ESSEX

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TRANSACTIONS OF THE ESSEX SOCIETY

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THE TRANSACTIONS OF
THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

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THE ESSEX SOCIETY FOR ARCHAEOLOGY AND HISTORY

The Society was founded in 1852 as the Essex Archaeological Society

Its objects are:

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

Publications

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

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Application should be made to the Hon. Membership Secretary for current rates.

Articles for Publication are welcome and should be set out to conform with the Notes for Contributors, of which offprints are available. They should be sent to the Hon. Editor.

A list of officers, with addresses, will be found in this volume.

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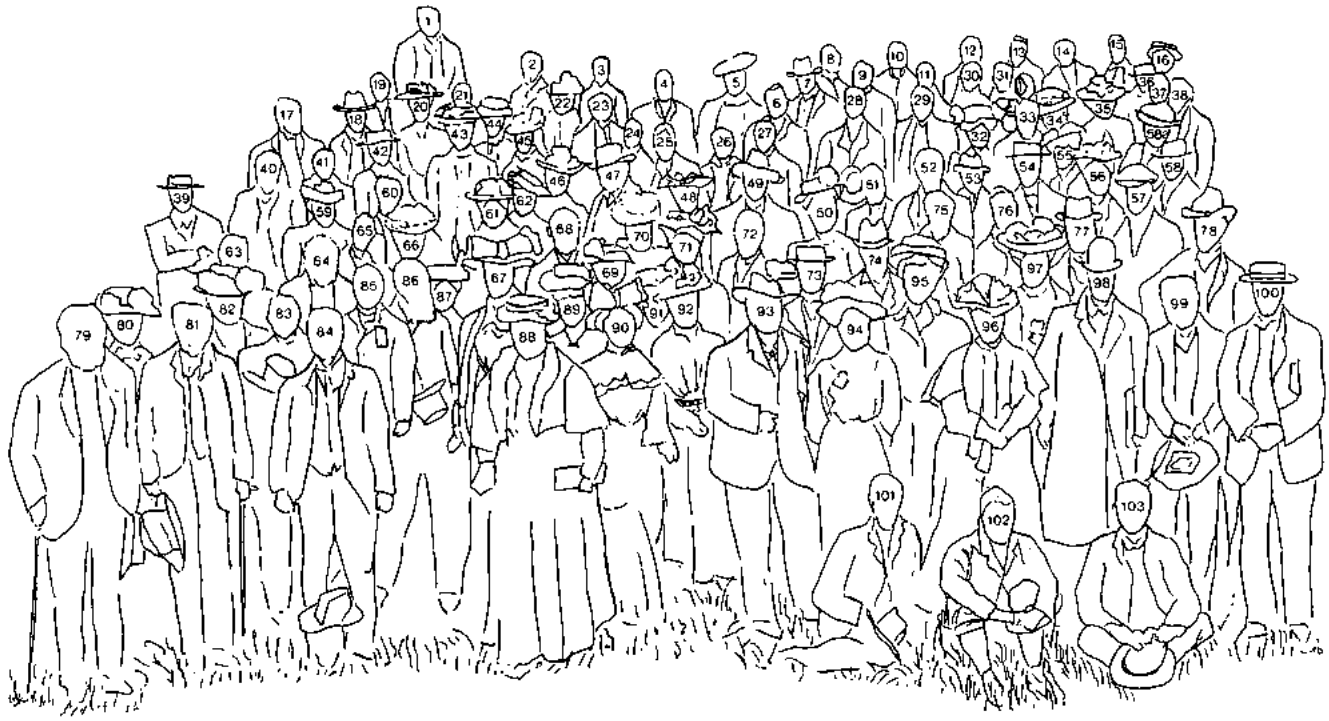

Key to illustration on front cover (taken at Colchester Castle, 26 July 1907).

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Mesolithic Flints from Badger Hall, South Benfleet, Essex

by K.L. Crowe

A small collection of struck flints was brought into Southend Museum for identification in May 1989. They had been found over a period of several years, during general gardening operations and when digging out an area for a concrete drive, at Badger Hall, South Benfleet, N.G. TQ 794875.[1] Badger Hall lies astride the 80 m contour, and the garden slopes quite steeply to the south-west. The garden is also at the junction of the Claygate and Bagshot beds (Figs 1 and 2). Although many flints have been collected by the owners, it is unlikely that the smallest flints have been recovered or noticed, and this present collection can in no way be regarded as a complete or even representative collection. I am very grateful to Mr John Llewellyn-Jones for bringing the finds to my attention, and to Mrs C. Sherwin for allowing me to retain the flints for study.

The flints recovered comprise the following categories:

1. Two core axes
2. Blade cores
3. Scrapers
4. Other retouched pieces
5. Unretouched pieces
6. Microblades/blade segments
7. Large flint nodules and pebbles

(1) The Core Tools (Figs 3, 4, nos 1 and 2)

The two axes/adzes are both in black flint, partially stained and patinated to an orange/brown colour. The larger tool (Fig. 3, no. 1) measures 158 mm long and 51 mm in maximum width. It is markedly plano-convex in section, the domed (dorsal) face bearing a considerable area of cortex. A series of tranchet flakes had been removed to create the cutting edge on the ventral face. A small area of cortex remains on the ventral surface, and presumably indicates that the minimum amount of work was carried out to produce this functional tool.

The smaller tool (Fig. 4, no. 2) measures 111 mm in length by 42 mm maximum width. Details of the cutting edge have been masked by later damage. The more symmetrical section of this implement may argue for it functioning as an axe rather than an adze. It is possible that this tool may be a rough-out or incomplete Neolithic chisel or axe.[2]

(2) Blade Cores (Fig. 5, nos 3 and 4)

3. A single platform conical bladelet core, on a large pebble, from which blades have been removed from around the convex face. Cortex survives on the flat side of the core.

4. A single platform conical bladelet core, on a large pebble, with cortex surviving on the back. Blades have been removed from just over half the circumference. The core had presumably become too small for further blade removal, and a small area near the distal end had been retouched, creating a shallow notch.

(3) Scrapers (Fig. 5, nos 5 and 6)

5. A somewhat denticulated scraper of convex form made on a black flint pebble(?) flake. Cortex survives over much of the dorsal surface. Retouch is mainly confined to the dorsal face, but there is some on the opposing ventral face, in addition to use-wear scars. The proximal end has also been retouched, perhaps to create a point at the junction of two notches.

6. A "side" scraper of almost straight outline on a pebble flake, with cortex surviving over most of the dorsal surface. Vertical retouch has created the scraping edge and a notch has been created on the opposite side.

(4) Other Retouched Pieces (Fig. 5, nos 7-10; Fig. 6, nos 11-18)

7. A possible knife or "shave" on a thick flake, with fine retouch along the convex edge; the retouch is invasive at the proximal end but becomes steeper towards the distal end.

8. Blade exhibiting some flaking on right-hand ventral edge, perhaps use/wear damage. The distal end bears some retouch and much of the right hand dorsal edge bears steep retouch, possibly backing.

9. Probably a scraper on a pebble flake with pebble cortex surviving along the proximal edge. Very pronounced positive and negative bulbs of percussion suggest the use of a hard hammer. Steep retouch along much of the distal edge.

10. Blade with small area of retouch at the distal end, removing some of the cortex. Proximal end possibly damaged.

11. Thin flake with distal hinge fracture. Opposing dorsal edges bear fine retouch, which is especially invasive along the right-hand edge.

