. (ed.) 'Work of the ECC Archaeology Section 1994', <i>Essex Archaeol. Hist.</i> 26, 234-236	Strachan, D.	1995b "The Problems and Potentials of Coastal Reconnaissance in Essex." <i>AARGNews</i> No. 10. The newsletter of the Aerial Archaeology Research Group.
Ingle, C. and	1994	'National Mapping Project		

The Society is extremely grateful to Essex County Council for a generous grant towards the cost of publishing this article.

Archaeology in Essex 1995

Edited by A. Bennett and P.J. Gilman

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 archaeo-

logical research, and the opportunity to take an overview of significant advances. This year 49 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

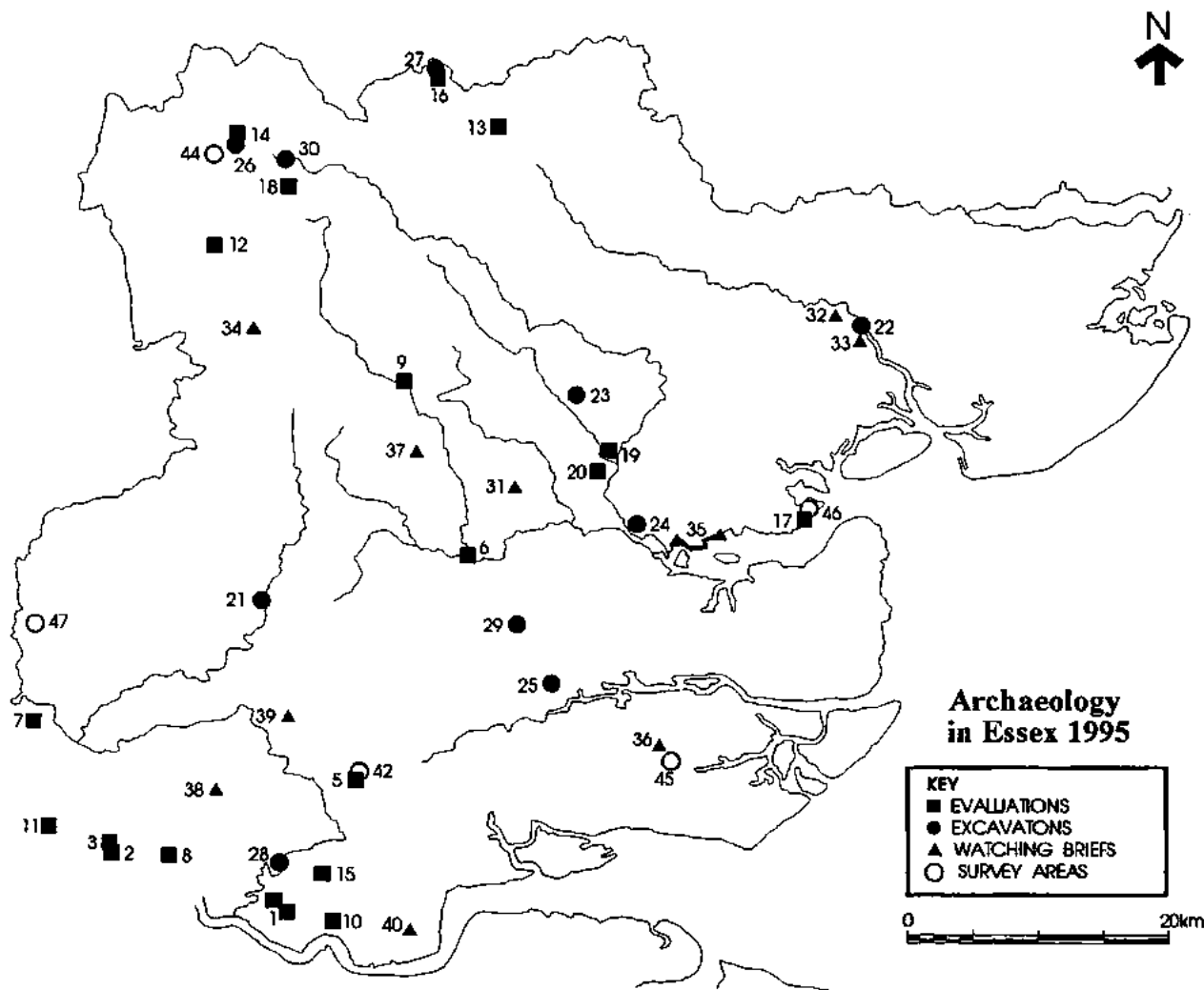


Fig. 1 Location of archaeological projects in Essex 1995

finds and places of final report 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 Barry Crouch (Fig. 2).

The original summaries, and any associated limited circulation reports, have been added to the County Sites and Monuments Record held by the Archaeology Section at Essex County Council, Planning Department, County Hall, Chelmsford CM1 1LF. For details of sites in the London Boroughs, contact the Newham Museum Service, Archaeology and Local History Section, 31 Stock Street, Plaistow, Stratford, London E13 0BX.

Progress in Essex Archaeology 1995

Introduction

The number of summaries (49) is significantly lower than for 1994 (78), partly as a result of some summaries being supplied after the final deadline for inclusion. However, the main reason would appear to be a general reduction of economic activity in the county and the consequent impact on the number of archaeological projects undertaken. Although the overall total of planning applications for the county was only slightly down in 1995, relatively few were for large developments and this may explain the reduction in the number of excavations, from seventeen to nine.

Competitive tendering is now firmly established as normal practice for developer-funded archaeological projects with a variety of contractors regularly undertaking work in the county. The lack of projects initiated by amateur societies gives some cause for concern, although the County Council, in continuing the annual Cressing Field School and Training Excavation, is attempting to provide amateur archaeologists and societies with the skills necessary to undertake fieldwork. Government guidance on the handling of historic buildings in the planning system was published in September 1994 (Department of the Environment and Department of National Heritage 1994). The recommended approach to the recording of buildings affected by planning and Listed Building applications broadly follows that of guidance previously issued for archaeology (Department of the Environment 1990). A notable early example of the application of this approach is the recording of the important 1930's hospital buildings at Rochford (46).

Prehistoric

No Palaeolithic sites were investigated during 1995, although environmental evidence was found at Aveley (1). On the other hand, the year saw the investigation

of two important Late Neolithic sites at Brightlingsea (21) and Langford (25), both producing interesting evidence for funerary and ritual practices. The Bronze Age was less prominent, although some Late Bronze Age features were recorded at South Ockendon (15) and Upminster (29). The most significant Iron Age investigation was that at Upminster (29) where remains from throughout this period were examined.

Roman

For this period, the emphasis was entirely on rural settlements, such as at Aveley (1), Dagenham (8), Elsenham (35), Upminster (29) and West Hanningfield (30). Remarkably, at Felsted (9), evaluation suggested that significant remains survive from a villa, despite relatively recent, large scale disturbance.

Saxon

As with previous years, sites of this period are relatively rare, although useful results were obtained from Upminster (29) and West Hanningfield (30).

Medieval

Rural sites were again well to the fore, especially at Boreham (4), Cressing (24) and Grays (10). A number of urban sites were also investigated but, with the exception of Colchester (23), results were limited, especially at Chipping Ongar (22) where the hopes raised by evaluation were not fulfilled.

Post-medieval

1995 saw rapid development in the study of Industrial Archaeology in Essex, as described elsewhere in this volume (see p. 255-60). As well as 'extensive' surveys of particular types of site, there has been an increase in the numbers of detailed surveys of individual buildings threatened by development, for example at Rochford (46) and Waltham Abbey (48). The RCHME's Cambridge Office have continued to make a vital contribution through earthwork surveys. At Littlebury (45), detailed survey was able to elucidate the 18th-century landscaping of an Iron Age hill fort. At Cressing (24), excavation has revealed more about the post-Dissolution development of the site. There has been continued progress with the survey of Second World War Defences (49) and extensive sections of the defensive lines have now been recorded.

Evaluations

1. A13 Wennington-Mardyke

S. Foreman, E.C.C. (F.A.G.) and D. Bridgeland (Earth Sciences Consultancy)

Two sites were investigated in advance of improvements to the A13:

Aveley, Ponds Farm (TQ 555 799C)

Pleistocene (Ice Age) gravel deposits of the Mucking

formation were identified in a series of test pits as stratigraphically equivalent to those at Sandy Lane Quarry 0.5km to the north-east. These latter deposits have produced two mammoth skeletons and other, similar deposits have produced Lower Palaeolithic artefact assemblages. No artefacts were found at this site, but important environmental evidence was recovered.

Aveley, Ship Lane (TQ 566 794C)

A rural settlement of the 1st century AD (Late Iron Age/Roman transitional) was identified near Ship Lane. The site included the truncated remains of two round-houses, and a series of large ditches which served as settlement enclosure boundaries. The surrounding landscape of rectilinear field boundaries follows the same alignment as the 1st-century ditches, suggesting that this alignment may have originated in the Late Iron Age or even earlier. The settlement was abandoned by the early 2nd century AD, although the boundary system continued in use. There is some indication of renewed activity in the late 4th or early 5th century AD, although this is interpreted as a system of livestock enclosures and a shelter shed, rather than a permanent settlement. A small number of Saxon and medieval features were recorded, but they probably represent no more than isolated features in the rural landscape.

Previous summaries: Gilman (ed.) 1993, 197; Gilman & Bennett (eds.) 1995, 240.

Finds: T.M.

Final report: Essex Archaeol. Hist.

2. Barking, Unit 7, Barking Retail Park (TQ 4386 8380)

N. Truckle, N.M.S.

An archaeological evaluation revealed archaeological features dating from the 9th to the 17th centuries. Of particular interest was a pit containing metal-working waste associated with large quantities of decorated Ipswich Ware pottery. Another find of note was the remains of a Lincoln Ware jug (AD 1200-1250) of a type not previously recorded in a London context which was recovered from a dumped layer associated with a possible revetment.

Finds: N.M.S.

3. Barking, Formula 1 Hotel, West Bank/Highbridge Road (TQ 4375 8390)

D. Divers, N.M.S.

Several collapsed timber structures were found preserved in alluvial silts and clays associated with Back River, a branch of the Roding. The earliest timbers were partially dressed large oaks probably redeposited

from the collapse or demolition of a substantial waterfront structure. Overlying these was a length of wattle and probable posts, while to the south were the remains of a possible revetment. A thick layer of chalk blocks formed an area of hardstanding, possibly for a wharf or jetty, or more likely a slipway or causeway for fording the river.

Documentary evidence shows the road into Barking once crossed the Back River in the vicinity of the site. A foot bridge over the river at this point was pulled down in 1447, possibly to be replaced by a causeway and fording point (Powell 1966, 187). It is possible that at least some of the timbers may have been associated with the bridge, while the chalk could have consolidated this fording point.

After further alluvial deposition, an unsecured brushwood platform, probably dating to the 18th or 19th century, was found. It was a light structure and probably had a short lifespan, consolidating the soft clay below. Alluvial deposits continued to accumulate with further attempts to consolidate the riverbank.

Finds: Valance House Museum

4. Boreham, Bulls Lodge Quarry (TL 7447 1210)

M. Germany, E.C.C. (F.A.G.)

An evaluation was carried out to determine the extent of archaeology present on land at Boreham Airfield prior to gravel extraction. An early medieval ring ditch, probably a 13th-century wind mill, has been located with a large pit within the interior. This is surrounded by a medieval field system and an enclosure ditch. A watching brief during a further phase of stripping revealed some evidence of Roman ditches below one of the disused runways.

Previous summaries: Gilman (ed.) 1992, 151-2; 1994, 241.

Finds: E.C.C., to go to Ch.E.M.

5. Brentwood, The Pigeon Mount, Thorndon Country Park (TQ 522 897)

A Garwood, E.C.C. (F.A.G.)

A programme of trial trenching was undertaken as part of the evaluation of a sub-surface structure which had been identified on the summit of the Pigeon Mount through resistivity survey in 1994 by Peter Cott. In total, three trenches were investigated and all three contained structural remains from an octagonal brick building which measured 6.5m from wall to wall. This is interpreted as being either an ornate dovecote or a garden feature, originally constructed in the early 17th century, renovated subsequently in the early 18th century and demolished some time after 1763.

Finds: Ch.E.M.

**6. Chelmsford, St. Mary's Cathedral
(TL 7082 0694)**

M. Ingram, E.C.C. (F.A.G.)

Three test pits were dug in the grounds of the Cathedral within the footprint of a proposed extension. The test pits established the depth of graveyard deposits to be at least 1m. Burials were present at a depth of 1m. A brick vault was located in the northernmost test pit. Another test pit, dug at the junction of the Chapter House and north transept, revealed deeply offset brick and concrete foundations. No other archaeological features were located. One sherd of residual Roman pottery was recovered along with a small collection of post-medieval pottery. Other finds comprised a copper-alloy buckle, window lead, coffin handles and modern brick.

Finds: E.C.C., to go to Ch.E.M.

**7. Chingford, Ainslie Wood Sports Field,
Ainslie Wood Road (TQ 3782 9217)**

D. Divers, N.M.S.

Traces of a ridge and furrow field system were found in the form of undulating natural clay, the depressions being filled with a reworked clay sub-soil interpreted as the lower part of a ploughsoil. The undulating nature of these deposits reflected the north-south orientated undulations visible in the grass surface of the sports field. A north-south orientated ditch was also recorded, probably contemporary with the ridge and furrow ploughing. Ridge and furrow ploughing is usually associated with the medieval period, although the practice continued into the post-medieval period. No finds were retrieved from the site so the date of the field system can only be surmised as medieval.

Finds: Vestry House Museum

**8. Dagenham, Goresbrook Fields,
Goresbrook Road (TQ 482 837)**

W.S. Tamblyn, N.M.S.

Excavation of 29 trenches and associated geophysical survey revealed many traces of past human activity on the site. The only securely dateable features were uncovered in trench 20. These comprised four poorly reserved cremations dating from the late 1st century to early 2nd century AD. These were within a rectangular ditched enclosure, which may have had an internal timber palisade, dating from the 1st century AD (early Roman). This enclosure truncated an earlier post hole.

Four ditches/linear features of indefinite date were uncovered running through other trenches, all orientated roughly north-northeast to south-southeast or northeast to southwest. The stratigraphic position of these features suggested they may have also been of a Late Iron Age to Early Roman date. Additionally, two pits and two linear features/ditches of possibly prehistoric date were uncovered.

Finds: N.M.S.

**9. Felsted, Felsted Sugar Beet Factory
(TL 665 205)**

J. Hawkes, A.C.A.

The proposed development area lies immediately to the south of the former Felsted Station, around which earlier investigations and stray finds have produced evidence for the presence of a probable Roman villa with possible earlier (late Iron Age) activity.

A field evaluation by means of a series of six machine-stripped trenches was undertaken in March 1995. This established that there had been extensive disturbance over much of the site caused by terracing for the former railway sidings, but intact soil profiles were present in the area nearest to the site of the station buildings. Features within this area included a series of shallow boundary ditches and the remains of the footings of a masonry building. The scale of the investigation did not allow any reconstruction of the plan of the building or boundary features, but both were associated with Roman roof and flue tile and pottery largely dating to the 1st century AD. A pit containing iron hoops - probably the last remaining elements of an *in situ* wooden barrel - was also investigated.

The features encountered provide further evidence for the presence of a villa complex. The evaluation has identified a maximum area of c.100m by 40m over which further deposits may be expected to have survived later disturbance. Arrangements are being made for full excavation of this area to be undertaken before any development.

Finds: A.C.A., to go to S.W.M.

Final report: Essex Archaeol. Hist.

**10. Grays, Stifford County Primary School,
Parker Road (TQ 6055 7820)**

K. Reidy, E.C.C. (F.A.G.)

Six trenches were excavated revealing evidence of pits, ditches and gullies. These may have been on the edge of a small early medieval settlement occupied between the 11th and 14th centuries. There was also residual evidence of prehistoric and Romano-British activity, but the centre of activity is thought to be some distance from the development area. Further work is expected.

Finds: E.C.C.; to go to T.M.

**11. Leytonstone, Langthorne Hospital,
Langthorne Road**

M.D. Turner, N.M.S.

Two trenches were excavated east and north of the existing Elderly Day Care Centre. These revealed three nearly square post holes of unknown date cutting the

underlying natural deposits. A residual sherd of Late Neolithic/Early Bronze Age pottery was recovered from a feature interpreted as being caused by a tree root. Overlying these features was a layer of ploughsoil and a ditch of possible early 19th-century date. Above this was evidence for 19th-century hospital buildings which were demolished in the second half of this century.

Finds: Vestry House Museum

12. Quendon, Quendon Court (TL 5148 3015)

S. Godbold, E.C.C. (F.A.G.)

Evaluation took place in advance of a new lake and access road in the grounds of Quendon Court, Quendon. The site of the lake lay close alongside the north-west side of Quendon Woods, known to be ancient woodland. Also, Saxon metalwork has been found in Quendon village and the surrounding area. Three trenches were excavated to evaluate the site of the proposed lake. Trench A contained a post-medieval ditch, which had been infilled. This feature was still apparent as a slight hollow crossing the grounds on an east to west alignment. A fragment of Tudor type brick, dating from the 16th century, was recovered from the base of this feature. No archaeological features were detected in trenches B and C or along the line of the access road.

Finds: E.C.C., to go to S.W.M.

13. Ridgewell, Ridgewell Gypsy Site (TL 7375 3992)

E. Heppell, E.C.C. (F.A.G.)

An archaeological evaluation was undertaken in an area to the south of the A604 between Great Yeldham and Ridgewell. Thomas Walford's map of 1803 shows a Roman road running below the old A604. It was hoped that trenching would uncover the road itself or the northern roadside ditch. The excavation of one trench 23m by 1.9m showed that the whole area had been heavily disturbed. There was no trace of the road and no finds were recovered.

14. Saffron Walden, The Golf Driving Range, Little Walden Road (TL 541 395)

A. Garwood, E.C.C. (F.A.G.)

Two trial trenches were excavated in order to evaluate the archaeological survival of two of five limekilns identified from cartographic evidence relating to the Old Chalk Quarry, Saffron Walden. The evidence recovered and the locations of the buildings that presently stand on the site indicate that the groundworks involved in the construction of these buildings may have sufficiently disturbed the limekilns as to cause their subsequent partial or total collapse.

15. South Ockendon, South Ockendon Hospital, South Road (TQ 598 825)

H. Jurgielewicz, E.C.C. (F.A.G.)

A total of 24 trial trenches (A-X) were excavated prior to residential development by Countryside Properties PLC. A watching brief was also carried out during demolition of the existing buildings and associated groundworks.

A concentration of well-preserved prehistoric features dating between the Late Bronze Age and Early Iron Age was encountered in Trench F in the north of the site. The features appear to represent localised domestic activity, not extending into any of the other trenches.

A ditch running approximately east-west was identified in Trenches F and V. This was aligned on the northernmost of two parallel linear cropmarks in the north-west of the field directly east of the site. The projected line of this ditch passed through Trench A but was not encountered there. The ditch contained a Roman pottery sherd suggesting that the ditch was filled during the Roman period. Nearby surface finds of other Roman sherds indicate some Roman activity in the area.

A boundary ditch of probable post-medieval date, shown on the 1st edition OS map (1872), was identified running north-south through Trenches C, B, K, J, R and S. There was no evidence for the continuation into the development area of features associated with a cropmark ringditch on the northern boundary, or with a cropmark pit cluster near the south-eastern boundary.

Finds: E.C.C., to go to T.M.

16. Sturmer, A604 Haverhill Bypass (TL688 443)

D. Gill, S.C.C.

A group of ditches was found to the north-west of the Sturmer barrow (ESMR 1590). One sherd of early medieval pottery was recovered from these. Close to the A604 there was a 50cm deep layer of clay, possibly a colluvium, in which was found late 12th- to early 13th-century pottery and one sherd of Late Iron Age pottery. This layer was removed in a limited area and revealed a ditch, demonstrating that at least one feature exists close to the road frontage. There was no evidence to suggest that there had been further barrows within the evaluation area. The evaluation was followed by excavation (see 28 below).

Finds: S.C.C.

17. Tollesbury, Tollesbury Wick Marsh (TL 970 090)

A. Garwood, E.C.C. (F.A.G.)

A programme of test pitting was undertaken as part of the archaeological evaluation of two mounds identified

from aerial photography and interpreted as possible red hills (Strachan 1995). Two test pits were investigated. The evidence recovered indicates that neither of the mounds were red hills but were probably the remnants of other forms of salt extraction undertaken within the marsh (see 47 below for a summary of survey of these and other earthworks at Tollesbury Wick).

18. Wimbish, Parsonage Farm (TL 5795 3544)

A. Garwood, E.C.C. (F.A.G.)

Three test pits and a linear trench were excavated in order to assess the degree of survival of archaeological remains within this scheduled moated site. Medieval occupation deposits were found to lie beneath 0.38–0.43m of post-medieval overburden in test pits C and D. Pottery dated these deposits to the 12th–14th centuries. More dating evidence was recovered from a domestic rubbish pit in test pit A, indicating that the main focus of active occupation in the medieval period was from the 12th to the 14th century. A flint built wall observed in test pit B was post-medieval.

Finds: E.C.C.; to go to S.W.M.

19. Witham, rear of George Public House, Collingwood Road (TL 8212 1465)

H. Brooks, H.B.A.S.

This evaluation demonstrated that there is a difference in the preservation and surviving depth of archaeological deposits between the west and east sides of the site. To the west, on the Collingwood Road frontage, there is a considerable depth of post-medieval remains, principally of the 18th to 20th century, down to 1.5m below present ground level. Apart from a single residual medieval sherd, no remains earlier than the 18th century were found here. However, on the east side, medieval remains survived, in the form of pits containing pottery of the 12th to 14th centuries. Medieval pottery was also found in later contexts in this area.

The site falls into an area where Rodwell (1993) proposes early medieval town planning, with the present site area suggested as a market. Later Rodwell envisages subdivision of the former market area into burgrave plots, and expansion of the town over the present site area.

Due to the great depth of truncation by later activity, it was not possible to determine whether any of the excavated contexts corresponded specifically with Rodwell's market or later burgrave plots.

Finds: H.B.A.S.; to go to Bt.M.

Final report: Essex Archaeol. Hist.

20. Witham, Maltings Lane (TL 815 132)

H. Brooks, H.B.A.S.

Fieldwalking has produced evidence for prehistoric,

Romano-British, medieval and post-medieval activity. One area produced a concentration of worked flint of general Neolithic/Bronze Age date, and another area had a heavy concentration of prehistoric burnt flints. Two large, adjacent and possibly connected groups of Romano-British material indicates probable occupation. There are also indications of a potential medieval site. Elsewhere, there is an almost complete absence of medieval material, thus weakening any claim that this area is the location of the Saxon or early medieval burh. Rodwell (1993, 52–54) has suggested that this area may have been an enclosed medieval or later woodland.

Post-medieval and modern pottery and tile is widespread over the whole survey area, representing manuring activity. One field with no tile may have been pasture or woodland at that time.

Finds: H.B.A.S.; to go to Bt.M.

Final report: Essex Archaeol. Hist.

Excavations

21. Brightlingsea, ring-ditch at Moverons Pit (TM 070 183)

N. Lavender, E.C.C. (F.A.G.)

Following evaluation from December 1994 to January 1995, full excavation was conducted on a Neolithic ring ditch. A further nine segments were excavated through the ditch of the monument and a detailed investigation of the interior carried out. The presence of a single east-facing causeway through the ditch was confirmed, as was the fact that it had been allowed to silt up and had been recut at least seven, and possibly as many as ten, times during its lifetime. Further 'Mildenhall-style' pottery was recovered from the ditch, including much of the second half of a bowl found during the evaluation. It is clear that the two halves were deliberately placed each side of the causeway. The interior of the ring ditch proved disappointing since any Neolithic features which had originally existed here were almost completely obliterated by the use of the monument as a medieval rabbit warren. A number of pits and post holes lay outside the ring ditch but, until analysis of their finds is complete, their data and function remain unclear.

Previous Summaries: Gilman and Bennett (eds) 1995, 242.

Finds: E.C.C.; to go to C.M.

Final Report: Essex Archaeol. Hist.

22. Chipping Ongar, New Library site, The Pleasance Car Park (TL 552 031)

R. Clarke, E.C.C. (F.A.G.)

Over one hundred archaeological features were recorded, the majority of which were found to be post holes,

pits and gullies dating from various periods. Very little evidence for deep stratigraphy was present other than in the form of inter-cutting features. It is likely that the archaeological deposits have been truncated as a result of levelling or ground reduction during previous periods of development. The evidence from each period is described below:

Saxon: Two sherds of possible Saxon pottery were found, one of which was from a stratified context (a possible pit), the other apparently residual from the fill of a 12th-13th-century pit. This, together with a single sherd of Saxon pottery recovered from the fill of a post hole during the evaluation stage, provides some tentative evidence for Saxon occupation in the vicinity.

Medieval: About one fifth of the features excavated have been dated broadly to the medieval period. No obvious building foundation plans can be identified so far, although the majority of the more substantial post holes appear to be concentrated in the north-west corner of the excavation, which is close to the High Street. A possible zone of rubbish pits was also located in the eastern half of the site, away from the High Street.

Post-medieval: The majority of features excavated have been dated to this period, and some closer phasing has been possible: 15th-16th century: part of a probable late medieval/early post-medieval building with a possible associated fence-line was identified in the south-west corner of the excavation area, as well as several apparently unrelated features. 16th-17th century: a linear possible drainage gully, a brick-built drain and two post holes have been dated to this phase. 17th-18th century: six small post holes dispersed over the southern half of the site were excavated which could have related to temporary structures or fence-lines. Four larger, possibly associated, post holes were also identified, concentrated towards the centre of the site. 19th-20th century: several modern construction cuts and brick foundations were present on the site, of which only a small sample was excavated, although examples of bricks were taken from all relevant features. These may relate to the adjacent building, "The Pleasance".

Undatable: a small proportion of the features contained no datable evidence, including two large possible ditches and several post holes.

Artefacts: Moderate quantities of medieval and post-medieval pottery were recovered, providing significant assemblages for the study of pottery trade and production for these periods. Other artefact-types include animal bone, shell, daub, brick and tile which have not as yet received specialist attention. Registered finds comprise four copper dress pins, a copper plaque and a wooden handle (all post-medieval). Two charred pit-fills were sampled for environmental analysis.

Previous Summaries: Gilman and Bennett (eds) 1995, 242.

Finds: E.C.C., to go to E.F.D.M.

Final report: Essex Archaeol. Hist.

23. Colchester, 79 Hythe Hill (TM 0133 2468)

H. Brooks, C.A.T./H.B.A.S.

Excavations on the medieval and post-medieval buildings at the former Colchester Tractors site were completed in January 1995. The earliest building dated to the 13th/14th century. It was a three-roomed house with masonry footings, clay floors and a central hearth for heating and cooking. The footings presumably supported a timber superstructure. The house measured approximately 5 by 15 yards (4.6 x 13.7 metres). The implication of the central hearth is that the hall (the main room) was single storey, and open to the roof. To the rear of the house were yard areas, a few pits, and a tile-built circular bread oven.

During the 15th/16th century the earlier house was substantially rebuilt and enlarged into what was ultimately a five-roomed structure - still with masonry footings, clay floors, and central hearths. Although the earlier structure was probably a domestic residence, this later and larger structure may have contained shops or industrial units - blacksmithing debris was found on one of the floors. In the 16th/17th century, there was further building work, primarily the insertion of a chimney breast.

There was a certain amount of 18th-century brickwork, and quite a lot of Victorian brickwork on the site. The archaeological deposits connected with the later history of the site have been removed by recent terracing, and as a consequence the adjacent plot to the west stands a few feet above the present site level.

Previous summaries: Gilman & Bennett (eds.) 1995, 249.

Finds: C.A.T., to go to C.M.

Final report: Essex Archaeol. Hist.

24. Cressing, Cressing Temple (TL 799 187)

T. Robey, E.C.C.

The year began with a continuation of the excavations in and around the tin-roofed shed near the car park to evaluate proposals for a new visitor centre. The evidence showed that the core of this ostensibly modern building was in fact an 18th-century aisled barn of a somewhat unusual design, with longitudinal cills and cill-plates beneath the arcade posts. An accurate ground plan of the original building was established and its history was traced in some detail. As a result, the barn was preserved and the site for the proposed visitor centre moved.

In June, an excavation was undertaken in the south-eastern corner of the monument with a single trench, 20m long and lying east-west, across the position of a large rectangular geophysical anomaly. The anomaly was very similar in shape to the two medieval barns and hopes were high for a significant discovery, however, the "walls" turned out to be two parallel, but not contemporary, ditches.

The main excavation of the year was the Field

School excavations just north of the Granary, during the summer. Last year's trenches were re-opened to excavate the cellar and other features hinted at by the deposits revealed in 1994. The excavations revealed that the gravel foundations of the medieval house became much deeper in the west corner, and may have been as much as 50% wider here. Disturbance from the cellar construction made accurate measurement impossible. The foundations here were in excess of 1.8m deep compared with the average of 0.5m and must have been designed to support a large staircase or chimney. Part of the foundations of a second building were found, built against the first building. Evidence indicates that these buildings were of flint with dressed greensand coins and apertures.

The brick cellar thought to date to *c.*1600, was a well-built structure 9.1m by 5.7m, with a wide flight of steps leading up into the first medieval house. Remains of brick wall-footings showed that the medieval structures were considerably altered during this period, but had clearly been incorporated into the new grander building. This is believed to be part of the 'Greate House' known from documentary evidence. The cellar, together with the deep brick culvert found in the other trench, links this complex with similar structures in the 1980 excavations 30m to the north, indicating the presence of a magnificent house worthy of its title.

Work also began on the new system to link the site to the main sewage network. This involved the excava-

tion of a trench across the south-east corner of the monument and a watching brief on a trench along the B1018. The excavation exposed a couple of fairly modern post holes and a 16th-century arched brick drain. It was clear that there has never been a direct connection between the present moat and the pond across the road. The excavation also revealed a massive periglacial stream channel running down the western edge of the site parallel to the moat. This was traced further in the contractor's trench along the road and its full width measured some 56m.

Previous summaries: Gilman (ed.) 1989, 61-2; 1990, 130-1; 1991, 153; 1992, 103; 1993, 204-5; 1994, 249; Brown and Flook 1990; Robey 1993a, 1993b; Gilman and Bennett 1995, 247-9

Finds: Cressing Temple

25. Langford, Langford Hall Farm (TL 8410 0920) H. Cooper-Reade, E.C.C. (F.A.G.)

A geophysical survey and excavation are being undertaken in advance of the construction of a reservoir in an area where aerial photographs show a large complex of ring-ditches and enclosures. The geophysical survey and the first phase of a three phase excavation have been completed.

The geophysical survey was undertaken over a 2ha area using a fluxgate gradiometer and allowed two

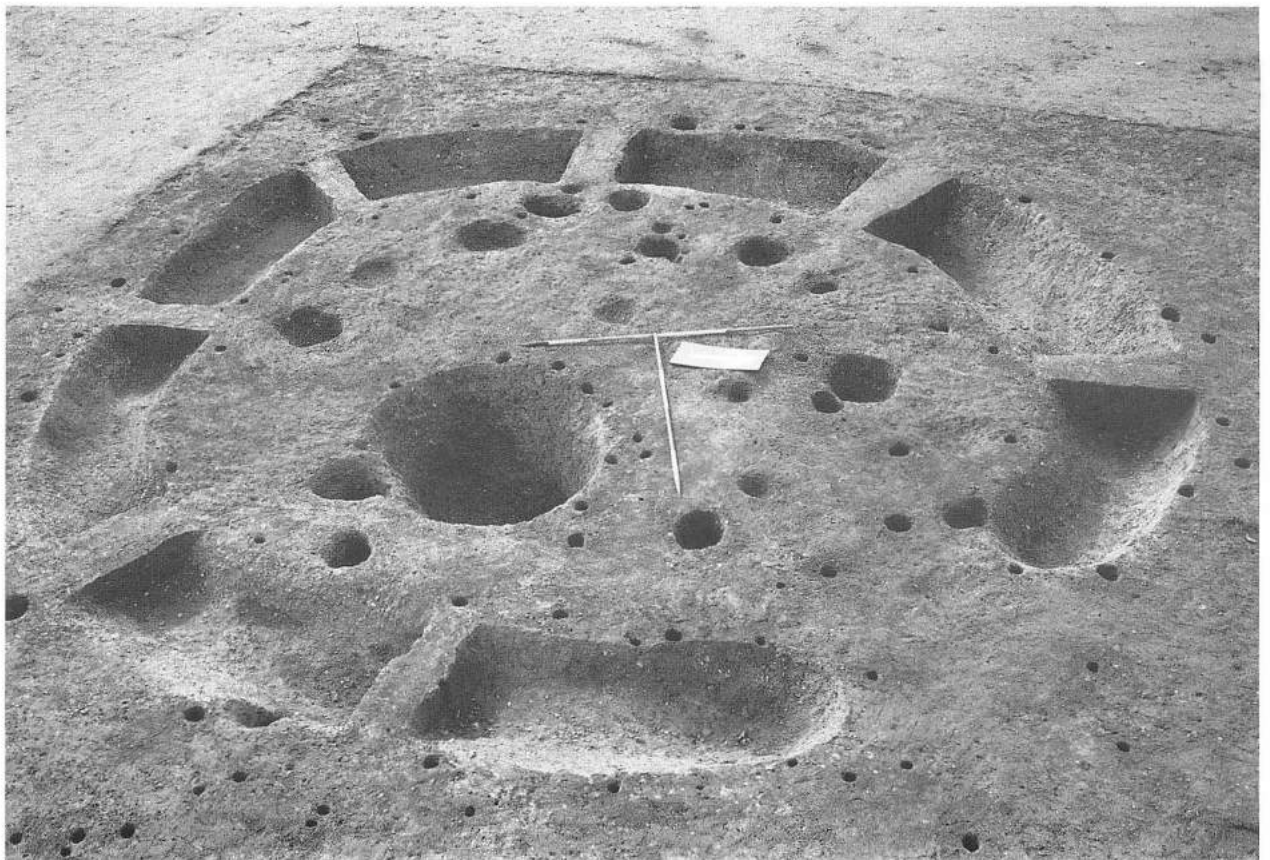


Plate 1: Langford Hall Farm: ring ditch with internal cremation pit (Photo by Hester Cooper-Reade)

areas to be chosen for intensive survey. A ring ditch 25m in diameter with some internal features, and the south-western return of a known enclosure ditch were identified in one area. The other area showed three significant linear anomalies, one of which was not shown on aerial photographs.

The first phase of excavation covered approximately a third of the development area. Features excavated comprised enclosure ditches, an area of irregular features and shallow pits along the western edge of the development area, and two ring ditches. Undiagnostic prehistoric pottery was recovered from most features, although that which could be dated appears to be from the Neolithic/Early Bronze Age period. Further analysis of the dating evidence will take place after completion of the final stage of excavation.

The principal features were two ring ditches and a trackway with a ditch on either side. The ditched trackway can be seen on aerial photographs and its southernmost ditch appears to form the northern side of a large enclosure. The ditches flanking the trackway had been recut, probably in the Iron Age. The two ring ditches have been provisionally dated to the Late Neolithic/Early Bronze Age. The smaller of the two had an entrance 'causeway' and contained internal post holes and a cremation pit (Plate I). Possibly deliberately-placed pots and un-urned cremations were recovered from the termini of the ditch. There were a large number of stake holes associated with this ring ditch: most were found around the internal and external edges of the ditch, around the central cremation pit; others formed a linear approach to the entrance. The second, large ring ditch comprised two ditches, the wider internal one having been recut to form a narrow ditch on its internal edge. There was no entrance way to this ring ditch, although the external ditch was very shallow along its northernmost edge. Several internal features were associated with this ring ditch, although they were all shallow and truncated. As with the smaller ring ditch a series of associated stake holes was excavated. These formed a roughly circular pattern on a slightly different alignment to the ditches, perhaps indicating a different phase. One very small (c.0.12m diameter) pit containing cremated bone was found cutting the outer ditch. Possible satellite cremations, however, have been noted nearby in the Phase 2 area.

Full assessment and analysis of the results will be undertaken upon completion of the fieldwork in 1996.

Finds: E.C.C., to go to C.M.

Final report: Essex Archaeol. Hist.

26. Rettendon, Hall Farm (TQ 772 965)

M. de Bootman

The re-excavation of two Romano-British pottery kilns commenced in 1994, with the aim of re-examining the features to obtain a clearer idea of their relationship, and exploring previously unexamined areas. The kilns were originally investigated in 1967 (Tildesley 1971)

when they were found to date to the late 3rd/4th-century, producing predominately reduced fabrics with flint tempering. The recording at that time indicated that the stoke holes to the two kilns may have been joined but re-excavation has shown that both kilns have been destroyed. A large pit to the north-east may be another stoke hole, and further pits have been located with deposits of waster material. One unexcavated feature appears to be another kiln.

Finds: Ch.E.M.

Final report: J. Roman Pottery Stud. or Essex Archaeol. Hist.

27. Saffron Walden, 15 Gibson Close (TL 5351 3822)

A. Garwood, E.C.C. (F.A.G.)

Excavation revealed a substantial boundary ditch aligned on an east-west axis and at 90 degrees to the medieval town defensive ditch (the *Magnum Fossatum*). This ditch survives in a good state of preservation within and towards the northern limits of the development area. No dating evidence was recovered but it may be suggested that the boundary ditch is part of a rectilinear street pattern laid out in the early 13th century.

Finds: S.W.M.

28. A604 Haverhill Bypass Phase II (TL 687 444)

C. Abbott, S.C.C.

Following earlier evaluation (see 16), excavation adjacent to the A604 and the Sturmer Barrow revealed part of a medieval settlement site. After topsoiling, a colluvial or remnant ploughsoil deposit was seen to cover the eastern part of the site. It contained abraded early to mid 13th-century pottery. A number of shallow post holes or pads were cut into this deposit. On removal of this layer, a series of ditches was discovered. Several contained pottery, and they probably defined fields and domestic plots. Initially, at least four phases of layouts appear to be represented, although finds analysis should provide more detail. An Iron Age gold stater of Middle Whaddon Chase type was also found.

Finds: S.C.C., to go to Bt.M.

Final report: to be decided

29. Upminster, Hunts Hill Farm (TQ 566 831)

P. Greenwood, N.M.S.

The final year's work on the site was in the north-west field (area C), subject of an evaluation in 1994. Four main areas of the cropmark complex were investigated: a possible prehistoric enclosure; the zone with linear features to the east; the Late Iron Age rectangular enclosure; and the remainder of the main Roman area first examined in 1990.

Post-excavation work is at a preliminary stage and conclusions are therefore tentative, but it is clear that many phases were present. Features with Late Bronze Age pottery similar to that from Mucking were found on the western edge of the site in the same area as Early Iron Age evidence. This part of the site contained at least three or four round-houses from the evidence of penannular gullies, partial gullies and post hole patterns. Some are probably Middle Iron Age in date. The area further east contained at least seven penannular gullies identified as round-houses of several phases spanning the Middle Iron Age and possibly Early Iron Age. The finds have yet to be examined in any detail.

Late Iron Age evidence and features were concentrated on the eastern side of the field centring on the large rectangular enclosure, some 60 x 50m in size, which appears to have had an entrance on the north side. Its ditches and some of the features in the same zone, including some wells, have produced much Late Iron Age pottery and other finds. Two, or possibly three, of the wells may belong to the Late Iron Age. There is much structural daub.

Roman evidence appears to range from the mid-1st century to perhaps as late as the early 4th century, with many features including five or six wells, a cremation burial, post-fast structures and much domestic debris. It is clear that much of the site was spanned by Roman ditch systems forming fields, paddocks or enclosures which appear to represent the same date range as the other features. Characteristic late 4th-century pottery types are absent so far, in contrast to the nearby site at Moor Hall Farm, Rainham (Greenwood 1982). There is much pottery which appears to be similar to that from the Mucking and Orsett area kilns. This is found particularly around the very western edge of the site indicating the presence of a settlement area just off this site. Roman pottery of the late 2nd to early 3rd century is particularly abundant in some features.

Ten wells and large pits with waterlogged deposits were examined. These seem to represent the Late Iron Age and Roman phases on the site. One or more may probably be later Iron Age in origin. One of the later Roman wells was timber-lined and contained the remains of a pole-like wooden object. The largest well, subrectangular in shape, produced a moderate amount of Late Iron Age and Roman material and a re-used, incomplete Dressel 1 type amphora. This may have been the major Late Iron Age well which continued to be cleaned out and used in to the early Roman period. Much waterlogged environmental material was recovered from these wells/large pits.

In the early Saxon period, perhaps in the 6th to 7th century, a small group of graves were dug on the western edge of the site. No skeletal remains or shadows survived, but the shape and dimensions of the pits are like other graves of this period. Some of these contained a small blade-like object, possibly a knife. Finds also include a complete grass-tempered pot and a glass bead. The main evidence for later periods was the extensive ridge-and-furrow which covered this part of

the site. Medieval and later finds, apart from the more recent debris and litter, were few.

Previous Summaries: Gilman (ed.) 1991, 159; 1992, 108; 1993, 207; 1994, 252; Gilman & Bennett (eds) 1995, 251-2; Greenwood 1986; 1992.

Finds: N.M.S. or suitable repository

Final report: N.M.S. monograph.

30. West Hanningfield, Downhouse Farm (TL 7462 0135)

S. Godbold, E.C.C. (F.A.G.)

Excavations uncovered features spanning the Roman period from the 1st century AD until the late 4th century, including field ditches, ponds, large quarry pits and a large number of unrelated post holes and smaller pits. Also, evidence of Early Saxon occupation was found including a post-built structure, ditches, a possible trackway, post holes and pits, all dated to the 5th/6th centuries. Part of a large medieval ditch or moat was also located along with some smaller medieval field ditches. A post-medieval ditch was also found. A quantity of prehistoric worked flint was also recovered, but no definite prehistoric features were located.

Previous Summaries: Gilman (ed.) 1992, 100.

Finds: Ch.E.M.

Final report: Essex Archaeol. Hist.