12. A long flake, slightly converging towards the distal end. Cortex survives over the length of the dorsal surface. The distal end and one edge bear fine retouch.

13. A thick flake with step fracture on ventral surface. Quite fine retouch along the left edges of both dorsal and ventral sides.

14. Blade with distal hinge fracture. Retouch at the distal left edge of the dorsal face and at the proximal end, where a notch created on the dorsal side begins to

converge with retouch from the opposite edge, possibly to form a piercing tool.
15. A long flake with cortex at the distal end. Retouch along a short length of both right and left edges of the dorsal surface.
16. A thick flake with distal hinge fracture. Pronounced cone of percussion and retouch along both ventral and dorsal sides of one edge have created a denticulated outline.
17. Long flake in orange flint. Retouch along part of both dorsal and ventral sides of one edge.
18. Small flake in red flint with very fine retouch along both edges and steep retouch at distal end.

(5) Unretouched Pieces (Fig. 6, nos 19 and 20; Figs 7 and 8)
19. Blade snapped at proximal end.
20-32. Unretouched debitage.

(6) Microblades/Blade Segments (Fig. 8)
33. Proximal end of blade, with retouch along surviving distal edge of ventral side. Across distal end is small flake scar and notch, indicating removal of blade. Possibly a microburin or mishit.
34. Small blade on distal hinge fracture. Steep retouch, possibly to form a piercing tool. Possibly a crude microlith?
35. Blade segment, with notch created on ventral side.
36. Proximal end of bladelet
37. Distal end of bladelet, with snap spall.
38. Distal tip of bladelet, with battering along one edge.

Discussion

These struck flints seem to indicate the use of both hard and soft hammer technology. The "pebbles" especially, exhibit pronounced bulbs of percussion. Several of the secondary/tertiary flakes have more diffuse cones, and are more likely to have been detached with a soft hammer.

This obviously incomplete collection was recovered possibly from a disturbed working floor. Diagnostic pieces have not been recovered, and so it is not possible to assign the collection with any certainty to either earlier or later mesolithic, although all the pieces would fit quite happily within the mesolithic as a whole. The site is one of several known to exist in the area (Fig. 2) where suitable gravels for flint knapping seem to exist. The two nodules brought to the museum with these flints are representative of a large number freely available in the garden of the owners. The flint pebbles and nodules probably derive from eroded terrace gravels. Some 3 km to the north-east is the early mesolithic site of Daws Heath (the Wyburn Height Estate) and about 5 km to the north is the large mesolithic site of Hamborough Hill. Just 2 km distant a considerable number of mesolithic flints have been found in the fields around Daws Heath. Some of these isolated finds are also to be published by the present author.[3] It is quite noticeable from the geological map (Fig. 1b) that it is in this area, on the Claygate/Bagshot ridge, that most large-scale finds of mesolithic date have come to light. A deliberate choice seems to have been made to exploit this ridge and, probably, to set up at least seasonal camps here. Such sites at the junction of geological deposits have been identified elsewhere.[4] It is impossible, from the flints recovered so far to enter into any discussions relating to the nature of activity at Badger Hall (e.g. whether it was a preparation or processing site, etc.).

Most of the flints recovered from Badger Hall could have come from a single flint source, the most obvious contenders being the flint nodules, like the two brought into the museum. These are of black flint, with a white to dark grey thin cortex. Just two other flint types seem to be represented in this collection: a red flint (no. 18) and an orange flint (no. 17). These were no doubt made from flint pebbles occurring in the local gravels. Perhaps they were specially chosen because of their colour.

The owners of the site have very kindly given permission for small-scale survey and investigation of the grounds of Badger Hall, when it is hoped to be able to sieve soil from areas of the garden in an attempt to recover other, and smaller, flints. The opportunity will also be taken to investigate the surrounding area in order to identify the possible extent of the flint scatter and to locate the possible source of the flint nodules.

Author: Ken Crowe, Southend Museums Service, Central Museum, Victoria Avenue, Southend-on-Sea.

Acknowledgements

The author wishes to thank Mrs P. Sherwin for allowing him to retain the flints for drawing and study. Sincere thanks are also due to Hazel Martingell for her most constructive comments and criticisms of this paper.

Notes

1. Southend Museum S.M.R. TQ78NE 32.
2. I am grateful to Miss Hazel Martingell for this suggestion.
3. Particularly the D.F. Shorter and J. L.-Jones collections. See Crowe, forthcoming.
4. For example, in the Weald; see Mellars and Reinhardt, 1978, p.254.

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Crowe, K. forthcoming — 'Some previously unpublished flints from Daws Heath, Essex.'

Mellars, P. and Reinhardt, S. 1978 — 'Patterns of Mesolithic Land Use in Southern England: a Geological Perspective', in Mellars, P. (Ed.) *The Early Postglacial Settlement of Northern Europe.* Duckworth, New Approaches in Archaeology.

The Society is grateful to Southend-on-Sea Borough Council for a generous grant towards the cost of publishing this article.