31. Wimbish, Tiptofts Farm, Swards End (TL 5702 3737)

R. Clarke/M. Germany, E.C.C. (F.A.G.)

Recording of *in situ* timbers and investigations of the underlying archaeology was carried out during improvements to a 14th-century moated farmhouse which is a Scheduled Ancient Monument (SAM No. 20685). After removal of the floor boards, plans of the timber joists were made in the drawing room, dining room and study, and the different joints recorded. It was noted that the wings at the side of the house were later than the main building. Box sections were dug through the floor below revealing medieval floor layers, the original north-eastern wall of the house and a cobbled yard surface. The cobbled yard was also recorded outside the present-day house during a watching brief on groundworks. The depth and make-up of the moated platform was revealed during this work as well as the remains of a now demolished post-medieval chimney breast.

Finds: E.C.C., to go to S.W.M.

Watching briefs

32. Boreham, Boreham Airfield (TL 7455 1225)

M. Germany, E.C.C. (F.A.G.)

This watching brief was undertaken during the strip-

ping of topsoil and runways prior to gravel extraction. Two medieval ditches, one pit and one large amorphous feature were located beneath one of the World War Two runways. The ditches were aligned south-west/north-east and south-east/north-west respectively, and contained sherds of early 13th-century pottery, oyster shells and many small fragments of daub.

These features, together with the complex of cropmarks to their immediate west, may have been part of a medieval moated settlement. The cropmarks seem to include the remains of several timber buildings and several enclosures surrounded by a number of very large ditches or moats.

Previous summaries: Gilman (ed.) 1994, 241

Finds: E.C.C., to go to Ch.E.M.

33. Colchester, The Folly, Castle Park (TL 9995 2555)

H Brooks, C.A.T.

There was an opportunity to carry out limited recording in September 1995 when removal of the Victorian casing masking the north face of the Roman town wall revealed the rear edges of original Roman brick string-courses, to the west of Duncan's Gate.

34. Colchester, Hythe Quay (TM 017 242)

H Brooks, C.A.T.

In connection with the construction of Eastern Approaches Road, two contractors' trenches were observed close to the new bridge over the Colne. Remains of several stages of recent (i.e. Victorian or later) wharf construction were observed in the trench on the west bank of the Colne (TM 0160 2423). Observed stratigraphy on the landward side of the trench on the east bank of the Colne (TM 0166 2420) was 1.5m of loose modern infill, overlying natural. On the river side, the deep hole only showed river silts to its full depth, though for safety reasons a close inspection was not made. No old timbers were observed in either trench, nor were there any finds.

35. Elsenham, Tye Green (TL 542 244 & TL 541 243)

K. Reidy, E.C.C. (F.A.G.)

Two areas were examined:

Area A showed evidence of Romano-British occupation. Features were not excavated so their exact nature and function is unclear. Two possible structures were present, one of which was defined by two curvilinear gullies and the other by a rectangular layer of clay and gravel. There were also a number of rubbish pits, ditches and post holes. Much pottery was present on the surface of these features, datable to the 3rd or 4th century. There was very little earlier pottery. Three copper alloy coins of the 3rd to 4th century

were also found, and a prehistoric barbed and tanged arrowhead.

Area B contained four features, possibly post holes or small pits. One contained abraded prehistoric pottery and another contained a little burnt bone.

Finds: E.C.C., to go to S.W.M.

Final report: Essex Archaeol. Hist.

36. Goldhanger, Mill Beach to Goldhanger tidal defences (TL 8760 0772 to TL 9090 0800)

A. Garwood, E.C.C. (F.A.G.)

The remains of two previously known red hills were located. Pottery recovered from the first red hill (PRN 12123-12124) and previous excavations undertaken here (Fawn *et al.* 1990) date it to the early Roman period. No pottery was recovered from the other red hill (PRN 13644) but a moderate amount of briquetage, indicative of salt production, was retrieved.

The poor preservation of both red hills may be the result of previous work on the sea wall, reportedly undertaken in the early 1970's. Disturbance caused by the construction of an access route has been extremely detrimental to the survival of archaeological deposits.

Finds: E.C.C., to go to C.M.

37. Hawkwell, Church of St. Mary (TQ 8605 9175)

R. Isserlin, E.C.C. (F.A.G.)

A watching brief was undertaken during the construction of an extension to the north of the church, which involved underpinning and partial demolition of the north wall of the nave. The present church is built of Kentish ragstone and flint, and consists of a simple nave and chancel dating to the 14th century, with late medieval and Victorian alterations (RCHM 1923, 66). There is a reference in Domesday to an earlier church at the time of Edward the Confessor.

A length of ragstone footings recorded during underpinning of the north wall of the nave followed a slightly different alignment to it, and may represent the north wall of the Late Saxon church, laid out to a different ground-plan. The earliest fabric of the existing church is a part of the west wall, which may be Saxo-Norman on stylistic grounds. The ragstone north wall of the 14th-century nave was recorded, including remains of a doorway with moulded limestone jambs. The present chancel was constructed a little later than the nave, in the 14th/15th century, although it is unclear whether this was a reconstruction of an earlier chancel or a new construction. The roof of the nave was raised and external buttresses added, an episode dated stylistically to the 15th/16th century. A timber bell-turret was inserted at the west end of the nave, most likely as part of the reroofing programme. In the Victorian period the tower was constructed in its pre-

sent form and a vestry was added in the northwest of the nave.

During demolition of the vestry an assemblage of broken-up late medieval window mouldings was recovered from the rubble raft for the Victorian floor. These presumably represent the remains of windows removed and replaced during Victorian refurbishment of the church and reused as hard-core.

Finds: S.M.

Final report: Essex Archaeol. Hist.

38. Pleshey, White Horse (TL 6635 1439)

H Brooks, H.B.A.S.

A watching brief was carried out during groundworks for the construction of a rear extension to the White Horse Public House. The site lies on the western side of the medieval village of Pleshey, and is within the earthwork enclosure of the town. However, observation of topsoil removal did not reveal any ancient features or finds.

39. Romford, The Bull, Romford Market Place (TQ 5134 8898)

A. Hodgins, N.M.S.

A watching brief took place in the vicinity of the presumed route of the Roman London to Colchester road, and within the Market Place which has been a commercial centre since the 13th century. Four test pits were excavated by machine. These contained largely 20th-century material, revealing two buildings of uncertain purpose, an associated drain and floor surfaces. After these buildings and drain went out of use a new service drain was laid along the same northwest-southeast alignment, and the ground levelled off.

The earliest archaeological deposits noted on this site were two alluvial layers, the later of which contained pottery, roof tile and clay pipe of a post-medieval date.

Finds: N.M.S.

40. South Weald, Weald Country Park (TQ 569 940)

S. Godbold, E.C.C. (F.A.G.)

A watching brief located several features of post-medieval date relating to the former kitchen garden area of South Weald Hall, including a gravel metalled surface; several brick structures, mainly walls dated to the late 18th/early 19th centuries and a late 19th-century brick-built well. A brick-built vertical drain was also located, probably part of the Hall's formal gardens, and an extensively damaged brick structure lying close to the west side of the former site of the Hall's west wing. These latter features also contained bricks with a date range of late 18th to early 19th centuries.

41. West Tilbury, West Tilbury Hall (TQ 661 776) K. Reidy, E.C.C. (F.A.G.)

Six features were identified within the foundation trenches of an extension for a conservatory. A pit or ditch contained a single sherd of Late Romano-British pottery. Three flint-and-chalk footings were probably earlier than the 17th century. Two butted at right angles, running north-south and east-west. The third ran northeast-southwest. Two post holes or pits were probably post-medieval in date.

Survey

42. Aerial Survey

See this volume, pp. 250-3

43. Brentwood, Old Thorndon Pastures, Thorndon Country Park, (TQ 623 898)

I. Peet, E.C.C. (F.A.G.)

A contour survey of landscaped parkland was conducted in the area surrounding Old Thorndon Hall, as part of a project to create a model of the ancient landscape for public display. The Old Hall was the home of the Petre family, first documented in 1414, and demolished in 1763 when the Petres moved to New Thorndon Hall. The Old Hall was rebuilt and the gardens landscaped in the late 16th century and again in the years after 1733. The Old Hall was succeeded by Thorndon Hall Farm (also now demolished), and the landscaped gardens were made over to pasture. A relict mound known as the Pigeon Mount, a dovecote or gazebo (or possibly a dovecote converted into a gazebo) dating to the early 17th-mid 18th centuries, survives to the south-west of the Old Hall. The contour survey shows that the Hall stood near the top of a low hill, overlooking a gentle undulating slope down to the south-east. The Pigeon Mount was located at a prominent position near the top of the slope, and is still a highly visible landscape feature today. Trenching of the Pigeon Mount is the subject of a separate summary (see 5 above).

44. Industrial Archaeology Survey

See this volume pp. 255-60

45. Littlebury, Ring Hill Hillfort (TL 5155 3818)

A. Oswald, R.C.H.M.E.

The Royal Commission on the Historical Monuments of England carried out an earthwork survey of the Iron Age hillfort on Ring Hill. The survey was undertaken primarily as a training exercise for archaeology students from Cambridge University. The hillfort is univallate and fairly well preserved, but has been modified to some extent as a result of 18th-century landscaping

associated with the gardens of Audley End, including the addition of The Temple of Victory, and a walled garden which was formerly a menagerie. Both buildings survive but no detailed architectural survey was carried out. The survey covered an area of c. 8ha, most of which is planted with trees and was fairly overgrown when the fieldwork was carried out. The site occupies the end of a prominent chalk spur, at a height of between 78m and 92m above OD, and commands broad views along the Cam valley and eastwards towards Audley End house.

The hillfort is oval and generally respects the natural topography of the spur, but falls gradually towards its south-eastern end. The rampart has a slight counterscarp bank and encloses an area of 4.3ha, measuring 340m long southeast to northwest by up to 205m wide. It is most prominent on the north-eastern and south-western sides where the natural slope of the hillside has been exaggerated to form a very steep scarp, and where the rampart crosses the level top of the spur on the north-western side of the hillfort, the ditch is more massive. The internal bank can be traced around most of the circuit but appears to have been modified in the 18th century to form a carriageway around the interior of the hillfort. The counterscarp bank is absent on the northwest. There are four causeways across the ditch, but none can be identified as an original entrance with certainty. The interior of the hillfort was investigated, with the exception of the walled garden, but there appear to be no earthworks nor any surface finds associated with the Iron Age phase.

Most of the planting on Ring Hill originates from the re-design of the parkland by Launcelot 'Capability' Brown after 1763. These plantings originally framed the Temple of Victory, designed by Robert Adam and built in 1774-5, on or near the site of an earlier four storey tower or *belvedere* which was portrayed by Stukeley in 1722. A number of masonry fragments, some moulded, which are scattered around the north-western end of the hillfort may be remnants of this earlier building. The menagerie was completed in 1774 and comprised a Gothic-style cottage and an adjoining irregularly shaped enclosure of 2.90ha. Elements of the building appear to be 19th-century additions. The shape of the enclosure was always irregular and may have been designed to suggest a natural clearing in the forest, though the area was wooded by 1783. The wall is of mid-late 19th-century date and replaced an earlier high paling. The menagerie apparently replaced an earlier warren, probably contemporary with the early 17th-century estate, but possibly associated with the medieval Abbey of Walden. No earthwork evidence for the earlier phase could be identified.

46. Rochford, Rochford Hospital, formerly Southend Municipal Hospital (TQ 8732 9093)

H. Cooper-Reade, E.C.C. (F.A.G.)

A number of buildings (Daly's House, Matron's

House, the Training Unit and the Admissions Block) were recorded in advance of demolition. A full record was made of Daly's House and Matron's House with low level recording of the other buildings. These buildings were built between 1938 and 1941 as part of a major expansion scheme at the hospital

Although a major expansion of the hospital had been planned prior to 1929, the design of a new Hospital Extension Scheme began in 1932. Building work did not, however, begin until 1938. The extensions were largely complete by 1941. This was undertaken against a background of changes in public health provision that would eventually lead to the creation of the National Health service in 1948, just one year after the extensions were officially opened by HRH The Duchess of Kent.

The buildings were steel-framed and reinforced concrete structures, with flat-roofs and brick screen walls. The screen walls were constructed of yellow stocks laid in an English bond, with blue brick or concrete block plinths. Windows were regularly spaced and made of a light metal frame in a plain style and with brass fittings. The Matron's House, built in a different style to Daly's House, was a more typically suburban, detached house with hipped roof and grey pebble-dash exterior. However, in keeping with the functional, modern design Matron's House had few decorative details, with the exception of a canopy above the front door.

A few later modifications were made to the buildings. These comprise an extension to the administration block, an additional building adjacent to the Education Centre and an extension to the rear of the recreation hall. Most internal fixtures and fittings remained and of particular interest were the various light fittings, the wooden electric fire surrounds and the fitted furniture in the bedrooms.

The architectural style of Daly's House and its associated buildings can be best described as understated *moderne*. The above door pilasters and stepped glass frontage give the building a distinctly *moderne* look; however other elements, (e.g. sun bathing roof, aspects of the internal design) are more typical of the International Style. The function of these buildings was an important part of their design and it was hoped by those concerned with its design that Southend Municipal Hospital would serve as a model local authority hospital. A parallel and possible influence on Daly's House, is The Royal Masonic Hospital, Ravenscourt Park, London, built from 1929-33.

47. Tollesbury, Tollesbury Wick Marsh (TL 975 100)

T. Pearson, R.C.H.M.E.

Tollesbury Wick Marsh is an Site of Special Scientific Interest and a National Nature Reserve, and is a rare survival of coastal grazing marsh. It has been enclosed by a sea wall at least since 1777, which appears to have

been constructed in an attempt to capture hitherto unenclosed marshland. The area enclosed is riddled with a relict creek system, elements of which still contain water. Three sites were selected for earthwork survey, comprising two possible red hills, and an enclosure which had been noted during a reconnaissance visit.

The enclosure (TL 9736 1018) is sub-rectangular in shape, two sides defined by an extant creek and the remaining two, on the northwest and southwest, are narrower, straighter and shallower, clearly excavated to create the enclosure. A causeway in the southwest side provides access to the interior. The enclosure measures 49.0m by 45.0m. The interior is uneven. A slight irregular platform, situated close to the causeway, probably supported a structure of some kind.

One of the possible red hills (TL 9782 1016) consisted of a roughly circular mound (I) measuring 18.0m by 15.0m by 1.5m high, surrounded on all sides by the relict creek system. This mound is not recorded on Ordnance Survey maps of any date.

The other possible red hill (TL 974 094) is located at the south-eastern tip of a natural spur of slightly higher ground which appears to be largely devoid of relict creeks. This complex site occupies an area 130.0m by 75.0m on the western side of an extant creek. Smaller, now relict, creeks lead off this to form a dendritic pattern which feeds and terminates in a series of artificial rectilinear 'ponds' of varying sizes, ranging from 4.5m by 2.5m by 0.2m deep, to 25.0m by 7.5m by 1.0m deep. Within this pattern are two mounds: a is 12.0m by 10.5m by 0.6m high; and c is 19.0m diameter by 1.3m high. Mound a has an associated lower platform (b).

Evaluation of mounds I and b (see summary 17) indicated that these are not the remains of red hills; however they are comparable to groups of medieval mounds and tanks investigated in the past at Hullbridge and Tolleshunt D'Arcy, and interpreted as salterns.

Four other sites were investigated but not surveyed: a rectangular pond, use unknown; a possible enclosure, in fact natural; three parallel lines of pits, probably remains of a World War II land minefield; and a sinuous linear embanked feature, probably a causeway across the salt marsh.

48. Waltham Abbey, Royal Gunpowder Factory (TL 376 018)

N. Turner, Cw.A.T.

The Royal Gunpowder Factory had been a centre for the production of explosives for over 300 years until it was decommissioned in 1991. The site contains two scheduled areas and twenty one listed buildings. In May 1995 survey was undertaken of a section of canal, a sluice system, and an incorporating mill which had been discovered during the decontamination programme on what was thought to be the site of an early gunpowder mill. The survey, on behalf of the Defence

Estate Organisation, identified three distinct phases of construction, each with evidence for alteration and repair. A section of planking associated with the earliest phase may be related to the early mill. The two later phases relate to well-documented expansions in production during the 18th and 19th centuries.

49. World War II Defences Survey

F. Nash, E.C.C. (A.A.G.)

During 1994 the survey of the General Headquarters (GHQ) Line, Britain's main line of defence in 1940, commenced from the point it entered the county at Great Chesterford, following it southwards along the River Cam through Audley End to Wendens Ambo. The first half of 1995 saw the continuance of the recording of this defensive line. From Wendens Ambo, the pillbox defences followed the west bank of the Cam to Newport before striking off south-eastwards via Debden Water to join the River Chelmer at Tilty. From here, the chain of pillboxes - sometimes sited on the river bank, sometimes in the fields and hedgerows further back - continued southwards, using the river as a natural anti-tank barrier, around the eastern side of Great Dunmow to Great Waltham. Although the survey has not recorded the sites beyond this point, the GHQ Line continued around Chelmsford to eventually join the Thames estuary at Canvey Island. From Great Chesterford to Great Waltham a total of 163 pillboxes were recorded of which 116 remain extant.

At each of the places along the line where a road bridge crossed the river a concrete and steel barrier was erected. These took several forms. In one, large concrete blocks were set into the roadside at one end of the bridge and cut lengths of railway line were dropped into metal sockets between them to present a "hedgehog" of steel. Alternatively, a heavy steel cable anchored between them could be raised or lowered. As a further alternative, wide bands of 2ft high concrete cones, known as "pimples" or "dragon's teeth" were set in rows four or five deep creating a trap for tanks attempting to cross them. Between Great Chesterford and Great Waltham 23 road barriers were recorded along the GHQ Line. In contrast to the high survival rate of the pillboxes very few of the barriers now remain. The great majority were demolished shortly after the war as their roadside position made them a dangerous traffic hazard and only the few cable blocks at Audley End now survive (cf Gilman and Bennett (eds) 1995, Plate I).

A number of spigot mortar sites were recorded (Plate II). Following their issue to the Home Guard in 1942 these anti-tank weapons formed a major part of the defences of most towns and many villages. However, the survey has recorded spigot mortars sited to augment the main pillbox and anti-tank defences along the GHQ Line at a time when the concept of linear defence had become secondary to a more flexible "all-round" defensive system.



Plate 2: Spigot Mortar Pedestal at Tilty with the remains of its ammunition alcoves (Photo by Fred Nash).

During the autumn the survey moved to the coast, recording the anti-invasion defences in Frinton and Walton-on-the-Naze. Although hardly any traces remain, Frinton was particularly well-fortified. Pillboxes, trenches and barbed wire dotted the Greensward, two 6-inch naval guns dominated the cliff top opposite the Grand Hotel and by linking the houses and hotels along the Esplanade with hundreds of concrete blocks and "pimples" a one-and-a-half-mile-long anti-tank barrier was created along the sea front.

On the Naze at Walton some of the pillboxes still remain although erosion of the cliff top over the years has caused two of them to slide down onto the beach where they now provide the unusual sight, at high tide, of a pair of concrete blockhouses sitting in the sea.

Previous Summaries: Gilman (ed.) 1994, 256-7; Gilman and Bennett (eds) 1995, 256-7.

Abbreviations

A.C.A.	A.C. Archaeology	E.F.D.M.	Archaeology Group)
B.M.	British Museum	H.B.A.S.	Epping Forest District Museum
Bt.M.	Braintree Museum	H.M.	Howard Brooks Archaeological Services
Ch.E.M.	Chelmsford and Essex Museum	N.M.S.	Harlow Museum
C.A.T.	Colchester Archaeological Trust		Newham Museum Service (formerly
C.M.	Colchester Museum (formerly		Passmore Edwards Museum)
	Colchester and Essex Museum)	R.C.H.M.E.	Royal Commission on the Historical
Cw.A.T.	Cotswold Archaeological Trust	S.C.C.	Monuments of England
E.C.C. (A.A.G.)	Essex County Council (Archaeological	S.M.	Suffolk County Council
	Advisory Group)	S.W.M.	Southend Museum
E.C.C. (F.A.G.)	Essex County Council (Field	T.M.	Saffron Walden Museum
			Thurrock Museum

Bibliography

Brown, N. and. Flook, R	1992	'Archaeology at Cressing Temple 1988-90', <i>Essex J.</i> 25 No. 2, 39-41	Greenwood, P.A.	1986	'A Late Bronze Age - Early Iron Age Field System and Settlement at Whitehall Wood, Upminster', <i>The London Archaeologist</i> 5, No. 7, 171-175
Department of the Environment	1990	<i>Planning Policy Guidance Note 16, Archaeology and Planning</i> , HMSO			
Department of the Environment and Department of National Heritage	1994	<i>Planning Policy Guidance Note 15, Planning and the Historic Environment</i> , HMSO	Greenwood, P.A.	1992	'Archaeology in Havering 1991-92 - the Highlights', <i>Havering History Review</i> 13, 46-48
Gilman, P.J. (ed.)	1989	'Excavations in Essex 1988', <i>Essex Archaeol. Hist.</i> 20, 157-171.	Powell, W.R.(ed.)	1966	<i>The Victoria County History of Essex</i> 5,
			RCHM	1923	<i>An Inventory of the Historical Monuments in Essex</i> , IV.
Gilman, P.J. (ed.)	1990	'Excavations in Essex 1989', <i>Essex Archaeol. Hist.</i> 21, 126-139	Robey, T.	1993a	'The Archaeology of Cressing Temple' in D.D. Andrews (ed.) <i>Cressing Temple, A Templar and Hospitaller Manor in Essex</i> .
Gilman, P.J. (ed.)	1991	'Excavations in Essex 1990', <i>Essex Archaeol. Hist.</i> 22, 148-161.			Essex County Council.
Gilman, P.J. (ed.)	1992	'Archaeology in Essex 1991', <i>Essex Archaeol. Hist.</i> 23, 98-113.	Robey, T.	1993b	'Cressing Temple', <i>Current Archaeol.</i> 135, 84-87
Gilman, P.J. (ed.)	1993	'Archaeology in Essex 1992', <i>Essex Archaeol. Hist.</i> 24, 195-210.	Rodwell, W.	1993	<i>The Origins and Early Development of Witham, Essex</i>
Gilman, P.J. and Bennett, A	1995	'Archaeology in Essex 1994', <i>Essex Archaeol. Hist.</i> 26, 238-258	Strachan, D.	1995	<i>Tollesbury Wick Marsh, Air-photo Interpretation</i> , Essex County Council Internal Report
Greenwood, P.A.	1982	'Cropmarks at Moor Hall Farm, Rainham, Essex', <i>The London Archaeologist</i> 4, No. 7, 185-193	Tildesley, G.M.	1971	'Roman pottery kilns at Rettendon', <i>Essex J.</i> 6 No. 2, 35-50

Historic Buildings Notes and Surveys

During the course of its work the Essex County Council Historic Buildings and Design Section surveys and records a number of buildings each year. Some of this work is carried out with members of the Essex Historic Buildings Group, the Essex Architectural Research Society, and other experts whose collaboration and assistance is much appreciated.

Orsett, Old Hall Farm
D.F.Stenning, P.M.Richards and P.M.Ryan

This building invites comparison with the Radwinter cross-wing described below. Now part of a later complex, it is an elaborate structure with sophisticated elements not usually found in conventional domestic cross-wings. The flank walls incorporate arch bracing, not uncommon in this south-western part of the county probably as a result of the influence of London. The building is of two bays, with one room on each floor and with a crown-post roof. The arrangement of doors and its relationship with an adjoining block suggests the former existence of a covered external staircase to the rear of the building (Figs 1 and 2).

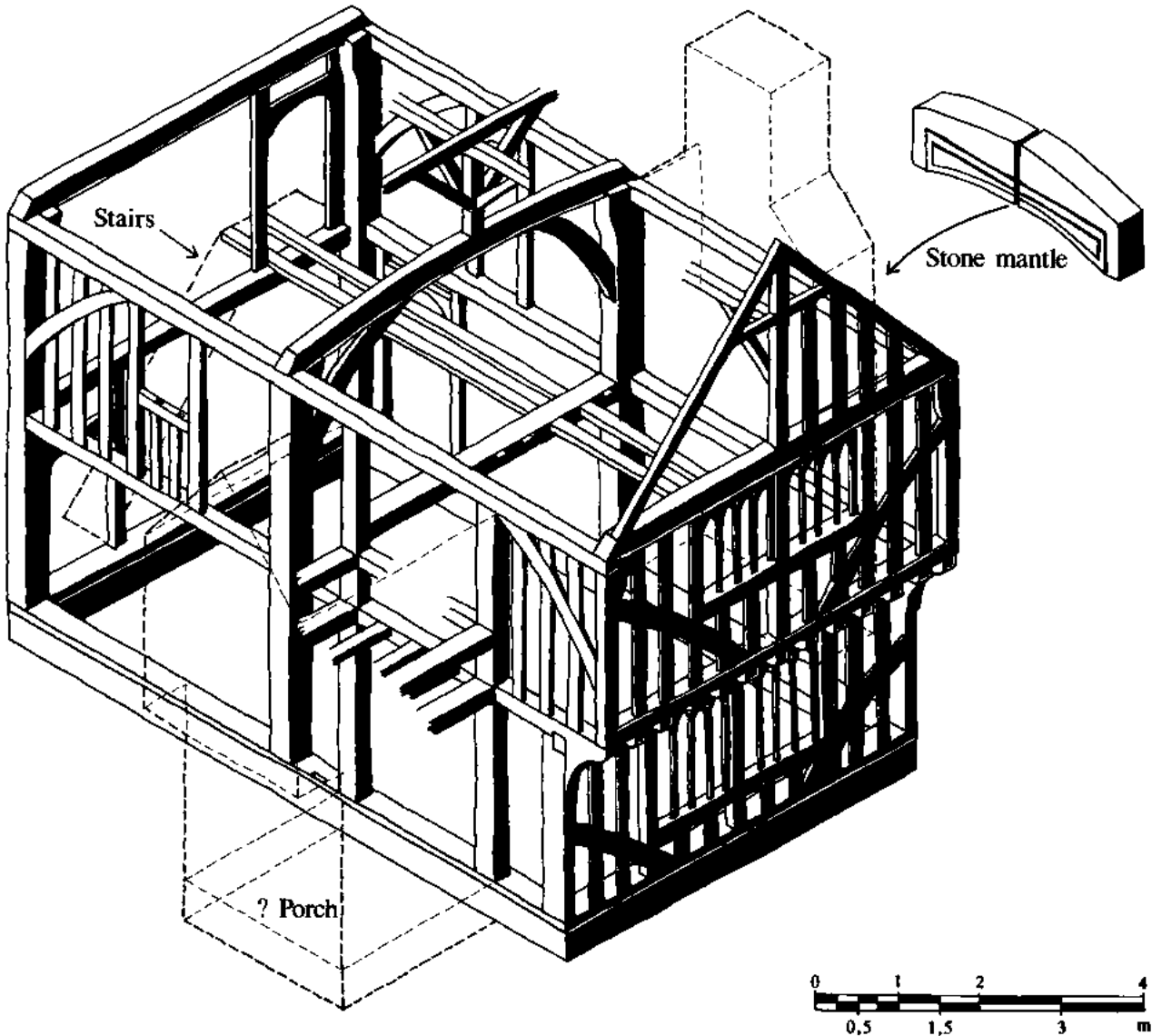


Fig. 1 Orsett, Old Hall Farm, drawing of the timber frame

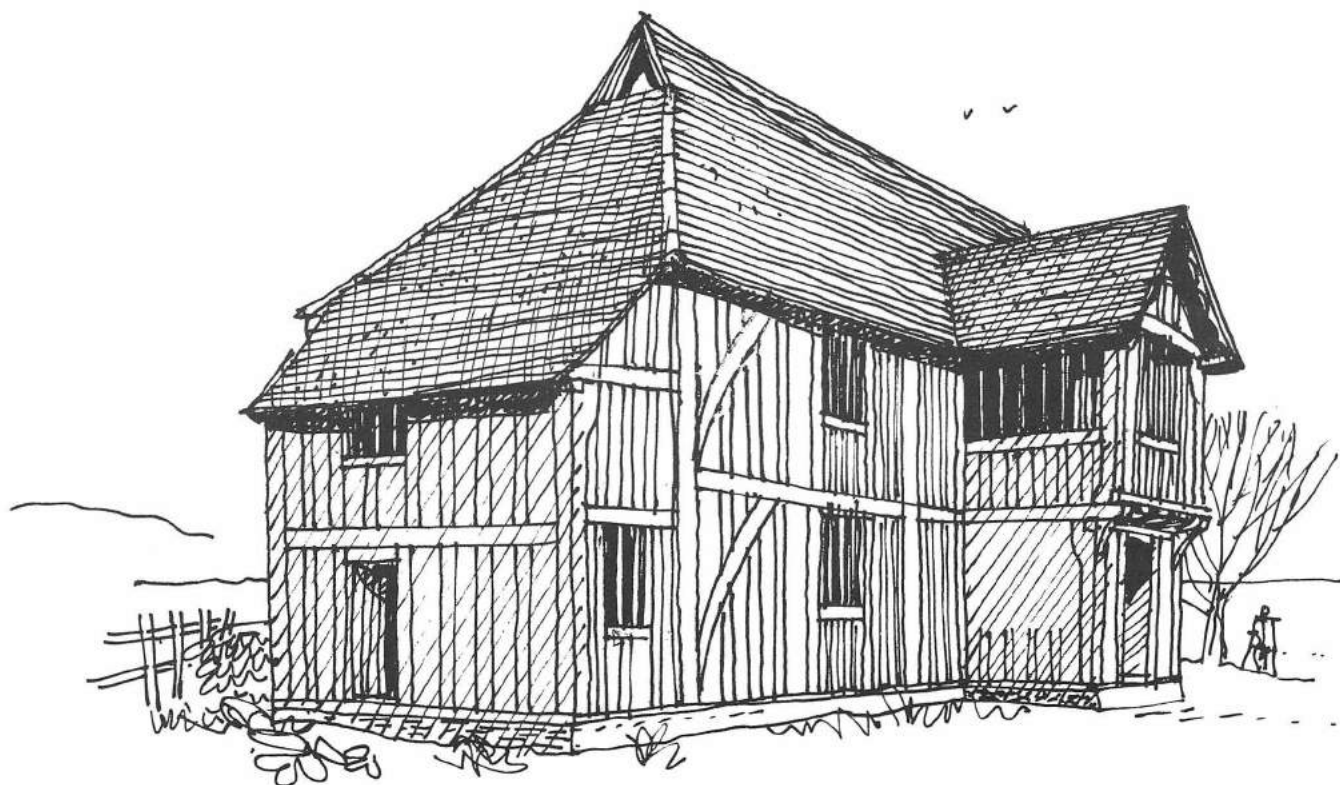


Fig. 2 Orsett, Old Hall Farm, reconstruction of the original timber-framed building

A flank wall has an apparently contemporary brick stack with a carved and moulded stone mantel arch. On the exterior of the opposite flank, a series of mortices imply the existence of an attached structure. It is likely that they represent a lost two-storey porch - an improbable feature in such a location.

Old Hall Farm forms part of an extensive moated site formerly in the possession of the bishop of London. The bishop's tenant in the 1460s was a Robert Hotoft who carried out repairs to various buildings, including the *Newehous* (Guildhall Library, MS25, 416/5). It is likely that the cross-wing is this *Newehous* and the carpentry seems consistent with a mid 15th-century date. It remains unclear whether there was once an open hall on the fireplace flank.

Radwinter, The Old Vicarage

D.F.Stenning

The present owner has documentary information indicating that this building is a purpose-built priest's house constructed shortly before 1520 (Fig. 3). Externally, it resembles a typical cross-wing. It is of three structural bays, and has two unequally sized rooms on each floor. The gabled front is jettied, and has the remains of oriel windows on each floor and of apparently original moulded bargeboards. In one flank is the entrance door, with a four-centred arched head

and sunken spandrels. In the opposite wall is a contemporary brick stack with a later fireplace added at the first floor. Against the rear elevation is a two-storied contemporary garderobe tower, an unusual survivor, but similar to that at Thatchers Farm, Roxwell. The construction of the building is conventional, but the use of internal tension wall bracing seems precocious at this date.

It is evident that the structure which survives represents a complete building and the lack of an open hall is noteworthy. However, the documentation indicates that there was also a detached kitchen with an upper room suitable for guests. In many respects, the building resembles the All Saints Vicarage at Maldon, which is another documented priest's house though one almost a century older. Other probable late medieval priest's houses survive at Church End, Dunmow (The Old Vicarage) and adjoining the churchyard at Saffron Walden (Vergers Cottage and Parish Room).

Witham, 126 - 128 Newland Street TL 8192 1432

B.A.Watkin

In the Autumn 1995 Ancient Monument Society newsletter the main street of Witham is described as "one of the most attractive historic townscapes in Essex. It appeals not just for its architectural diversity but for the almost complete lack of eyesores."

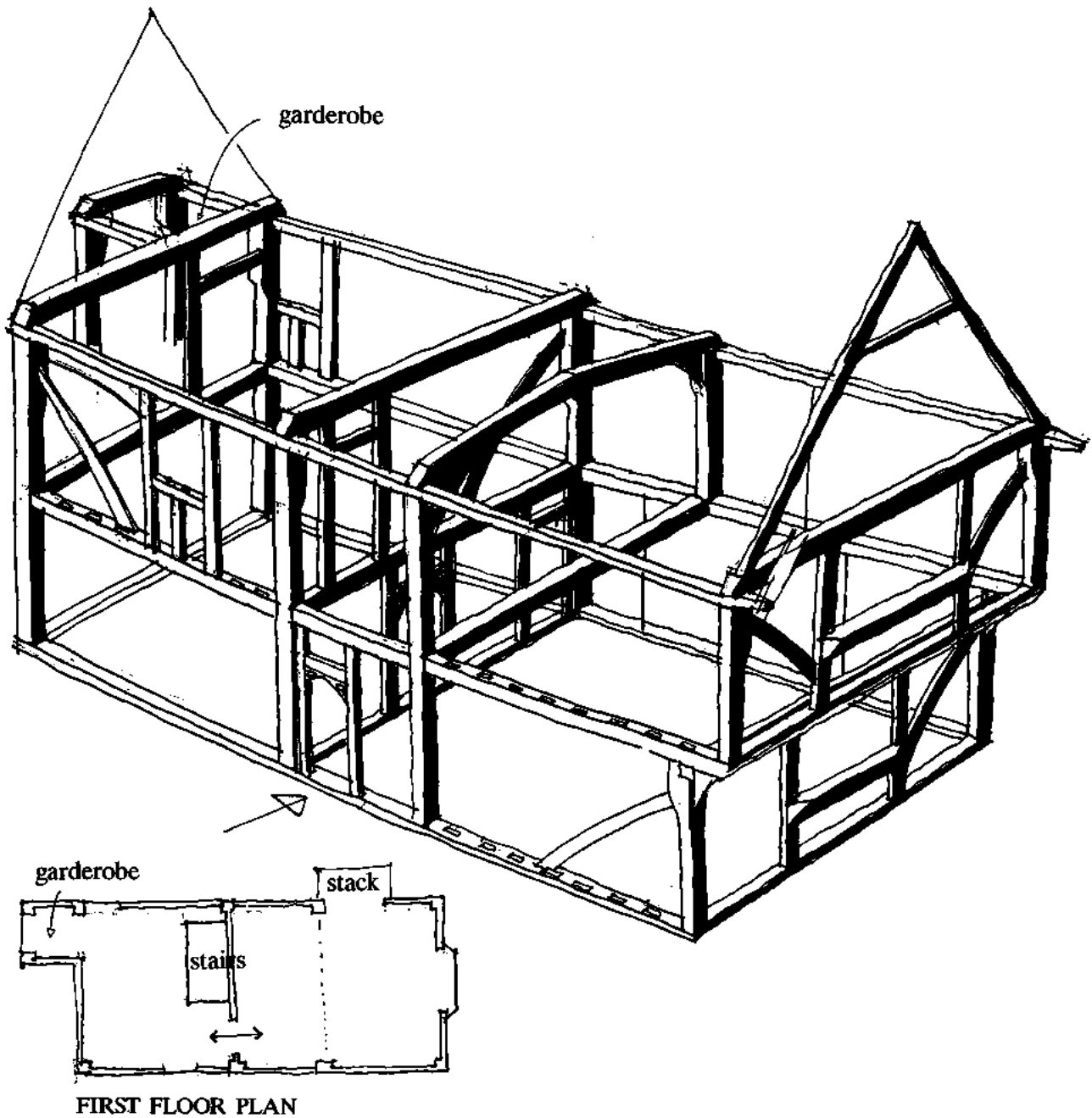
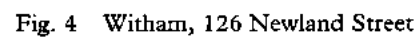
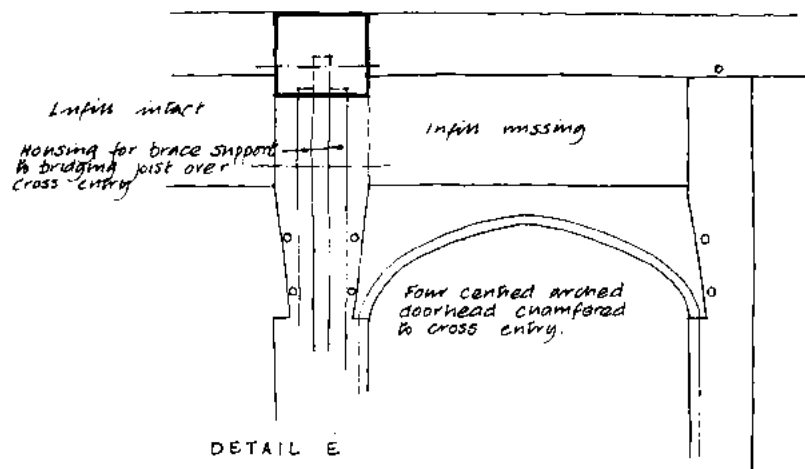
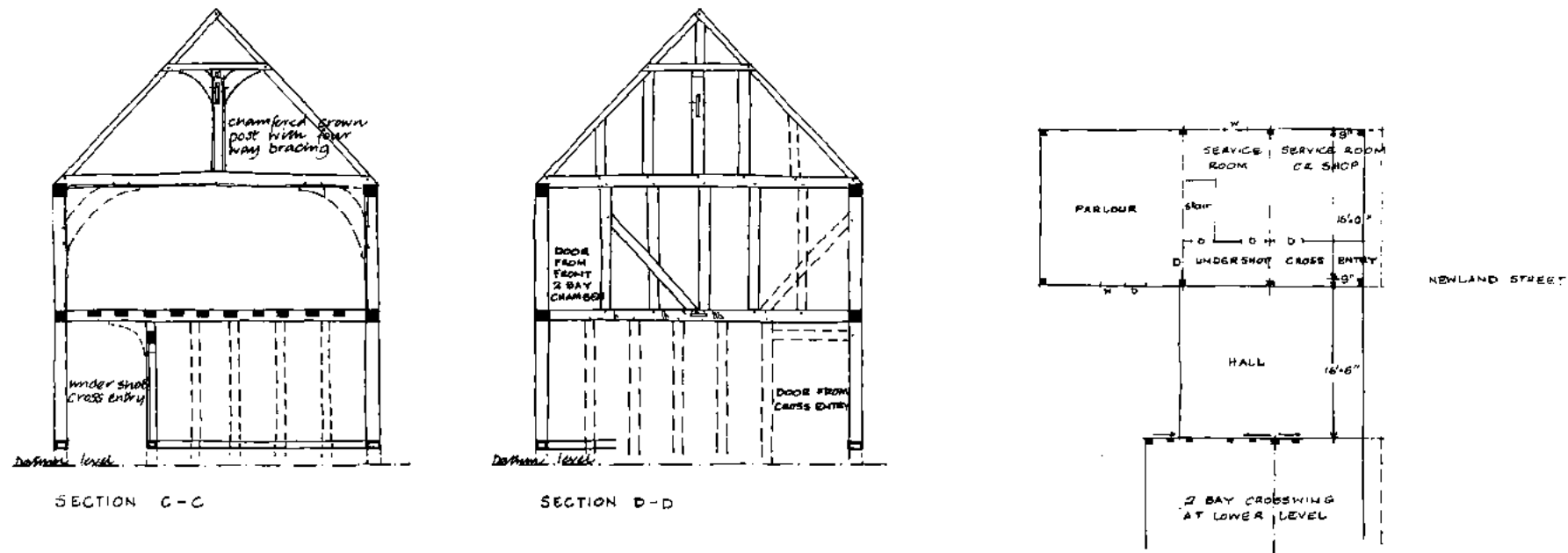


Fig. 3 Radwinter, The Old Vicarage

126-128 Newland Street is one of those buildings that makes a considerable contribution to the historic townscape (Figs 4-6). From the outside, except for the modern shopfront insertions, all the characteristics of an early Georgian building are evident: a parapetted brick facade, built in flemish bond with very fine gauged brick window heads and detailing, early sash windows with ovolo moulded glazing bars and six panelled door with surrounding doorcase. In the 19th century, the building was the Blue Post Inn with the adjacent building, now the Crotchet Public House, used as the tap room. More recently it had been Coates electrical shop until retirement finally closed it.

Work carried out to the building in the early part of 1995 disclosed a medieval cross-wing and remnants of an adjacent cross-wing flanking the space previously occupied by the open hall. Other cross-wings recorded in Newland Street have been of modest size i.e. two bays (cf. Watkin 1992). However the cross-wing of 126 Newland Street comprises three bays and also encompasses an undershot cross-passage. Whilst cross-passages contained within rather than adjacent to the service end cross-wing are not uncommon, this passage terminates at the entrance to the rear chamber and did not give the usual direct access to outside, a plan form that is more usually found in urban areas (cf. Stenning 1991).



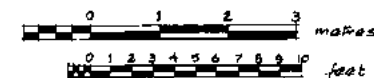


3 bay crosswing with undershot cross entry leading to rear bay parlor. Stairs leading directly from the passage to first floor front two bay chamber with door through to rear bay chamber. Two paired four centred arched openings give access to service rooms of which the front bay may have served as a shop. (all evidence lost.)

The frame is well converted although the timber was of below average size. Storey posts are positioned as in the Colchester style of carpentry with external tension-braces branched into the studs.

- Stud spacing averages 2' 4" centres.
- Joists of horizontal section are housed into the bridging joists with centre tenons.
- Windows have diamond mullions with grooves in the mid rails or wall plates for sliding shutters.
- Scarf joints are of edge halved & bridled type with a face peg.
- Paired rafter roof with crown posts. Open bay crown post chamfered with four way bracing. (short spandrel type bracing)

Original daub infill survives which is of a high straw content onto riven oak lathes. Evidence survives as an imprint in later plaster of the original scratch design.



126, NEWLAND STREET : WITHAM

SHEET 2

ESB/BAW/12/110 May '95

Fig. 5 Witham, 126 Newland Street

126, NEWLAND STREET : WITHAM

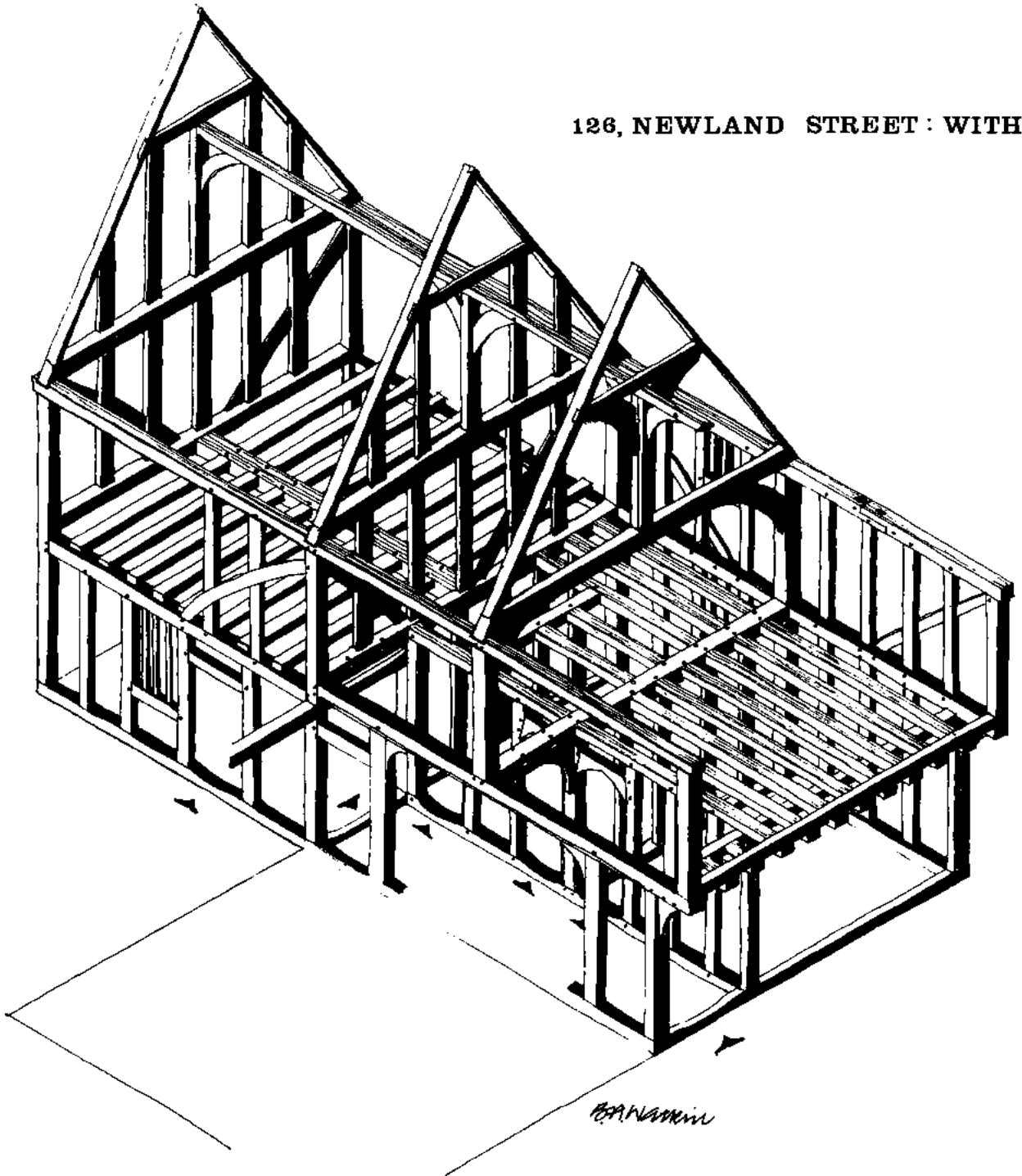
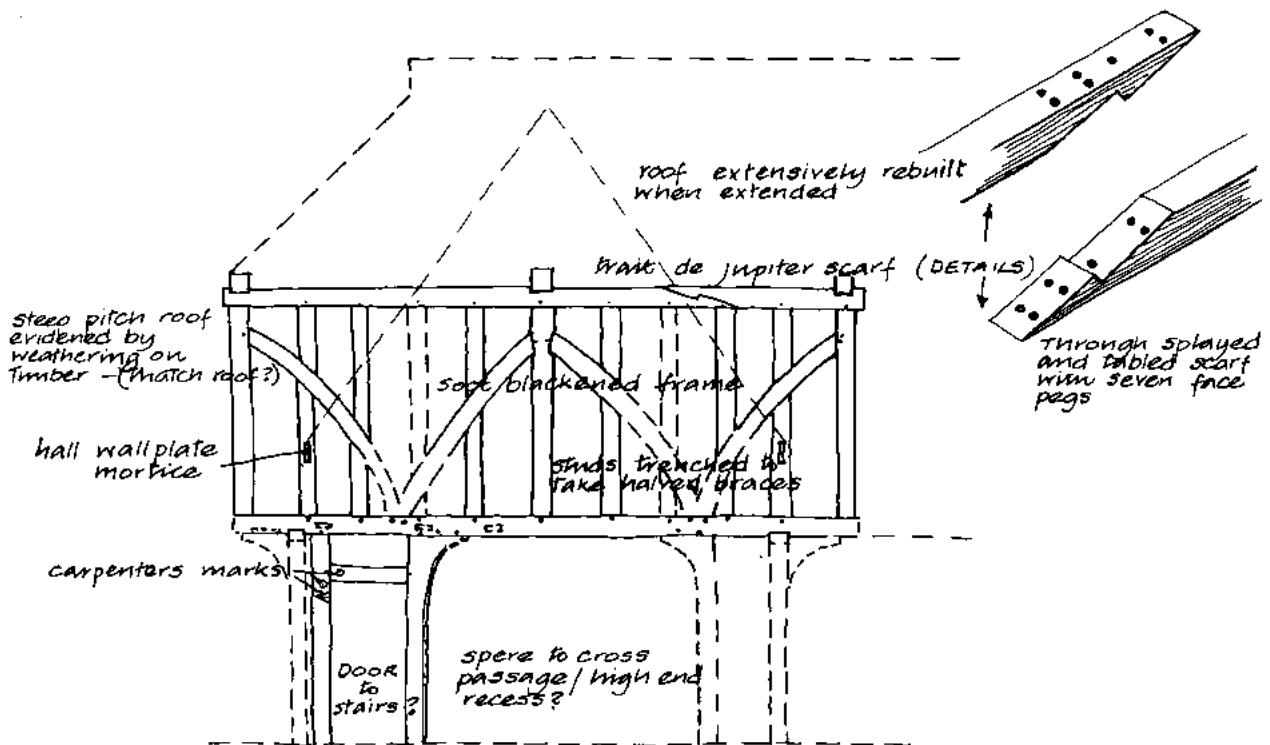
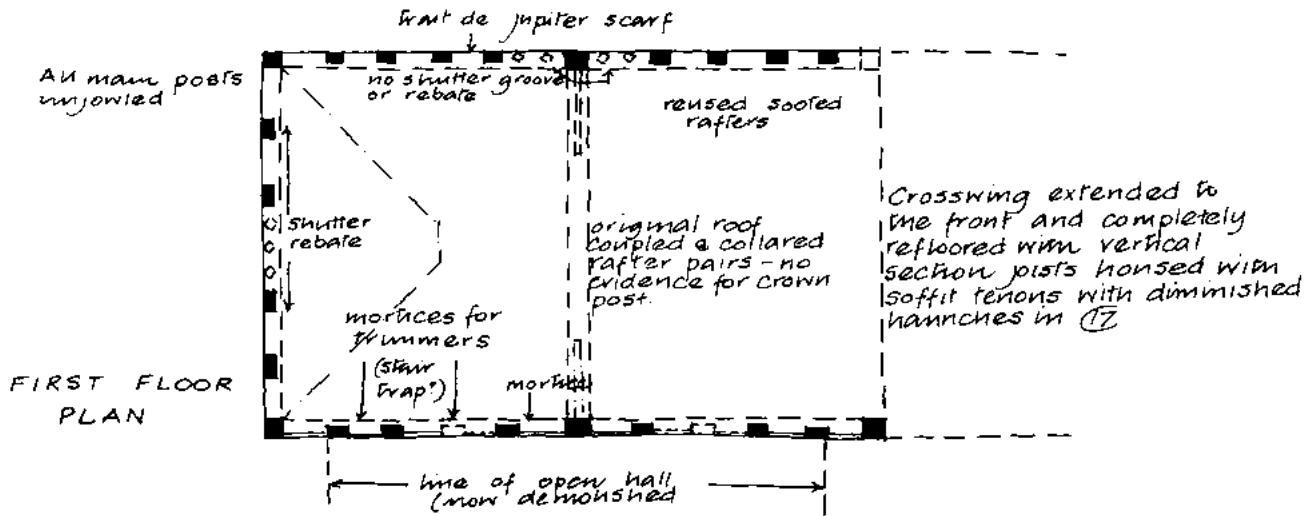


Fig. 6 Witham, 126 Newland Street, isometric projection

The framing of the building was of well converted oak, although smaller in section than that found in other buildings in Witham of later date. The wall studing was widely spaced with slightly curved braces trenced into the external face of the studs. The wattle and daub infill showed evidence of a lined and diamond scratch design similar to that found at 6A, East Street, Coggeshall. The bridging joists were chamfered with step run-out stops, and the horizontal section common joists were housed with centre tenons. The

roof was of coupled rafter construction with a four-way braced crown post to the central tie-beam of the two-bay front chamber. This crown post was simply chamfered at the edges and the braces of spandrel profile whilst the other crown post had curved axial braces. The wall plates were joined by an edge-halved and bridled scarf with a face peg (cf. Hewett 1980, 267). The datable features and construction suggest a 15th-century date.

The ground-floor plan consisted of three rooms all



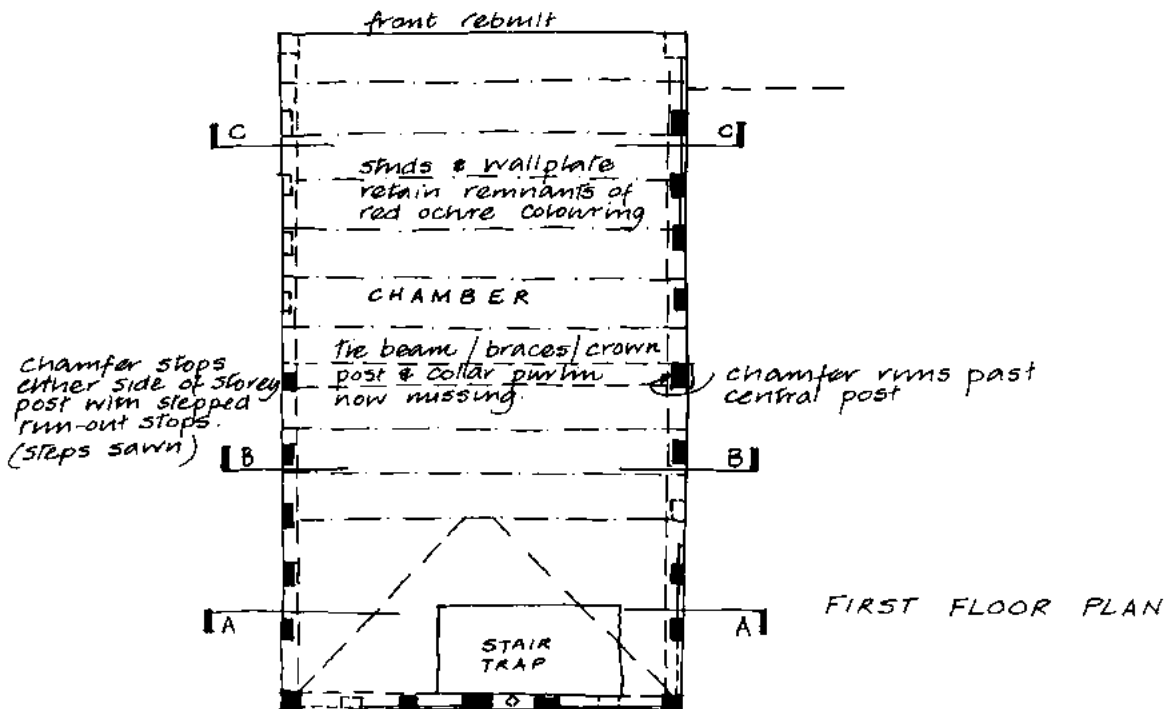
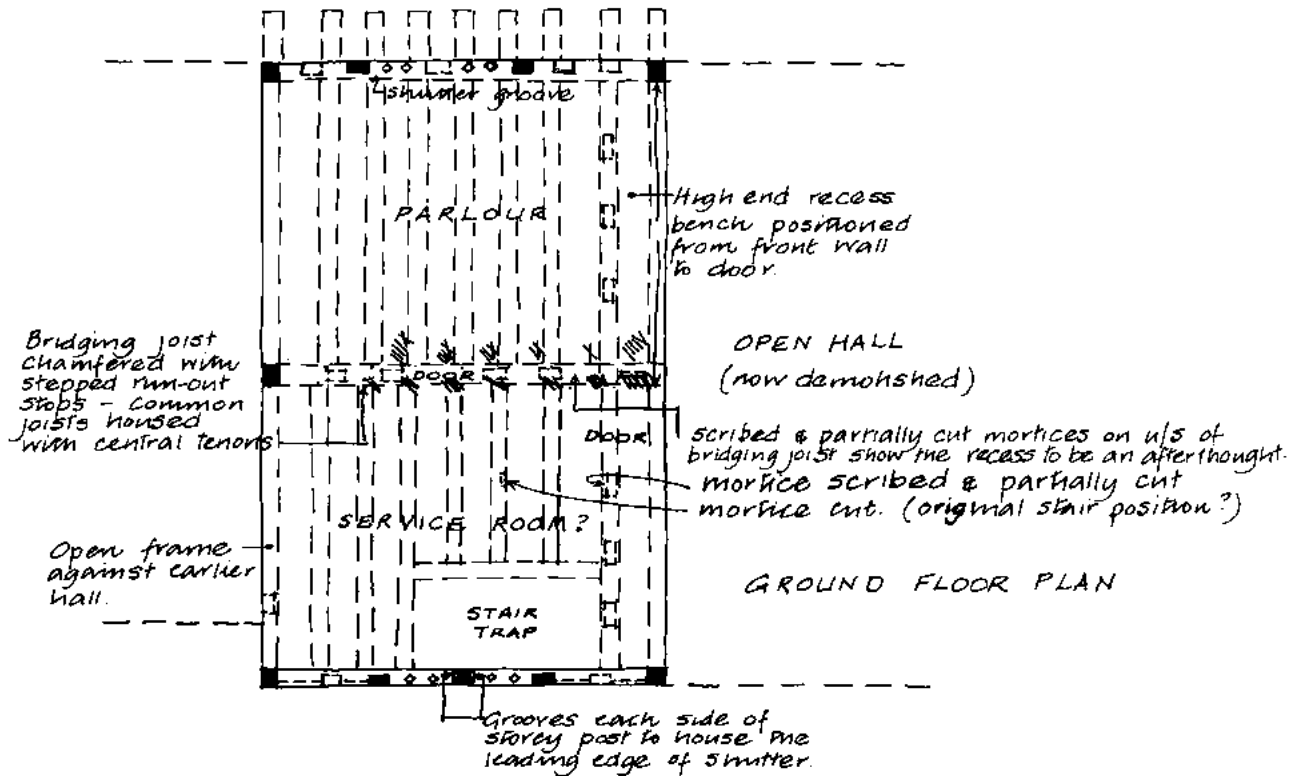
ELEVATION FROM OPEN HALL

26, CHIPPING HILL : WITHAM
(formerly called 'Druggles')

ESB/BAW / June '93

Fig. 7 Witham, 26 Chipping Hill

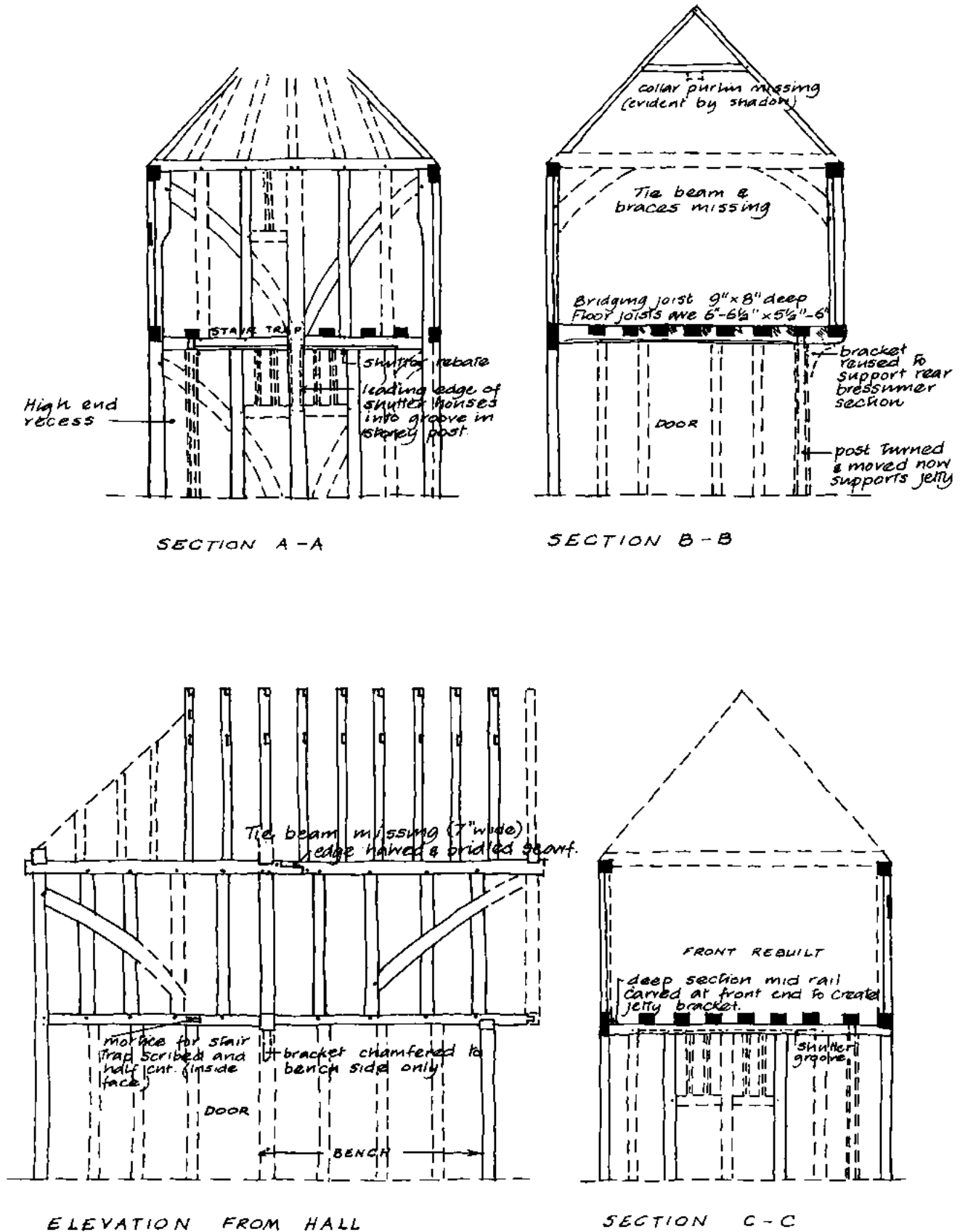
28, CHIPPING HILL : WITHAM
(formerly called 'Struggles')



ESB/BAW / June '93

Fig. 8 Witham, 28 Chipping Hill

28, CHIPPING HILL : WITHAM
(formerly called 'Struggles')



ESB/BAW / June '93

Fig. 9 Witham, 28 Chipping Hill

entered from the cross-passage, the two front service rooms through doors with four-centred arched heads each side of the dividing partition. The rear parlour has evidence for another door, adjacent to a diamond mulioned window, that gave direct access to outside. Unfortunately all of the front wall was lost when the Georgian refronting took place so that it is now impossible to prove the probable presence of a shop use for the front room.

Stairs to the first floor, evidenced by the trap framing, were sited against the partition dividing the front two rooms from the rear parlour and were entered directly from the passage. At first-floor level the stairs came up into the two-bay front chamber with a door giving access to the rear chamber over the parlour.

Sufficient evidence also remained to allow the reconstruction of the opening to the hall. The mid rail framing had its hollow chamfer decoration to the hall side still soot-blackened. Each side of the opening were mortises for a spere post creating short sections of screen.

Although the overall dimension of the cross-wing was 17' 6" it was pleasing to note that the width across the former open hall to the adjacent cross-wing frame was 16' 6", a rod. The rod was the basic unit of measurement commonly used for medieval architecture and town planning.

Witham, 26 - 28 Chipping Hill TL 8168 1533 B.A.Watkin

Sitting below the medieval church of St. Nicholas, and positioned at the back of the green is a vernacular house of the typical Essex double cross-wing form. During 1993 repairs were carried out to the house, providing the opportunity to examine and record the structure (Fig. 7-10).

Prior to the sale and repair of the house it had been divided into three properties. The extent of each of these was determined by the natural elements of the plan form. Thus the two cross-wings each formed one individual unit, and the central two-storey hall range the third unit. On the sale of the houses it was to revert back to its original state of a single occupancy.

The eastern, double jettied two-bay cross-wing, nearest the church entrance, had been extensively altered. The addition of another bay to the front of the original two bay structure and the complete reflooring, including bridging and common joists, had taken place in the 17th century. It was probably this operation that also destroyed the crown posts and braces of the roof. However, in spite of the loss of this datable evidence enough of the fabric survived for a date to be suggested. The wall plate was joined by a through splayed and tabled scarf with seven face pegs known as a *trait-de-Jupiter* and datable from the late 12th century to the early 14th century (cf. Hewett 1980, 263). The use of "W" style display bracing to the high end indicates a

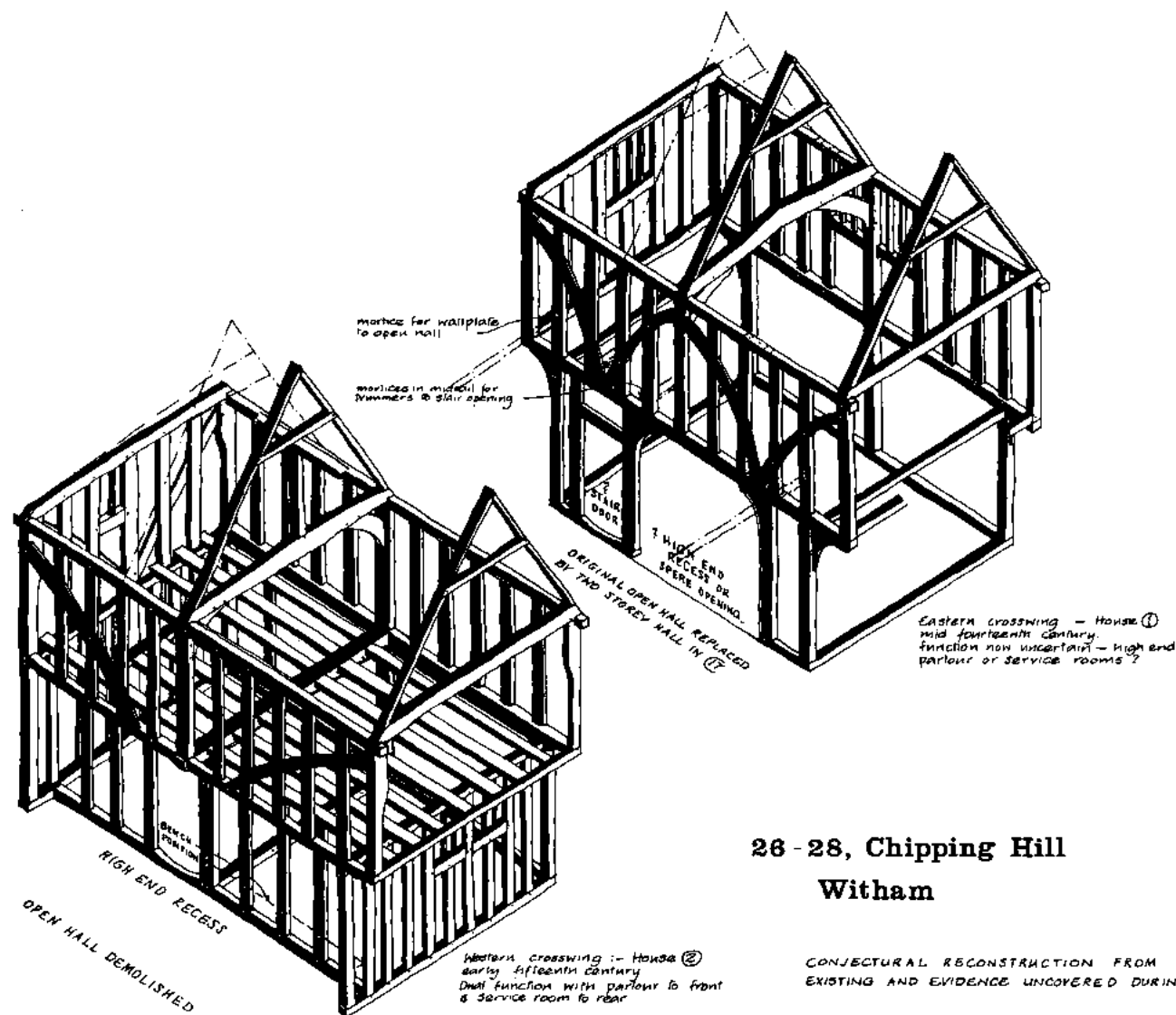
14th-century date. How the plan of the cross-wing worked is more problematic due to the extensive changes and it is now impossible to demonstrate whether the opening against the hall was a spere entrance to the hall from a cross passage or a high end recess. Remnants of soot blackened wattle and daub infill and the blackening of the timbers confirmed that an open hall had been replaced by the present 17th-century two-storey hall and brick stack.

The timber used in the construction of the cross-wing was of oak and of minimal size. The storey posts were unjowled, a characteristic of Colchester carpentry and already noted at 33, Newland Street, Witham (Watkin 1992). The studs were spaced at 2 foot (600mm) centres.

The western cross-wing, furthest from the church, was least altered and significantly different in style and carpentry. The storey posts were jowled and the wall plates were joined by an edge-halved and bridled scarf. The braces were of the typical arched tension type falling from the corner posts to the mid rail. The heavy flat-section joists were housed into the bridging joist with central tenon joints, which with the other features would be consistent with a late 14th or early 15th-century date. The timber in the construction was fast-grown oak and the size and detail used is consistent with high class carpentry.

Of particular interest was the recess for the high end bench, formed as an internal jetty, which created an important focus point at the high end. However this feature occurred in the western wall now covered by a modest lean-to extension. It did not relate to the original open hall or its 17th-century replacement. What appears from the outside to be a typical double cross-wing house was in fact the hall and cross-wing of one unit with the western cross-wing originally serving the now demolished hall of another house.

The evidence of the development of the house has been further substantiated by documentary evidence in the Essex Record Office and kindly supplied by Mrs. Janet Gyford. In 1442 the manorial records note that "Edmund Brid held a tenement formerly called Drogles, afterwards of Robert Odyn, for 14d. per annum. Now of John Pennyngton" (D/DBwQ1). In 1608 the house was in the ownership of Jerome Gerrard who held tenements at Le churchgate of Witham called Druggles and Struggles for an annual rent (T/B 71). Manorial court rolls of the time of Henry VII reveal that it was then held by copyhold of 14d. per annum. Was this property built on the market area as the size and importance of the Chipping Hill market continued to wane after the grant of the Newland Street market to the Knights Templar in 1212? In 1680 the property was occupied by Edmund Taylor (D/DBwM63), one of the first nonconformist parsons in Witham, and the house was licensed for nonconformist worship. In such a close position to the church it really must have been the stranger at the gate!



26-28, Chipping Hill
Witham

Fig. 10 Witham, 26 and 28 Chipping Hill, reconstruction

Essex tree ring dates

D.D.Andrews

For several years, Essex County Council and the English Heritage funded Dendrochronology Laboratory at Sheffield University have had a programme of sampling and analysis to create a tree-ring curve for the county which will assist in dating and understanding historic buildings and archaeological artefacts. A list of Essex tree-ring dates up until 1993 was printed in Tyers 1993.

Recent tree-ring determinations include the following:

Clavering, The Bury	1304
Coggeshall Grange Barn	1237-82

Cressing Temple Granary	1623
Saffron Walden, St. Aylotts	1500-1501
Southchurch Hall	1321-1363

The Coggeshall Grange Barn result is new data from a slice from an arcade post with a single sapwood ring and refines previous results, showing that the barn was probably built between the two great barns at Cressing Temple.

Published lists of tree-ring dates omit the samples that fail to be dated, of which there are a significant number. Notable amongst failures are the samples that have been taken from the town of Maldon. These include the two pairs of Wealden houses that have been discovered, and the Darcy Tower or Moot Hall.

Bibliography

Andrews, D.D,	1994	'The Granary at Cressing Temple', <i>Essex Archaeol. Hist.</i> , 25, 79-106	Tyers, I.	1993	cross passage', <i>Essex Archaeol. Hist.</i> 22, 180-83
Robey, T., Ryan, P. and Tyers, I.					'Tree-ring dating at Cressing Temple, and the Essex curve', in D.D. Andrews (ed.), <i>Cressing Temple. A Templar and Hospitaller manor in Essex</i> , Chelmsford: Essex County Council, 77-83
Hewett C.A.	1980	<i>English Historic Carpentry</i> , Phillimore: London and Chichester			
Gibson A.V.B.	1994	'The constructive geometry in the design of the thirteenth-century barns at Cressing Temple', <i>Essex Archaeol. Hist.</i> 25, 107-112	Watkin B.A.	1992	'33, Newland Street, Witham', <i>Historic Buildings in Essex</i> , 6, 12-17
Stenning, D.F.	1991	'The extended intruded			

Church Miscellany

This review summarises the results of watching brief and recording work at churches carried out by the County Council Historic Buildings and Archaeology Sections and by others. Such work is typically occasioned by the excavation of dry areas round churches, and by repairs to floors, roofs, and wall plaster, and is carried out under faculty jurisdiction as administered under the Care of Churches Measure 1991. The co-operation of incumbents and churchwardens, architects and contractors, and the role of English Heritage in grant-aiding restoration and recording, is acknowledged with appreciation. More detailed accounts of some of the work reported on here can be found in the County Historic Buildings Record and Sites and Monuments Record.

Tree-ring dating

As occasion arises, and in particular as a result of the Bellframe Survey (see below), a number of tree-ring determinations have been carried out at churches by the Dendrochronology Laboratory at Sheffield University. The most notable recent investigation is that carried out at the church of St. Andrew at Greensted-iuxta-Ongar which has been shown to date from 1053 $\pm$ 10-50 years, the latter being an estimate to allow for the missing sapwood. As such it must almost certainly be an early Norman building, not an Anglo-Saxon one. A full account of the results can be obtained from the English Heritage Ancient Monuments Laboratory at Fortress House, 23 Savile Row, London W1. Further research on the implications of this result is planned.

Other results include:

Cressing belfry	c.1410
Stondon Massey belfry	1408
Ramsden Bellhouse belfry	1413

Essex bellframes survey

Elphin Watkin

This survey, funded by English Heritage and carried out by Essex County Council, was prompted by concern over damage to medieval bellframes caused by the

maintenance and up-grading needed to make them equal to the stresses and strains of modern change-ringing. Work began in 1992 with a pilot study which saw the production of a report in 1994 which includes a database containing all known information on the bellframes in the county. This has revealed a high rate of survival of older frames compared with what is known of some other counties. A second phase of work has begun attempting to use dendrochronology to provide dates on which to hang the typological assessment of the bellframes. So far, results have been mixed as it is proving difficult to find bellframe timbers with sufficient rings to be datable.

Much is known of church bells but little of the history and development of the bellframes which until about 30 years ago were treated as something in which the bells were hung but little study or recording took place.

They are in fact a major item of history within our churches and the massive loss of frames with no record was a serious omission of a feature known to exist within our churches since before 900AD. Essex agreed in 1992 to carry out the pilot survey as a possible first stage of a national survey. It would set out to show the amount of work required, to give some idea of the cost involved and the possible problems in conducting a survey of this type.

The survey was to be limited to the bellframe only, except where the structure of the tower or other associated items showed direct links to the frame in construction or history which would add information to the survey.

A database was set up listing all Anglican churches with bellframes. The system of classification of bellframe types illustrated in *Bellframes - A practical guide to inspection and recording* by Christopher Pickford (1993), was used to allow for national standardisation.

Having entered the existing records into the database a decision was made to concentrate on pre-1800 churches and churches with no previous notes or records. The reason for this cut-off was to limit the early phase of the survey to churches with possible historic frames, being those most at risk, and, in the case of no record, to assess what existed. In this list some 47 churches were noted showing no record of a frame. These churches have been visited and a brief assessment made of the age, quality, and condition of their bellframes.

Having collated and assessed the information so gathered, it became obvious that records made in excess of ten years previously were of limited value in the light of the many changes which had taken place. Some of the records had been made more than 50 years ago. This stage involved visits to a further 46 churches which have now been completed. Its worth has been proved as out of these old records only seven frames remain as originally recorded, which highlights the pace of change and the need for the survey.

A report on the pilot stage of the survey, including the database, was produced in 1994. Some facts that have come from the survey to date are listed below. They are based on the number of frames as churches with more than one bellframe have multiple entries.

Total number of records now held of all types	558
Total number of churches listed	514
Total number of churches visited on the survey	272
Information from records made before 1983	164

The dating of frames is mostly by typological development sequence, carpentry and associated items. Very few early frames have been conclusively identified. The following statistics can be given for those frames which have been examined and for which

either a date can be estimated or a known date exists.

Frames datable pre-1500	33
Frames datable 1500-1800	101
Frames datable to after 1800	130

The simplest type of frame is an arrangement of parallel beams between which the bells are hung. 52 frames have been recorded within this group. The oldest type of full frame as a free-standing unit is the short-headed 'group 3' truss (Fig.1). It has a triangulated truss construction with a centre king post and open ends to the bell pits, sometimes with a transom tying them together. 18 of these frames have been found in various states of completeness which is a high survival rate.

The next main type of frame is the long-headed 'group 5' truss, of which 94 examples have been discovered. It is simply an extension of the tops of the earlier type to form a complete box construction. It appears to have started with the growing use of rope wheels in place of the earlier lever-type operation of the bells. This further developed to the 'group 6' truss which is similar but with no king post at the centre of each truss. 108 of these have been found.

Metal and metal composite frames were developed from c.1830 and have been one of the reasons for the loss of old oak frames. 63 examples are listed in the survey; it is thought that many of this type will be found in the post-1800 churches not yet visited.

Open bellcotes of various constructions have provided 64 examples, and seven bellframes have been noted as of no agreed type.

In parallel with this latest phase a limited investigation into the dating of bellframes by dendrochronology has been undertaken. This technique is potentially of great value to the survey as bellframes are extremely difficult to date. However, Essex timber is difficult to date due to the methods of timber management from early times resulting in exceptionally fast growth. The young age of many trees used in the frames of Essex buildings results in timbers of even large size having insufficient annual growth rings to make dating possible. This is further exacerbated in bellframes by the physical limitations from where cores may be taken. Very little timber from bellframe cores has been matched although some long tree-ring sequences have been obtained. It is hoped that, with a wider sample base, a link will be found to enable these results to provide dates. Some timber belfries have proved to be datable (see above), but none of them are of the same age as the surviving bellframes.

An assessment has also been made of the historical sources, but unfortunately the most potentially useful class of documents, churchwardens' accounts, do not have a high survival rate in Essex.

The survey is proving its worth in many ways. The details of the frames are now easily available to those bodies such as the Parochial Church Councils and the

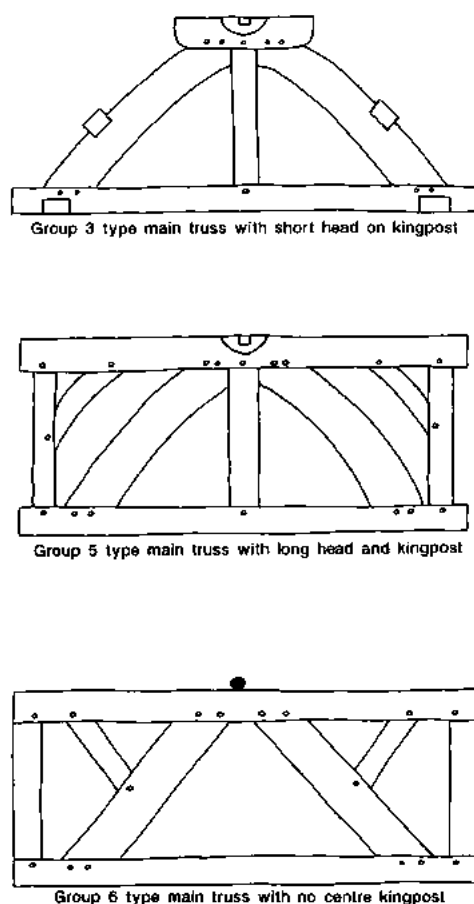


Fig. 1 Examples of bellframe types

Diocesan Advisory Committee who are responsible for conservation decisions. The churches visited are now more aware of their frames and have, in general, shown a great interest in any information that we have been able to give them. The survey has revealed a higher rate of survival of old frames than was expected, and will be a valuable addition to the County Historic Buildings Record and Sites and Monuments Record, and to the National Monument Record.

We are grateful to the Chelmsford Diocese and the many church wardens who have given time and assistance to the survey, and to the many helpers who have travelled the county, raised ladders, climbed to unknown heights and still returned for more, making the inspection of the bellframes possible.

Ashen, St. Augustine

D.D.Andrews

In 1995, the north pitch of the nave roof was retiled. This had been ceiled with the addition of lower collars probably in the 18th century. The presence in the nave

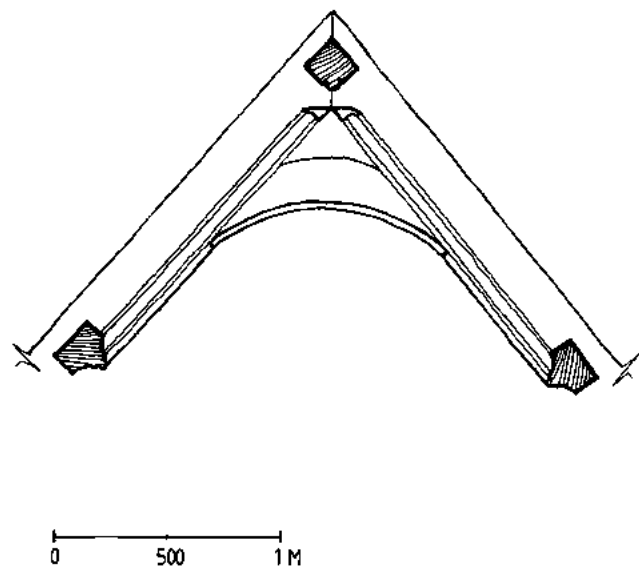


Fig. 2 Ashen Church, apex of roof

of wall pieces and braces rising from them shows that the roof is medieval. Removing the tiles revealed, above the inserted collars, the apex of a good 15th-century roof made with curved collars, a moulded ridge beam, and butt purlins (Fig.2). The collars, principal rafters and ridge beam are all moulded with hollow chamfers and rolls on their soffits. The rafters are plain, but many are rebated on their upper surfaces for the fixing of boards between them. The rafters are 350 - 400 mm apart.

The roof may be compared with that at Ridgewell, little more than a mile away, though it is much less splendid. As well as being less highly decorated than

Ridgewell, it is also of simpler and possibly less robust construction. The curved collars are set very high up near the apex of the roof, and, contrary to what might be expected, there are no braces between the collars and the rafters, continuing the braces lower down between the wall pieces and the rafters.

When the chancel was rebuilt in the 19th century, the nave roof was extended 800 mm to the east of the original end of the 18th-century roof. This small enlargement of the nave is also evident inside the church.

Bradfield, St. Lawrence

D.D.Andrews

In 1994, the render was removed from the south-west corner of the nave and part of the wall facing collapsed, exposing the wall core made of septaria. The wall has offset foundations 600 mm below ground level. The base of the wall is made with an orangey-brown mortar, whereas the rest of it is bonded with a pale grey-brown sandy silt mixed with lime, and containing some pebbles and shells. At a height of about 2.3 m above ground level, there is a change in the character of the masonry: below it is mainly of medium-sized pieces of septaria, above it is of massive septaria blocks. Some lifts can clearly be seen in the higher build, indicated by slight changes in mortar colour.

The difference in mortar colour at the base of the wall probably indicates that it is of 12th-century origin, later rebuilt in the 13th or 14th century. A further rebuild is suggested by the change in the size of the septaria blocks, perhaps in the 15th century, as similarly massive blocks also occur in Dovercourt church tower, built c. 1400.

It could be seen that the tower has been built on to the west end of the nave. The masonry of the tower differs from that of the nave in containing flints and field stones.