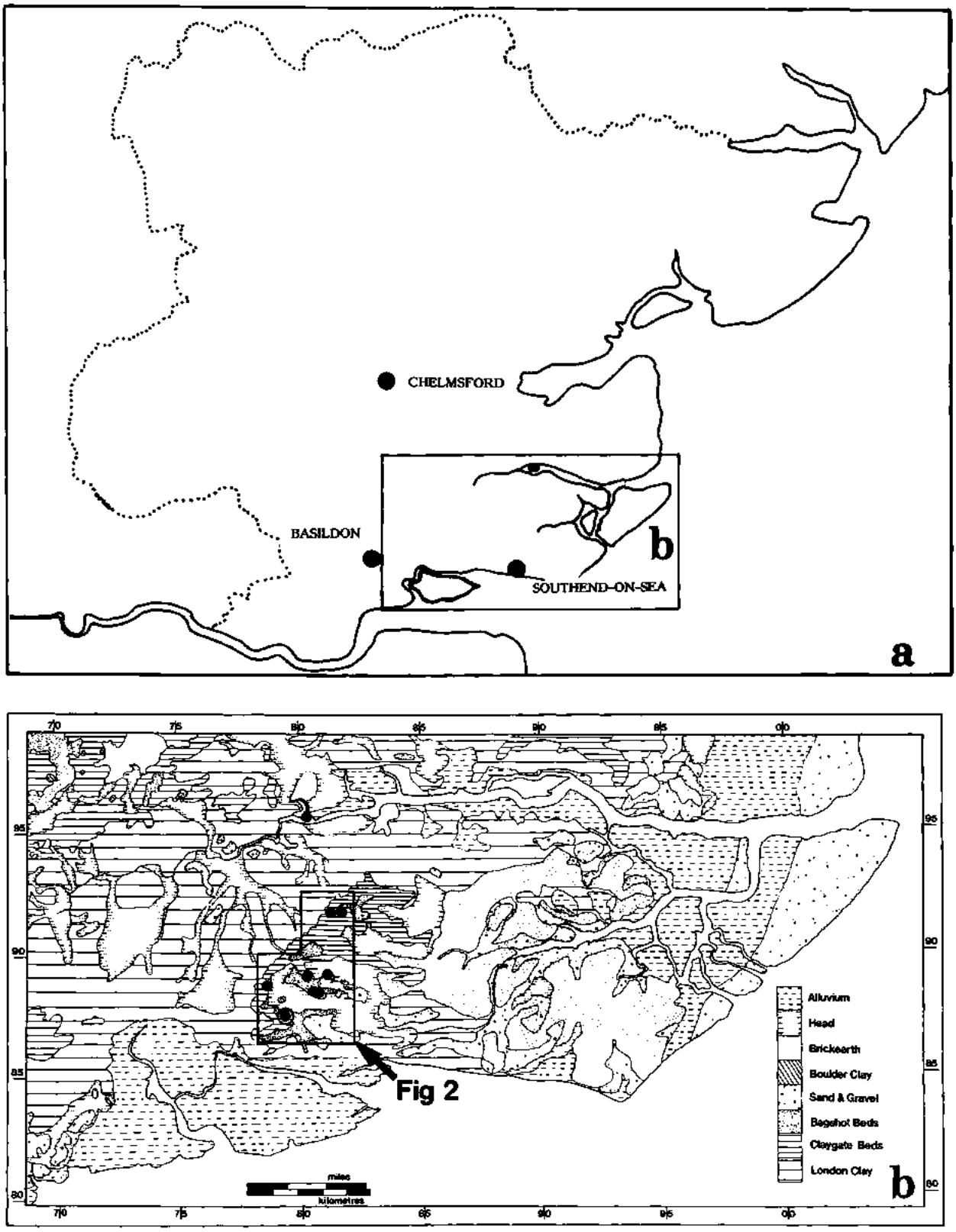

Fig. 1 Badger Hall. (a) Location map; (b) major Mesolithic assemblages in S.E. Essex.

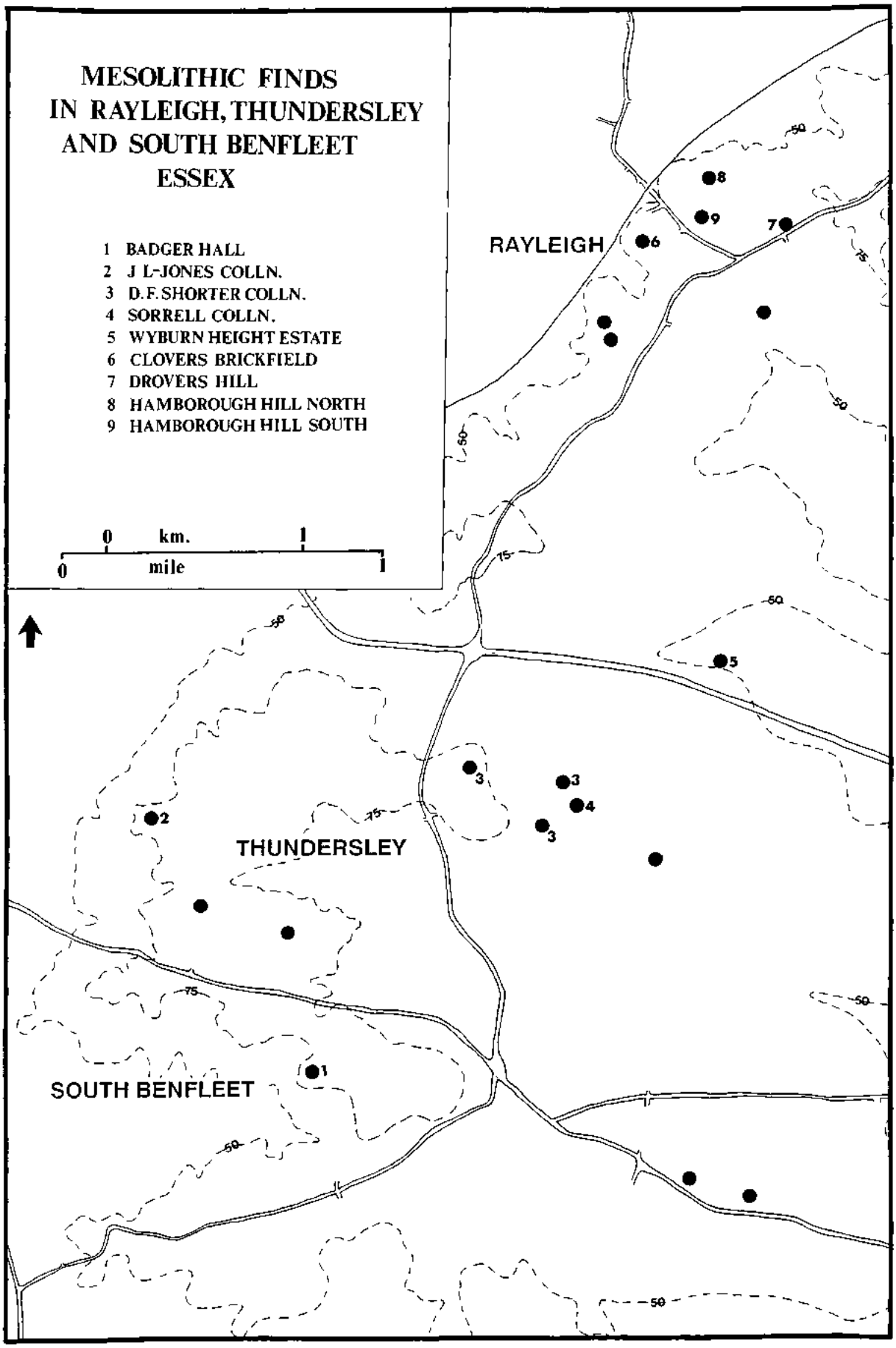

Fig. 2 Badger Hall. Mesolithic finds in Rayleigh, Thundersley and South Benfleet.