Bradwell-on-Sea, St. Peter's ad Murum

D.D.Andrews

In 1993, the tie-beam at the east end of the nave set below the level of the roof trusses had the strap on its southern end renewed. The beam is about 8 inches (200mm) square and from a much branched tree, probably an elm. A large shake aggravated by death-watch beetle necessitated the repair. The beam is said to only go about 4 inches (100mm) into the wall, and it is clear that the strap was original to it. A similar strap is used on the north wall. The ironwork, characterised by spikes and a forelock bolt, suggests an 18th to early 19th-century date, and it is clear that the tie-beam was inserted below roof level to tie the walls together.

The top of the south wall, which is about 2 feet thick, is levelled with Roman brick. Brick patches in 18th/19th-century bricks (220 x 105 x 60mm) at the top of the walls mark the position of former roof truss-

es. There seem to have been eight of these, 56 inches (1.42m) apart or at 68 inch (1.73m) centres. It is probable that these represent an archaic roof with a tie-beam at each rafter couple datable to perhaps the 12th century or earlier. A lift is visible in the masonry just below the level of the repaired beam at the same level as the existing window lintels.

The East Window of Saint Nicholas Chapel, Coggeshall Elphin Watkin

Introduction

The chapel of Saint Nicholas is the chapel outside the walls of Coggeshall Abbey. Commenced in the 12th century, the

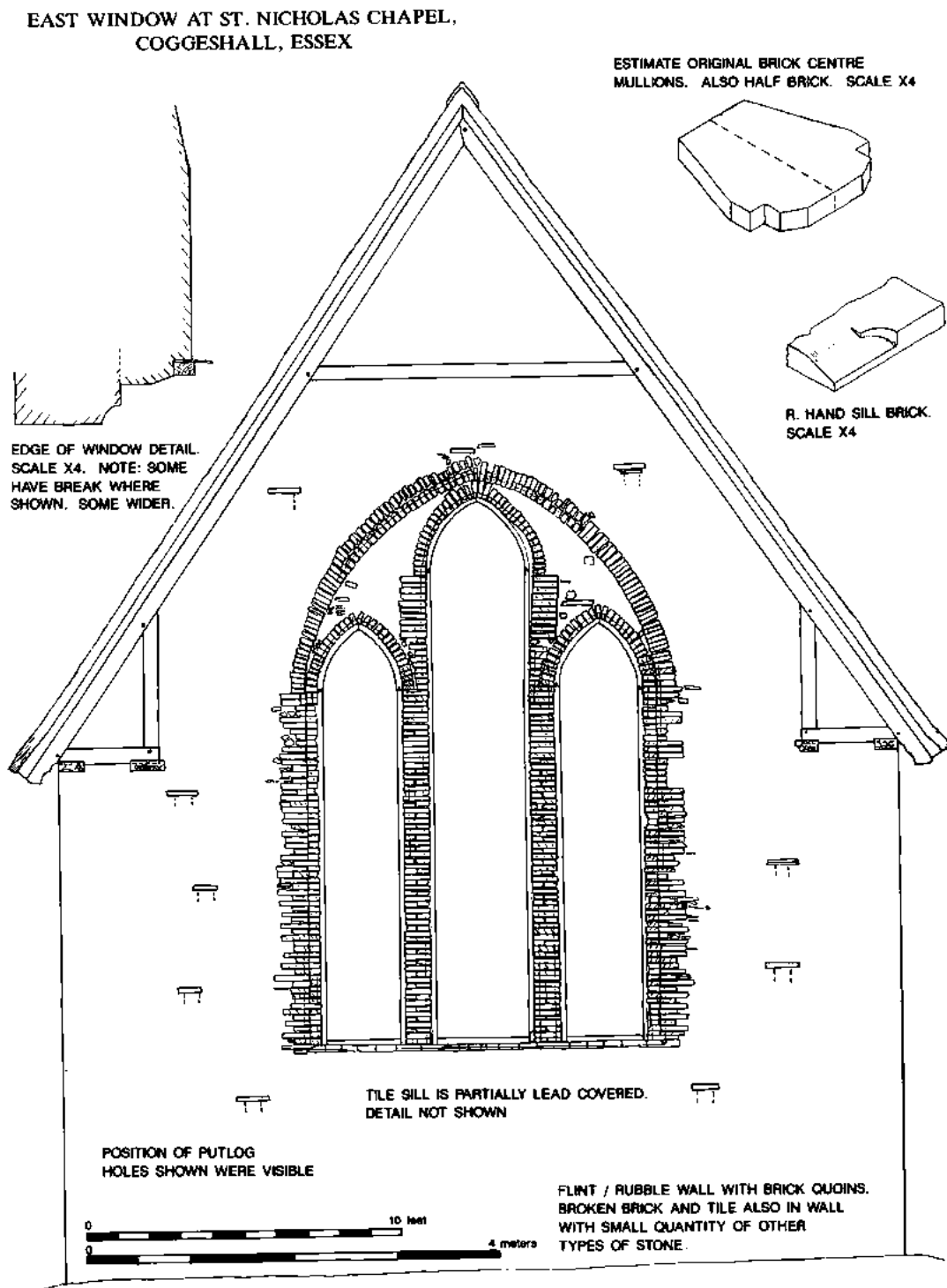


Fig. 3 East elevation of St. Nicholas' chapel, showing the brickwork of the lancet windows. Replacement bricks are hatched.

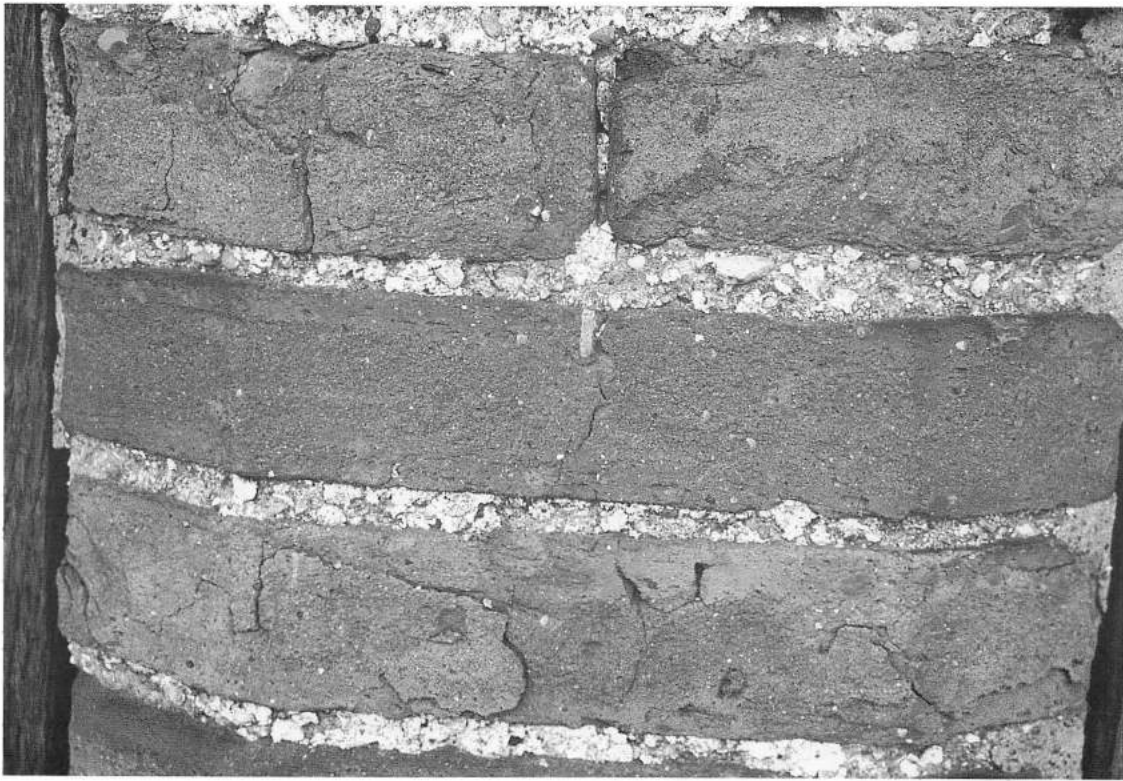


Plate 1 Centre mullion showing moulded replacement bricks flanked by a full width original brick below and two half bricks above.

abbey complex was not finished until the 13th century. It is thought that the chapel was built in about 1220.¹

A plain rectangular building, it spent much of its life, from c. 1560 to 1860, as a farm building. Bought back for the church in January 1860 the building was restored by rebuilding the south doorway, rethatching the roof and replacing some of the quoins and dressings with bricks specially moulded for the purpose. In 1888 a plea was being made for funds to fully restore the building before “— it is too late. Winds, rains and frosts are only too quickly and sacrilegiously doing their ruthless work of destruction.”² Major restoration did not commence until 1896.³ Other than the major works on the west wall and window some 25 years ago, and further work to the quoins, the chapel is still mainly as it was after this restoration.

The wall of the east end was not refaced in the restoration as the putlog hole positions in the main still visible. They are topped with long Coggeshall bricks except for one which has a double tile lintel comprising tiles eleven and a half and twelve inches long, their large size confirming that they are original to the construction of the chapel. It was noticeable that the equivalent hole on the right hand side was slightly higher each time than that on the left. A study of any other remaining positions in the north wall may confirm whether this only represents support for an out of level scaffold or whether the rise continues around the

building to give a continuously rising scaffold. The upper part of the gable has been rendered to a near flush surface with just parts of the rubble wall showing, but it is assumed that this finish dates from when the chapel was reroofed.

The East Window

The east window, comprising triple lancets within a containing arch, was showing signs of erosion by the weather and a major crack at the upper levels was in need of repair. Before commencement of repairs in 1995, the opportunity was taken to record the window and to inspect at close quarters its construction and condition. This served two purposes, the production a permanent record and also the provision of drawings on which the architect could mark any work that had to be done. The specification clearly stated that any replacements were to be kept to a minimum.⁴

The window was measured and drawn with all the bricks of the window jambs and mullions shown in place (Fig.3). It revealed that the majority of the window was still of original brick as the bricks showed the Coggeshall characteristics of a relatively fine texture and a dark burnt centre core exposed where eroded.

The number of old replacement bricks which do not belong to the 1896 restoration discernible for certain in the window is put at six. A considerable amount of patching had been carried out at various times with



Plate 2 South window jamb clearly showing the rubbed replacement bricks, two of which have a black core as with original Coggeshall bricks

everything from good soft mortars to very hard cement mortars which had in themselves caused further damage. But, in general the mortar colour and texture was very consistent and of the slightly yellowish tint found in medieval work at Coggeshall. This was the main reason for assuming that most of the work was original although the bricks varied from those that looked nearly perfect to those that had flaked and eroded badly.

On further close inspection of the bricks it was noticed that some were moulded and some were rubbed. Either not enough moulded bricks were available when the window was built or the rubbed bricks were made to enable repairs to be made when the building was restored at the end of the last century. Further study of some of these rubbed bricks also showed that the consistency of the clay used was slightly different and was a consistent colour throughout its thickness after firing. This mainly applied to the long bricks used in the mullions either side of the centre lancet (Plate 1) and some of the smaller bricks on the edge of the window jambs. However, many of the jamb bricks showed dark centres even though their profile had been formed by rubbing (Plate 2).

Considering the methods of brick manufacture it

can be suggested that the mix of moulded and rubbed bricks in the jambs could be original where there is a dark centre core. The fact that the rubbed bricks have survived in a better state could be that they were made by the method of double firing. This method lightly fires the full brick, it is then cut (rubbed) to shape and refired to produce a hard brick. The replaced moulded and rubbed bricks in the mullions are all of similar clays and could both be from a repair period, especially as the earlier bricks appear to be more lightly fired.

The quality of the main restoration in 1896 was very good. It could as easily be argued that the rubbed bricks in the window jambs have to be replacements as they always seem to occur at a loss of bond continuation into the jamb. The drawing (Fig.3) has hatching to cover all these bricks as my personal opinion is that they are replacements of this restoration, or, possibly, from the initial restoration of 1860.

The brick sizes found in the window vary considerably. The length of the moulded bricks to the main window jambs reach a maximum of fifteen and a quarter inches visible width which could be increased to seventeen inches when taking into account the rebate area for the window which became visible during repairs. The seventeen inch size could have been the main full brick size for the window jambs and it is possible that some other bricks, having their front corners replaced by later bricks, could also be one continuous brick through the maximum width of the jambs. In the present state of the window it is only possible to see for certain that three bricks run the full width of the jamb. What is clear is that the inner design of each of the three lights of the window are standardised. The shape of the centre mullions is continued at half width around the arched heads and down each jamb. This then offers the basis for a brick at about six and a half inches with an outer length of about ten inches at the jambs if the two remaining through bricks at seventeen inches are typical. This would also agree with the smaller existing through brick at thirteen inches long which gives an outer face width of about six and a half inches. If the bond on these jambs to the flint rubble was long/short consistently up each side of the window and one takes all bricks measuring up to thirteen inches as short and all those exceeding thirteen inches as long, equal numbers of each can be counted in the jambs. The average thickness of the bricks is one and seven-eighths inches for the longer bricks and one and three-quarter inches for the shorter ones.

The bricks of the mullions average ten inches long for the full width bricks with a minimum measured at nine and five-eighths inches. During the repair, with the window frame removed, it was possible to see more of these mullion bricks. In fact they average thirteen and a half inches wide if the window rebate is included, return for three inches from the inner edge of this rebate then taper by three inches each side to an overall depth also about thirteen and a half inches. Some appear to have been made as half bricks to give the

effect of a bond but this could not be proved. All the inner surfaces are plaster covered.

The lancet arches have voussoir bricks with a face on average five inches long (without window rebate) with an average thickness of one and three-quarter inches. The minimum thickness is about one and a quarter inches and the maximum two inches. On the main arch the average size is seven and a half inches with an average thickness of one and seven-eighth inches, the minimum thickness being one and a quarter and the maximum two and one-eighth inches. The upper part of this arch is all constructed of half bricks set in a parallel double row, the inners being four inches and the outers three and a half inches wide. The average thickness of these bricks is one and seven-eighth inches, again with a minimum thickness of one and a quarter inches. It is suggested that when building the chapel they were running short of good bricks by the time the upper portion of the arch was being built.

The sill of the window has special sill bricks which are now partially covered by a later lead flashing. It is noticeable near the centre of the window that no equivalent bricks could be found when some replacements were previously required. The replacement bricks used are thicker and not of good shape. At the base of the right hand jamb (north) can be seen the one remaining end sill brick with sufficient detail left to reconstruct its shape to show that it formed the transition from the hollow shape of the jamb moulding to the sloping front of the sill. It had been hacked away in thickness when the sill had its lead flashing applied.

As the inside of the window is fully plastered it was not possible at the time of recording to ascertain the detail shape of the jambs and mullions. From the limited removal of plaster after the window lights were removed during the repair it was thought that the jambs and mullions were one continuous brick from outside to inside with only a thin skim of plaster on the inside.

Conclusion

Gardner in 1955 suggested the dates for the Gatehouse Chapel and also stated that it was the most complete building on the abbey site. Some 40 years ago when this was written the general finish and the state of weathering of the walls would have been more consistent throughout with less spalling of the brick faces. This would agree with the contention that there has been little restoration work to the brick east window. The fact that all other bricks *in situ* at Coggeshall appear to be moulded supports the idea that the rubbed bricks date from the 19th-century restoration. If the rubbed brick is medieval, would one still expect to find scribe marks delineating the extent for rubbing still clearly showing on the surface of the chamfered bricks? One would expect this feature to have weathered away if it were pre-19th century.

This is a problem that warrants further study of the bricks in the hope that future conservation work

does not produce another west window where the repairs removed every shred of historic evidence.

Notes

1. J.S. Gardner 1955 'Coggeshall Abbey and its early brick-work', *Journal of the British Archaeological Association*, 3rd series XVIII, 19-32
2. G.F. Beaumont 1888 *Some account of St. Nicholas Chapel, Coggeshall, Essex*.
3. Church guide - St. Nicholas Chapel Coggeshall.
4. Thanks to the Rector of Coggeshall, the staff at Purcell Miller Tritton, and to English Heritage who funded the recording through their grant towards the conservation of the chapel.

Great Parndon, St. Mary

D.D.Andrews

The chancel, nave and tower of this church are dated by the RCHM (Essex II, 1921, 102-3) to the 15th century. The transepts are modern. According to the VCH (Essex III, 1983), the porch was rebuilt in 1975, and the tower was restored in c. 1895 and then in the 1960s.

A dry area about 18" deep was excavated along the west and north sides of the tower and the north nave wall as far as the modern porch. The nave wall is built of flint in a firm, yellow-brown mortar, the masonry extending about 6" below the level of the dry area. The diagonal buttress at the north-west corner of the nave is of the same build. There seems to be a butt joint between the nave and the tower, the tower apparently the later, though the materials of which it is built are much the same.

Removal of a shed from the south side of the tower has uncovered the original wall finish, pre-dating the repointing in a hard gritty mortar, probably of the 1960s. The mortar formed a coating almost flush with the surface of the flints and perhaps originally covering them.

About 18" below ground level, the tower has a footing projecting 17", and which is itself about 15" deep. This is in a fairly hard concrete and seems to be an underpinning dating probably from the restoration of the tower in the 19th century.

Replastering of the west end of the north nave wall has been specified to a height of about 6 feet. The lower 5 feet or so of the wall is in a different, smoother and harder plaster, which must be modern. Paint scrapes above this level revealed the remains of decoration which looked like a fleur de lis pattern, the remains of a 19th-century decorative scheme. This dating is indicated by the apparently stencilled character of the decoration, and also the appearance of the plaster, which is fairly smooth and quite sandy.

Helion's Bumpstead, Church of St Andrew (PRN 1613-1615)

Owen Bedwin

A watching brief was carried out on the removal of turf

and topsoil to form a sloping cut along the northern edge of the nave and chancel. The chancel dates from the mid 13th-century but the nave is probably older (RCHM 1916). The maximum depth of the footings exposed was 70cm towards the eastern end of the chancel, shallowing out to virtually nothing at the western end of the nave.

The upper part of the foundations of the chancel, the large north buttress and, to a lesser extent, the nave were revealed. The foundations of the nave and chancel were of uniformly mortared flint, apart from a blocked north door in the nave. The buttress footing had roughly shaped stone as a top course, and flint below.

Lamarsh, Church of the Holy Innocents (PRN 16129-16131)

Richard Havis

A watching brief was undertaken on the northern and western side of this church, which dates from the 12th century (RCHM 1922). The topsoil against the church walls had been excavated to a depth of 0.3 - 0.4m. Only very shallow foundations were visible, a mixture of lime mortar at the top, over a layer of flint. A thin layer of darker soil containing fragments of peg tile was visible underneath. One piece of Roman tile was visible at the western end of the church.

Leigh-on-Sea, Church of St Clement (PRN 14722)

Shane Gould

The digging of a trench for a gas pipeline resulted in the exposure of a brick-lined vaulted tomb. The tomb lay between two modern paths to the south of the south porch. The stone that sealed the vault was broken at the west end. The vault was built of red brick in Flemish bond which had been white-washed. A close inspection of the floor was not possible. The tomb was approximately 2m long, 2.45m high, and 0.88m wide, its width decreasing to the west. Four pieces of wrought iron were positioned along the width of the vault at a depth of 1.42m, and supported a lead-lined coffin. The coffin was well preserved with its head to the west, but there was no sign of any name plate. The west end of the vault had been disturbed at some point and the top seven courses had been replaced with unpainted red and yellow bricks. Above the stone seal was a brick core sealed with lime mortar at 0.35m depth, a deposit of brown clay soil lay above that at 0.07m depth, and this was sealed by modern tarmac at 0.06m depth.

The method of construction and the brickwork suggest that the tomb is mid-19th century in date. The coffin may be earlier and could have been repositioned when the church was enlarged. The tomb was resealed by the placing of a steel plate above the vault which was then covered with concrete. The footings of a second vault were exposed to the west.

Little Hallingbury church

D.D.Andrews

This is a small church with a 12th-century nave, a chancel lengthened, if not rebuilt, in the 13th century, and a north aisle and south vestry added in the 19th century (RCHM Essex II 1921, 154-5). A feature of the fabric of the church is the promiscuous use of Roman brick. The provenance of this is uncertain: although the Essex SMR notes the presence of a number of late Iron Age and early Roman sites in the vicinity, none of these seems to have an obvious link to the church. Preliminary to the construction of an extension on the south side of the chancel, two test pits were excavated, one against the chancel wall and the other against the vestry. The chancel had foundations about 4 feet (1.2m) deep. Made ground was encountered to this depth. At ground level, the character of the flint masonry was observed to change, confirming the RCHM's view that the chancel has been rebuilt. The vestry was found to have a deep concrete foundation with a stepped offset in stock brickwork just below the base of the wall.

North Benfleet, All Saints

D.D.Andrews and P.M.Richards

The church is relatively isolated for this part of Essex, and the access road runs across the end of the farmyard of North Benfleet Hall Farm. As so often in Essex, the church is distant from modern settlement and close to the manor house, by the lord of which it was no doubt originally built. In this case, North Benfleet Hall has disappeared, having been demolished sometime between c. 1920-53. The Hall was moated. The large pond, allegedly fed by a spring, adjacent to the churchyard may be the remains of the moat. The church was proposed for redundancy in 1994, and an assessment was made of its fabric and structural history.

All Saints is a medieval church comprising chancel and nave which was extensively restored in the 19th and 20th centuries when a west tower was added. A large lancet window in the west wall reveals the nave to be of c. 1200 or earlier. The Ragstone facing may be medieval but more probably dates from the 19th-century restoration (see below). Inside, the nave walls have been refaced for the upper half of their height in brickwork which looks 16th-17th century, and which is no longer plastered (though it is painted white with a vinyl paint like the rest of the church interior). The westernmost bay of the nave is occupied by a timber belfry dating probably from the 15th century which no longer protrudes above the roof. A vertical timber which runs across the saltire bracing of the belfry is probably a relic crown-post from a medieval roof. The wall plates and tiebeams of the existing roof are modern, as it is assumed are the seven-cant roofs of both nave and chancel, though neither have been inspected. The suspended floors of the nave are rotten and slope away dramatically either side of the central tiled alley. Notable amongst

the fittings are some 17th-century ledger stones in the chancel floor, and the font bowl of c. 1200.

Work to the church in the 19th century can be reconstructed from a faculty of 1870 and H. W. King's manuscript *Ecclesiae Essexienses* (ERO D/CF 9/1 and TP 196/2). King first visited the church in 1847. He described it as dilapidated, with walls giving way which had been shored up with large brick buttresses. The north wall was also propped with tree trunks. The windows had been altered in 'a barbarous and uncouth manner'. In short, he had never before seen 'a church in such a shameful state of neglect and dilapidation'. In 1856, he found the nave entirely rebuilt, though not to his satisfaction. Lancet windows had been inserted in the nave and the porch rebuilt or possibly added. The nave had also been refaced, and it is probable that the Ragstone is entirely modern. The lancet windows had buttresses located between them as later plans show, but these have been systematically

removed leaving scars in the masonry.

The 1870 faculty was for the rebuilding and lengthening of the chancel, combined with the removal of the west gallery and reseating. The scheme was by G E Street; in view of the rather heavy tracery of the east window, it is presumably to be regarded as very much a product of his office. The chancel too is faced in Ragstone. Although the rebuilding was extensive, the plan accompanying the faculty shows that the portion of the north wall containing a brick window with Perpendicular tracery was retained. However the brickwork of this window seems to have been totally renewed. The annex on the north side of the chancel is described as a vestry, and below it is a boiler house. The plan also shows buttresses on the south side of the nave but not on the north.

In 1903, the west tower was built of red brick with cement render over stock brick quoining. The tower is now moving westwards, detaching itself from the nave.

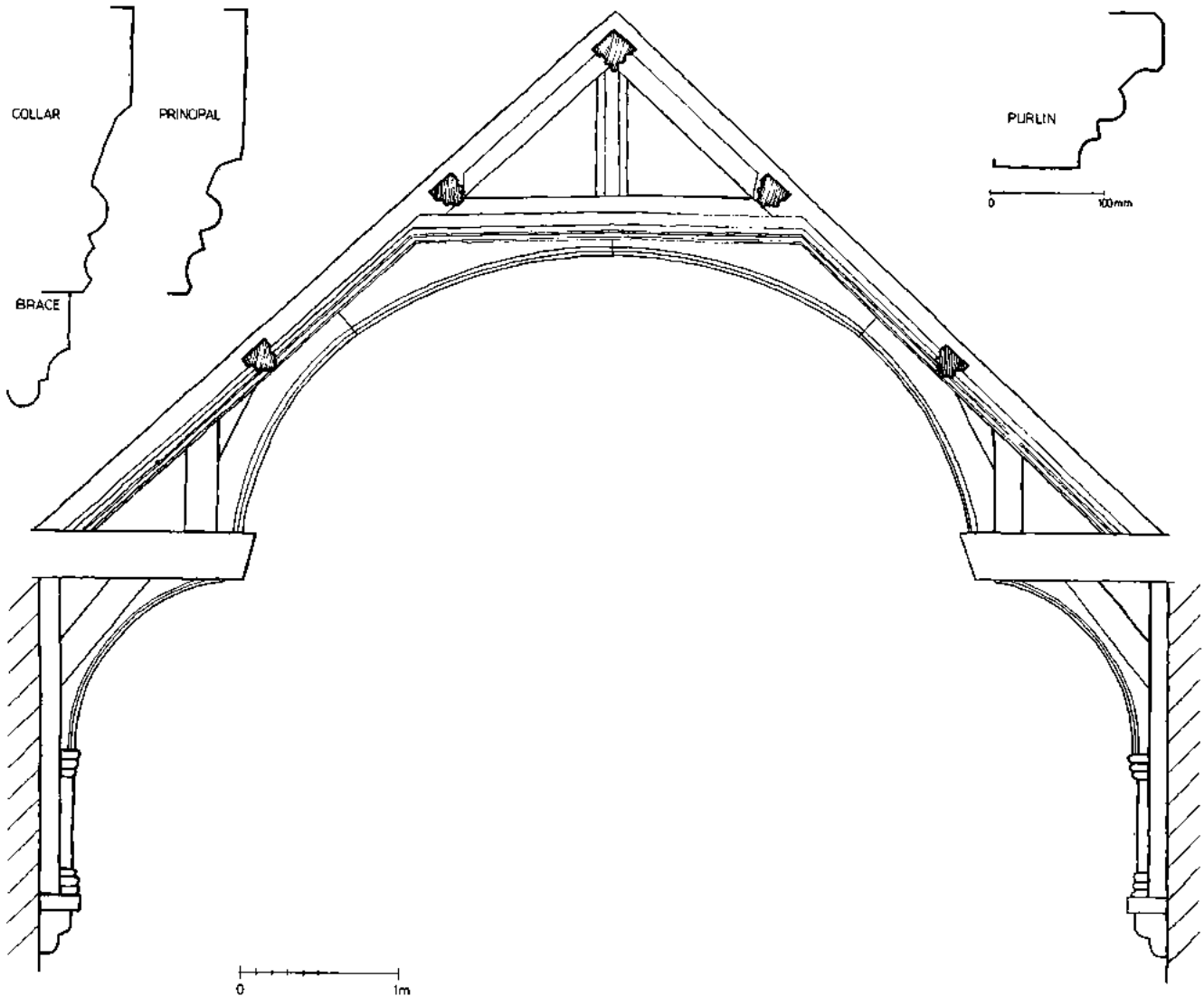


Fig. 4 Peldon church; nave roof

North Shoebury, St. Mary

D.D.Andrews

The RCHM (1923, 101-2) dates this church mainly to the 13th century. There are lancet windows in the chancel, and the south arcade in the nave is mid-13th century. In the 14th century, the north nave wall was rebuilt, and the top stage of the tower built or rebuilt. The south aisle has been demolished and the arcade infilled in the Middle Ages. The south porch is 18th century.

In summer 1995, a French drain was excavated round the north side of the church, the Reigate stone plinth on the north side repaired, the walls repointed, and repairs carried out to the west wall of the tower. The stonework below the west window in the tower had collapsed. The original wall core was found to be made of Ragstone with a little chalk, bonded with an orangey brown silty mortar containing a certain amount of grit. The diagonal buttresses could be plainly seen to have been added to the tower.

All but the west end of the north nave wall was found to have a projecting footing. This must represent a different build as it is bonded with an orangey-brown mortar, whereas a pale lime-rich mortar occurs in the upper part of the wall. Repointing to the chancel showed that this was bonded with orangey-brown mortar like the tower. This confirms the RCHM's conclusion that the north nave wall was rebuilt in the 14th century. That the north wall has a plinth (unlike the chancel), and the buttresses seem original to it, are corroboration of this argument.

The chancel was found to have a footing projecting by 150 mm. No difference in mortar colour was noted in this case. It could be concluded that either the footing was an original offset foundation, or that it represented an earlier phase, the existing wall being a rebuild using a similar mortar. On the north side of the chancel, the drain encountered a deep, 19th-century brick-lined grave covered with a vault set close to the wall.

The south chancel wall is bonded with a pale lime-rich mortar like that of the nave, and includes some reused Reigate stone, indicating that it is a rebuild. A straight joint occurs east of the buttress separating the nave and the chancel on this side and supports this inference, as does the fact that the south-east buttress seems contemporary with the south chancel wall. (Note that in origin the buttress between nave and chancel was presumably the east wall of the missing south aisle).

The top of the foundations of the blocking of the south arcade were exposed by the removal of earth from the base of the wall. The foundations incorporated brickwork some of which looked 19th century in date, implying that the blocking had been rebuilt. In origin, the demolition of the aisle and the blocking of the arcade ought to be late medieval, as inside the church the 15th-century wooden roof is built off the blocking and therefore seems to post-date it.

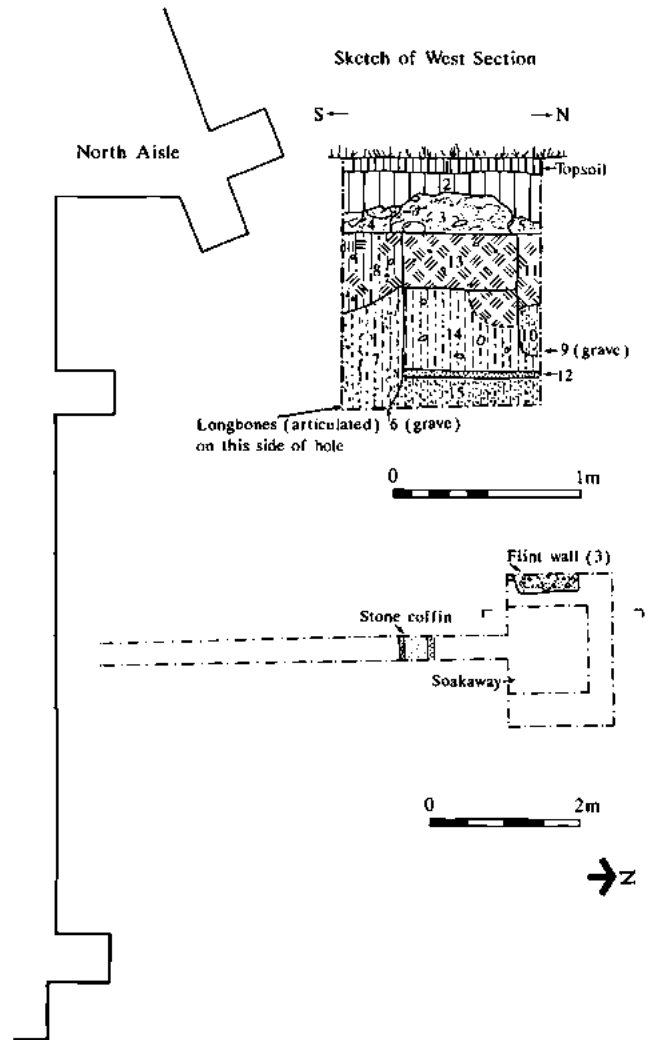


Fig. 5 Ridgewell, St. Lawrence; plan and section of archaeological observations 1995

Peldon, St. Mary

D.D.Andrews

Early in 1995, the interior of Peldon church was lime-washed. The hammer-beam roof, the outstanding feature of the church, was also limewashed, making the nave appear much lighter as previously the roof was stained. The roof may be dated to the early 16th century, and is of good but simple construction, with moulded principals, purlins, collars, and braces (Fig.4), but lacking the elaborate decoration of some roofs of this type. The hammer-beams, ashlar pieces, the lower half of the braces, together with the wall pieces and their corbels and braces, have all been renewed. A date of 1961 found by the decorators on one of the timbers may refer to these repairs or to an earlier redecoration. Replacement on this scale implies dismantlement of the roof.

Ridgewell, St. Lawrence: the lost chapel on the north side of the chancel

D.D.Andrews

This is a large parish church, comprising chancel, a north chapel and vestry, a nave with aisles, a tower and a south porch. Most of the church was rebuilt in about the middle of the 15th century, but there are significant remains of late 14th/early 15th-century work in the chancel, in the form of a two-arched arcade separating it from the north chapel (RCHM I 1916, 225-7). In the north wall of the vestry, the RCHM noted the presence of a late 12th-century door originally with engaged shafts and water-leaf capitals, probably no longer *in situ*. Today, externally, there are at this point the tops of two blocked arches, the apertures beneath them obscured by a panel of modern brickwork. Presumably this second aperture has been uncovered since the RCHM survey, very likely having been exposed when render was removed from the wall. From inside the church it is no longer possible to check the observations made by the RCHM as the vestry wall has been rendered over and no features are visible in it.

In August 1995, a drain was dug to a soakaway on the north side of the chancel. An open chute at parapet level emptying onto a concrete gutter was to be converted to a downpipe and gully. At 4.6 m from the side of the church, the trench encountered a coffin made of oolitic limestone about 1 foot below ground level (Fig.5). The sides of this were partially cut through by the excavator. It was aligned east-west, about 460 mm wide, with sides 70 mm thick and 300 mm high. The part exposed must have been the foot of the coffin, and it seemed to be narrower to the east. Stone coffins are commonly to be found at Essex churches, most being able to boast one or two. A 13th-century date may be proposed for it. It may be that the worn, featureless stone coffin lid in the north chapel is associated with it. In view of the discoveries made in the soakaway (below), it is just possible that the coffin found in the drainage trench is still *in situ*.

In the area of the soakaway, just over 6 m to the north of the north vestry, a flint wall was discovered, the soakaway being relocated just to the east of this. The top of the soakaway was stepped, the wall being situated on the step on the west side. A sketch drawing was made of the west section of the hole, projected at the top to show the wall (Fig.5).

The natural was a light yellow sandy silt (15) with much pea grit and many small round pebbles, including chalk, beneath a thin band of pale sand (12), overlain by a compacted silty clay with chalk and flints (14). These seemed to be sedimentary deposits of fluvial origin. An overlying stiff, yellow-brown clay (13) with some angular flints and small pebbles also appeared to be natural. It was this that had determined the character of the clay loam soil present beneath the topsoil in the drainage trench from the soakaway.

The archaeological sequence was interpreted as follows:-

- (I) The flint wall (3) was the earliest feature in the trench. It seemed not to extend further to the east. It looked to be aligned east-west, but in fact there were less well preserved remains of masonry on its south side filling the gap between it and the side of the trench, and it could have been running north-south, as well as east-west. As a result its width is uncertain, but it was at least 700 mm, and perhaps as much as 900 mm. It was probably of two phases, as on its south side it was bonded with an orangey mortar, contrasting with the pale brown mortar of the main part of the wall.
- (II) Two graves (6 and 9) had been dug on the north and south sides of the soakaway, that on the south extending in depth to the bottom of the trench, and that to the north to a depth of just over 1 m. Nails showed that the latter was a coffin burial. The articulated skeletons of both were only slightly disturbed in the digging of the soakaway. It is probable that both grave cuts had damaged the wall, being therefore responsible for its apparent east-west alignment. A mortar layer (5) on the north side of the wall may have been debris from the wall filling the top of the grave cut. From the presumed date of the demolition of the wall (see below), it follows that both graves are post-medieval.

Conclusions

1. The stone coffin is probably 13th century in date. It is just possible that it may be *in situ*, and that it is associated with the coffin lid in the north vestry.
2. The flint wall must be associated with a chapel on the north side of the church. It is natural to link this chapel with the Early English doorway in the north wall of the vestry, and also to see it as explaining in some way the extraordinary oblique alignment of the north aisle wall. The RCHM's theory that the wall was built this way to provide more space for the altar is not entirely convincing. The church guide says that on the north side there was a chapel dedicated to the Blessed Virgin Mary built by the De Veres, which had fallen into decay and was demolished in 1704. The statement that the foundations "are still traceable to the north of the chancel" is no longer true, unless they are evident in exceptional conditions. This is unfortunate, as the rediscovered flint wall is too limited in extent to indicate its shape and position with any certainty.

It has been possible to verify what the guidebook says about the chapel from a brief scrutiny of the more obvious sources in the Essex Record Office (ERO), a fairly full account of it being given by Holman (ERO T/P 195/14). He says it was "as large as the Chancell itself", and that it was found-

ed by Dionysia de Montchensi, who died in 1313 and was wife of Hugh de Vere, second son of the earl of Oxford. According to Holman, there was an inscription on the east wall of the chapel recording its foundation by Dionysia, an event which seems highly probable as she founded the priory of Waterbeach in Cambridgeshire, and endowed it with the church at Ridgewell. Holman failed to discover any evidence for a chantry, and it may be that it was founded simply for the use of the lord of the manor. By the time of a visitation made in 1678, the chapel, which was "out of repair", was said to have been built by Margaret Beauchamp, countess of Derby and Richmond, who had founded St. Johns College, Cambridge, and whose executors had purchased the manor of Ridgewell and transferred it to the college (1521). That Margaret Beauchamp was regarded as the builder of the chapel was doubtless due to the existence of a second inscription to her memory, recorded by Holman. It may be that this was erected by Reginald Braybrook, her confessor and one of her executors, who some years later acquired the rectory of Ridgewell and eventually settled it on St. Catherine's college, Cambridge. If restoration or rebuilding were carried out at this time, it could

explain the evidence for two construction phases in the rediscovered foundation. In 1704, a licence was obtained to demolish the "ruinous old Chappell on the north side of the Chancel" (ERO T/A 366).

South Shoebury, St. Andrew

D.D.Andrews

Early in 1994, this church was redecorated, rectifying mistakes made in the last major restoration of 1966-69. The depressing grey cement render of the walls was painted, and the cement paint on the exposed ashlar stonework was stripped and replaced with a porous finish. The hard pointing of the chalk masonry of the inside of the tower was removed and the walls made good with lime mortar. The former rood beam over the chancel had at mid-span been badly infested with death-watch beetle and was therefore repaired.

The opportunity was taken to examine the crown-post roof (Fig.6). This proved to have been extensively restored. The fascias to the wall plates, the braces, soulaces, collar purlin and some of the rafters have all been renewed. The tie-beams, crown-posts and the majority of the rafters are all that survive of the medieval roof. An attempt to tree-ring date a tie-

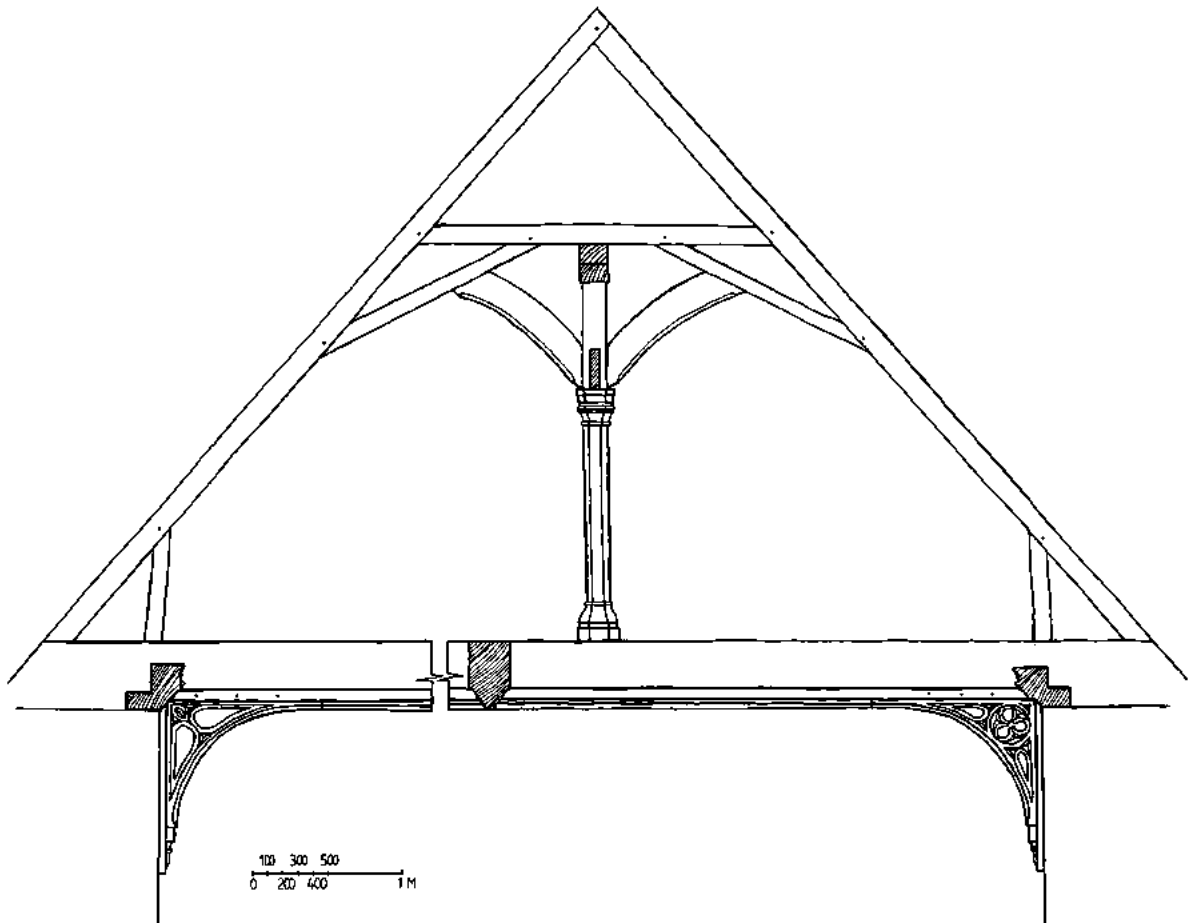


Fig. 6 South Shoebury, St. Andrew; nave roof

beam was abandoned because it contained insufficient rings.

Takeley, Holy Trinity

D.D.Andrews

A proposed re-ordering of the south aisle prompted an examination of its roof which is ceiled. It is a collar rafter roof of great simplicity. The rafters are sawn oak of squarish section. Many of the collars are reused from an earlier roof. Distinguishing characteristics are few, but an 18th to early 19th-century date may be suggested for its construction. A closer dating can be inferred from the construction of the gable at the west end of the roof void which seems to be contemporary with the roof. This is made of neat, small, squarish bricks (220-30 x 110 x 50 mm), which look late 17th to early 18th century, and may be taken to indicate a date of c. 1700.

Tendring, St. Edmund

D.D.Andrews

In 1994, ground level on the north side of the church

was lowered by about 200-250mm, and the render cut off to a height of about 500-600mm. The base of the walls was shown to be built of septaria, though typically, the picture varies from one part of the fabric to another.

Along the nave and the first bay of the chancel, there is a bottom course of large blocks of septaria, above which the blocks are smaller. That these large blocks do not occur in the eastern part of the chancel suggests that this may be of a different date, possibly an extension or a remodelling of an east end that was originally apsidal. The two eastern bays of the chancel have an offset foundation in septaria blocks.

At the eastern end of the nave, a dwarf wall was found parallel to the church wall and separated from it by only 60mm. It is 140mm wide, at least 200mm deep, bonded with an orangey brown mortar, and has an outward lean. To the west this feature, which can be traced as far as the porch, becomes contiguous with the base of the church wall. It looks in this area like an offset foundation, but since it is not bonded with the wall this is improbable. The most obvious explanation of the feature is that it represents the remains of an earlier phase of the nave wall, which has been rebuilt total-

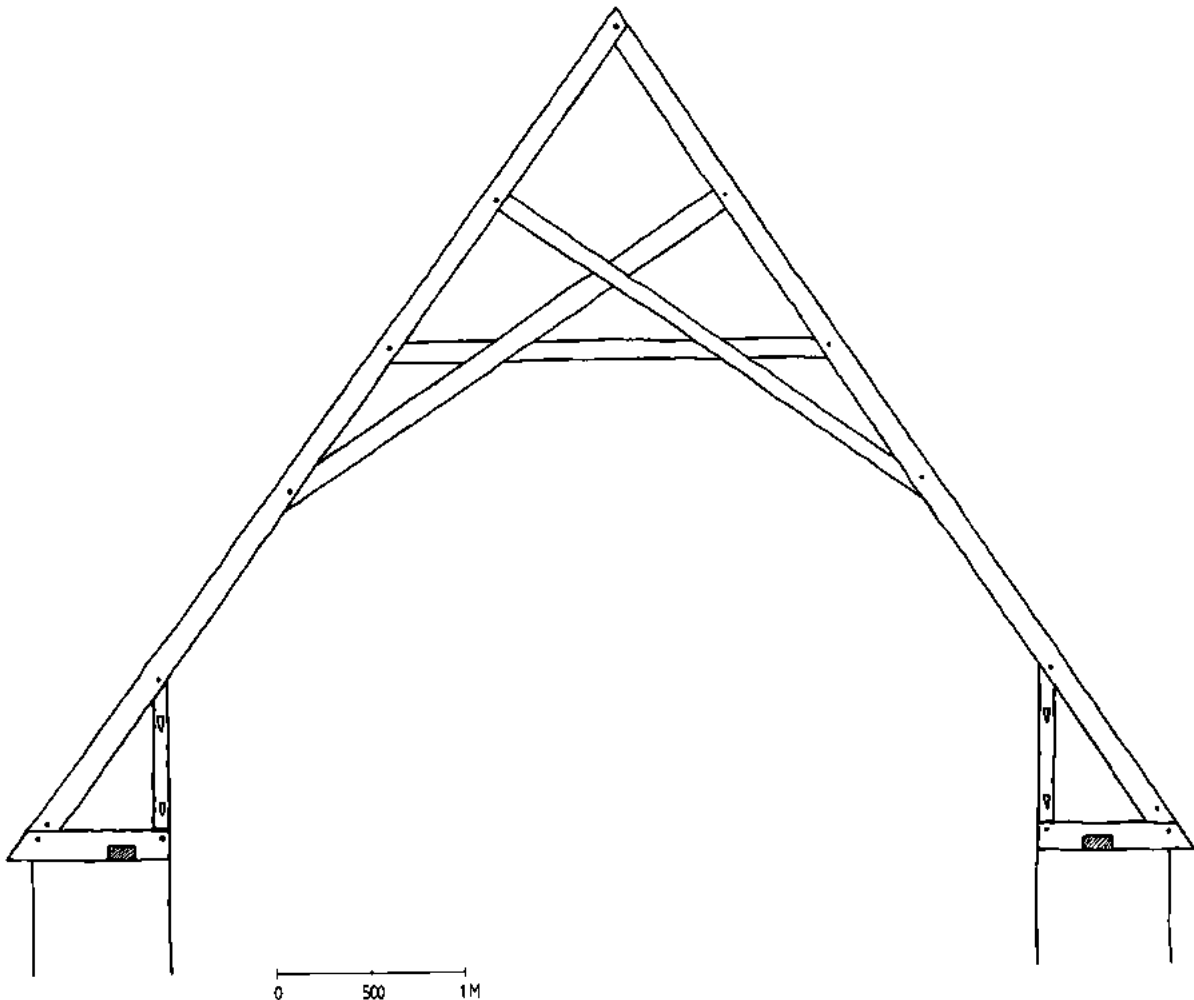


Fig. 7 West Bergholt, St. Mary; south aisle roof

ly. The dwarf wall looks as if it has been cut through by the church wall, and its distinctive mortar is typically 11th-12th century. The pale brown-grey mortar of the existing wall is what would be expected of the 13th and 14th centuries. The rebuild would have occurred by *c.* 1300, the date of the window at the east end of the north wall of the nave. The ground between the nave wall and the dwarf wall seems noticeably soft with possible voids. A greyish layer was noted running northwards about 300mm below ground level, indicating that there might be some well preserved stratigraphy in the area. This layer seemed to have been cut by the dwarf wall.

The three brick buttresses of the north nave wall are all slightly different, but the bottom parts of all three are built of small bricks that look datable to the 17th or early 18th centuries. The top part of the two western buttresses have been rebuilt in 19th-century brick.

Terling church

D.D.Andrews

In early 1995, the wooden floor of the south aisle was renewed and associated works carried out, including the lowering of the ground outside the aisle wall. The base of the aisle wall had been refaced in brick datable

to the late 19th or early 20th century. Beneath this, it seems there is a flint foundation perhaps one foot deep. Beneath the pew platform, there was a sub-floor void 10-12 inches deep. The deposits beneath this were very desiccated: they comprised a hard, stony, sandy silt, presenting a compact surface, though probably merely trampled in the course of building work. There were no obvious traces of true floor levels. The pier bases of the arcade suggest that the floor level was lowered in the 19th century. If so, this would have had the effect of removing any superficial stratigraphy. It was noted that the tiled alley which runs down the south aisle had been laid directly over a ledger stone. The surface of this was obscured by the tiles, but two letters were legible at its southern edge. The style of the letters suggests an 18th-century date. The monumental brass at the east end of this alley must have been relaid at the same time as the floor, no doubt in a new position. This brass has had to be underpinned in brick as voids had formed beneath it.

The wooden floor was also lifted at the east end of the south aisle, north of the alley, and the front row of pews was temporarily removed. Here a fragmentary ledger with a brass indent was found in the void beneath the pew platform. The ledger is of Purbeck marble, 640 mm wide and about 650 mm long, but broken lengthwise. It seemed to rest on loose earth,



Plate 3 Gestingthorpe St Mary; the hammer-beam roof of *c.*1500. The church was retiled in 1995.

again very dry and desiccated, and almost certainly was not *in situ*. The ledger bears the indent of half a human figure, probably female. Above the head there is a scroll in which the brass survives. It reads: CREDO VIDERE BONA DNI IN TERRA VIVENCIIUM. This text is from verse 13 of psalm 26 in the Vulgate. (In the Authorised Version, it is verse 13 of psalm 27 and is rendered "I had fainted, unless I had believed to see the goodness of the Lord in the land of the living"). The ledger was removed from beneath the pews for eventual display in the church.

In the same area, it was noted that the respond at the east end of the south arcade has a foundation at least 300 mm deep, projecting 300-500 mm from its base.

When the soakaway was dug outside the church, a squared block of limestone was found with a rough inscription in plain capital letters: 1607/S |I| [?erased]/PRICE. This has been moved into the west end of the church.

The monumental brass is of particular interest as there is a collection of Rochester family brasses in the south aisle of Terling church, which have been studied by Briggs (1961). The construction of the south aisle, and probably also the south porch, was paid for by John Rochester who died in 1444. The brass set in the tiled alley, and two fixed to the east wall of the aisle, are all to members of the Rochester family who died in the 16th century. Other brasses to members of the family are recorded by antiquaries, but none seems to correspond to the recently discovered brass, which appears

to be of 15th-century date. Since the brass was not *in situ*, and seems to have been dumped under the pew platform in the course of the Victorian re-ordering, it could have come from anywhere in the church. However, its position suggests it may have been situated in the south aisle, and may therefore be a hitherto unrecorded memorial to a member of the Rochester family.

Bibliography

Briggs, N.	1961	'The Rochester brasses in Terling church', <i>Transactions of the Monumental Brass Society</i> 9, 429-37

West Bergholt, St. Mary

D.D.Andrews

Re-tiling of the south aisle of this church which is vested in the Churches Conservation Trust revealed that the roof structure is of scissor-brace construction (Fig.7). The joints are mortices and tenons, and the construction is consistent, and apparently original to, the early 14th-century date which is assigned to the aisle. The rafters are rather waney and knotty, and it could be seen that many of the braces are halved or quartered timbers. A sample taken from a timber cut out for repair had insufficient rings for tree-ring dating. The ashlar pieces have nicks in their sides for wattle and daub infill, which in some cases survives, the wattle being made of horizontal laths and vertical rods. Puzzle holes are present in the east side of the rafter feet.

Shorter Notes

Flint axe/adze from Stock Road, Ingatestone

by Louise Austin

A flaked flint axe/adze was recovered from the garden of 'Hillcrest', Stock Road, Ingatestone. It is a Mesolithic tranchet axe/adze, measuring 200 by 60 by 35mm, and is sub-triangular in section, with a central ridge running down the centre of one surface (Fig.1). The slightly convex long edges of the piece gently taper towards the butt end. The cutting edge is sharpened on one surface with a tranchet sharpening blow and is irregular, though this appears to be due to edge damage. This damage may be the result of use wear or possibly post-depositional damage. The raw material from which it is made is good quality dark grey/brown flint which is completely unpatinated.

The tranchet axe/adze is a diagnostic tool for the early Mesolithic. Little other material of this date is known from the Stock area, apart from one spot find of 'Mesolithic flints' at NGR TQ 790 900. At present, little is known of the distribution of Mesolithic activity in this area of Essex. It is possible that this implement was a chance loss in an area of woodland, as these tools are believed to have been used as woodworking tools.

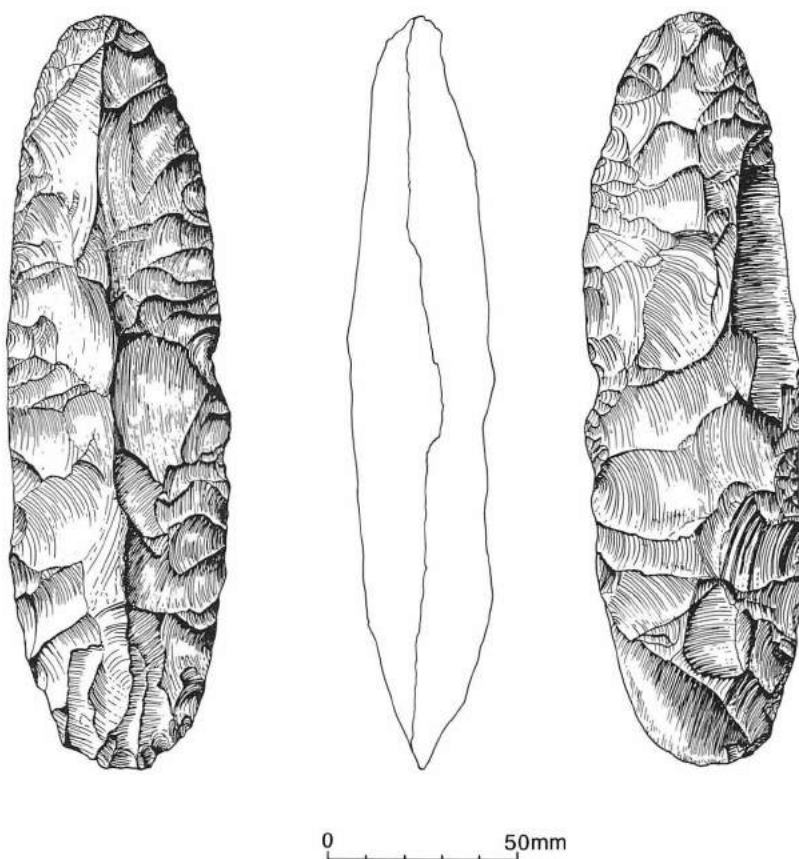


Fig. 1. Mesolithic axe/adze from Stock.

Mesolithic flint tranchet axe/adze from Chelmsford

Louise Austin

This flaked flint axe/adze (Fig.2) was found at 35 Byron Road, Chelmsford. It measures 99 by 50 by 25mm. The raw material from which it has been produced is light grey/brown with frequent large pale inclusions. The tool has been produced from a small nodular piece of flint with small areas of cortex retained on the finished piece. The cortex is thin and creamy grey in colour. Forty percent of one surface of the tool has no removal scars and is a natural fracture. The cross-section of the tool is triangular with one edge being almost square to the two faces.

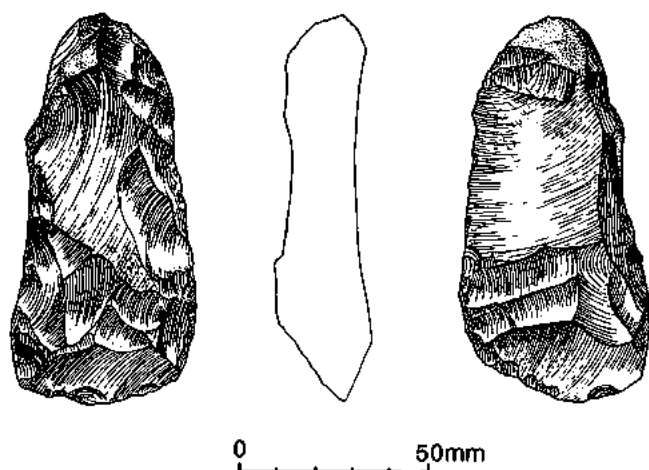


Fig. 2. Mesolithic axe/adze from Chelmsford.

Two tranchet sharpening blows, one across each face, but from the same edge, have formed the cutting edge of the tool. Subsequent damage to that edge appears to be of a similar age to the production of the piece, i.e. similar staining of the damage scars, and may be the result of the tool's use.

It is not a finely finished piece, being quite rough and irregular. There is some slight modern damage. There is no recognisable patination, although it is quite heavily iron stained, increasing towards the cutting edge.

Within the parish of Chelmsford, only 4 other Mesolithic find spots are known, and are confined to river valleys.

Cropmark of a possible long mortuary enclosure north of Rose Cottage, Chadwell St. Mary

D. Strachan

A previously unnoticed cropmark of a possible long barrow or long mortuary enclosure has been identified

during routine examination of air photographs in response to a planning enquiry, at TQ 6416 8026 (PRN 13745), c. 1 km west-south-west of the Neolithic causewayed enclosure at Orsett (Hedges and Buckley 1978). The site lies within a larger cropmark complex (PRN 5235), which comprises a sub-rectangular enclosure, c. 250 by 200 m, oriented north-west by south-east, with internal divisions, and associated trackways. This complex is site 87 in Priddy and Buckley (1987, 70-1), and, indeed, the possible long mortuary enclosure is visible on a photograph reproduced to illustrate the site (Priddy and Buckley 1987, Plate XXII).

The possible long mortuary enclosure, which is formed by two parallel sides and has rounded terminals, is 20 by 9 m, and aligned east-west (Fig.3). This is noticeably smaller than the long mortuary enclosures proposed by Buckley et al. (1988, 89), which varied in length from 35 - 80 m and in width from 14 - 30 m. The orientation of these sites, however, is predominantly north-east to south-west and east-west, like the Chadwell example.

The site lies at the head of a shallow valley of a Thames tributary running north-west to south-east, on the edge of the Boyne Hill terrace (Fig.4). To the north of the valley is the Orsett causewayed enclosure (PRN 5158), whilst, at TQ 646 796, two Neolithic flint assemblages (PRN 1802) indicate activity on the southern side of the valley, opposite the causewayed enclosure (Hedges and Buckley 1978, 252; Couchman 1979, 34). Almost all the other proposed Essex examples are in the vicinity of other forms of enclosure considered to be of Neolithic date (Buckley et al. 1988). The relationship between this possible mortuary enclosure and the Orsett causewayed enclosure is similar to that between the Springfield Lyons causewayed enclosure and the cropmark mortuary enclosure east of the Springfield cursus. Clusters of Neolithic ceremonial monuments, forming ritual foci at particular points in the landscape, are a widely recognised phenomenon and may help to support a Neolithic date for the Chadwell site.

Bibliography

Buckley, D.G., Major, H. and Milton, B.	1988	'Excavation of a possible Neolithic long barrow or mortuary enclosure at Rivenhall, Essex', <i>Proc. Prehist. Soc.</i> 54, 77-91
Couchman, C.R.	1979	'Work of Essex County Council Archaeology Section, 1978', <i>Essex Archaeol. Hist.</i> 11, 32-77
Hedges, J.D. and Buckley, D.G.	1978	'Excavations at a Neolithic causewayed enclosure, Orsett, Essex 1975', <i>Proc. Prehist. Soc.</i> 44, 21-308.

Palstave from Stapleford Abbots (TQ 5062 9440)

N. Brown

A Middle Bronze Age Palstave was recovered during ditch clearing and reported by Stapleford Abbots

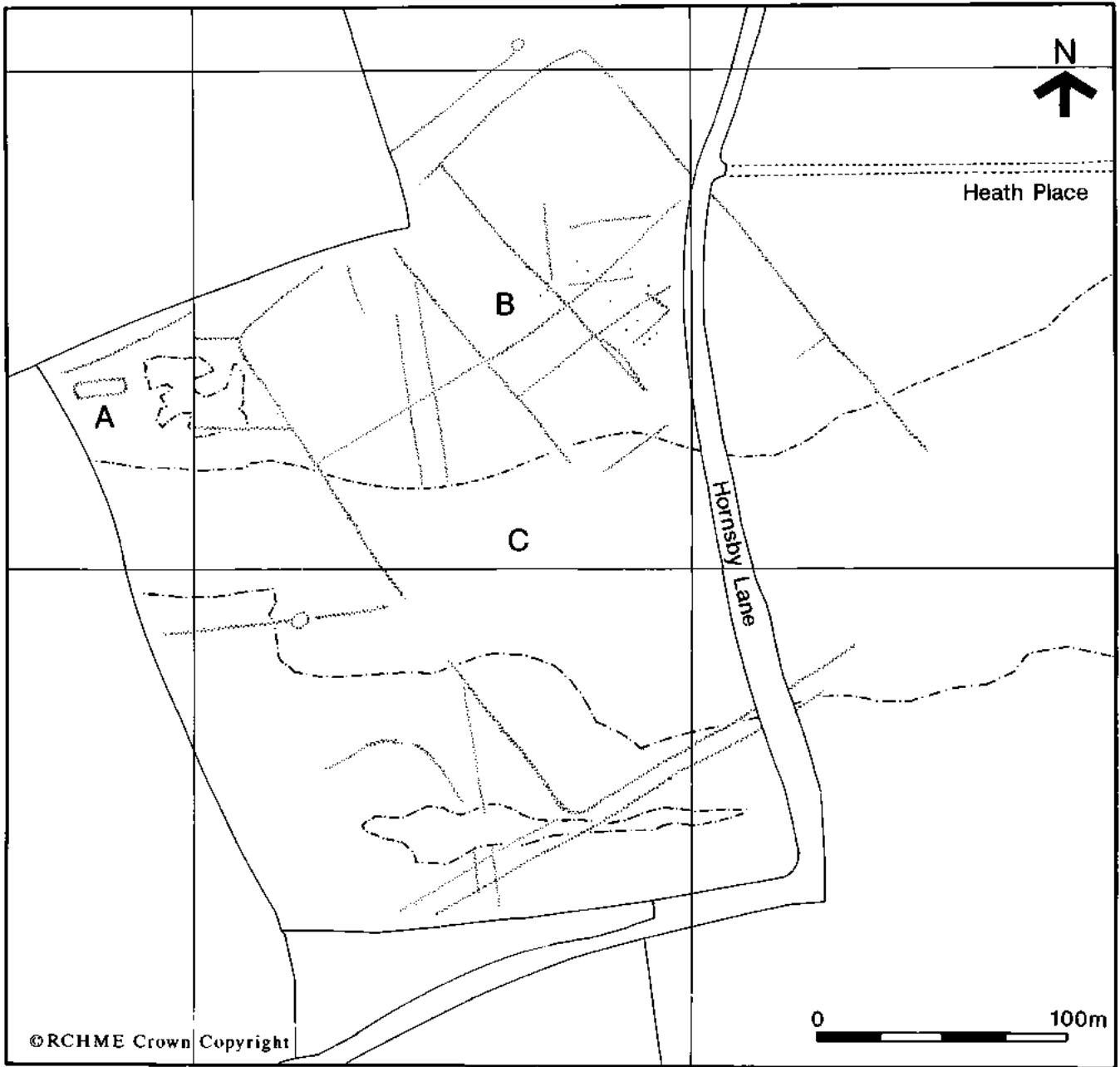


Fig. 3 The possible long mortuary enclosure at Chadwell St. Mary. The site (A) is shown in the context of the larger cropmark complex which features a large sub-rectangular enclosure (B). The dashed line defines an area (C) where variations in soils and local drift geology obstruct the development of archaeological cropmarks.
© Crown copyright

Historical Society to Epping Forest District Museum, who arranged for the axe to be loaned to the Essex County Council Archaeology Section for recording.

The object weighs 267g, maximum length is 140mm and maximum width of the blade is 53mm (Fig.5). The butt, though damaged, appears rounded and there are deep, hollow, shield patterns on the faces below the stop ridge. The expanded blade is backed by a clear bevel. There is no sideloop. The axe is severely damaged by corrosion, with bright green, active corrosion in the pitted surfaces. Corrosion damage is partic-

ularly severe on the sides of the axe. Some patches of smooth patina survive on the faces of the blade and septum. There appears to be a blow-hole on one face, in the angle between the septum and stop ridge, although this area is too severely damaged by corrosion to be certain. Such blow-holes are a common feature of Palstaves (Schmidt and Burgess 1981, 116), and one occurred on the recently recorded example from Billericay (Brown 1994). The axe would appear to belong to Schmidt and Burgess (1981) Group 1: Primary Shield Pattern Palstaves.

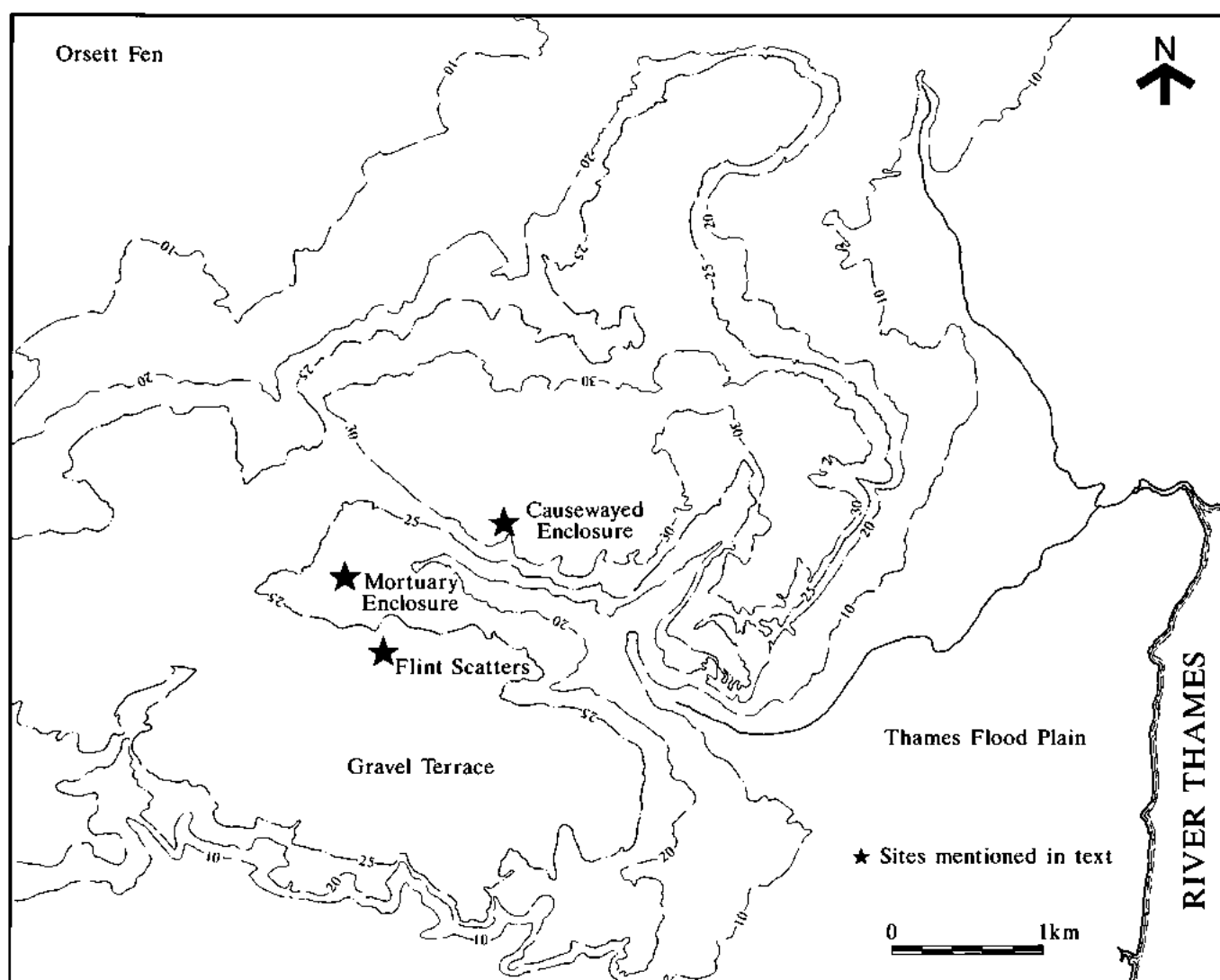


Fig. 4. Location of the sites mentioned in the text. © Crown copyright.

The Stapleford Abbots and Billericay finds together form part of an arc of findspots across south-west Essex, from south of Billericay to Epping Forest (Couchman 1980, fig.18), often related to the valleys of rivers and streams. The Stapleford Abbots find lies on the edge of the valley of the Bourne Brook/River Rom.

Bibliography

Brown, N.	1994	'Palstave from Billericay', <i>Essex Archaeol. Hist.</i> 25, 258
Couchman, C.	1980	'The Bronze Age in Essex', in Buckley, D.G. (ed.), <i>Archaeology in Essex to AD 1500</i> , CBA Res. Rep. 34
Schmidt, P.K. and Burgess, C.B.	1981	The axes of Scotland and Northern England, <i>Prähistorische Bronzefunde</i> ix, 7

Roman and medieval metal finds from north and west Essex

H. Major

The following finds were kindly lent for study by the owner, Mr K. Sandwell. The material is copper alloy, unless otherwise specified. The objects are illustrated (where appropriate) in Figs 6 and 7. Nos 1-3 are from Henham, no. 4 is from Chigwell, and nos 5-27 are from Great Chesterford.

1. Dragonesque brooch. A large, well made brooch with enamelled Celtic-style curvilinear panels round a raised lenticular panel with an applied boss. The pin is missing. The enamel is now mostly missing, but was probably red, with ?green or dark red in the central area. No enamel survives on the ears; the eyes may have been enamelled also. L 68mm

The fine quality and style of the brooch clearly ally

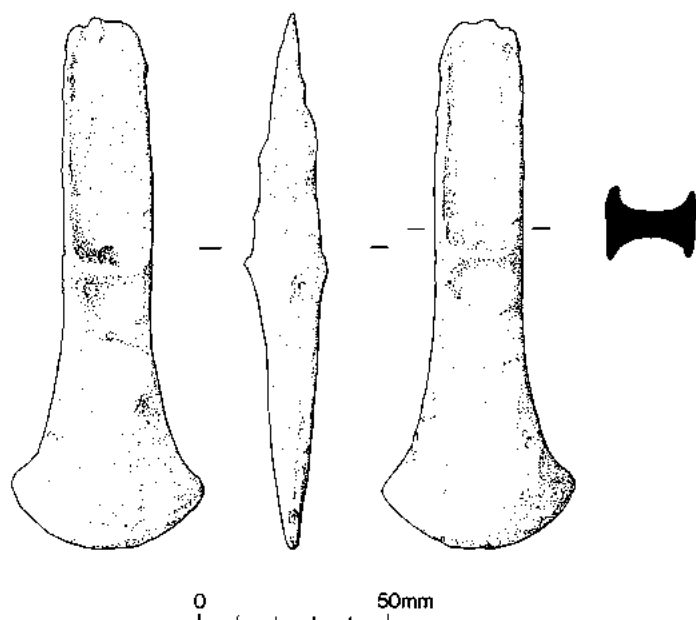


Fig. 5 Palstave from Stapleford Abbots.

it to Kilbride-Jones' East Brigantian style (1980, 174-76), but it is not completely of this style. The ears are tilted back in a way more reminiscent of the Parisian style brooches, although it is much better modelled than the latter style. The distribution of this brooch type is principally in the north and west of the country, with only a few outliers, and they are virtually absent from Essex. There is, however, an example from Wickford (Neild 1979, 47).

2. Trumpet brooch; part of the bow, foot and spring missing. The moulded knop partly carries round the back, and is flanked by moulded bands, and there is a line round the edge of the trumpet.
3. Medieval horse harness pendant. Lozenge with traces of gilding, and a cross in blue enamel.
4. Cast terminal from a torc, with some damage to the ends. It has four reels with knurled decoration, a knop with moulded decoration, and a hollow end. This is a cast copy of the Celtic 'beaded torc' discussed by Kilbride-Jones (1980, 142-50).
5. Trumpet-with-pelta brooch, in poor condition, and incomplete. It probably had a head loop originally. This is a very small example of Collingwood's type Sii (Collingwood and Richmond 1969, 298), dating to the mid 2nd century AD.
6. Colchester BB brooch (Hull's type 93), distorted. It has a line down each side of the bow, and a knobbed terminal to the foot, an unusual feature. Original L c. 35mm.
7. (Not illustrated) Colchester BB brooch in very good condition. Plain, with D-sectioned bow, triangular cut-out in catchplate and nine coil spring. L 45mm

8. Hod Hill brooch in poor condition, distorted, with traces of white metal coating. The bow is narrow, with knobbed side wings, and there is a strong transverse moulding. The foot of the bow is square in section, and has traces of two ring-and-dot motifs on each side, possibly enamelled originally. There may have been further decoration, but this is now obscured or missing.
9. (Not illustrated) The bow from a Nauheim derivative brooch, probably Hull's type 11a. An illustrated brooch from Colchester (Crummy 1983, 8, no. 4) is similar but slightly narrower. It has a line round the edge and two transverse lines just above the foot. L. 43mm
10. (Not illustrated) Oval plate brooch, pin missing. It has settings for a central oval of enamel or an intaglio, with a separate concentric band round it. 31 x 26mm.
11. (Not illustrated) Head from a Langton Down brooch; too little survives to establish the sub-type, but it can be seen that the junction between the head and the reeded bow is curved. 1st. cent. AD.
12. (Not illustrated) Tie loop from armour (*lorica segmentata*) or horse trapping, now slightly bent. The plate is parallel sided, with no obvious rivet holes, and has two transverse lines on the front. Original L c. 32mm. See Bishop and Coulston 1993, 89 pl. 52, and *ibid.* 108, no. 1, the latter for use on horse trappings.
13. (Not illustrated) Pin, with sub-globular head. This is probably a decorative tack from furniture, rather than a hairpin. It is very short (L. 36mm), and the shaft is poorly finished and rather square. It is probably Roman.
14. Finger-ring. A plain hoop with an oval bezel bearing engraved lines in a geometric pattern. Probably Roman.
15. Harness mount. It is a complex curvilinear shape, now incomplete, and is probably 3rd century in date. Cf. Bishop and Coulston 1993, 156, fig. 112.
16. (Not illustrated) Roman key finger-ring, distorted, and in two pieces. Original diam. c. 20mm.
17. Iron hipposandal in good condition. It is of Aubert's type II (*vide* Manning 1972, 171). The front loop is missing (if it was present), but bar that it is complete though somewhat flattened. The underside is ridged round the edge, and longitudinally, a feature also found on a recently excavated example from Heybridge, Essex.
18. Medieval; lead alloy (pewter?) Pilgrim badge of the Virgin and child.
19. Medieval; lead alloy (pewter?) Pilgrim badge or secular brooch in the shape of a pair of gloves.
20. (Not illustrated) Medieval annular brooch, pin missing; D-shaped section. It is similar to (and exactly the same size as) Egan and Pritchard 1991, 252, no. 1318, and like the latter, it is reversible. It was decorated on both sides, although the pattern is now unclear. It probably had chevrons on the

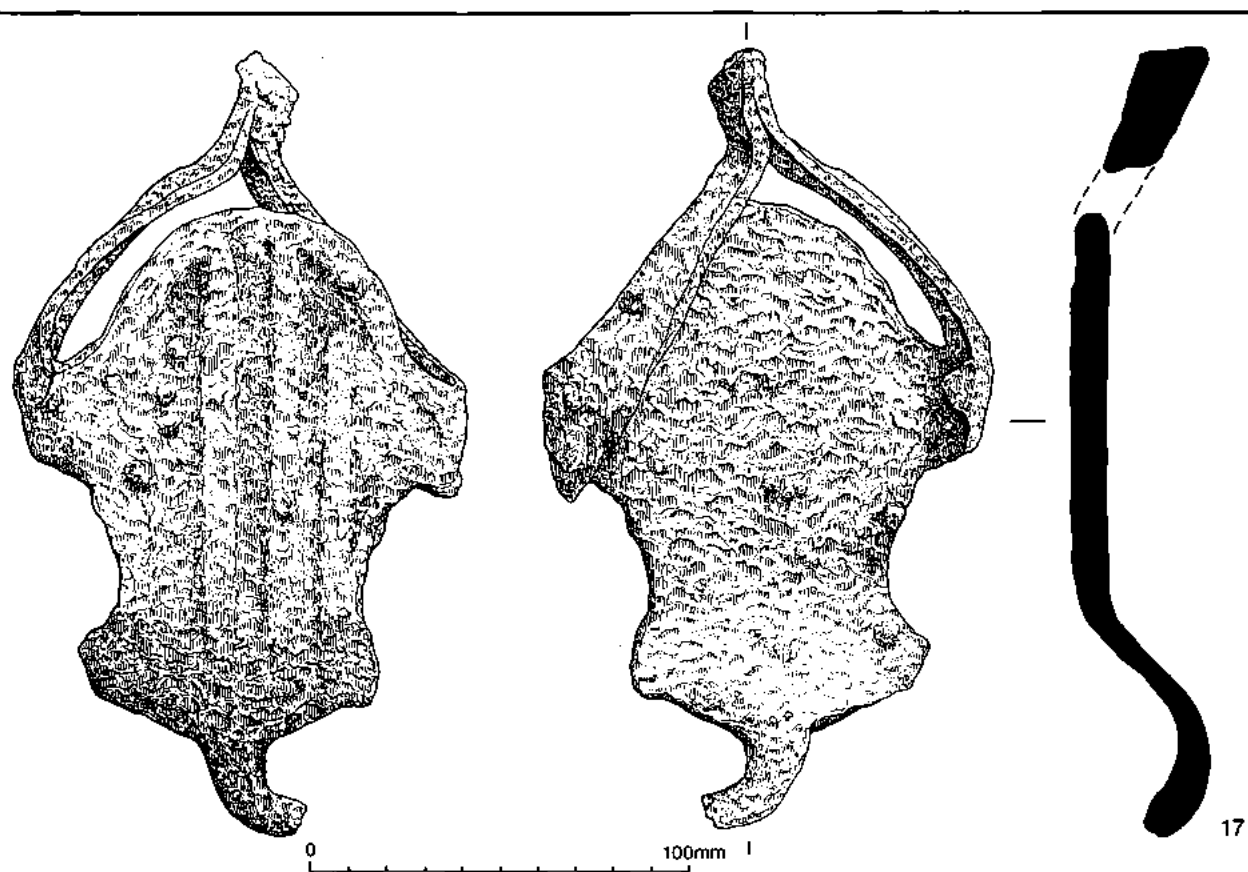
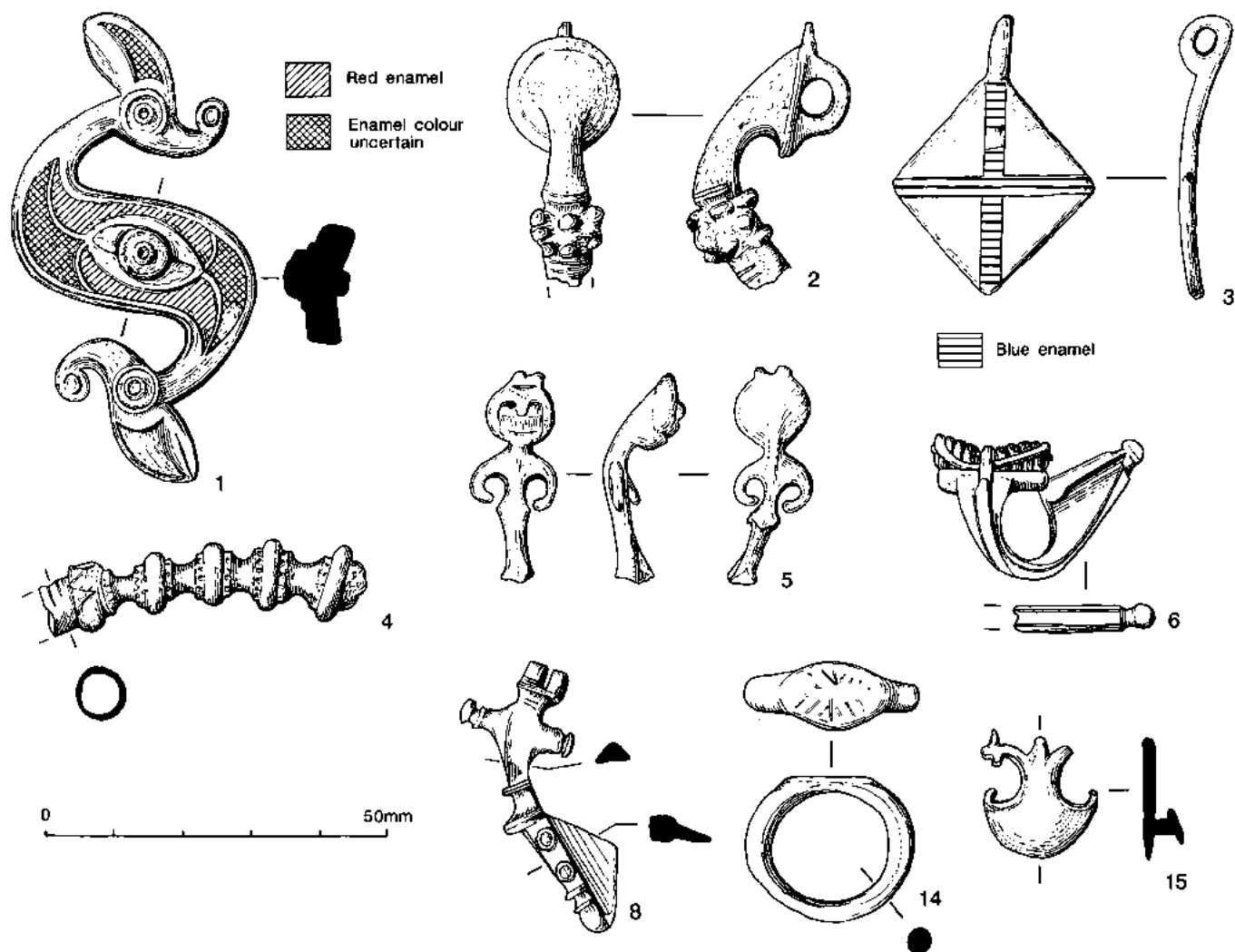


Fig. 6 Metal objects from north and west Essex.