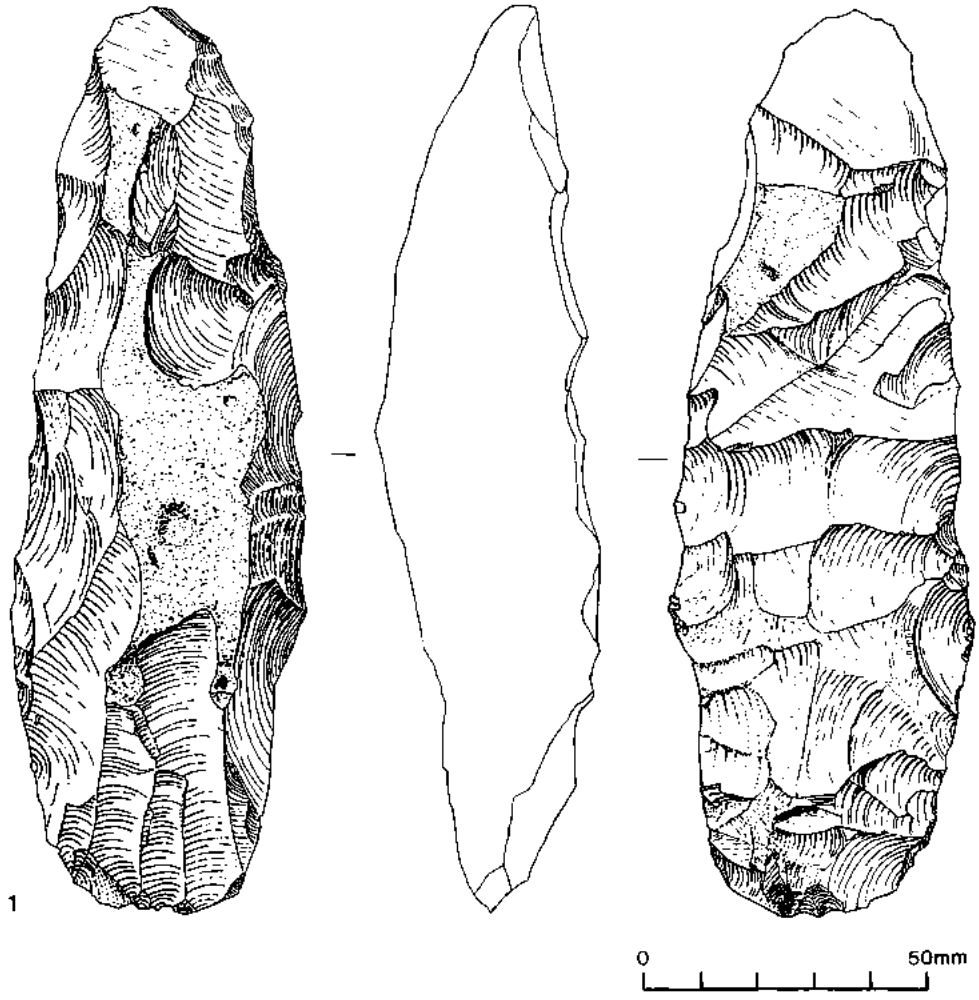

Fig. 3 Badger Hall. Axe/adze.

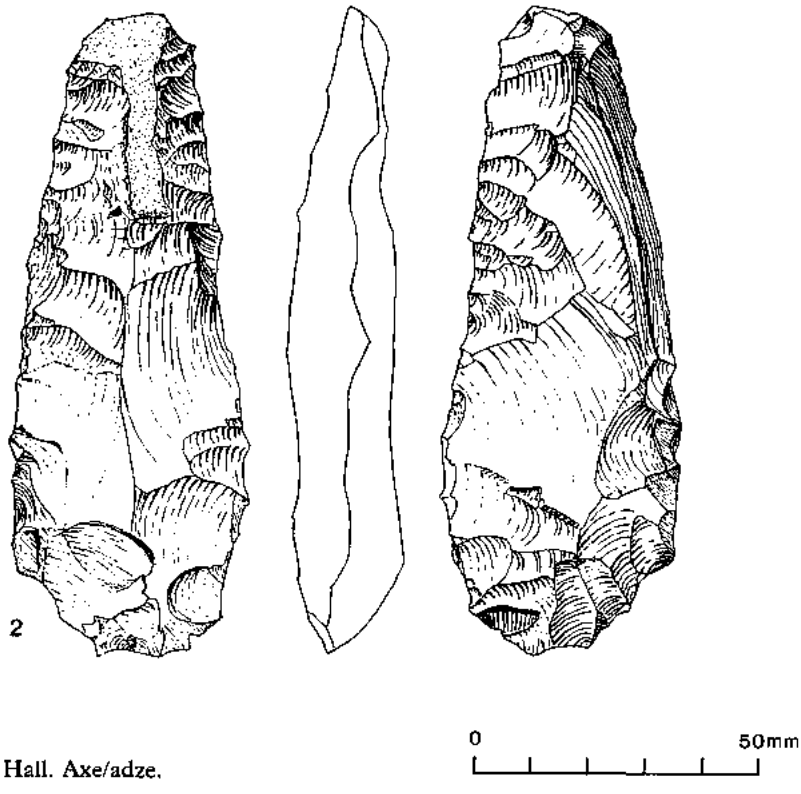

Fig. 4 Badger Hall. Axe/adze.

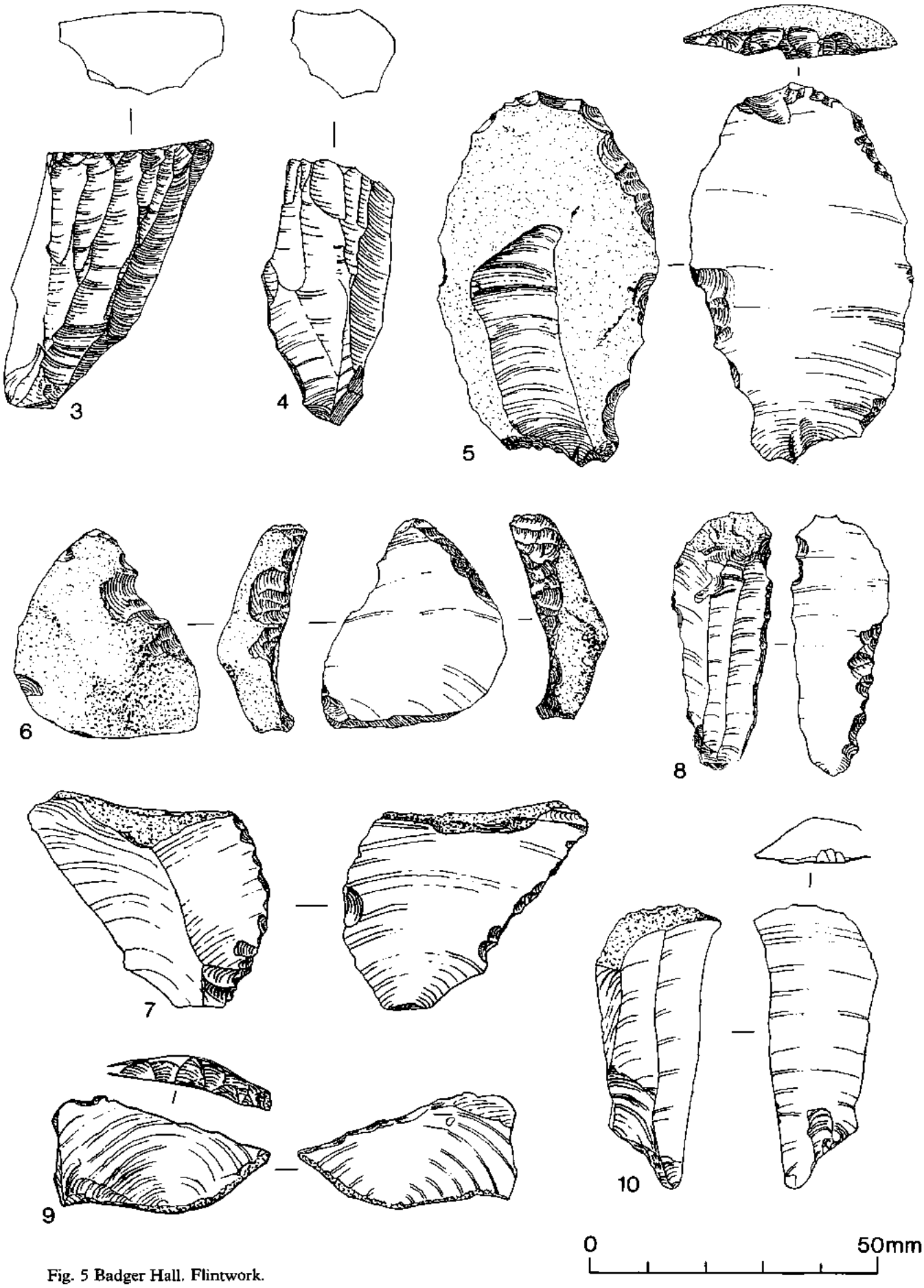

Fig. 5 Badger Hall. Flintwork.