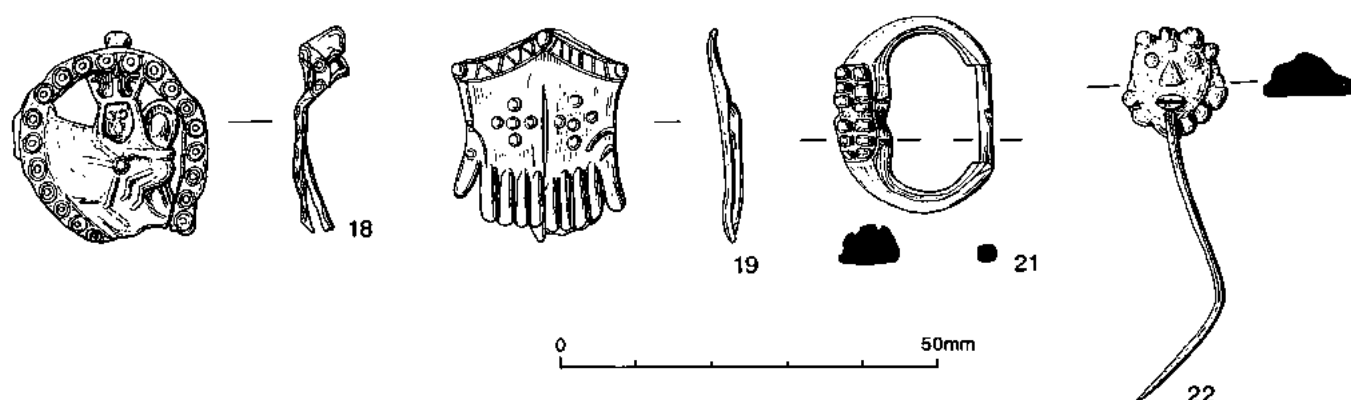


Fig. 7 Metal objects from north and west Essex.

top, perhaps with punched dots, and oblique lines on the back, some definitely composed of punched dots, some perhaps engraved. External diam. 35mm.

21. Medieval buckle. Oval frame, with moulded decoration on the top of the outside edge mimicking a roller bar. The cross frame is notched to take the tongue. This is not directly paralleled at London, but is presumably of a similar date to those with rollers. W 25mm, L 20mm.

22. Decorative pin, comprising a ?pewter head on a copper alloy shaft. The face is probably that of a lion; the back is poorly finished. Probably late Medieval. L c. 58mm.

23. (Not illustrated) Medieval buckle with plate, tongue broken. The plate is made from sheet folded in half, with one rivet. The tongue is wire, with an almost square section. This buckle is similar to Egan and Pritchard 1991, 72, no. 289, but with two knobs flanking a plain bar. The type appears to be long lived in London, from the 12th to the 14th century. Buckle 16x14mm, plate 12x8mm.

24. (Not illustrated) Buckle plate made from a thick sheet folded in half, with a cut out for the tongue. It has white metal coating, and is decorated with an engraved line round the edge on top. There is a rivet at each corner, and a central rivet. This arrangement of rivets is more typically medieval than Roman. There may be some organic material (leather?) surviving within the plate. 42 x 25mm.

25. (Not illustrated) Triangular hooked tag, with one attachment hole; distorted. Triangular hooked tags were in use from the 7th to the 11th or 12th century; this one is likely to be later rather than earlier in this period. The type, as exemplified by material from Winchester, is discussed by Hinton (1990).

26. (Not illustrated) Medieval belt mount; domed, faceted, sheet sexfoil with central hole. It has two opposed rivets, both with roves surviving. The type is illustrated by Egan and Pritchard (1991, 188; cf nos. 990 and 1001), who suggest that they are surrounds for buckle pin holes. Probably post 13th century. Diam. 19mm.

27. (Not illustrated) Mount; a moulded five-sided plate with five holes surrounding a central hole, and elaborate petal-like moulding on top. W 23mm. Probably late medieval or post-medieval.

Bibliography

Abbitt, M. W.	1973	'The eighteenth century shoe buckle' in Noel Hume, A. et al., <i>Five Artifact Studies</i> , Colonial Williamsburg Occ. Pap. in Archaeol. I
Biddle, M.	1990	<i>Object and economy in Medieval Winchester</i> , Oxford
Bishop, M.C. and Coulston, J.C.N.	1993	<i>Roman Military Equipment</i> , London
Collingwood, R.G. and Richmond, I.	1969	<i>The Archaeology of Roman Britain</i> , London
Crummy, N.	1983	<i>The Roman small finds from excavations in Colchester 1971-9</i> Colchester Archaeol. Rep. 3
Egan, G. and Pritchard, F.	1991	<i>Dress Accessories</i> , London
Frere, S.S.	1972	<i>Verulamium Excavations Vol. 1 Res. Rep. Soc. Antiq. London XXVIII</i>
Hinton, D. A.	1990	'Hooked tags', in Biddle, M., <i>Object and economy in medieval Winchester</i> , 548-52
Kilbride-Jones, H.E.	1980	<i>Celtic Craftsmanship in Bronze</i> , London
Manning, W.H.	1972	'The Iron Objects', in Frere, S.S., <i>Verulamium Excavations Vol. 1</i> , 163-95
Neild, P.	1979	'Wickford, Beauchamps Farm', in Couchman, C. (ed.), 'Work of Essex County Council Archaeology Section, 1978', <i>Essex Archaeol. Hist.</i> 11, 41-50

A group of finds from the vicinity of the "Noah's Ark" Roman villa at Brightlingsea, Essex
by T.S. Martin

Introduction

During the early and mid 1970's, the field known as "Noah's Ark" on Moverons Farm, Brightlingsea, was quarried for sand and gravel. The then farmer, Mr John Pilkington and his son David, knowing of previous archaeological finds in the area – the site lies close to the putative Roman villa (E.S.M.R. P.R.N. 2116; TM 0590 1875) located by Australian soldiers engaged in training exercises during World War I – had asked the drag-line driver to be watchful. It was he who notified the Pilkingtons when his drag-line disturbed a pit or dump about 1.5m in diameter located towards the centre of the field. The Pilkingtons later recovered a considerable quantity of artefacts along with oyster shells and 'debris' which were not kept; the pit or dump was completely cleared. Although the drag-line driver continued to co-operate, no further finds were made. Both the find spot and the greater part of the field have been quarried away; the area is now a lake and currently owned by Alresford Sand and Ballast Co. Ltd. All finds were subsequently donated to Brightlingsea Museum in 1993 by the Pilkingtons.

The Pottery

The pottery was classified using the Chelmsford typology published by Going (1987, 2-54) and where appropriate with reference to the *Camulodunum* form type series published by Hawkes and Hull (1947, 215-273) and Hull (1963, 43-138). All pottery was quantified by sherd count, weight (g) and estimated vessel equivalent (EVE); the results of which are presented in Tables 1 and 2 below.

Fabrics: the fabrics identified were (numbers after Going 1987 followed by ECC mnemonic codes):–

- 60 (TSG) Samian (all sources);
- 1 (CLC) Colchester colour-coat;
- 6 (LRC) Lower Rhineland colour-coat, fabric 1;
- 27 (CLB) Colchester buff ware;
- 31 (BUF) Unspecified buff wares;
- 32 (NKG) North Kent grey ware;
- 34 (FROM) Fine Romanising wares;
- 36 (HAR) Hadham grey ware;
- 39 (GRF) Fine grey wares;
- 40 (BB1) Black-burnished ware 1
- (OBB1) Unspecified Black-burnished ware 1;
- 41 (BB2) Black-burnished ware 2
- 42 (OBB2) Unspecified Black-burnished ware 2;
- 44 (STOR) Storage jar fabrics
- 45 (ROM) Romanising grey wares;
- 47 (GRS) Sandy grey wares;
- 48 (RET) Rettendon type wares;
- 55 (ASS) South Spanish amphorae (Dressel 20);
- (ARB) ?Mediterranean rilled-body amphorae;
- (AIT) Dressel 2-4 amphora fabric.

Table 1: Quantification of fabrics by sherd count, weight (g) and estimated vessel equivalents (Eves).

Fabric	Sherds	Wt. (g)	%Wt.	Eve	%Eve
TSG	10	108	0.56	0.16	0.73
CLC	11	97	0.50	0.70	3.20
LRC	4	62	0.32	–	–
CLB	13	3,744	19.71	1.17	5.35
BUF	21	725	3.81	0.27	1.23
NKG	3	10	0.05	–	–
FROM	8	44	0.23	–	–
HAR	8	72	0.37	–	–
GRF	221	2,074	10.91	5.90	27.02
BB1	7	74	0.38	–	–
BB1T	4	67	0.35	0.13	0.59
BB2	290	4,050	21.32	6.04	27.66
BB2T	4	47	0.24	0.32	1.46
STOR	22	1,107	5.82	0.11	0.50
ROM	108	1,148	6.04	1.91	8.74
GRS	380	3,531	18.59	4.74	21.71
RET	7	39	0.20	–	–
ASS	10	1,729	9.10	0.25	1.14
ARB	6	76	0.40	0.13	0.59
AIT	1	170	0.89	–	–
Totals	1,139	18,994	–	21.83	–

Because of the lack of any stratigraphic details it is impossible to be certain whether or not the group was recovered from a single context or from several. Analysis was primarily concerned with establishing the group's archaeological integrity.

Initial finds viewing confirmed that the group consisted of a substantial quantity of pottery (over 19kg), a small amount of tile, three fragmentary bone pins, some glass (including a bead) and a copper alloy pin. Although the group's context is archaeologically dubious, detailed study can be justified for three reasons. Firstly, the assemblage is closely datable with most of the pottery falling within a fairly narrow date band. Although residual pieces are identifiable, the bulk of the pottery dates to the period after c.125/30 and a good proportion of that is Antonine. There are only three sherds that are certainly later than c.230/40 and they are post-Roman. Secondly, there was much joining material, and thirdly, even under close scrutiny, it was impossible to detect any obvious biases in the collection, such as in the ratio of rims, bases and decorated sherds to undecorated bodysherds, or in favour of fine wares at the expense of the coarse wares as would generally be the case if a policy of on site selection had been operated by the Pilkingtons. It seems, therefore, that there is little in the way of evidence from which a case can be made to question the group's integrity. This indicates that the collection should be considered as being representative of what was originally present, rather than simply as a selection of exotica, pieces of intrinsic interest, or *objets d'art*.

Having substantiated the group's integrity, the aim was to identify the variety of fabrics and forms and establish the date range. No attempt has been made to present a site form type series, although duplication of forms illustrated has been kept to a minimum. Where duplicates do appear it is because they carry distinguishing features such as graffiti, unusual decorative schemes, or simply variation in size. The report examines the pottery by fabric using a catalogue format and discusses the significance of the group with reference to other published quantified groups from Essex of similar date and where possible, of comparable proportions.

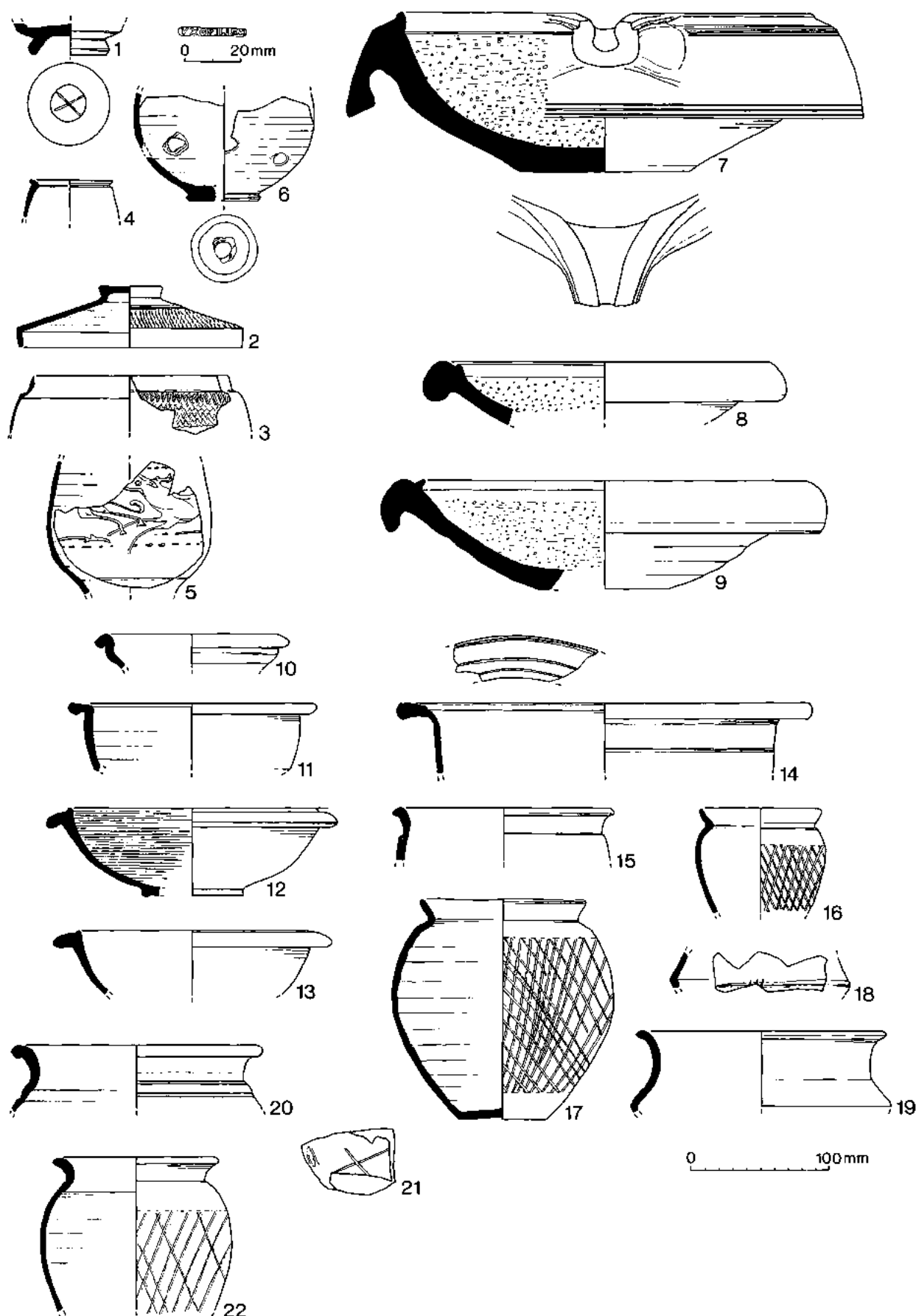


Fig. 8 Romano-British pottery from Noah's Ark, Brightlingsea.

Table 2: The incidence of vessel class by fabric quantified by Eves

Fabric	Vessel Class								
	B	C	D	E	F	G	H	K	P
TSG	0.06	—	—	—	0.10	—	—	—	—
CLC	—	0.18	—	—	—	0.20	0.33	—	—
CLB	—	—	1.17	—	—	—	—	—	—
BUF	—	—	0.27	—	—	—	—	—	—
GRF	0.15	0.80	—	0.15	—	4.80	—	—	—
OBB1	—	—	—	—	—	0.13	—	—	—
BB2	5.70	—	—	—	—	0.34	—	—	—
OBB2	0.33	—	—	—	—	—	—	—	—
STOR	—	—	—	—	—	0.11	—	—	—
ROM	—	0.32	—	—	—	1.46	—	0.13	—
GRS	—	0.60	—	0.20	—	3.87	—	—	—
ASS	—	—	—	—	—	—	—	—	0.25
ARB	—	—	—	—	—	—	—	—	0.13
Totals	6.24	1.90	1.44	0.35	0.10	10.71	0.20	0.46	0.38

(60) Samian

Mainly small sherds, with the only identifiable forms consisting of two f.33s, a f.27 and a f.18/31. One sherd was badly worn on the interior suggesting it may have been part of a bowl, although not enough was present to identify form. Two sherds were burnt, although joining, insufficient of the vessel was present to identify the form. There were no decorated pieces.

- 1: Base of a Central Gaulish Drag. 33 cup with the stamp VXOPILLIM of the potter Uxopillus. This potter had his workshop at Lezoux in the mid to late Antonine (he is dated by Hofmann (1985) to the period c.140-190). His stamp die 4a of which this appears to be an example is dated to the period c.150-170 at Bancroft villa, Milton Keynes (Pengelly 1989, 149). The underside has the letter 'X' crudely scratched after the vessel had been fired. This may signify 10 in Roman numerals or an illiterate ownership mark (see below). At Usk, this type of graffiti was well represented on samian cups within the fortress where they are interpreted as either numbers or ownership marks (Hassall 1982).

CLC (1) Colchester colour-coat

This is the main colour-coated fabric present. Although only four vessels are represented, the range of forms is diverse, comprising a castor box (bowl and lid, ?matching) and two bag-shaped beakers with rough cast decoration. Only the lid, bowl and one of the beakers is illustrated here.

- 2: Castor box lid with wide zone of rouletting on the body and plain rim (K7). This vessel differs typologically from other examples in that the knob is not grooved (Hull 1963, 106-7), although the fabric is typically Colchester (fabric identification confirmed by R. Symonds). The vessel is finely made suggesting that it may be an early example of the class. Probably later 2nd to early 3rd century.
- 3: Bowl with plain rim, sharply offset shoulder and zone of rouletting on the upper body (C18, Cam 308). Probably later 2nd to early 3rd century.
- 4: Bag-shaped beaker with cornice rim and traces of fine rough casting (H20.2/1, Cam 391). The other vessel of this type is represented by two lower bodysherds. At Chelmsford this type is dated to the period c. 130-70 AD.

LRC (6) Lower Rhineland colour-coat (fabric 1)

This is the least common of the colour-coated fabrics. It is represented by four bodysherds belonging to a single vessel.

- 5: A bag-shaped beaker with stags and ?dogs *en barbotine* forming part of a hunt scene. The absence of a wide band of rouletting below the carination suggests that this vessel belongs to the Hadrianic to early Antonine (Anderson 1980, 16).

CLB (27) Colchester buff ware

Flagons and mortaria only. One of the flagons represented appears to have been ritually 'killed' (No. 6). Such pots are more frequently encountered in cremation cemeteries rather than in domestic contexts. At Great Dunmow (Going in Wickenden 1988, 22-3) flagons and jars were generally 'killed' by piercing the body with a pointed implement like a metal rod; while only the more robust vessels were 'killed' by knocking a hole through the base. The Brightlingsea example is noteworthy in that both methods were employed to 'kill' the same pot. Both mortaria fall within the Cam 497 group. Only the most complete example is illustrated (No. 7).

- 6: Flagon base and lower body with several holes made after firing. One has been knocked through the base as if to 'kill' the pot, while several others – at least three or four – pierce the lower body apparently at regular intervals.
- 7: A large mortarium with heavy rolled over flange falling within the Cam 497 group (Going 1987, type D13) and similar to a vessel produced by the potter *Martinus*. Its spout is an unusual type for this form and probably dates to the period after c.180, but no later than the early 3rd century (K. Hartley *pers comm.*).

BUF (31) Unspecified buff wares

This fabric is also represented by flagons and mortaria. Seven flagons are represented, including a neck with part of the handle in a very coarse fabric, although none are sufficiently complete to warrant illustration. The mortaria types are all comparable to Colchester products suggesting that they may be examples of coarse Colchester fabric.

- 8: Rim of mortarium (type D.1). The form is loosely based on Cam 496/497 (cf. Hull 1963, Fig. 68, No. 8). The profile suggests a Trajanic-Hadrianic date.
- 9: Mortarium (type D1.4) Cam 497 (cf. Hull 1963, Fig. 66, No. 4). This vessel belongs to the period c.160 to 200.

NKG (32) North Kent grey ware

This fabric is the least common of the grey wares. Two bodysherds with burnished exteriors and one abraded bodysherd suggest that two vessels, possibly beakers, are represented.

FROM (34) Fine Romanising wares

A small and fragmentary assemblage consisting of 8 sherds. Compared with its coarser relative (fabric 45) it is poorly represented. Four vessels can be identified including a necked jar with a cord on at the carination and beaker with fine dots *en barbotine* (?H6). Neither vessel is illustrated. The remaining vessels are represented by single undiagnostic bodysherds.

HAR (36) Hadham grey ware

Another small and fragmentary assemblage comprising bodysherds from two, probably 'Braughing type' jars (G21) on account of the shoulder rilling. Neither is illustrated.

GRF (39) Fine grey wares

This is the third commonest fabric group. Vessels in these fabrics are likely to be derived from a variety of sources, including Colchester. Bowls and jar forms dominate the assemblage, with dishes being rare. Decoration is not particularly common, but generally consists of acute angled lattice on jars (cf. No. 16) and grooving on bowls (cf. No. 14). All over burnishing is present, but not common.

- 10: Shallow dish with flaring sides, and down-turned, undercut bead rim (B2.2/1). At Chelmsford the form broadly dates to the 2nd century.
- 11: Bowl with convex sides and flat out-turned, slightly drooping flanged rim (C1.2). Probably 2nd century, although at Chelmsford the form was current from the Flavian to the early 2nd in local mica dusted fabrics.

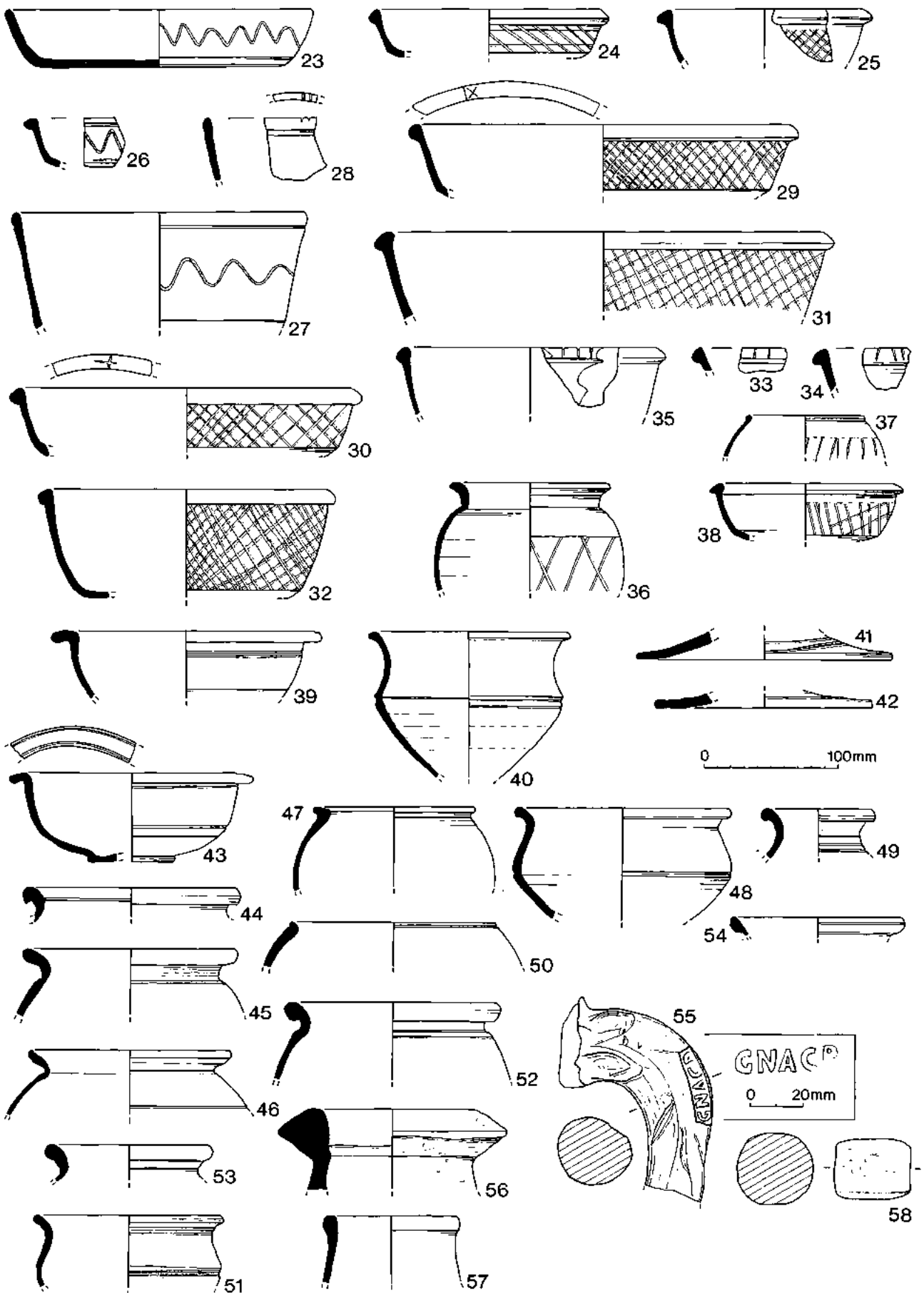


Fig. 9 Romano-British pottery from Noah's Ark, Brightlingsea.

- 12: Bowl with drooping pointed flange separated from the rim (C3.1; *Cam* 46). The interior surface has horizontal all-over wheel-burnishing with the exterior left plain. At Chelmsford the form belongs to the Flavian to early 2nd century and is present in contexts dated to c.105-130 at *Verulamium* (cf. Wilson 1972, Fig. 113, No. 495). However, at Derby, the form continued to be produced into the Hadrianic (cf. Brassington 1980, Fig. 15, Nos 400-444), and by the Derbyshire-ware industry into the Antonine (cf. Kay 1962, Fig. 13, Nos 13-18).
- 13: As No. 12, but slightly smaller. The interior surface is heavily worn.
- 14: Large bowl with out-turned grooved rim. A new form that shares some characteristics of C16 type bowls such as the rim and body grooving, but has a more rounded rim profile. Probably 2nd century.
- 15: Bowl-jar with concave neck and slightly rounded body. The neck is separated from the body by a slight shoulder. New form. No dating evidence.
- 16: Small, high-shouldered neckless jar with everted rim and broad zone of narrow spaced acute lattice (G9) in a fine pale grey slightly micaceous fabric.
- 17: Large, high-shouldered neckless jar with everted rim and broad zone of narrow spaced acute lattice (G9). Reconstructed from fragments.
- 18: Necked jar, type uncertain, with graffiti comprising three grooves of irregular length cut or sawn on the carination. These may possibly be interpreted as 3 in Roman numerals.
- 19: Carinated jar with out-turned rim and recurved profile. This vessel possibly represents the final development of the G19 *genre*. A mid 2nd-century date is suggested.
- 20: Large jar with recurved profile and hooked and beaded rim (G19.5). At Chelmsford the form is dated to the period from the Flavian to the early 2nd century.

BB1 (40) Black-burnished ware 1

As is usually the case in Essex this fabric is not well represented. A single abraded vessel was identified.

- 21: A fairly abraded base of a dish with the graffiti X scratched on the underside after firing (see No. 1). Not enough survives to identify type.

OBB1 (-) Unspecified Black-burnished ware 1

A single vessel represented. Although reminiscent of BB1 jars in form, and being hand-made, the surface finish does not have the usual 'glossy' finish.

- 22: High-shouldered neckless jar with everted rim and a wide band of acute lattice (G9). Very coarse fabric, close in form to Gillam 1976, Fig. 1, No. 4 - dated to the late 2nd century. Rim looks as though it was finished on a turn-table. Wheel-marks absent on interior of vessel.

BB2 (41) Black-burnished ware 2

Perhaps surprisingly, this was the group's principal fabric by weight and estimated vessel equivalence, although this is not reflected when quantified by sherd count. It suggests that the BB2, because of its relative frequency and less fragmentary condition compared with the other fabrics, provides a reliable indication of the group's date. The bulk of the vessels in this fabric consisted of dishes, with jars being poorly represented.

A significant number of dishes carried graffiti or notches cut into the top rim after firing. Such marks are sometimes considered to be non-literate, perhaps signifying votive use. Alternatively, they may represent capacity estimates. In view of the amount of numbers and possible numbers present the latter interpretation seems the most likely.

Another noteworthy feature is that many of the sherds are discoloured because of burning; few sherds exhibit the usual black surface. This appears to be unusual for Essex sites where BB2 tends to

be a consistent black or dark grey colour (C.R. Wallace *pers. comm.*). A further point on this matter concerns the fact that no vessel in any of the other fabrics is burnt. This is difficult to explain considering that it seems unlikely that BB2 vessels were exclusively used for cooking. Unless stated all the vessels in the catalogue are burnt.

- 23: Rimless shallow dish with convex sides and slightly chamfered base (B1.4). Decoration consists of a single burnished wavy line. The form occurs at Chelmsford from c.125/30 onwards.
- 24: Shallow dish with flaring sides, bead rim and chamfered base decorated with burnished oblique lines (B2.3/1). The walls are slightly concave internally. At Chelmsford the form dates from c.125/30 to the late 2nd century.
- 25: Type as No. 23 although broken above the chamfer and much finer. Decorated with acute lattice.
- 26: Type as No. 24 but decorated with burnished wavy line.
- 27: Deep dish with almost straight sides (B3.1). The plain rim is delineated by a single groove. Light all-over burnishing and faint burnished wavy line decoration. This is a long-lived form at Chelmsford where it was current from c.125/30 into the 4th century.
- 28: Type as No. 24 with two notches cut into the rim after firing.
- 29: Deep bead-rimmed dish/bowl with slightly flaring sides, finely executed acute lattice and chamfered base (B4.2/2). Fragmentary graffiti on the rim. Unfortunately the vessel is broken at this point, but seems to show the letters IX and almost certainly represents the numbers 9 or 11 depending on which way round it is read. At Chelmsford this form appears c.140 and is most common in the Antonine period.
- 30: Type as No. 24. Graffiti on the rim consists of a crudely executed cross or perhaps the numeral X for 10.
- 31: Type as No. 24 but deeper (B4.2/1, *Cam* 37). At Chelmsford this form appears c.140 and is most common in the Antonine period.
- 32: Type and dating as No. 34.
- 33: Fragmentary dish rim (B2/B4) with graffiti comprising two notches. Unburnt.
- 34: Fragmentary dish rim (B2/B4) with graffiti consisting of three notches (see No. 18).
- 35: Fragmentary dish rim (B2/B4) with graffiti consisting of three notches.
- 36: High-shouldered neckless jar with everted rim (G9) and zone of fairly widely spaced burnished acute. Mid 2nd century at Chelmsford.
- 37: Small jar or beaker with bead rim in fine fabric. Decoration consists of narrow spaced oblique burnished lines.

OBB2 (42) Unspecified Black-burnished ware 2

Represented by a single vessel. This was separated out from the other BB2 on account of surface treatment (ie very little of the vessel has been burnished apart from the rim) suggesting that, although firmly within the BB2 tradition, it may be derived from a different source to the rest of the BB2.

- 38: Dish with distinctive internal bead, chamfered base and unusual decorative style on exterior consisting of faint oblique lines perhaps representing poorly executed lattice which appears to show up in burnished band below the rim set within an unburnished zone. Interior also unburnished. Traces of residue or soot-blackening on interior surface. Probably falls within Going's B2 group.

STOR (44) Storage jar fabrics

The group contained relatively very little of this fabric. At least two vessels were represented, including a very large bodysherd. The forms present were G44 (1st to 4th century) and G45 (2nd to 3rd century), both were fragmentary.

ROM (45) Romanising grey wares

These are fairly well represented by sherd count and weight, although their low EVE value would seem to indicate high residual-

ry. The fabric is best considered as a post-conquest continuation of the pre-conquest grog-tempered 'Belgic' wares that are widely distributed over south-eastern England (Thompson 1982). A Colchester or Ardleigh source is probable. Forms comprise bowls, jars and lids.

- 39: Large bowl with out-turned grooved rim and mid body carination delineated by grooving (C16). A late 1st to mid 2nd century date range seems plausible.
- 40: Carinated jar with out-turned bead rim, concave upper body, convex sided below the carination (G29). ?Early 2nd century.
- 41: Lid with squared grip and burnished motif on the upper surface (K3). Date range uncertain.
- 42: Lid with squared grip and burnishing on the upper surface (K1). Date range uncertain.

GRS (47) Sandy Grey wares

The second commonest fabric group by weight and EVE, although by sherd count it is by far the most common. This greater fragmentation implies that the assemblage contains a higher residual element compared with the BB2. Nearly all are probably locally produced with Colchester a likely source as with GRF (39). At Chelmsford, Going (1987) was able to tentatively distinguish a number of vessels on the basis of form profile (e.g. G25 jars) which were ascribed to this centre (fabric 38), although in fabric they are indistinguishable from the coarse sandy grey wares that are found all over Essex. The principal vessel class was the jar, other forms were virtually absent.

- 43: Small version of bowl form C16. The groove under the has been burnished, but the other grooves are unburnished. Possibly mid 2nd century.
- 44: Jar with pointed rim and internal ledge or cordon. The closest parallel is Going's G24 group. At Chelmsford these vessels appear from the 2nd century onwards.
- 45: Jar with out-turned rim and tapering neck (G24.1). 2nd to 4th century at Chelmsford.
- 46: Neckless jar with cupped rim and groove on the body below the rim (G7.1). Early to mid 2nd century.
- 47: Neckless jar with flat bead rim (G11). ?Later 2nd century.
- 48: Bowl-jar with bead rim, concave neck and rounded body. This type also has a groove delineating the carination. No dating evidence.

- 49: Large narrow-necked jar with bead rim (G34.1). Slightly distorted and smaller than usual. Faint burnished horizontal lines around the neck. This type dates from the beginning of the 3rd century at Chelmsford, however, the slightly smaller size of this example may indicate that it represents an early version of the genre.
- 50: Neckless high-shouldered jar with small bead rim and all-over burnishing (G3.2). A form that dates from the mid to later 1st century at Chelmsford. Residual.
- 51: Short-necked jar with recurved profile and out-turned rim (G29.2). A groove marks the carination. The exterior is partly oxidised and burnished all-over. Probably 1st century. Residual.
- 52: High-shouldered short-necked jar with rolled, slightly undercut bead rim (G25.1). 2nd to 4th century at Chelmsford.
- 53: Short-necked jar with bead rim (G24). Dating as Nos. 44 and 45.
- 54: Jar rim with grooves, form uncertain.

RET (48) 'Rettendon' type wares

A small amount of flint-tempered sandy grey ware was present with no more than one vessel represented. At Chelmsford Going (1987; 12) noted that Rettendon wares first appeared towards the end of the 3rd century. The small amount of pottery in the 'Rettendon' tradition may suggest that the origins of the use of flint temper in fully Romanised grey wares may date to the end of the 2nd century but only became common by the last quarter of the 3rd century.

The Amphorae

Few amphora sherds were recovered. The fabrics represented included South Spanish Dressel 20, ?Mediterranean rilled body amphora and Dressel 2-4. Dressel 20 was the principle type and included a stamped handle.

- 55: Handle of Dressel 20 amphora with stamp. The stamp reads GNACR or GNACP, the reading of the last letter is uncertain. It possibly stands for GN. A(ppi or -ppulei) C(o)R(neli)? The closest parallels listed by Callender (1965) are Nos. 401a GNAC and 401b GNACOR. A variation on this theme seems likely.

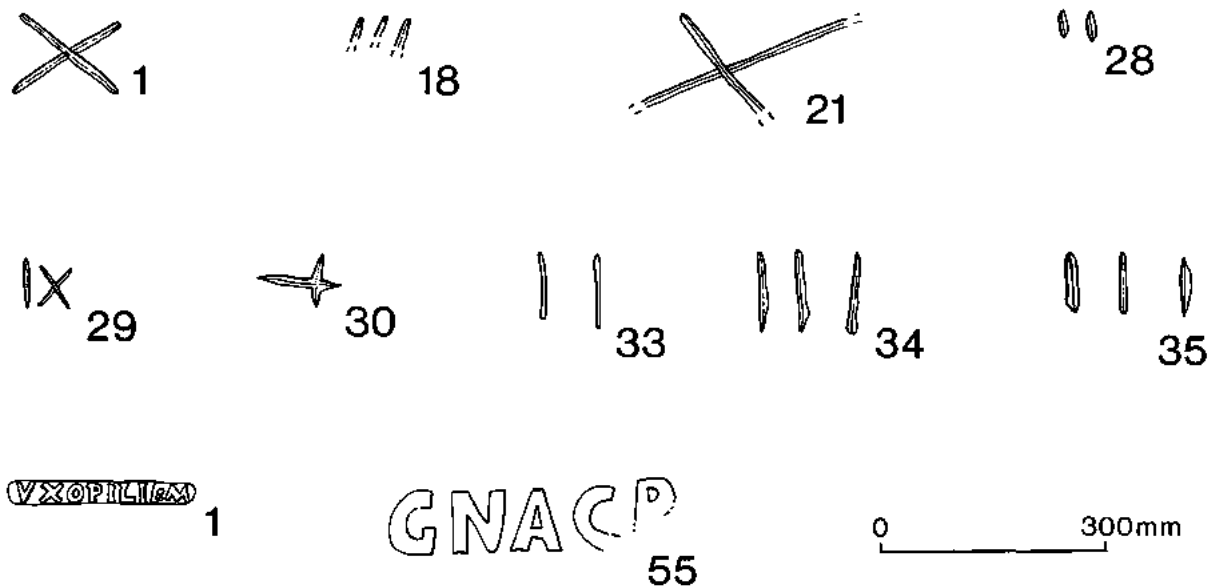


Fig. 10 Graffiti stamps on Romano-British pottery from Noah's Ark, Brightlingsea. (Numbers refer to vessel catalogue)

- 56: Dressel 20 amphora rim (P1). This type is dated to the second half of the 2nd century and into the early 3rd century.
- 57: Rim of rilled-body amphora. The distinctive black inclusions visible under the microscope suggest a Mediterranean source. These often have small and delicate rims.
- 58: Spike base of Dressel 2-4 amphora reused as a pestle or weight. The object weighs 170g.

The other finds

Compared with the pottery all other finds form only a minor component of the group. The following categories are present: medieval and post-medieval pottery, window and vessel glass, a glass bead, bone pins, tile and a copper alloy pin.

(i) *Glass*: Five fragments, four of which are of window glass. One has a D-shaped edge; all are rough on one side. The other piece is a very fine vessel fragment.

A glass bead was also recovered. It is blue, approximately spherical in shape and 5mm in height.

(ii) *Copper alloy*: A single pin fragment, 47mm long and 1mm in diameter, from either a brooch, needle or hair pin. The absence of widening at the opposite end to the point suggests that it is most likely to be a brooch pin. Not closely datable.

(iii) *Worked bone*: Three bone pins, all broken, are also present. One of these had transverse grooves beneath a conical head (Crummey 1983, 21; type 2). The type is dated to before c.200 AD. The other pins had lost their heads and consequently were too fragmentary to identify type.

(iv) *Tile*: Although the Pilkingtons claimed that they did not recover any brick or tile, the group contained 15 tile fragments (2,202g). As the assemblage was so small any attempt at detailed fabric identification was not considered worthwhile. Analysis of the tile was confined to classification of type based on primary function, the recording of deliberate markings, such as decoration, and evidence for re-use, such as *tesserae*. The types present are recorded in Table 3.

Table 3: The Tile

Type	Frag. No.	Weight (g)
<i>Tegulae</i>	4	1,546
<i>Tubulus</i>	3	301
Unclassified	3	262
<i>Tesserae</i>	5	91
Totals	15	2,200

Tegulae

These flat roof tiles were formed by pushing a slab of clay into a rectangular wooden frame with high sides on the two long sides. Clay was then forced along the high sides to form the flanges. One flange fragment showed trim marks close to the cut away.

Box flue-tile (tubulus)

These rectangular, square-sectioned hollow tubes, were used to convey hot air through hypocaust systems. All fragments have combed decoration, a device which probably facilitated keying into walls. It is likely that these were confused with storage jars and comb decorated pottery.

Unclassified

This group of tile has no distinguishing features to identify type. One of the fragments is, however, possibly part of a *tegula* and another may be post-Roman.

Tesserae

All *tesserae* were fashioned from flat tiles (eg. the bodies of *tegulae* and wall-tiles or *tydion* as used in bonding courses in masonry walls) which were no longer required as building materials.

(v) *post-Roman pottery*: This consisted of two sherds of Mill Green type ware (13th to 15th century) and one flower pot sherd with illegible lettering possibly representing the maker's name (post-medieval). The wide disparity in date between these sherds and the rest of the collection suggests that they are intrusive from the topsoil.

Discussion

The criteria for regarding this assemblage as a homogeneous group have been outlined in the introduction. Detailed analysis of the Roman pottery suggests several significant traits are identifiable concerning dating and supply on the evidence of fabrics and forms. Another aspect to emerge is the high incidence of vessels with graffiti.

Much of the pottery recovered can be securely dated to the 2nd century on typological grounds. Although some earlier vessel types are present (cf. Nos. 11, 50, 51), these do not figure significantly. The presence of common forms belonging to the period c.125/30 to c.230/40, for example, bead-rimmed dishes (types B2 and B4) and high-shouldered neckless jars with everted rims (types G9.1 and G9.2) and the absence of common forms of later Roman date, for example, incipient and fully flanged dishes (types B5 and B6) and distinctively late jar forms suggests that much of the pottery dates from the mid 2nd to early 3rd century. Apart from three post-Roman sherds which can be dismissed as intrusive, the latest pottery dates to the late 2nd (probably after c.180) and early 3rd century. This places the group within the Chelmsford ceramic phase 4 (Going 1987) and may even continue into phase 5. The vessel forms which fall within this later date range consist of, for example, a mortarium (No. 7) and a castor box (Nos. 2 and 3). There is nothing that has to be dated exclusively to the 3rd century, however. The small amount of 'Rettendon type' sandy flint-tempered ware almost certainly represents an early version of this fabric style as these sherds are much greyer in colour than is usual in the Rettendon wares of the later 3rd century onwards. In view of the nature of the deposit and the circumstances of the find, it is proposed to adopt a broader date range than would be usual if group had been recovered under scientific conditions. A date band of c. AD 160/70-c. 210/20 is here proposed.

To provide an overview of the pottery supply, the site is compared with two other quantified groups of broadly the same date (Table 4), Gravel Pit 857 at Great Dunmow (Going and Ford 1988) and the Period 3A assemblage at Rivenhall (Going 1993). The Great Dunmow group was dated c. AD 190-240 and comprised 21.835kg (21.93 EVE), while the Rivenhall

group more closely dated to *c.* AD 190-215, but consisted of only 5.890kg (8.00 EVE). Although the latter group is much smaller than both the Brightlingsea and the Great Dunmow groups, comparisons between the groups are valid for the reasons outlined by Going (1993).

Table 4. Comparison of assemblages from Brightlingsea, Great Dunmow and Rivenhall.