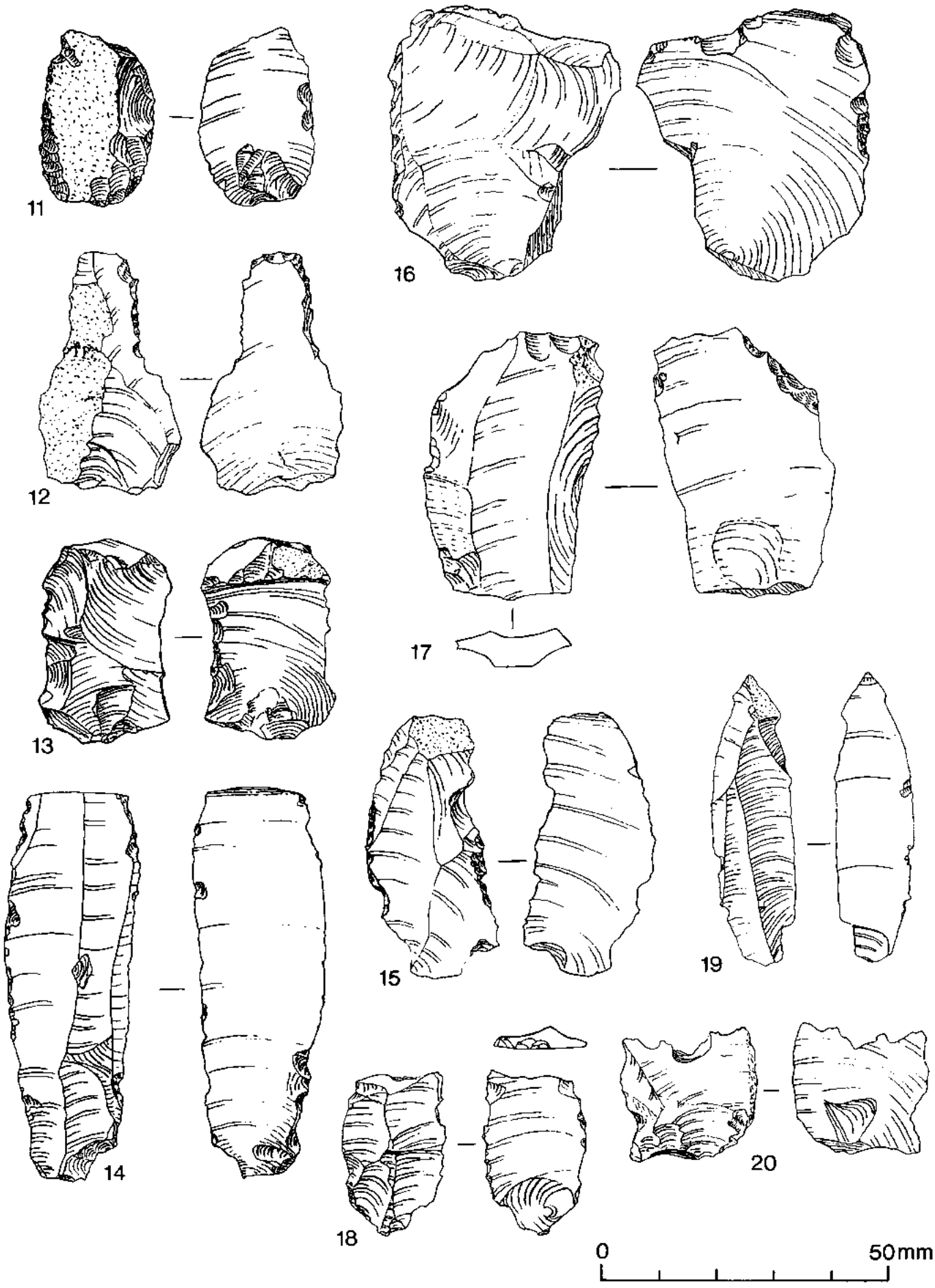

Fig. 6 Badger Hall. Flintwork.

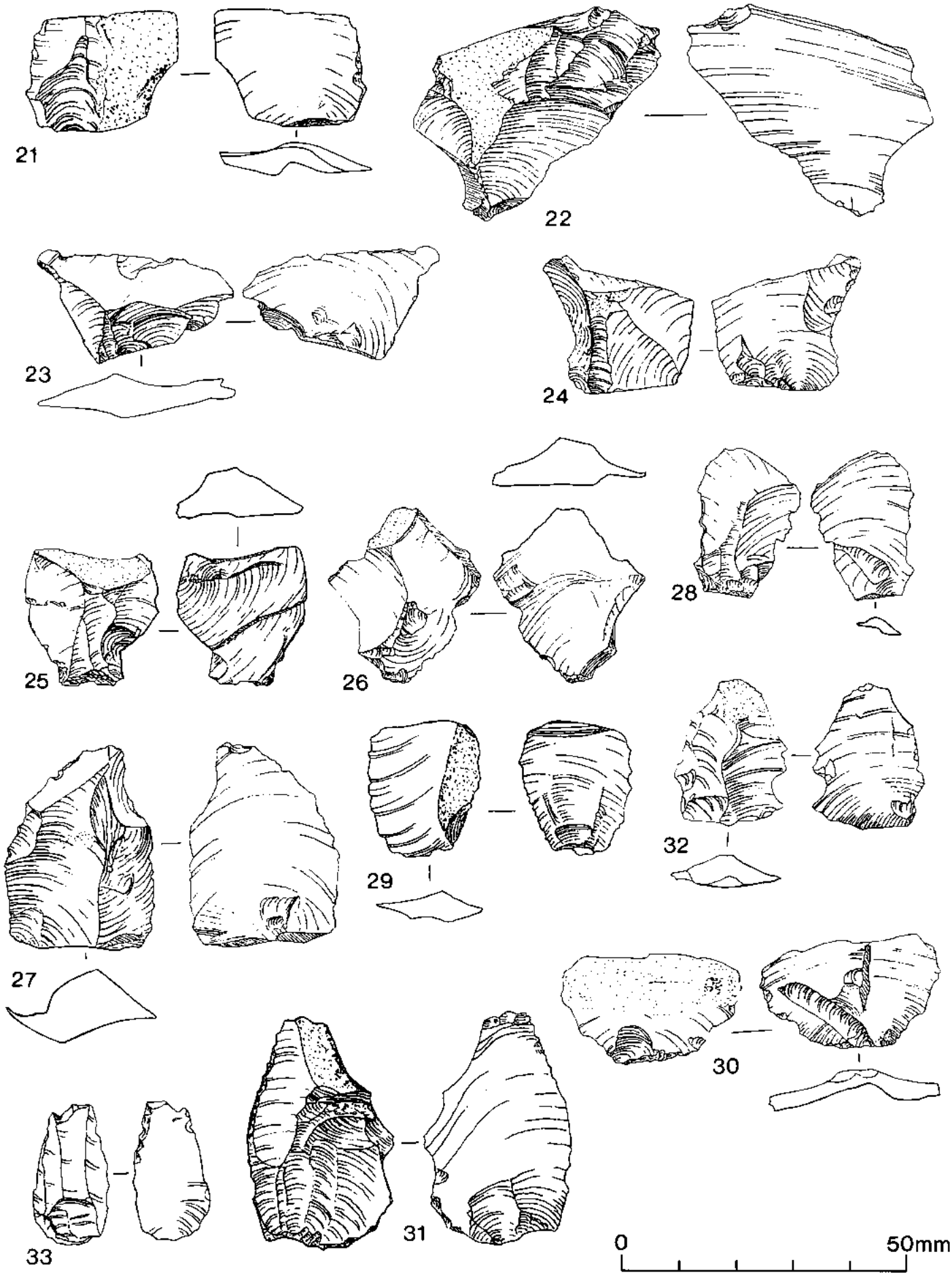

Fig. 7 Badger Hall. Flintwork.

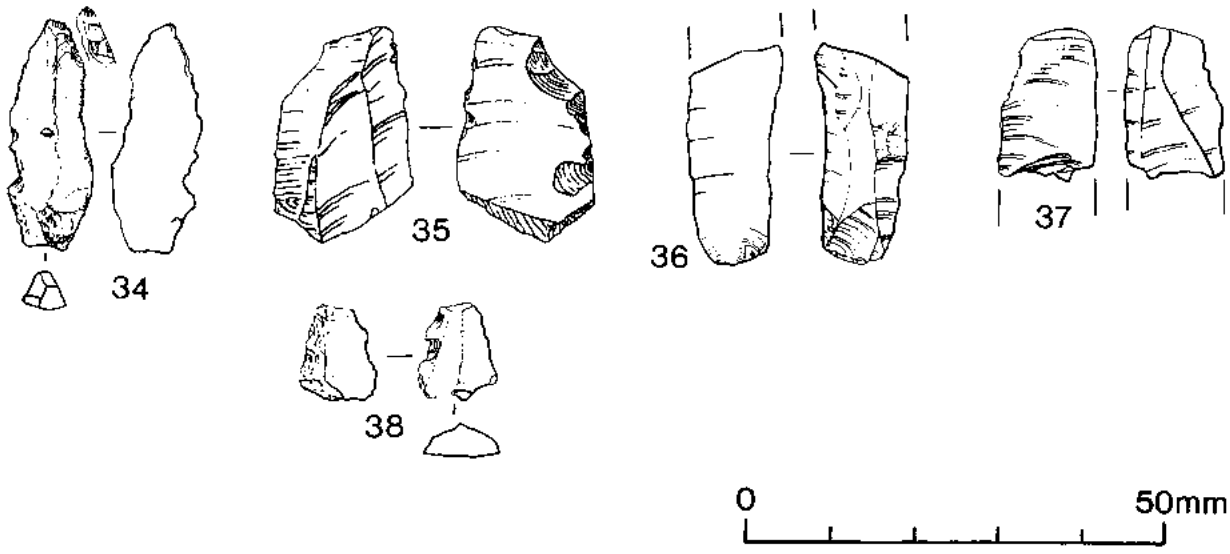

Fig. 8 Badger Hall. Flintwork.

Essex Archaeology and History 23 (1992), 10-24

Early Iron Age settlement at Maldon and the Maldon 'burh': excavations at Beacon Green 1987

by Owen Bedwin

with pottery report by Nigel Brown

Small-scale excavation produced evidence of early Iron Age settlement on the hill-top at Maldon. For at least part of its life, the settlement was palisaded. A large assemblage of Darmsden-Linton pottery was found, broadly dated to the 6th century B.C.

Evidence is also presented for the line of a substantial ditch, which is identified with the historically-documented 10th-century burh. The possibility that the burh consisted of a re-fortified early Iron Age hill fort is discussed, but the current evidence is inconclusive.

Introduction

This report presents the results of a combination of watching brief and limited excavation at the Beacon Green sheltered housing development in 1987 (Figs 1 and 2). The original discovery of early Iron Age material and most of the subsequent watching brief was by Paul Brown of the Maldon Archaeological Group (hereafter M.A.G.). There was also a formal 3-week excavation undertaken jointly by Essex County Council Archaeology Section and M.A.G., under the direction of the author and funded by a grant from Maldon District Council.

Interim reports on this site have been under the name 'Elmcroft' (Priddy 1988), after a nearby house in the former garden of which the excavation took place. Although still standing while fieldwork was underway, this house was subsequently demolished, the owners moving into a new house about 35 metres to the north, also called Elmcroft (Fig. 2; 'New' Elmcroft). To avoid confusion between old and new, it has been felt preferable to refer to the site as Beacon Green, the name given to the housing development *after* the initial archaeological discoveries were made.

Site work

Planning consent for the sheltered housing development included an archaeological condition, namely provision for a watching brief, aimed at locating the presumed line of the Saxon *burh* (Figs 1 and 2). It was anticipated that this might be detected as a large ditch along the extreme north-eastern edge of the development, on a line projected from a dip in Highlands Drive, assumed to mark the almost fully silted ditch.

The development area consisted of a large garden, mostly grassed over but with some trees, on a north-west facing slope. Over the south-eastern half, the slope was gradual, but was far more pronounced, even precipitous, over the north-western half. (To anticipate, the archaeological features shown in Fig. 3 were all on the gently-sloping area, just above the break of slope). The view to the north and north-west was extensive and uninterrupted, out across the valley and estuary of the Rivers Chelmer and Blackwater. The subsoil was a complex mixture of stiff orangey clay and gravel, the former predominating. Constant seepage of clean water in the vicinity of trench B suggested a spring nearby.

Construction work began in February 1987, with an access road (later called Newnham Green; Figs 2 and 3), drainage trenches alongside, and landscaping. Although these works were all some distance from the projected line of the *burh*, Paul Brown monitored all ground disturbance. Where topsoil was stripped along the line of Newnham Green, he was rewarded with the unexpected discovery of early Iron Age settlement. This took the form of a long rectilinear slot (later identified with context 2 [Fig. 3] during formal excavation), a substantial irregularly shaped feature, *c.* 6 metres by 5 metres (MBF 11 in Fig. 3), and a number of other less well defined features. Because of the circumstances of discovery, it was possible to carry out only salvage recording; thus the 'single' context, MBF 11, was planned in as two separate, intercutting features (refer to Fig. 3), there being insufficient time to resolve them fully. Nevertheless, rapid excavation of MBF 11, which turned out to be a shallow hollow, 0.4 metres deep, yielded by far the best pottery assemblage on the site (2018 sherds, weighing 23.4 kg). The only secure stratigraphic relationship was that the slot, context 2, cut through the top of the back-filled hollow, MBF 11.