Fabric	Brightlingsea		Great Dunmow		Rivenhall	
	%Wt.	%EVE	%Wt.	%EVE	%Wt.	%EVE
TSG	0.56	0.73	1.07	1.68	nd	8.25
CLC	0.50	3.20	1.58	4.97	3.14	10.62
NVC	-	-	1.19	2.93	-	-
HAX	-	-	1.28	5.65	0.67	-
LRC	0.32	-	-	-	-	-
RHN	-	-	-	-	0.16	3.50
MCA	-	-	0.20	1.00	0.16	-
HAW	-	-	0.09	-	-	-
RED	-	-	0.93	-	-	-
CLB	19.71	5.35	1.23	0.59	1.35	2.37
MFBW	-	-	-	-	1.10	-
BUF	3.81	1.23	-	-	-	-
NKG	0.05	-	0.20	0.45	0.50	4.75
FROM/ROM	6.27	8.74	8.86	16.32	3.82	2.62
HAR	0.37	-	5.08	8.66	2.46	7.37
GRF/GRS	29.50	48.73	53.01	48.83	77.67	52.62
BB1	0.38	-	-	-	-	-
BB2	21.32	27.66	1.53	4.10	4.32	7.78
BB1T	0.35	0.59	-	-	-	-
BB2T	0.24	1.46	-	-	-	-
STOR	5.82	0.50	22.87	4.78	3.48	-
RET	0.20	-	-	-	-	-
ESH	-	-	0.04	-	-	-
ASS	9.10	1.14	0.77	-	11.03	-
ARB	0.40	0.59	-	-	-	-
AIT	0.89	-	-	-	-	-

Comparative sizes of assemblages

Brightlingsea	19.065kg	21.49	EVE
Great Dunmow	21.835kg	21.93	EVE
Rivenhall	5.890kg	8.00	EVE

Table 5. Site 'Status'

Brightlingsea	?villa
Great Dunmow	small town
Rivenhall	villa

The fine wares (ie colour-coats, including samian) constitute only a small proportion of the assemblage (3.99% by EVE). This is in marked contrast to Great Dunmow (16.23% by EVE) and Rivenhall (22.37% by EVE) where fine wares are more plentiful. On both of these sites Romano-British fine wares were present, unlike Brightlingsea. At both Great Dunmow and Rivenhall the fine wares, excluding samian, were restricted to beakers. However, at Brightlingsea, perhaps a reflection of its close proximity to Colchester, the range of colour-coated vessels from this source was

much more diverse as represented by a castor box (lid and bowl).

The figures for the supply of samian are fairly evenly matched at Brightlingsea (0.73% EVE) and Great Dunmow (1.68% EVE), although the proportion at Rivenhall (8.25% EVE) is much higher, reflecting perhaps the site's greater economic status rather than any disparity in date (Table 5).

The supply of flagons and mortaria in white and buff fabrics shows considerable divergence between the three sites. At Brightlingsea, both forms are well represented, although flagons are absent in terms of EVEs. Colchester Buff ware forms a high proportion by weight (19.60%), but is relatively poorly represented by EVEs (5.44%). At Great Dunmow, where no flagons are present, and Rivenhall which had no mortaria, this fabric comprises a relatively small proportion of each assemblage. All of the Brightlingsea mortaria, fit into the *Cam* 497 range and on the evidence of fabric are probably Colchester products as would be expected for a site lying close to this production centre.

A noticeable feature of the Brightlingsea group is the virtual absence of Hadham wares. At Great Dunmow, Hadham oxidised red wares form the main fine ware by EVEs (5.65%), is present at Rivenhall by weight only (0.67%), but is totally absent at Brightlingsea. A similar situation occurs with the Hadham grey wares. Although represented in terms of weight only at Brightlingsea (0.37%), at Rivenhall and Great Dunmow, it comprises an important assemblage component (7.37% EVE and 8.66% EVE respectively). This pattern can be explained in the case of Great Dunmow in that the Hadham kilns lie only 18km to the west. With Rivenhall, a site fairly close to Colchester, the matter appears to be more complicated. It is possible that factors other than geographical location determined the distribution of Hadham products in this instance.

The large quantity of BB2 is noteworthy. Compared with Great Dunmow (4.10% EVE) which Going considered high, and Rivenhall (7.78% EVE), the figure of 27.66% EVE for Brightlingsea seems very high indeed. The site's coastal location may account for this and points to a north Kent origin, although if this is the case, the low incidence of North Kent grey wares is somewhat surprising. Given that it is feasible that the Brightlingsea BB2 may have originated in north Kent, it may be possible to further refine the group's dating. Monaghan has noted that bowls and dishes are largely undecorated after *c.*180 (Monaghan 1987, 226). This is in agreement with the evidence from New Fresh Wharf (Richardson 1986, 127) where the BB2 was generally undecorated in a group belonging to the first half of the 3rd century. At Brightlingsea all BB2 dishes/bowls are decorated with either narrow-spaced cross-hatching or with a single burnished wavy line. It is, therefore, likely on balance that the BB2 was deposited before *c.*180 A.D.

Compared with both Great Dunmow and

Rivenhall, the range of amphorae recovered is surprisingly diverse. At these two sites South Spanish Dressel 20 type amphorae was the only type to be recovered. Dressel 20 was also present at Brightlingsea, but was accompanied by Dressel 2-4 and ?Mediterranean rilled-body type amphorae. It seems then that on all three sites there was demand for olive oil, but only at Brightlingsea is there evidence for the import of wine.

As is frequently the case, a large part of the site assemblage consists of various fine and sandy grey wares. The figures for the supply of these wares between the two sites are evenly matched, 48.73% EVE at Brightlingsea, 48.83% EVE at Great Dunmow and 52.62% EVE at Rivenhall. The bulk of the grey wares cannot be attributed to any particular source as they are very much on a par with the grey wares that are found over much of Essex. Romanising grey wares were produced at Ardleigh, and in view of the geographical proximity of the two sites, this is perhaps a likely source for the Brightlingsea material. A Colchester origin is likely for much of the remaining material.

Finally, some comment is necessary on the relationship between the group and the putative villa. No evidence of any structures apparently came to light during gravel extraction, even though a small quantity of tile was recovered. The presence of box flue tile points to the likelihood of there being a centrally heated room in the vicinity, but it is not possible to be more specific. Consequently, we must look to the pottery to see if this will provide any clues. However, the Brightlingsea pottery does not compare well with the Rivenhall villa assemblage, particularly in respect of the volume of fine wares, although the most notable difference lies in their respective sizes. It would appear that the Brightlingsea material is more likely to have been recovered from a dump rather than from a structure or structures. The group's relationship to the villa, in the meantime, must remain unresolved.

Acknowledgements

The introduction to this report was compiled using notes supplied by Jean Whiffing of Brightlingsea Museum on her efforts to find out more about the site from the finders. I would also like to acknowledge the help of Dr. Paul Sealey of Colchester Museum in identifying the amphora stamp, K. Hartley for commenting on the mortaria, Dr. R. Symonds for comments on the amphorae and confirmation of the Colchester colour-coat and my colleagues in the E.C.C Archaeology section H. Major (small finds and tile), C.R. Wallace and H. Walker (identification of the post-Roman pottery).

Bibliography

Anderson, A.	1980	<i>A Guide to Roman fine wares</i> , Vorda
Brassington, M.	1980	'Derby Racecourse Kiln Excavations 1972-3' <i>Antiquaries Journal</i> 51, 36-69
Callender, M.H.	1965	<i>Roman Amphorae</i> London.
Crummy, N.	1983	'The Roman small finds from excavations in Colchester 1971-9, Colchester Archaeol Rep 2, Colchester.
Going, C.J.	1987	<i>The Mansio and other sites in the south-</i>

Going, C.J.	1988	<i>eastern sector of Caesarmagus; the Roman pottery</i> , CBA Res Rep 61 'Ritual' in Wickenden, N.P., <i>Excavations at Great Dunmow, Essex; a Romano-British Small Town in the Trinovantian Civitas</i> , Chelmsford Archaeological Trust Rep. No. 7, East Anglian Archaeology Rep. No. 41, 22-3.
Going, C.J.	1993	'The Roman pottery' in Rodwell, W.J., and Rodwell, K.A., <i>Rivenhall: Investigations of a Villa, Church and Village, 1950-1977</i> , CBA Res. Rep. 80, 64-70.
Going, C.J. and Ford, B.	1988	'Romano-British pottery' in Wickenden, N.P., <i>Excavations at Great Dunmow, Essex; a Romano-British Small Town in the Trinovantian Civitas</i> , Chelmsford Archaeological Trust Rep. No. 7, East Anglian Archaeology Rep. No. 41, 60-76.
Hassall, M.	1982	'Inscriptions and graffiti' in Boon, G.C., and Hassall, M., <i>Report on the Excavations at Usk 1965-1975: The Coins, Inscriptions and Graffiti</i> , Cardiff.
Hawkes, C.F.C., and Hull, M.R.	1947	<i>Camulodunum; first report on the excavations at Colchester 1930-1939</i> Rep. Res. Comm. Soc. Antiq. London. Oxford.
Hofmann, B.	1985	'Catalogue des estampilles sur vaisselle Sigillée' L'Association Française d'Archeologie Metropolitaine, Revue Archeologique Site Hors-série No. 27
Hull, M.R.	1963	'The Roman potter's kilns of Colchester' Rep. Res. Comm. Soc. Antiq. London. Oxford.
Kay, S.O.	1962	'The Romano-British pottery kilns at Hazelwood and Holbrook, Derbyshire' <i>Derbyshire Archaeological Journal</i> 83, 21-42
Monaghan, J.	1987	<i>Upchurch and Thameside Roman Pottery</i> BAR Brit. Series 173, Oxford.
Pengelly, H.	1989	'The Samian ware' in Marney, P.T., <i>Roman Milton Keynes - the pottery</i> , 146-169.
Richardson, B.	1986	'Pottery' in Dyson, T., (ed) <i>The Roman Quay at St Magnus House</i> , London, Pap. 8, London Middlesex Archaeol. Soc., 96-138.
Thompson, I.	1982	<i>Grog-tempered 'Belgic' Pottery of South-eastern England</i> BAR Brit. Series 108.

Some recent finds of late Anglo-Saxon metalwork from Essex

Michael J. Cuddeford, with a contribution from David Williams

The following artefacts (illustrated in Fig.11) are all previously unpublished single finds, recovered unstratified from ploughsoil in the course of fieldwalking with a metal detector. None of the findspots have so far produced any related evidence that might indicate occupation, and for the most part the finds probably represent casual losses.

All the items are of copper alloy, and all have a characteristic copper toning with little patination. It is

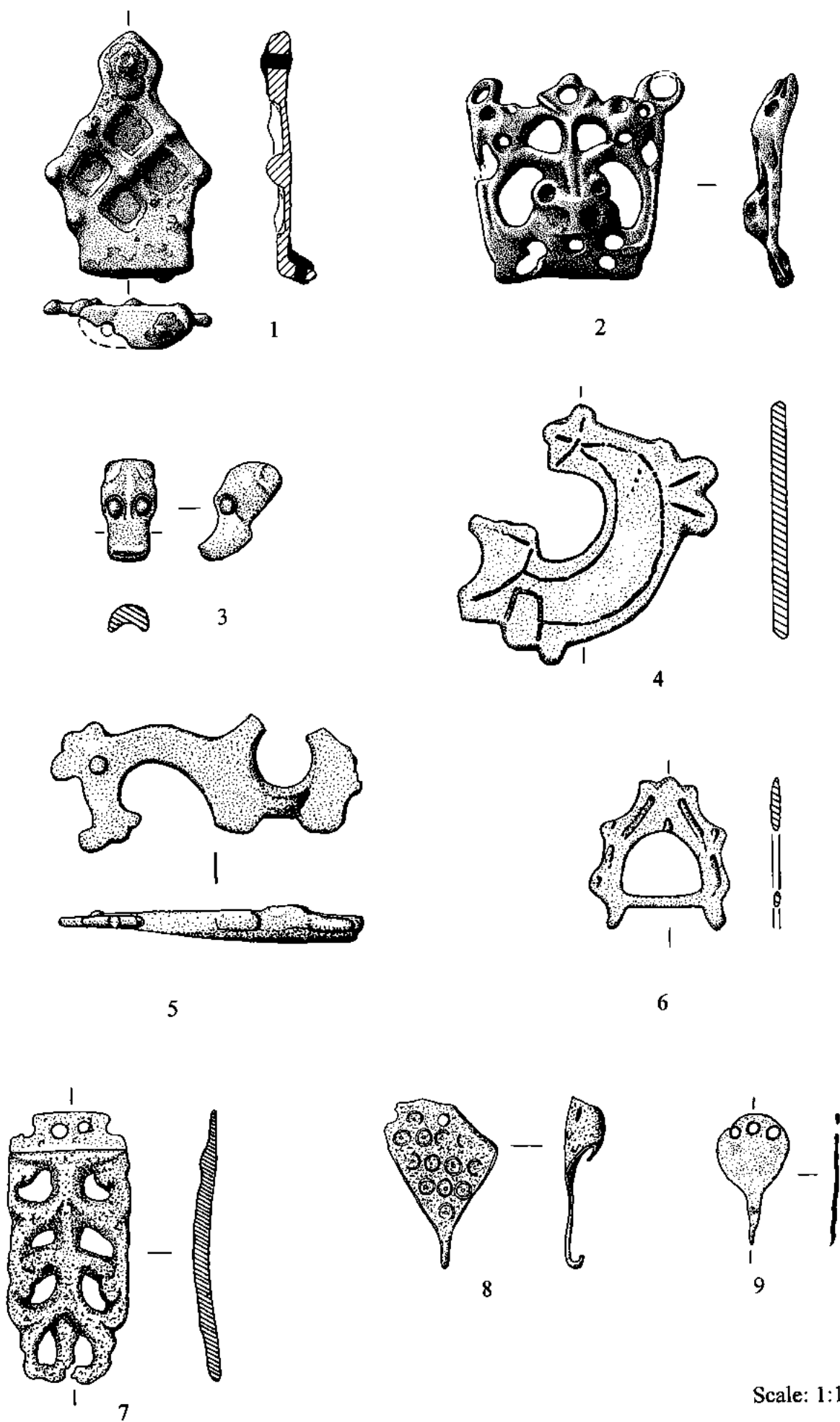


Fig. 11 Late Anglo-Saxon metalwork from Essex.

possible that the alloy used is specific to the date range, and that metallurgical analysis of these and other examples might identify a particular alloy composition.

Catalogue

1 and 2. Two stirrup mounts. These are examples of a distinctive form of flanged mount whose interpretation seems likely to be that they were attached to the stirrup/strap junction to protect against the loss of the stirrup, in the event of wear on the leather loop. Flanged mounts fall into 2 main classes (Williams 1996 and forthcoming), an example of each of which is recorded here. The bulk of these mounts are likely to date to the second half of the 11th century.

No.1 is a mount of class A, Type 12. This is a widespread group of pentagonal mounts with a diagonal cross and bosses at the intersections; many are openwork. Two of the fixing rivets survive. Provenance: High Easter TL 64 15 (1994).

No.2 is a fine example of a mount of class B. These are often trapezoidal and have slightly angled flanges and decoration in the form of protruding animal heads. This example shares a number of characteristics, particularly in the arrangement of apertures, with 5 other mounts ranging from Yorkshire to Kent. On this example, two of the fixing holes are torn and there remain slight traces of iron on the reverse. Provenance: High Easter TL 64 15 (1994) [different field from no.1].

3. A zoomorphic stirrup terminal of a type only recently identified by David Williams (pers. comm.). On stylistic grounds, they may be dated to the 11th or 12th century. A complete iron stirrup in the Ashmolean Museum (Loan 393 from Chalgrove, Oxon) has 2 such mounts *in situ* at the junctions of the footbar and the bow, with 2 small copper-alloy collars at the shoulders of the bow. A mount from West Ravensdale in Lincs is of similar style, attached to a fragment of an iron stirrup which also bears traces of copper sheathing (Scunthorpe Museum Ref. WGV AB7). Provenance: Pleshey TL 66 14 (1995).

4 and 5. These 2 bridle cheek-piece fragments are of a type distributed throughout the areas of Viking influence in Britain and Scandinavia. Such objects have been published singly and also within a study of Anglo-Saxon equestrian equipment from England (Graham Campbell 1991).

No.4, a broken, right-hand ornament, is an example of devolved Ringerike style. Flat-sectioned, it has lightly punched linear decoration produced with a rectangular-sectioned instrument, creating impressions which measure c. 750 by 500µm. For the most part, the decoration has been produced by short runs of 4 punches, changing direction for another 4 punches. Provenance: Ashen TL 76 44 (1989).

No. 5 is a more robustly moulded left-hand ornament. The back of the mount has a fairly rough-cast

finish; the front has no linear decoration. There is, however, a distinctive raised 'eye'. Provenance: Margaret Roding TL 59 12 (1995).

6. Buckle; single frame type of flat section with light linear decoration. This sort of buckle would seem to owe its origins to earlier zoomorphic forms, degraded elements of which can be noted in other examples similar to this one (e.g. Bu'lock 1960, fig.7b; Rogerson and Dallas 1984, fig.110, no.24). Stylistically, this buckle is late Anglo-Saxon, but other probably related specimens could date as late as the 12th century or even into the 13th (Margeson 1993, fig.13, no.128). Provenance: High Easter TL 63 14 (1984).

7. Large, open-work strap-end with 4 rivet holes, the 2 outer ones torn. This example belongs to a group of late Anglo-Saxon strap-ends (cf. Bu'lock 1960, fig.4f), the design seemingly a devolution of 9th - 10th-century motifs, such as 'vine scroll and bird', or 'facing man and foliage'. The date of this devolved example is taken to be c. 11th century. Provenance: High Easter TL 60 12 (1995).

8 and 9. Hooked tags of this basic form are known from 2 main periods. The later group, which are stylistically quite distinctive, may generally be dated to the 16th century, and there is evidence for their use in securing clothing (Margeson 1993, 16-17 and figs 71-75). As regards the first group, opinions as to the date range vary. Triangular types such as no.8 may be the earliest, with origins in the 7th century, but perhaps not later than the 10th century; the sub-circular form, however, seems to have continued in use well into the medieval period (Webster and Backhouse 1991, 235, cat. no. 196). By contrast, others suggest that both types continue as late as the 13th century (Crummey 1988, 12, cat. no. 1421-3).

No.8 is a triangular tag with 3 attachment holes (one torn). One corner is bent back on itself. The surface of the tag displays a pattern of ring and dot decoration. The hook is formed from a projection at the base of the tag. An example with similar ring and dot and hook formation is in the Museum of London, dated c. 10th century (MoL Ass no. 83,344/1). Provenance: High Easter TL 60 12 (1995) [Same field as no.7].

No.9 is a sub-circular tag with 3 attachment holes, the hook (now almost straight) was formed from a projection at the base. There is no evidence of any decoration. Provenance: Mashbury TL 65 12 (1992).

Acknowledgements

The author is indebted to David Williams for providing the notes pertaining to items 1 and 2, and for allowing his drawings of them to be reproduced here. He is also grateful to Jim Patterson for much assistance given in the course of researching the note.

Bibliography

Bu'lock, J.D.	1960	'The Celtic, Saxon and Scandinavian settlement at Meols in Wirral', <i>Historic Society of Lancashire and Cheshire</i> 112
Crummy, N.	1988	<i>The post-Roman small finds from excavations in Colchester 1971-85</i> , Colchester Archaeological Report 5
Graham Campbell, J.	1991	'Anglo-Scandinavian equestrian equipment in eleventh-century England', <i>Anglo-Norman studies XIV, Proceedings of the Battle Conference</i>
Margeson, S.	1993	<i>Norwich households: the medieval and post-medieval finds from the Norwich survey excavations 1971-78</i> , E. Anglian Archaeol. 58
Rogerson, A. and Dallas, C.	1984	<i>Excavations in Thetford 1948-59 and 1973-80</i> , E. Anglian Archaeol. 22
Webster, L. and Backhouse, L.	1991	<i>The making of England: Anglo-Saxon art and culture AD 600-900</i> , University of Toronto Press
Williams, D.	1996	'Stirrup mounts', <i>Finds research group 700-1700, Datasheet 20</i>
Williams, D.	forthcoming	'A corpus of late Saxon stirrup mounts'

and later periods (Rackham 1986, fig.13; Rippon 1991; Rodwell 1978). Several areas are exceptional, in having a landscape dominated by smaller, more irregularly shaped fields and sinuous lanes, derived from the piecemeal assarting of woodland. One such area lies on the Rayleigh Hills, a ridge of sandy gravels heavily dissected by valleys between Southend-on-Sea and Basildon (Fig.12; Rippon 1991, fig.2)

The former extent of woodland cover is also reflected in the predominance of 'leah' names (Reaney 1935; Rippon 1996), derived from the Old English for forest clearing (Gelling 1984, 198). Cartographic sources from the late 18th century show that a well wooded landscape survived on the Rayleigh Hills, though with considerable assarting. Even today, woodland forms an important part of the landscape. The woods of south-east Essex have already seen archaeological, documentary and botanical research (Delderfield 1981; 1982; Rackham 1986), and this short paper relates to further work carried out recently in one area, Pound Wood, the majority of which lies in Thundersley parish.

The origins of ancient woodland and a fish-pond in Pound Wood, Thundersley, Essex
R.B.Delderfield and S.Rippon

Introduction

The countryside of southern and eastern Essex is dominated by planned landscapes dating back to the Roman

Pound Wood

This 55 acre wood straddles 3 soil types, with sandy gravel to the south-west, clays in the centre and head to the north-east; these soils are all generally of poor quality suffering from waterlogging. Oak and hornbeam predominate, with virtually all the latter showing signs of having been coppiced. The outline of the wood is

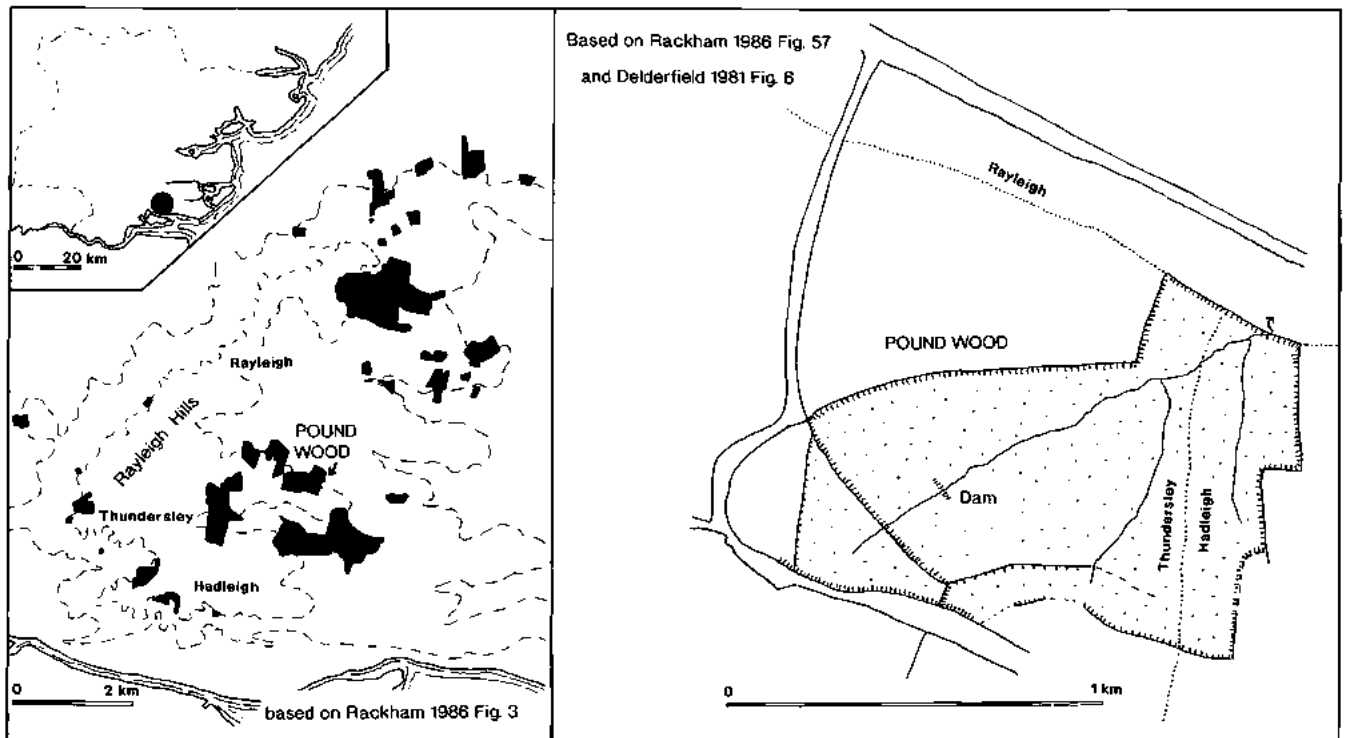


Fig. 12 Pound Wood; site location and outline of the wood. © Crown copyright.

mainly curvilinear, suggesting that it is of some antiquity. In addition to substantial earthwork banks around its perimeter, there are several internal banks to the south-west. These make little sense as internal management features, and might more plausibly relate to a field-system pre-dating the wood, since the southernmost bank continues the line of an extant field boundary outside the wood (Fig.12). Interestingly, the Thundersley/Hadleigh parish boundary is not marked on the ground by any visible feature.

The antiquity of this wood is not known. It has slightly above average 'ancient woodland' plants (Rackham 1986, 96), though recent work has shown that such botanically 'ancient' woodlands can be secondary regenerations, though many centuries old (Day 1993). The recognition of a possible fishpond in the wood, like the possible relict field system, also suggests that this woodland represents a recolonisation of the area (see below).

Documentary history

In 1993, Pound Wood was purchased by the Essex Wildlife Trust from the Church Commissioners, who had taken over its management from the Dean and

Chapter of Westminster Abbey in 1875. The wood was once part of a 92 acre estate recorded in the Tithe Awards of Thundersley (1838) and Hadleigh (1847), which included the present Tile Wood and Tylers Farm. The name Pound Wood first appears in the mid-18th century, and a long run of leases in the Westminster Abbey muniments between 1613 and 1832 makes it quite clear that it was formerly called Tylers Wood. A John Kyter was paid 12 shillings for hedging and ditching on the north side of Tylers Grove in 1568, which is the earliest specific reference to the wood.

The Westminster Domesday (W.D.), compiled in the early 14th century, reveals the acquisition of land in Hadleigh and Thundersley by the Abbot and Convent of Westminster in the 13th century, but, although the Hadleigh references include 'a particle of land and wood' in 1222/46, it is not identified by name (W.D. f.497/497b). This Hadleigh estate may be the small part of Pound Wood which lies in that parish, since there is no evidence that Westminster held any other woodland in Hadleigh. Woods are not mentioned among the Thundersley acquisitions until after 1283, though a Westfeld, Estfeld, Bernefeld and Medefeld are recorded in 1258/83, their combined acreage being 86 acres (W.D. f.616; compare with the 92 acres in the

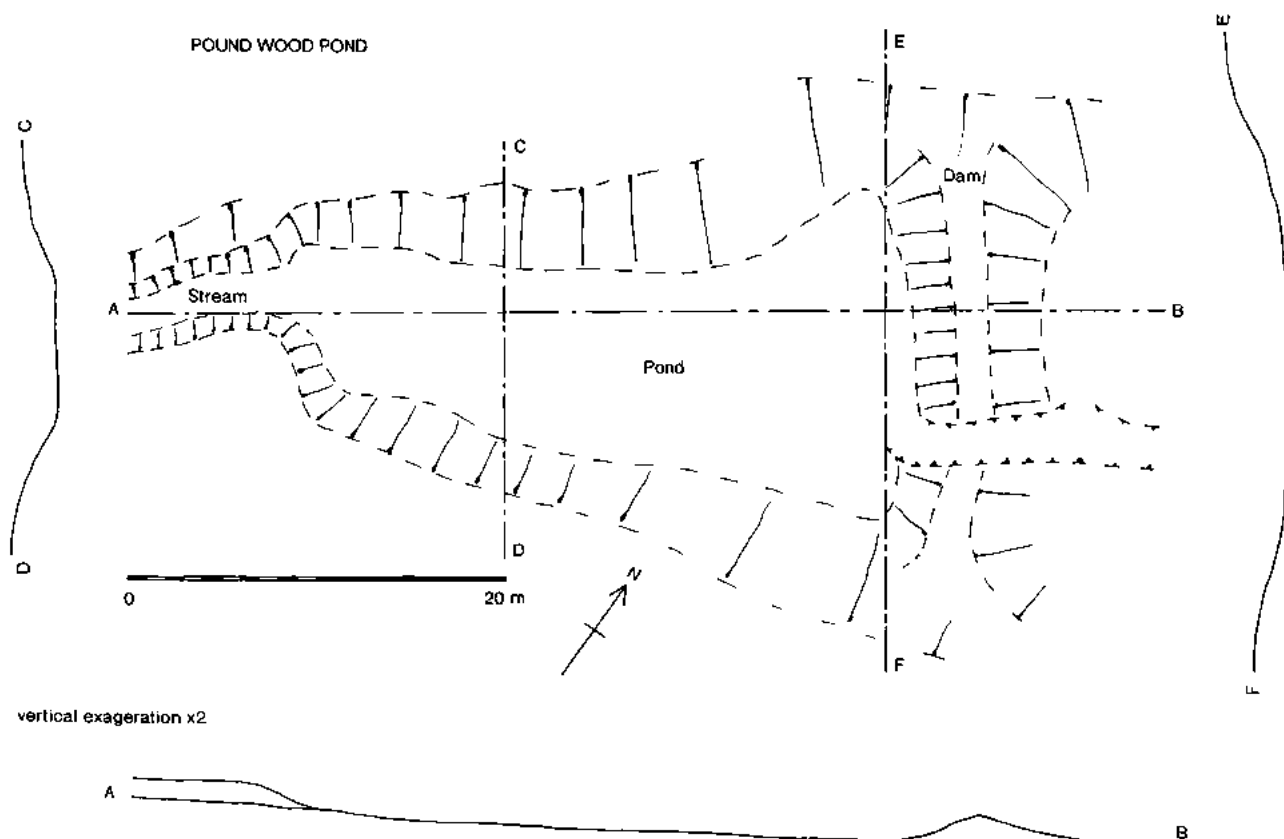


Fig. 13 Pound Wood; earthwork survey of dam and pond.

Tithe Awards of 1838/47 for the Westminster estate).

One factor that has been ever present in the recorded history of the Westminster estate in Thundersley is the use of the word 'tile' in one form or another. 'Tyler Sett', a small farm in a lease of 1613, became the Tylerset Farm of today. 'Tylers Wood' also regularly appears in the 17th century and later leases (see above). A 14th-centuryoucher book records amongst the land of the Westminster estate in 1315 a wood 'which is called Tilhurst containing 51 acres'; the Tithe Maps of Hadleigh and Thundersley show that in 1838/47, Pound Wood contained a little over 56 acres. 'Thielhurst' in Thundersley is also referred to in a grant to Westminster by William Macer in the reign of Edward I, but no acreage is given (W.D. f.609).

The Anglo-Saxon 'hyrst' is usually associated with a wood or a wood on a hill (Gelling 1984, 197-8). It is tempting to see 'Tilhurst' as including Pound Wood, formerly known as Tylers Grove (see above). Since the acreage in 1315 is likely to be an under-estimate, it would seem quite possible that 'Tilhurst'/'Thielhurst' refers to a large wooded part of the Westminster estate in Thundersley which included the present Pound and/or Tile Wood.

The Pound Wood earthwork

Pound Wood contains 3 small streams. Rackham (1986, fig.57a) noted a dam across the westernmost stream, and a visit to the site by Bob Delderfield in the summer of 1993 revealed the existence of a pond-like depression behind it. In the winter of 1993/94, the authors undertook an earthwork and auger survey of the complex (Fig.13).

The most impressive element is the dam, which stands 0.7m high and is c. 0.8m wide at the base. The pond is a steep-sided, sub-rectangular depression 32m long, c. 10 wide at the narrower western end and c. 30m wide to the east. The auger survey produced no evidence of any form of lining in the pond, and only a relatively shallow depth of organic-rich sediment within it (averaging c. 5 to 15 cm).

The date of the earthworks is unclear. Though fairly shallow, it seems clear that this dam and the broadening of the valley behind it, was to create a pond either for storing fish or watering livestock; if the former, it must pre-date the woodland, since fishponds need light and must not get clogged with leaves. Though it may have occupied a substantial clearing, it is perhaps more likely that it pre-dates the wood altogether. A substantial hornbeam coppice on the dam appears to be c. 300-500 years old (J. Rostron, pers. comm.). The documentary evidence suggests the wood existed by 1568, so the pond is presumably earlier. If Pound Wood was 'Thielhurst' in the reign of Edward I, then we have a terminus ante quem of the early 14th century.

The pond is some distance from the nearest medieval settlement, Tylerset Farm. However, an intriguing possibility is presented by the proximity of

an area of Roman occupation in fields immediately to the north of the wood (Drury et al. 1981). Apart from the surface collection of Roman material, and a now lost aerial photograph that allegedly indicated a villa-like building, little is known of this settlement. The possibility that the dam may relate to it, in a landscape far less wooded than today, suggests that this area would warrant further attention.

Acknowledgements

The Essex Wildlife Trust kindly gave permission for this fieldwork. Ken Crowe assisted with the earthwork survey and John Rostron with the augering.

Bibliography

W.D.	Westminster Domesday survey
Day, S.P.	1993 'Woodland origin and "ancient woodland indicators": a case study from Sidlings Copse, Oxfordshire, U.K.', <i>The Holocene</i> 3 (i), 45-53
Delderfield, R.B.	1981 'The woodlands of south-east Essex: report 1 - three woods of Thundersley and Hadleigh', <i>South East Essex Archaeology</i> , 9-23
Delderfield, R.B.	1982 'The woodlands of south-east Essex: report 2 - West Wood', <i>South East Essex Archaeology</i> , 14-23
Drury, P.J., Rodwell, W.J. and Wickenden, N.P.	1981 'Finds from the probable site of a Roman villa at Dawes Heath, Thundersley, Essex', <i>Essex Archaeol. Hist.</i> 13, 66-8
Gelling, M.	1984 <i>Place-names in the landscape; the geographical roots of Britain's place-names</i> , London: Dent
Rackham, O.	1986 <i>The ancient woodland of England: the woods of south-east Essex</i> , Rochford: District Council
Reaney, P.H.	1935 <i>The place names of Essex</i> , English Place Names Society XII
Rippon, S.	1991 'Early planned landscapes in south-east Essex', <i>Essex Archaeol. Hist.</i> 22, 46-60
Rippon, S.	1996 'Essex c. 700 to Domesday', in Bedwin, O. (ed.), <i>The Archaeology of Essex</i> , Chelmsford: Essex County Council
Rodwell, W.J.	1978 'Relict landscapes in Essex', in Bowen, H.C. and Fowler, P.J. (eds), <i>Early land allotment in the British Isles: a survey of recent work</i> , BAR 48, 89-98

Fragment of mortar from Sun Street, Waltham Abbey *Pat Ryan*

A fragment of a small, barrel-shaped limestone or possibly greensand mortar was found at the bottom of a medieval cesspit (context 164) during recent excavations at 1-5 Sun Street (Brown 1995). It included a section of the rim, a lug and part of the wall of the mortar (Fig.14). The flat rim is 20mm wide, but the wall

Table 1: Pottery from Area B by fabric, feature and sherd count

Context	Feature	Relationship	Fabric									Wt.	
			20	21	21C	22	35B	40	41	48D	48Y	51B	
B2	Ditch 1			1									52g
B8	Gully 6		5	1									49g
B10	Posthole 9			1							1		29g
B13	Gully 11			5					1				20g
B15	Cut 14		1	5				2					212g
B18	Ditch 20	Above B19		1									90g
B19	Ditch 20	Below B18		2									60g
B24	Gully 23			1									8g
B26	Cut 25			4						1			16g
B30	Segment 29			10	2			3		1		1	203g
B31	Layer	Above B33		91	125	1	1	6					3120g
B33	Layer			1	1								48g

Pottery from layers 31 and 33 in area B

Over 3kg of pottery was excavated from layer 31. In contrast, only two sherds were found in lower layer 33, but they appear to belong to the same pottery group. The only residual pottery is a sherd from a Hedingham fine-ware jug decorated with applied strips and ring and dot stamps. Such motifs are typical of Hedingham ware and this sherd is paralleled by a published example from excavations at Harwich (Walker 1990, fig. 15.39). It probably belongs to the 13th century. All the remaining pottery would appear to be late medieval and is catalogued below (numbered sherds refer to Fig.23): –

1. Part of large jar or cistern: sandy orange ware; distinctive fabric with occasional yellow-buff flecks about 1mm across; sparse red iron oxide inclusions, forming hard nodules ranging from 0.5mm to 2mm across; sparse flint as well as quartz sand tempering; inside surfaces slightly pimply, external surfaces smooth; uniform orange fabric but with darker surfaces; thumbled applied cordon; cream slip-painting; slip-dashes on rim extending to inside of neck; partial plain lead glaze with patches of glaze internally. Layer 31
2. Rim and glazed handle ?from cistern: sandy orange ware; reduced surfaces; unglazed. Layer 31
3. Bung-hole from cistern: sandy orange ware; uniform orange fabric; cream slip-painting with splodge of slip on top of the bung-hole; splashes of plain lead glaze; slight thumbing around edge of bung-hole; patches of internal limescale. Layer 31
4. Jug: *Sgraffito* ware; fine sandy uniform orange fabric with smooth surfaces; well defined throwing lines on inside surface; shows panel of *sgraffito* decoration; there may be more than one zone of decoration but as the vessel is only about 20% complete, this is impossible to tell; plain lead glaze with green flecks on upper part of vessel; splashes of glaze on underside of base; rim is from layer 33 and shows slip extending to inside of the neck, the vessel is extremely fragmented and comprises a total of 100 sherds. Layers 31 and 33
5. Body sherd ?from jug: *Sgraffito* ware; fabric as for No. 4; branch-like *sgraffito* decoration under a plain lead glaze which has bubbled in places. Layer 31
6. Body sherd ?from jug: *Sgraffito* ware; uniform orange fabric showing zone or panel of *Sgraffito* decoration; plain lead glaze. Layer 31
7. Part of ?cistern or storage jar: *Sgraffito* ware; dull red fabric, indistinct throwing lines unlike Nos. 4-6; thumbled applied cordon; *sgraffito* decoration beneath partial clear glaze. The *sgraffito* motif seems to denote a hanging fuchsia-like flower emerging from a stem. The slip-coating appears to finish at the other side of the "stem", but there is a line of slip-painting or slip-coating on the extreme left of the fragment. Other sherds which appear to belong to this vessel but do not join show vertical and horizontal lines of slip-painting. If these sherds are all part of the same vessel then it is unique, showing slip-painting and *sgraffito*

on the same vessel. A grooved cistern type handle with the same dull red fabric and slip-coating was also found (not illustrated) and may be part of the same vessel. It is possible that the fragment should be shown the other way up. Layer 31

8. Dish rim: sandy orange ware; internal cream slip-coating under a clear glaze; possibly *sgraffito* ware although it does not show *sgraffito* decoration; external sooting; burnt appearance. Layer 33
9. Jar rim: post-medieval red earthenware; unglazed. Layer 31

Other forms found in layer 31 but not illustrated comprise: the end of a sandy orange ware pipkin handle and grooved cistern-type handle, perhaps from the same vessel as bung-hole No. 3; a Mill Green-type ware flat base probably from a jug; a post-medieval red earthenware cup rim with an all-over honey-coloured glaze probably from a standing cup with a pedestal base (Cunningham's type E3). In addition there are further slip-painted body sherds and *sgraffito* body sherds which are too small to merit illustration. One sherd of post-medieval red earthenware shows an all-over plain lead glaze.

Discussion

The slip-painted sandy orange ware jar forms (Nos 1 and 3) are part of a late medieval tradition found throughout Essex and East Anglia, for example at Colchester and Chelmsford (Cunningham 1982 and 1985a), indicating there were several production sites. They were used for storage and the cisterns were often used in domestic brewing (Cunningham 1985a, 41), although the limescale on bung-hole No. 3 indicates that this particular example was used to contain water.