After the road had been built and associated drainage works completed, there was a gap of several weeks before work began on the houses. With the developer's kind consent, three areas were cleaned up and hand-excavated in April 1987 (trenches A, B and C in Figs 2 and 3). By this stage, virtually all the development area had been stripped of topsoil, and some areas had also undergone considerable landscaping. The latter

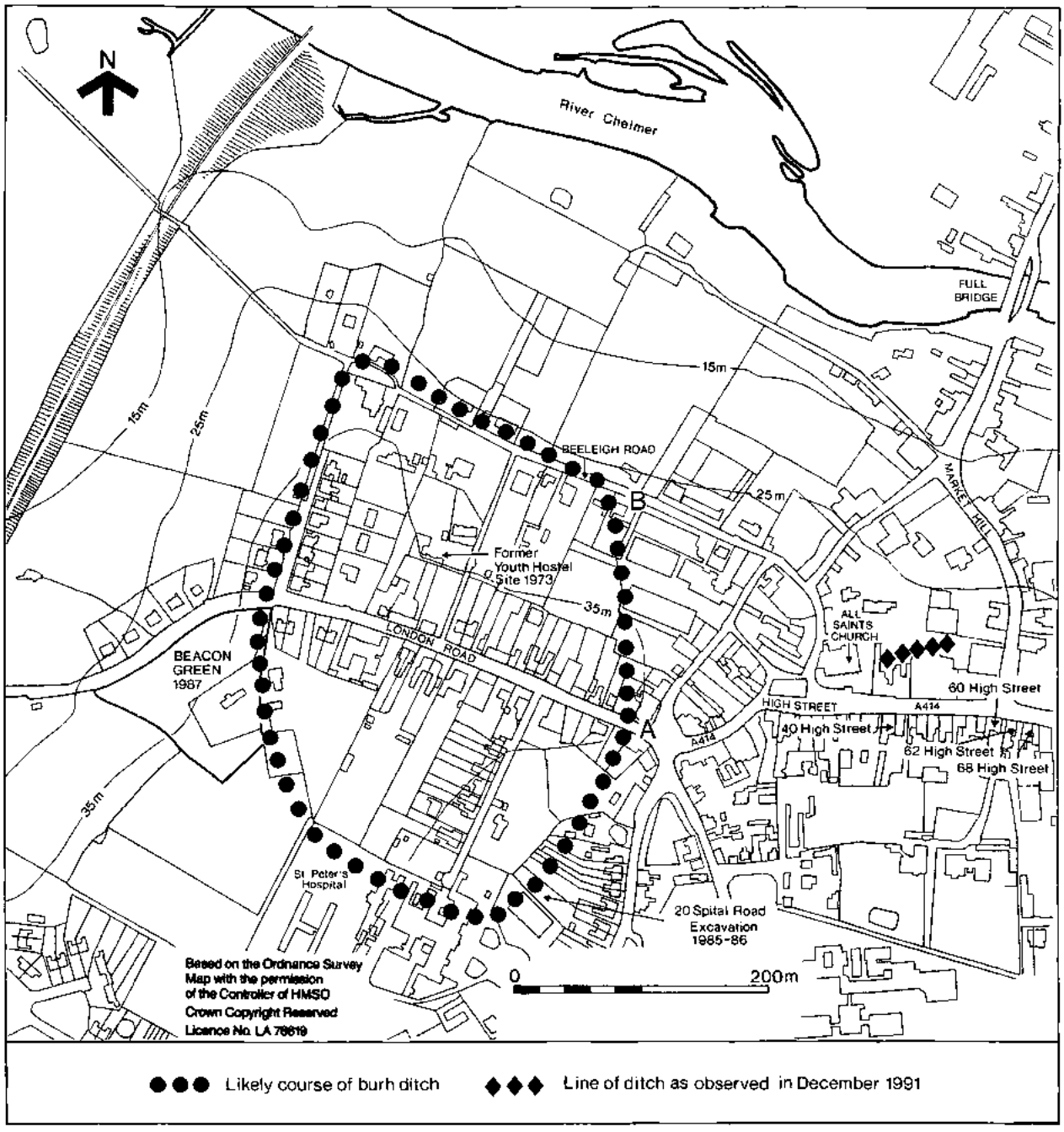

Fig. 1 Beacon Green 1987. Site location relating the 1987 work to previous early Iron Age finds in Maldon and the projected line of the *burh*, plus other sites mentioned in the text.

involved the removal of varying amounts of subsoil, up to *c.* 0.6 metres, wholly or partly destroying a number of archaeological features in the process. The effect of this landscaping may best be understood by reference to Figure 3, especially the slot, context 2, which was traced for at least 55 metres across the site. Essentially, the subsoil was graded so as to produce an artificial slope down to Newnham Green from each side; i.e. the nearer the road the greater the damage. Thus, although the slot had been cut into the subsoil by nearly 0.5 metres, and survived at the edges of the development area in trenches A and C, it had been obliterated over its central stretch by the time formal excavation began. The plan of features represented by Figure 3 is therefore incomplete. In the areas between trenches A, B and C, features were difficult to see because of badly cleared topsoil and ruts or smearing caused by machines.

Trenches A and C had lost little subsoil, but the area of trench B had lost *c.* 0.4 metres below topsoil. Excavated contexts were numbered from 1 to 40. Where a context was encountered during formal excavation *and* the initial watching brief, the excavation context is the one used in this report. Thus the hollow MBF 11 retains its watching brief number because it had been totally destroyed by the time formal excava-

tion began. The results from the three trenches are summarised below.

Trench A

Seven features were found, cut into the clay subsoil, in an area measuring *c.* 13 metres by 9 metres. The most conspicuous of these was the linear slot, context 2, running north-east/south-west. It was *c.* 1.0 metres across at its widest, and was cut up to 0.5 metres into the subsoil (Fig. 4). It had a symmetrical profile, with steeply sloping sides and a flat bottom. Sections invariably showed two kinds of fill; the upper, context 3, was