The *sgraffito* vessels found here have been compared, by the author, to examples found at Cambridge. Nos. 4-6 appear to be very similar in fabric and glaze to the Cambridgeshire products, but differ in the extent of the decoration. The Cambridgeshire examples show either all-over slip-coating on the upper part of the vessel (Bushnell and Hurst 1952, plate V and VI) or there is a large bib of slip, usually on the front of the vessel (*ibid* plates III and IV), whereas on Thaxted jug No. 4 and body-sherd No. 6 the decoration seems to be confined to a vertical panel. As the examples found at Thaxted are so fragmentary none of the decorative motifs can be paralleled, with the exception of the possible wavy line on the neck of jug No. 4 which is similar to Bushnell and Hurst's figs. I and II (1952). Jug No. 4 is also similar in shape to Bushnell and Hurst's fig. 1; both are large with beaded rims and correspond to Cunningham's type D4; squat jugs with narrow necks and wide bases. Cunningham considers this to be a late medieval form (Cunningham 1985b, 70), although a D4-type jug occurs in a sixteenth-century context at Moulsham Street. It is possible that the Thaxted material represents a late phase of *sgraffito* production where the area of decoration becomes much reduced. *Sgraffito* vessel No. 7 however, is unlike the Cambridgeshire

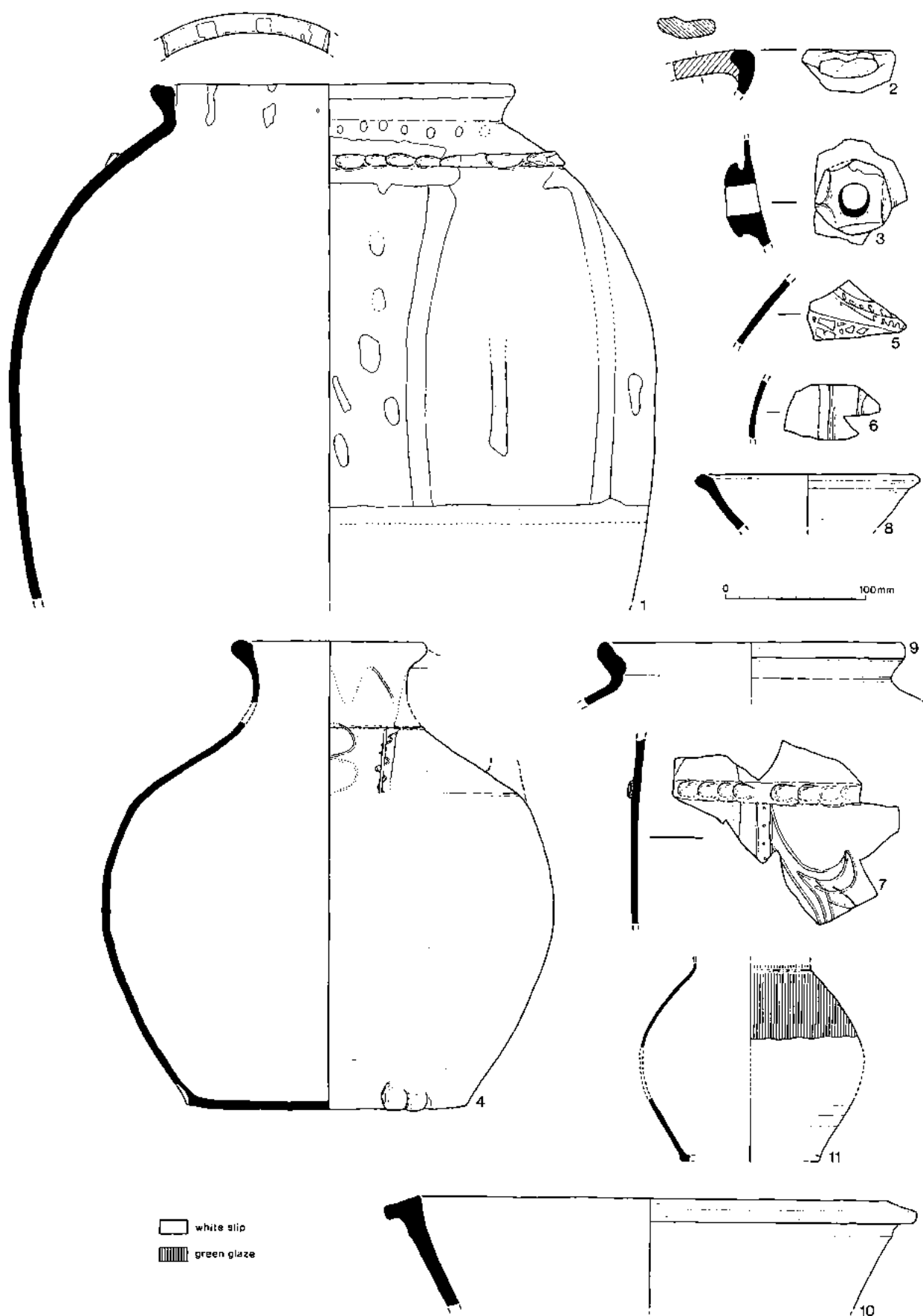


Fig. 23 23 Town Street, Thaxted. Medieval pottery.

material but is comparable to a vessel from Moulsham Street, Chelmsford (Cunningham 1985b, fig. 40.9). There is no cordon on the Moulsham Street vessel but there are similarities in motif. Cunningham postulates that this is not a 14th/15th-century Cambridgeshire product but is from a 15th/16th-century standard jug or storage jar. As for No. 7 displaying both *sgraffito* decoration and slip-painting, this would not have presented the potter with any technical difficulty as both methods involve the application of cream-coloured slip of similar consistency. The only other datable item found in layers 31 and 33 is the standing cup rim which would have been current in the 15th or 16th century (Cunningham 1985b, 71).

Pottery from remaining features in Area B

Only small amounts of pottery were excavated from the other features. The only possible medieval feature is gully 6. Its fill contained two sherds of medieval coarse ware including one bowl fragment with a horizontal flanged rim; and a medieval sandy orange ware jug handle showing random pin pricks in the top of the handle and covered by a plain splash glaze. The pottery probably dates to the 13th or 14th centuries. Sherds of residual medieval pottery, either medieval coarse ware or medieval sandy orange ware were also found in contexts 13, 15 and 30. In context 15 the medieval sherds include two sandy orange-ware sherds, one showing an applied strip under a green glaze and the second showing a cream slip-coating under a mottled green glaze. The latter may be a medieval Harlow product. Worth noting is a medieval coarse ware handle fragment found unstratified. It shows rows of stabbed decoration made with the end of a comb or fork-like tool and is probably an example of Hedingham ware.

However, most of the pottery found is late medieval sandy orange ware, probably contemporary with that found in layers 31 and 33. The forms are similar, comprising rims and grooved handles from large jugs or cisterns and bung-holes from cisterns (as Nos. 2 and 3). Occasionally these are slip-painted. A late medieval sandy orange-ware bowl was found in context 15 and is illustrated (No. 10). Sherds from the same bowl were also found in context 30.

10. Bowl rim: sandy orange ware; grey core, dull orange surfaces; quite coarse tempering; traces of plain lead glaze internally. Fill 15 (cut feature 14)

However, sherds classified as *sgraffito* ware occur only in context 30; they are from the same vessel as jug No. 4 but are plain and not from the decorated zone of the pot. Two sherds of Tudor Green were found; one sherd from context 13 has a mottled apple-green glaze on both surfaces; the second from context 26 cross-fits with fragments found unstratified (context B S/C) and appear to come from a small jug (No. 11).

11. Body of squat jug: Tudor Green; pale-buff fabric; external apple green glaze on upper half of pot only; stacking scar. Fill 26 (cut feature 25) and B S/C

This jug appears to correspond to Brears' Type 2 (Brears 1971, 24-25) who considers the shape to be a copy of 16th century German stoneware jugs although the resemblance is by no means exact. A very similar shaped jug was excavated from Basing House, Hampshire, from a group dated after c. 1540-50 (Moorhouse 1970, fig. 14.28). Tudor Green jugs may be a relatively unusual form in Essex as lobed cups seem to be commoner amongst the published material, for example at Moulsham Street and at Writtle (Cunningham 1985a, fig. 9, 54-56 and Rahtz 1969, fig. 56, 80, 85, 89 and 90).

Context 15 also produced two sherds of post-medieval red earthenware which was first produced in the 15th/16th century. It may be contemporary with the rest of the late medieval assemblage from this context but could easily be later. Post-medieval red earthenware was also found in context 30, along with an ironstone plate rim fragment and a flower pot both dating to the 19th or 20th century. A modern sherd of yellow ware was excavated from context 10 dating from the end of the 18th to mid 19th century.

Conclusion

The latest datable piece is the sixteenth-century Tudor Green jug. If all the pottery was deposited at the same time, then the *sgraffito* ware

is of a later date than suggested by Bushnell and Hurst (1952). A late sixteenth-century date can be produced however as both Tudor Green ware and sandy orange ware were in decline by then.

Animal bone

by Owen Bedwin

The animal bone assemblage was small, but consisted of two types of material. The first was a collection of domestic debris, consisting of 36 fragments of bone and teeth, plus two incomplete skeletons. The second was a group of 16 pieces of bone working waste, almost certainly derived from the medieval and post-medieval cutlery industry.

The domestic debris can be dealt with briefly. Of the 36 fragments, 13 were *Bos*, 14 *Ovis/Capra* (no distinction being made between sheep and goat), 7 *Sus* (plus one part skeleton of a young adult animal), 2 *Canis* and one part skeleton of *Gallus*. The material came from 13 different contexts, varying in date from the thirteenth/fourteenth centuries to the twentieth century. The partial skeletons of *Sus* and *Gallus* both came from context B31, a fifteenth-century layer (the reason for the incompleteness of the skeletons is simply that the layer was truncated during machine clearance, and what remained was not fully excavated). The assemblage is too small for any conclusions to be drawn about diet or economy.

As far as bone-working waste is concerned, this is the fourth assemblage of this kind from Thaxted (see Andrews 1989 for the other three). It consisted of 16 pieces of neatly sawn bone, 15 of which were in good condition, and one abraded. Eleven were clearly derived from *Bos* metapodials, consisting of sawn off terminals (9 examples), one narrow slice through the shaft, (leaving a piece like a napkin ring), and one metatarsal shaft 110mm long, with both ends sawn off, and with a single long plate of bone neatly removed along the long axis, preparatory to shaping into a scale for a knife handle (refer to Andrews 1989, fig. 7). The other 5 pieces were long, narrow, rectangular fragments with sawn ends and sides, derived from the long bones of either *Bos* or *Equus*.

The presence of the bone-working waste reflects the presence of an extensive cutlery industry in medieval and post-medieval Thaxted (Newton 1960). Given the unabraded nature of all but one of the waste fragments, it is unlikely either that they have moved far from their place of origin, or that they are residual. It would therefore seem probable that there was a cutlery workshop nearby, operating during the fifteenth and sixteenth centuries (the date range of most of the contexts from which waste came).

Brick and tile

by P.M. Ryan

Brick: The only complete brick (from Area A, context 8) is a typical early eighteenth-century brick. The remainder of the brick was very fragmentary. Two flakes from Area B Context 15 had some traces of a blue-grey glaze indicative of having been fired in a kiln or clamp fuelled with wood and therefore likely to have been pre mid-eighteenth century. The broken and abraded fragments from Area B, context 15, all appear to be of the same fabric. The largest pieces are c. 70mm thick, and are therefore likely to be late eighteenth century in date.

Roof tile: The tile from this site is typical late medieval or post-medieval peg tile. It varies in thickness from 11 to 16mm. Only one fragment provides an additional dimension, with a width of 150mm. The sand used for sanding the moulds is particularly micaceous.

The Maltings at the rear of 23 Town Street

by David Andrews

What remained of this building in June 1992 was a derelict brick

building just over 5m square. The interior of it was inaccessible, being full of trees and undergrowth, and the brick walls themselves being very precarious. The bricks were red to dark red, with fairly square arises and creased surfaces, and diagonal pressure marks. They measured 215-20 x 105-10 x 65 mm, though some were larger, 230-35 x 110 x 65-70 mm. They were laid in Flemish bond, and the walls were one and a half brick (360mm) thick. The suggested date of the brickwork is the second half of the eighteenth century. The height of the building had been at least 3m. The main feature of the building was a central round-arched stokehole in the east wall 800mm wide, and at least 900mm high (uncertain because of the rise in ground level round the building), with a rebated surround. To one side of this and 1.25-1.55m up, there was an aperture, probably a door. There was another such an aperture in the west wall, about 0.90m wide and 2m up. It was noted that the west wall seemed to have been increased in thickness. This wall was abutted by a modern building.

To the east, the building had originally extended further, giving a (?) total length of 16.1m. This was evident from the level ground in this area, traces of foundations, and a stub of a wall at the north-eastern corner. The latter was made predominately of thinner Tudor-type bricks, though white flooring bricks were also present, and had the remains of a mud plaster adhering to its inside face.

The larger eastern part of the structure was presumably used for storage and for spreading out the grain to germinate. It seems to have been of a distinct build to the brick structure. It was probably earlier, and in view of its almost total disappearance, may have had an upper storey of timber like some other maltings. The brick building would have been a drying kiln, doubtless a replacement of an earlier one if the above interpretation is correct. The ground floor would have comprised a system of flues to heat the upper floor where the germinating grain would have been put to dry. The apertures were doors which served to load the grain at this level. In comparison with some other maltings of the seventeenth- and eighteenth-centuries, this one was modest in size.

Discussion

Medieval Thaxted had a flourishing cutlery industry; the poll-tax records of 1393 list 79 cutlers, 11 smiths and four sheathers (Newton 1960, 20). The majority of these lived in either Town Street, or the neighbouring Middle Row. To that extent therefore, the discovery of

bone-working waste from the manufacture of handles for knives was not entirely unexpected. The fifteenth to sixteenth century date for the contexts does imply that the industry was still going on as late as c. 1500, and perhaps a little later.

Although the site at 23 Town Street produced some pottery of a thirteenth and fourteenth-century date, these were largely residual. The majority of the features were dated by pottery to the fifteenth and sixteenth centuries. The next phase of activity on the site was the construction of the maltings in the early 1780s. In the early twentieth century, the ditch F5 was filled with rubbish; it was probably cut not long before.

It appears that the excavated area must either be located within the gardens of the manor house which is thought to have stood on Town Street, or in the backyard of one of the commercial properties which faced onto the street. The presence of bone-working waste (admittedly not in any great quantity) suggests that the site was possibly part of the backyard or garden of one of the cutlery workshops, rather than within the boundary of the manor house. The cess-pit in Area A probably actually belonged to the adjoining property, but its presence strengthens the interpretation of the site being the backyard or backyards to properties with a street-frontage.

Acknowledgements

I would like to thank Mr Jossaume and family for financing the excavation, loan of a machine and their interest and co-operation with the project. Thanks are also due to Mr John Hunter and David Andrews of Essex County Council for their interest in the site. The excavation team consisted of the author, Alec Wade, Dave Smith, Rob Wardill and Alan Parry. The pottery drawings are by Miranda Bedwin, the other illustrations are by Nick Nethercoat and Iain Bell.

Bibliography

Andrews, D.D.	1989	"A late medieval cutlery manufacturing site at Weaverhead Lane, Thaxted" <i>Essex Archaeol. Hist.</i> , 20, 110-119	
Brears, P.C.	1971	<i>The English Country Pottery: its History and Techniques</i> , Newton Abbot: David & Charles	
Bushnell, G.H.S and Hurst, J.G.	1952	"Some examples of sgraffito ware from Cambridge", <i>Proc. Cambridge Antiq. Soc.</i> 46, 21-6	
Cunningham, C.M.	1982	"The medieval and post-medieval pottery" in Drury P.J., "Aspects of the origin and development of Colchester Castle" <i>Archaeol. J.</i> , 139, 358-80	
Cunningham, C.M.	1985a	"A typology for post-Roman pottery in Essex" in Cunningham, C.M. and Drury, P.J., <i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> Chelmsford Archaeol. Trust Rep. 5, 1-16	
Cunningham, C.M.	1985b	"The pottery", in Cunningham, C.M. and Drury, P.J., <i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> Chelmsford Archaeol. Trust Rep. 5, 63-78	
Drury, P.J.	1993	"The later Saxon, medieval and post-medieval pottery", in Rodwell, K.A. and Rodwell, W.J., <i>Rivenhall: Investigations on the villa, church and village 1950-1977</i> Chelmsford Archaeol. Trust. Rep. 4.2	
Moorhouse, S.	1970	"Finds from Basing House, Hampshire (c.1540-1645): Part I", <i>Post-Medieval Archaeol.</i> 4, 31-39	
Moorhouse, S.	1979	"Tudor Green: some further thoughts", <i>Medieval Ceramics</i> 3, 53-61	
Newton, K.C.	1960	<i>Thaxted in the fourteenth century: An account of the manor and borough with translated texts</i> , Essex Record Office Pub. No. 33, Essex County Council	
Pearce, J.E. and Vince, A.G.	1985	<i>A dated type series of London medieval pottery part 4: Surrey Whitewares</i> , London and Middlesex Archaeol. Soc. Special paper, 10	
Rahtz, P.A.	1969	<i>Excavations at King John's Hunting Lodge, Writtle, Essex, 1955-57</i> , Medieval Archaeol. Soc. monograph series 3	
Walker, H.	1990	"The medieval and later pottery", in Andrews, D., Milton, B. and Walker, H., "Harwich; its archaeological potential as revealed in excavations at George Street and Church Street", <i>Essex Archaeol. Hist.</i> 21, 72-86	

Book reviews

The archaeology of the Essex Coast vol.1: the Hullbridge survey, by T.J. Wilkinson and P.L. Murphy, *East Anglian Archaeology* 71 (1995), Essex County Council Archaeology Section, 238 pages, 30 plates, 135 figs, 1 fiche. £26.50

This monograph reports the results of an extensive survey of the intertidal zone on the Essex coast undertaken between 1982 and 1987. A second volume in the series will describe the detailed excavation of a Neolithic site at The Stumble which was discovered during the survey. A series of interim reports were produced as the work progressed, the last of which appeared in 1988. These describe some of the minor sites and finds in more detail than is presented in this report.

The book follows the familiar East Anglian Archaeology format and the production is to the customary high standard. Both line drawings and plates are clearly reproduced. The banana yellow cover should make it stand out on the bookshelf.

Part 1 provides a very useful summary of the methodology employed in the survey along with a list of sites and contexts which are very conveniently cross-referenced to the interim reports. It is a little disappointing to note the absence of radiocarbon dates calibrated to two standard deviations. Similarly, the presence of uncalibrated dates within the text is to be regretted. It is likely that both of these points reflect the prevailing orthodoxy when the text was written.

Part 2 summarises the Flandrian deposits and the palaeoecology of the area. Sub-sections cover methodology, type sections (used to define the stratigraphy), and palynology results. The section is concluded by a discussion and summary of the chronology. In this section, the palaeoecological information is well laid out, with detailed descriptions of the diagrams in a smaller typeface than the clearly written discussions.

Whilst framed within the Thames sequence of marine transgressions, emphasis is placed on the diversity of changing marine, estuarine and riverine environments. This is particularly clear during the late Neolithic and early Bronze Age, where sediments are present within the modern tidal range. It is suggested that the wide range of habitats is one reason for the intensity of settlement in this period.

Parts 3 to 7 discuss the archaeological evidence period by period from the Mesolithic to the post-Roman period. Within each section the data for each period are discussed on a site-by-site basis. Each site

description is accompanied by a useful discussion of stratigraphy and the palaeogeography of the area. These are accompanied by specialist studies including finds reports and site-specific palaeoecological data.

The changing environment through time is reflected in the nature and extent of the archaeological record. Low sea-level during the Mesolithic has meant that only two sites were found, both originally in dry-land locations away from the coast. Neolithic survival within the modern inter-tidal zone has meant that an enormous amount of information survives. This includes earlier-Middle Neolithic habitation sites, charcoal scatters and submerged forests, each of which is described separately. Despite remarkable levels of preservation on the habitation sites, the fact that they were originally located on dry land means that there is little or no associated organic preservation.

By the beginning of the Bronze Age, settlement on the modern foreshore ceases with the onset of the Thames III marine transgression. Instead of habitation sites and inorganic material, the archaeological record is represented by ephemeral wooden structures and salterns, which appear for the first time. Most of the wooden structures appear to represent small *æbridges* placed across creeks on the foreshore. Also discovered was the contemporary, and unique, Canewdon paddle.

The late Iron Age and Roman record is dominated by the Red Hills, numerous examples of which were discovered and mapped during the survey. These represent the remains of salt-making. The data on these sites is presented in tabular form and is usefully cross-referenced to earlier work on the sites, although no attempt has been made to discuss all known examples from Essex. More detailed consideration is given to four Type sites, the briquetage, and pottery from the sites along with palaeoecological data.

Post-Roman activity is represented by a variety of sites, including a small number of salterns and wooden structures associated with the rivers. This material is framed within a general discussion of the development of the estuaries which incorporates a limited amount of data from historical sources.

The last chapter presents an excellent discussion of the development of the Essex coast and the intertidal zone from the Mesolithic through to the present-day. The nature of human settlement is discussed in relationship to the changing environmental conditions and the effect of marine transgressions.

Most importantly, in the last section of the book, the authors outline the priorities for future work.

Emphasis is placed on the degradation of the archaeological record since the pioneering work of Warren in the 1930s. It is clear that the present volume represents a stepping stone to further and more detailed work before a large number of important sites are lost. Measurement during the project assessed the rate of erosion at 10-20 mm per annum, and new sites were continually being exposed.

It is disappointing to note, therefore, that this volume has taken a long time to see the light of day. It is clear that the reasons for this lie not with the authors, but with the publishers. The text is copyrighted 1992, whereas the volume appeared 3 years later. More important is the lack of more recent work in the area. The survey was completed 8 years before the report was published, in which time very little work on the Essex coast has been undertaken, either monitoring damage and mapping newly-exposed material, or more detailed, site-specific studies. Work by the authors at the Stumble (to be published in Volume 2) has shown that it will only be through the detailed examination of well preserved foreshore sites that we will understand the nature of Neolithic settlement. In a landscape where the survival of prehistoric remains other than lithics is extremely rare, the recovery of detailed settlement data from intact land surfaces must remain a priority.

The authors should be congratulated on the production of a highly effective synthesis of complex archaeological and palaeoecological data. Their work has revealed a hidden landscape which has been forgotten for 50 years. In doing so, they have uncovered many hitherto unexpected dimensions to the archaeological record, a record which needs to see further work if its full potential is to be realised.

Bob Middleton

Excavations at North Shoebury: settlement and economy in south-east Essex 1500 BC to AD 1500, J.J.Wymer and N.R.Brown, *East Anglian Archaeology* 75 (1995), 196 pages, 25 plates, 122 line drawings, 1 fiche. £22

The 1981 excavations at North Shoebury were supposed to be the first season of a 3 to 4-year project to investigate the long sequence of settlement on the fertile brickearth-covered terrace there. Rescue recording in quarries to the east of the isolated hall-and-church complex had revealed the potential of the area, and the threat of a major residential development nearer the church was the spur for the setting up of the project. Unfortunately, funding was only forthcoming for the first year, with the result that only about 7ha of the 25ha development area was investigated. Many parts of the site never progressed beyond the stage of investigative linear trenches. The authors of this report have therefore had to contend with frustratingly incomplete

data in trying to draw together the multi-period results of both the 1981 excavations and the rescue recording carried out by D.G.Macleod of Southend Museum in the brickearth pits in the 1970s.

One of the major aspects of the report is the evidence it presents for the development of land divisions and field systems through time. The existing rectilinear field system at North Shoebury has sometimes been thought to be Roman in origin. However, the excavations revealed a more complex and changing picture. The earliest enclosures dated from the Middle Bronze Age (c. 1500-1000 BC). These had variable boundaries – some were bounded by reasonably substantial ditches up to 2m wide and 0.8m deep, but others were only defined by slight gullies. Within these rectilinear 'compounds' there were small clusters of pits and post holes, but no recognisable houses. In the Late Bronze Age and Early Iron Age (c. 1000-600 BC), the focus of settlement seems to have shifted slightly to the east and a new alignment of linear features was established at an angle to the MBA enclosures, which appear to have been abandoned. The new layout consisted of more or less parallel trackways with rectilinear enclosures at right-angles to them. Within one enclosure there was a post-built roundhouse. Two other structures lay towards the edge of the recorded enclosures: one consisted of two concentric penannular gullies with wide, west-facing 'entrances'; the other consisted only of two lengths of curving gullies. A claimed four-post structure within one of the abandoned MBA enclosures is much less definite than is suggested.

The evidence for the Middle Iron Age (c. 300-50 BC) settlement was relatively slight, but included a probable roundhouse, defined by a discontinuous circular gully. Although not numerous, the distribution of the MIA features seems to indicate a westward shift of the settlement. The Late Iron Age (c. 50 BC to AD 43) evidence comes from the same area, suggesting continuing development. By the LIA, a rectilinear field system had been established, with a series of north-south ditches running towards a major east-west boundary ditch. Although it is claimed that the EIA field system was abandoned, it is noted that one of the LIA ditches runs parallel to an EIA one. This LIA field pattern continued in use through the Roman period and, although the latest Roman pottery from the site cannot be dated much beyond c. AD 350, the presence of Early Saxon sherds in the upper fills of some of the field ditches suggests an element of continuity into the 5th century. Some sort of break then seems to have occurred, for there is little evidence of occupation at North Shoebury between the 5th and the 11th centuries. The major elements of the medieval settlement that then appear (the churchyard and an adjacent 11th-century enclosure) do not align with the earlier field pattern, but their shapes do fit into the pattern first mapped in 1703, strongly suggesting an origin for the modern rectilinear field system in the Late Saxon or Early Medieval periods.

A number of the prehistoric features provide evidence for 'structured' or deliberately placed deposits of a possible ritual nature. Complete pots or substantial pottery fragments were found in a number of MBA and LBA pits, including one that contained an untrimmed 'as-cast' socketed axe and a near-complete pottery bowl. A shallow pit just outside the circular gully of the MIA roundhouse contained an inverted human skull and part of a pottery bowl, which could be interpreted as some sort of foundation deposit. Non-ritual, but of great environmental value, was a shallow hearth that contained over 5000 carbonised peas (*Pisum sativum*). Peas have only rarely been recovered from prehistoric contexts and this deposit has yielded a radiocarbon date of cal. 390 BC – cal. AD 20 (at 2 sigma).

The excavations suggest that there was continuity in the ritual landscape of the area from the LIA down to the Early Saxon period. In the LIA, a small cremation cemetery was established on the eastern edge of the settlement area, consisting of 3 pits furnished with Belgic pottery. The richest burial lay in the centre and was emphasised by a small rectangular enclosure. In the Roman period, this area was enclosed within a larger rectangular enclosure, the ditches of which contained a number of interesting deposits – the lower jaw of a horse, a cow's skull and a fragment of human skull. In the 5th century, a small Anglo-Saxon cemetery was established just outside the Roman enclosure. Several of the graves contained belt-fittings of a type often associated with Germanic mercenaries, suggesting that this was the cemetery of a small community of *laeti* settled at North Shoebury at the end of the Roman period.

Another thread of continuity is provided by the analysis of the prehistoric pottery. From the MBA down to the LIA, the pottery of south-east Essex shows stronger links with material from the lower Thames valley and north Kent than it does with north Essex. Coin groups of the LIA show a similar pattern. This suggests that throughout later prehistory there was a south-east Essex/north Kent 'territory' that was distinct from north Essex. This obviously has important implications for notions of a unified Trinovantian tribal territory.

The medieval and post-medieval aspects of the site receive the least satisfactory treatment. Although a section on the documentary background (by Pat Ryan) is included, there is very little attempt to integrate it with the archaeological evidence. The significance and function of the large 11th-century enclosure adjacent to the church is not really explored, nor is there much discussion of the nearby North Shoebury Hall, a Tudor brick structure burnt down in 1968, and the tantalising possibilities of a Late Saxon or Early Medieval predecessor beneath it.

In conclusion, this report gives important insight into the wealth of information that can be obtained from 'landscape' excavation projects, but it also demonstrates the problems of interpretation that arise

when projects are abandoned with much of the work still in the evaluation stage. The authors are to be congratulated for having extracted so much from the difficult circumstances surrounding the North Shoebury project.

Edward Martin

Mount Bures – its lands and its people. A brief history from prehistoric to Victorian times, by Ida McMaster and Kathleen Evans, 166 pages, 66 illustrations including 33 black and white photographs and 6 colour plates. £7.50

The seeds of this attractively produced paperback were sown over 30 years ago, when the first author became involved in the examination of Roman material in a field at Hall Farm. Not long afterwards, she came across a tin box containing a remarkable set of deeds dating from 1578, relating to the lands of the erstwhile manor of Mount Bures. These two events in many ways set the tone of the book, with both archaeological and historical evidence used to establish the development of the parish.

There are in fact three adjacent parishes, all with the 'Bures' place-name element; Bures Hamlet, Bures St. Mary and Mount Bures, each in a different Hundred and each existing at the time of Domesday. This book is concerned with the 1400 acres of land on the Essex side of the Stour that make up the parish of Mount Bures, though the two neighbours, inevitably, are often mentioned.

Two chapters deal with the archaeology of the parish, bringing out the importance of the 'Mount' and identifying the likely site of a Saxon mill. The medieval period is viewed through a chapter on the Sackvilles, to whom the manor of Mount Bures (and nearby West Bergholt) was granted in 1119, and who retained it for over 400 years, a chapter on the everyday life for the tenants of the manor, and a chapter on the church. This latter also brings the reader up to the 19th century with a description of the school, which opened in 1873 with 60 pupils. It closed in 1939, and the building is now the village hall.

There follow 7 more detailed chapters on 26 of the older houses and their lands. These houses range from the grand to the humble, and their histories reveal the great depth of research that has been undertaken by the authors. (Richard Shackle and Leigh Alston are acknowledged for their considerable help in this part of the book). The final chapter summarises Mount Bures at the time of the 1881 census. There were then 276 inhabitants (compared with 218 in 1991). A more dramatic comparison concerns the agricultural workers (including farmers). In 1881, there were 75, but by the 1990s, only about 14 make their living off the land, a change that would be echoed in many an Essex parish. There are also a series of appendices, detailing some of

the more significant documents in the history of the parish. All in all, this book provides excellent value for money; let us hope that other parish historians will be encouraged to produce similar histories of their own areas.

Owen Bedwin

A village in time. The history of Newport, Essex, by B.Nurse, J.Pugh and I.Mollett (1995), Newport: Newport News, vi + 186 pages. £15

The majority of the historic towns in Essex are new foundations of the 13th century. Newport is an exception. It is an older place, but as its name implies, not that much older, probably having been established in the 10th century as the administrative centre and market for the Hundred of Uttlesford. Evidence for early settlement is so far wanting. It may be that it was the successor to an 8th or 9th-century site a mile or two away at Wicken Bonhunt, which produced a notable quantity and array of finds, giving rise to the suggestion that it might have been a royal hunting lodge or food-rent collecting centre. But being unpublished, this remains speculation and indeed the significance of Bonhunt for the early history of Newport is difficult to assess. The town owes much of its *raison d'être* to its position in the Cam valley which in combination with the Stort and Lea rivers formed a natural routeway between Cambridge and London. The town may have come to be overshadowed by Saffron Walden, whither Geoffrey de Mandeville transferred its market in 1141, but the road (and the railway which came in 1845 and still survives) ensured that it enjoyed a continuing degree of prosperity.

It is natural to think that Newport today is largely a commuter village, but this book refutes such assumptions, as it seems that in 1992 only about 14% of the population worked in London. Whatever the case, the town preserves a lively sense of community, one of the manifestations of which is *Newport News*, surely the thickest and most lavishly produced of all local magazines in the county. This has acted as a forum for the exploration of various aspects of local history, and from a series of articles in it has evolved this book which is the first full length study of the town. It is attractively produced, profusely illustrated, and the work of the three authors is properly integrated. There is an index and the chapters are supplied with references. More importantly, its scope extends beyond secondary sources to new research and discoveries. These include recent archaeological work and the Vestry Book for the

18th century, which turned up in the church during spring cleaning.

Newport had a number of attributes of the larger than average market town. Allegedly there was a castle, though the site of it has eluded identification. It is here suggested that it might possibly be the same as the jail recorded in the 12th century. Were it to be discovered, the castle might shed light on the theory that Newport is the unidentified Edwardian burh of *Wigingamere*, though the proponent of this theory has apparently abandoned it in favour of Linslade in Buckinghamshire. There was too a mint briefly in the 11th century. On the north side of the town, a hospital was founded in the 12th century, the scanty evidence for which was re-assessed when the site was developed in the 1980s. The church is imposing and one wonders why it is quite so large when, apart from some Perpendicular windows, it is not a rebuild of the 15th and 16th centuries. The answer to this is probably provided, inasmuch as the book makes clear that until the early 14th century, Newport had not been surpassed by Saffron Walden and was still relatively prosperous and important. The absence of a late medieval reconstruction could be taken as a measure of the town's decline. The medieval history is set out clearly and concisely, but there is a lacuna for the 15th century which may reflect a lack of adequate sources but otherwise goes unexplained.

Half the book is devoted to the last two centuries. Generously illustrated, this may look like another collection of old photographs, but the text provides an absorbing and well documented account of town life. The history of the ordinary people is vividly brought to life in a chapter based on oral history in the form of tapes now held at Essex University. Also striking is the successful symbiosis of the town and its adjoining manor of Shortgrove, where the owners of the Hall created employment and provided various facilities for the townspeople. This successful service economy came to an end just after the last war and the late 17th-century mansion was destroyed by fire in about 1980.

What will future historians find of interest in the recent history recounted here? Notable is a photograph of the current Chancellor of the Exchequer (then Under Secretary for Transport), being feted by a jubilant throng at the opening of the M11 in 1979. This was clearly expected to satisfy a long-felt need, as a by-pass had been demanded as early as 1928. On the same page is a photograph of a demonstration demanding a pedestrian crossing in the High Street, and the admission that 'Traffic soon built up again' is a recognition of the limited success of roadbuilding.

David Andrews

Essex bibliography

Bibliography of Journal literature on Essex Archaeology and History at February 1996

Both monograph and periodical literature are included; articles published in journals 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.

For *new* books on Essex history see the regular lists published in the Society's Newsletter.

Adolph, A.R.J.S.	1994	'Bookselling, recusancy and land tenure: 120 years of family history in London and Essex', <i>Family History</i> 17, 120-33	Martin, M.C.	1994	'Women and philanthropy in Walthamstow and Leyton 1740-1870', <i>London Journal</i> 19, 119-50
Atkinson, M.	1995	'Elms Farm, Heybridge', <i>Current Archaeology</i> 144, 452-8	Meddens, F.	1995	'Bronze Age trackways in east London', <i>Current Archaeology</i> 143, 412-6
Ashton, N. and McNabb, J.	1995	'Rethinking the lower Palaeolithic' [on Clactonian and Acheulian 'cultures'], <i>British Archaeology</i> 4, 6	Meddens, F. and Redknap, M.	1992	'A group of kiln waste from Harding's Farm, Mill Green, Essex', <i>Medieval Ceramics</i> 16, 11-43
Brown, N.R.	1995	'Ardleigh reconsidered: Deverel-Rimbury pottery in Essex', in I.A.Kinnes and G.L.Varndell (eds), <i>"Unbaked urns of rudely shape": Essays on British and Irish pottery for Ian Longworth</i> , Oxbow monograph 55, 123-44	Schofield, P.	1994	'Frankpledge lists as indices of migration and mortality: some evidence from Essex lists', <i>Local Population Studies</i> 52, 23-9
Cool, H.E.M. and Price, J.	1995	<i>Roman vessel glass from excavations in Colchester, 1971-85</i> , Colchester Archaeological Report 8	Sharpe, P.	1994	'The women's harvest: strawplaiting and representations of labouring women c. 1793-1885', <i>Rural History</i> 5 (2), 129-42
Crummy, P.J.	1995	'Late Iron Age burials at Stanway, Colchester', in J. Swaddling <i>et al.</i> (eds), <i>Italy in Europe: Economic relations 700 BC - AD 50</i> , BM Occasional Paper 97, 263-5	Sharpe, P.	1994	'Bigamy among the labouring poor in Essex 1754-1857', <i>The Local Historian</i> 24 (3), 139-44
Dare, E.H.	1994	'A social initiative in Loughton, Essex: the Loughton Mutual Labour Aid Society 1891-99', <i>Local History</i> 24, 229-42	Sharpe, P.	1995	'"Cheapness and economy": manufacturing and retailing ready-made clothes in London and Essex 1830-1850', <i>Textile History</i> 26 (2), 203-13
Evison, V.	1994	<i>An Anglo-Saxon cemetery at Great Chesterford, Essex</i> , CBA Res. Rep. 91	Taylor, P.	1995	'The early St. Albans endowment and its chroniclers', <i>Historical Research</i> 68 (166), 119-42
Fishwick, D.	1995	'The temple of Divus Claudius at Camulodunum', <i>Britannia</i> 26, 11-27	Thompson, P. and Bornat, J.	1994	'Myths and memories of an English rising: 1968 at Essex', <i>Oral History</i> 22 (2), 44-54
Hawkes, C.F.C. and Crummy, P.J.	1995	<i>Camulodunum 2</i> , Colchester Archaeological Report 11	Truckle, N., Moore, P. and Thrall, P.	1995	'Excavations at George Mitchell School playing fields, High Road, Leyton, London E4', <i>London Archaeologist</i> 7 (15), 397-402
Hesse, M.	1995	'The Anglo-Saxon bounds of Littlebury', <i>Proc. Cambs. Antiq. Soc.</i> 83, 129-40	Wallace, C.R.	1993	'Notes on the dating of late shell-tempered ware in Essex', <i>Journal of Roman Pottery Studies</i> 6, 123-6
Hobbs, R.	1992	'Woodham Mortimer, Essex: 189 denarii to AD 38', in R.F.Bland (ed.), <i>The Chalfont hoards and other Roman coin hoards</i> (Coin hoards from Roman Britain vol. 9), 20-3 [Note the hoard was found in the neighbouring parish of Woodham Walter].	Wilkinson, A.J. and Murphy, P.L.	1995	<i>Archaeology of the Essex coast, vol. 1: the Hullbridge survey</i> , E. Anglian Archaeol. 71
Hoyle, R.W. and Sreenivasan, G.	1995	'The land-family bond in England', <i>Past and Present</i> 146, 151-87 [Ref: Earls Colne]	Wymer, J.J. and Brown, N.R.	1995	<i>North Shoebury: settlement and economy in south-east Essex 1500 BC - AD 1500</i> , E. Anglian Archaeol. 75

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:

Atkinson, M.	1995	'A Late Bronze Age enclosure at Broomfield, Chelmsford', <i>Essex Archaeol. Hist.</i> 26, 1-23
Hawkes, C.F.C.	1995	<i>Camulodunum</i> 2, Colchester Archaeological Report 11
and Crummy, P.		
Medlycott, M.,	1995	'South Weald Camp - a probable late Iron Age hill fort: excavations 1990', <i>Essex Archaeol. Hist.</i> 26, 53-64
Bedwin, O. and		
Godbold, S.		

Victoria County 1963 *Essex*, iii
History

Abbreviations of works cited should be in accordance with the annual *Archaeological Bibliography*, published by the CBA. Avoid the use of ampersands.

6. Line drawings

The print area of *Essex Archaeology and History* is 176 x 245mm, and drawings should be designed to fit, if possible, within this format when reduced. Note that this area also needs to include captions, apart from exceptional circumstances when a caption may be printed on a facing page. The reduction factor should be borne in mind at all stages of illustration, with particular attention paid to line thickness and size of lettering. The latter, whether Letraset, stencil or freehand should be neat, consistent and legible.

All maps, plans, sections, drawings of artefacts should contain a linear scale. Titles, scales and keys should be no longer than is absolutely necessary. Fold-out drawings are expensive and should be avoided.

7. Half-tone illustrations should be provided as good quality prints on glossy paper. Where appropriate, there should be a linear scale in the photograph. Plates are numbered in a single sequence through an article, using Roman numerals; this sequence is separate from the line-drawing sequence. Thus an article with 8 line drawings and 4 half tones will refer to Figs 1 to 8, and to Plates I - IV.

8. The responsibility for supplying all illustrations lies with the authors, who should also obtain any necessary copyright clearance, though *not* Ordnance Survey copyright permission, which will be done by the editor on a volume-by-volume basis.

9. First proofs only will be supplied for checking, unless there are exceptional circumstances.

10. Contributors will be given 20 copies of their articles. Additional copies may be ordered at cost price.

ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

OFFICERS AND COUNCIL, DECEMBER 1995

Patron

Lord Braybrooke
Her Majesty's Lord Lieutenant of Essex

Honorary Life President

Col. Sir John Ruggles-Brise Bt, C.B., O.B.E., T.D., J.P.

President

Dr J. Ward

Vice-Presidents

Lord Alport of Colchester, P.C.
The Rt. Hon. Lord Braybrooke
The Rt. Revd. John Waine, Lord Bishop of Chelmsford
The Master of Sidney Sussex College, Cambridge
The Master of Pembroke College, Oxford

The Mayor of Southend
Dr A.F.J. Brown
The Mayor of Maldon
G.H. Martin M.A., D.Phil., F.S.A., F.R.Hist.S.
Mrs M.U. Jones, B.A., Dip.Ed., F.S.A.

Hon. Secretary

Dr C.C. Thornton
75 Victoria Road
Maldon CM9 5HE

Trustees

J.S. Appleby F.R.Hist.S., F.R.Met.S.; M.S. Crellin;
W.R. Powell M.A., M.Litt., F.S.A., F.R.Hist.S.;
P. Buxton B.A.

Hon. Programme Secretary

D.D. Andrews B.A., Ph.D., F.S.A.

Hon. Excursions Secretary

Mrs P. Ryan

Hon. Treasurer

D.A. Davies
(as from 1 January 1996)
W.A. Hewitt
51 Crossways
Gidea Park
Romford RM2 6AJ

Hon. Editor

Owen Bedwin
The Manor House
The Street
Febmarsh
Halstead
CO9 2NH

Curator

O. Green B.A.

Publications Development Fund Secretary

W.A. Hewitt T.D., A.C.I.B.

Hon. Librarian

Andrew Phillips, B.A., B.Ed.

Hon. Membership Secretary

Dr J. Kemble
27 Tor Bryan
Ingatestone CM4 9JZ

Hon. Legal Adviser

Charles Sparrow Q.C., LL.B., F.S.A.

Hon. Newsletter Editor

P.J. Gilman B.A.

Council

The President and Honorary Officers, The Trustees
Rev. J. Bartlam; J. Bensusan-Butt B.A.; P. Berridge; R.W. Coleman; K. Crowe; Mrs N. Edwards; A.J. Fawn; Miss A. Green B.A.; Dr P. Greenwood; P. Nutt; Miss M. Scollar; Dr P.R. Sealey; M.H. Stuchfield; K. Walker

Representative Members

Essex Record Office: K. Hall
Essex County Council Archaeology Section: D.G. Buckley
Victoria County History: Dr J. Cooper
University of Essex Centre for Local History: Dr P. Hills
Chelmsford and Essex Museum: N.P. Wickenden

Representatives of the Society

Colchester Borough Council Conservation Advisory Committee: Mrs C. Mabbitt
Chelmsford Borough Council Arts Committee: N.P. Wickenden
Essex County Council Library, Museum and Records Committee: Mrs E.E. Sellers
Advisory Committee for Archaeology in Essex: Dr J. Kemble
Essex Archaeological and Historical Congress: Miss E. Ludgate
Community Council for Rural Essex: Mrs E.E. Sellers
Victoria History for the County of Essex: Dr D.D. Andrews
Council for British Archaeology: P.J. Gilman
Colchester Archaeological Trust: J. Burton
Chelmsford Borough Council Conservation Areas Advisory Committee: Mrs J.R. Beardsley
VCH Appeal Committee: J.S. Appleby
Essex Field Names Project: Dr J. Kemble, Dr C.C. Thornton