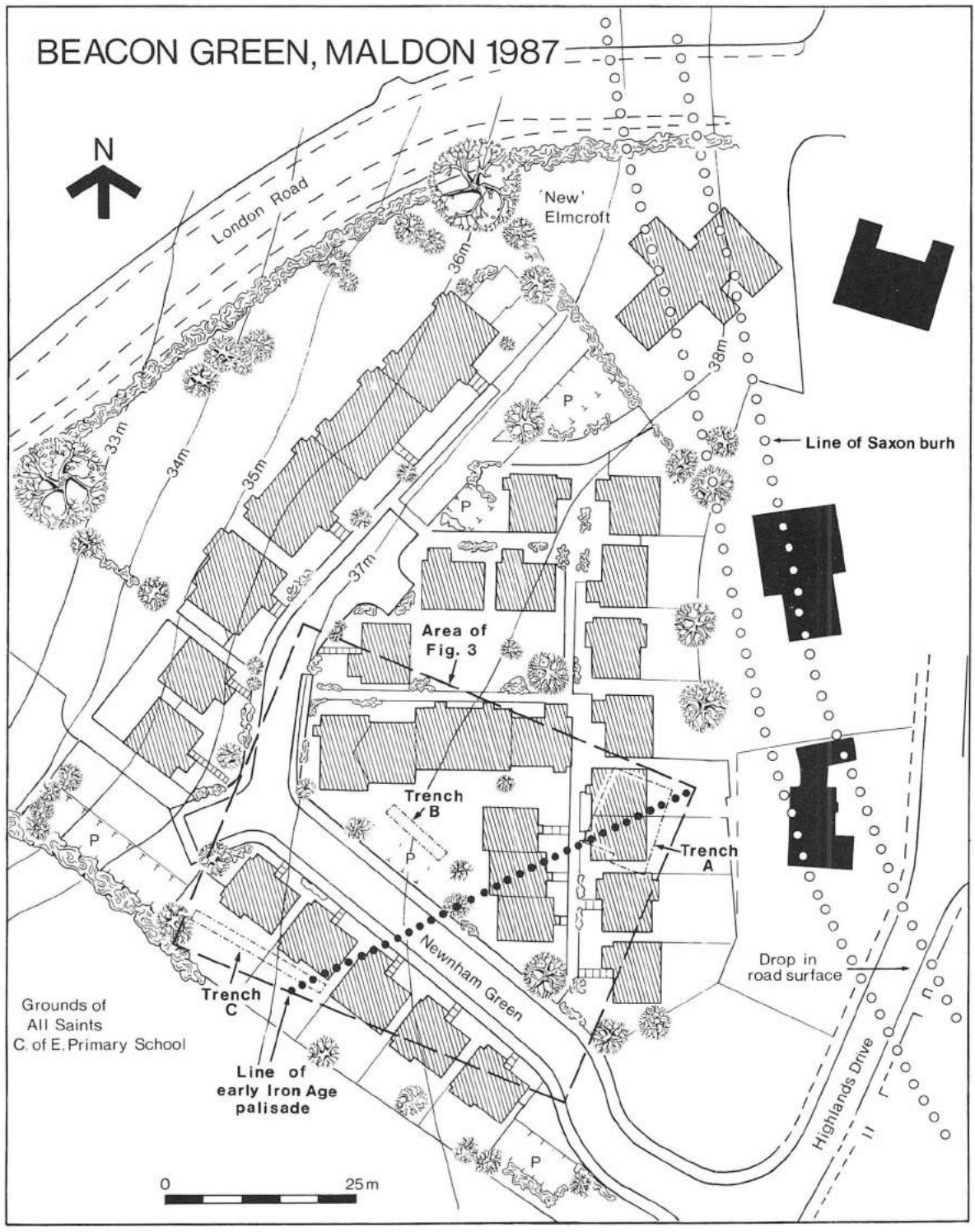

Fig. 2 Beacon Green 1987. Plan of the main linear archaeological features within the sheltered housing development. The houses of the Beacon Green development are shown with oblique shading. Pre-existing houses are in black. The contours are in one-metre intervals (from survey by Paul Brown).

soft, grey and almost stone-free, with a little flint-gritted early Iron Age pottery, charcoal and fire-cracked flint. The lower fill, context 13, was a more compact, slightly stony, mottled yellow-grey deposit, with no finds. Both fills were present in all 4 sections excavated in trench A (though not in the section in trench C), but the profile of the interface between them varied (Fig. 4, lower sections).

The slot is interpreted as a palisade trench, though there was no indication of post-pipes which might have been expected from wooden uprights rotting *in situ*. However, painstaking excavation in the easternmost section revealed context 3 filling three regularly spaced round pockets within context 13. It may therefore be that wooden uprights were pulled out of their packing (context 13) within the palisade slot. In that case, a variable degree of disturbance resulting from the pulling out of the uprights may be the cause of the variable boundary between contexts 3 and 13.

In addition to the slot there were three similar, small, shallow post holes (contexts 17, 19 and 21), all undated, two shallow contiguous scoops (context 8 and 23) containing a few flint flakes, and part of an unexcavated feature in the northern corner. This latter corresponded to the edge of ditch 4 and/or 15, projected from trench B (Fig. 3).

Trench B

Landscaping had severely truncated features in this area of the site. Only three were identified: a recent drainage gully, with sections of ceramic pipe still *in situ*, and two ditches, contexts 4 and 15. The fills of both contained post-medieval brick and tile. Context 4 was cut by context 15.

Trench C

In its western half, this contained the same three features as trench B, though far better preserved (Figs 3 and 4). In profile, context 4 was more like a shallow ledge cut into the hillside than a ditch proper. The fills of ditch 15 contained 19th-century pottery.

The eastern part of the trench was taken up by a

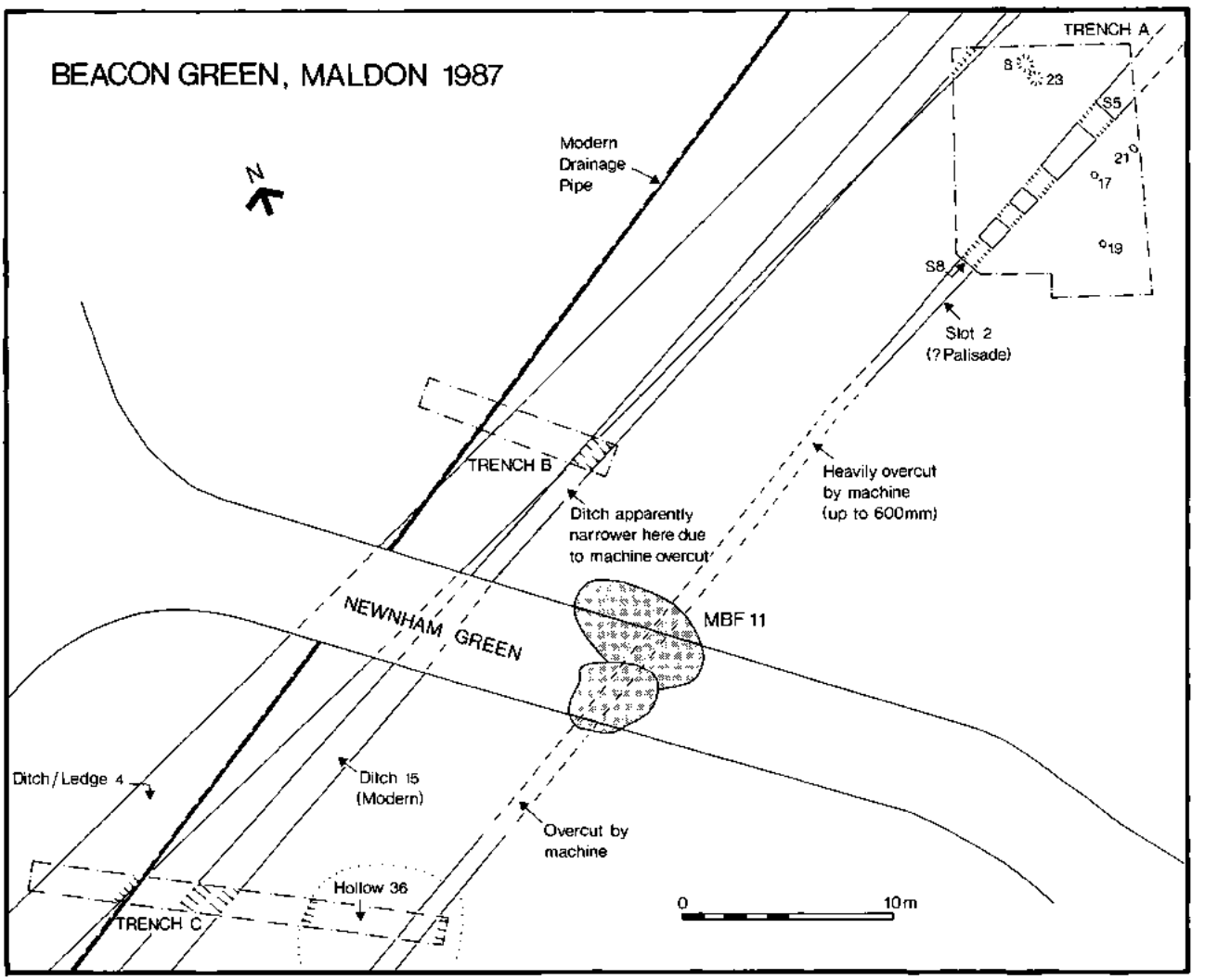

Fig. 3 Beacon Green 1987. Detailed plan of excavated features.

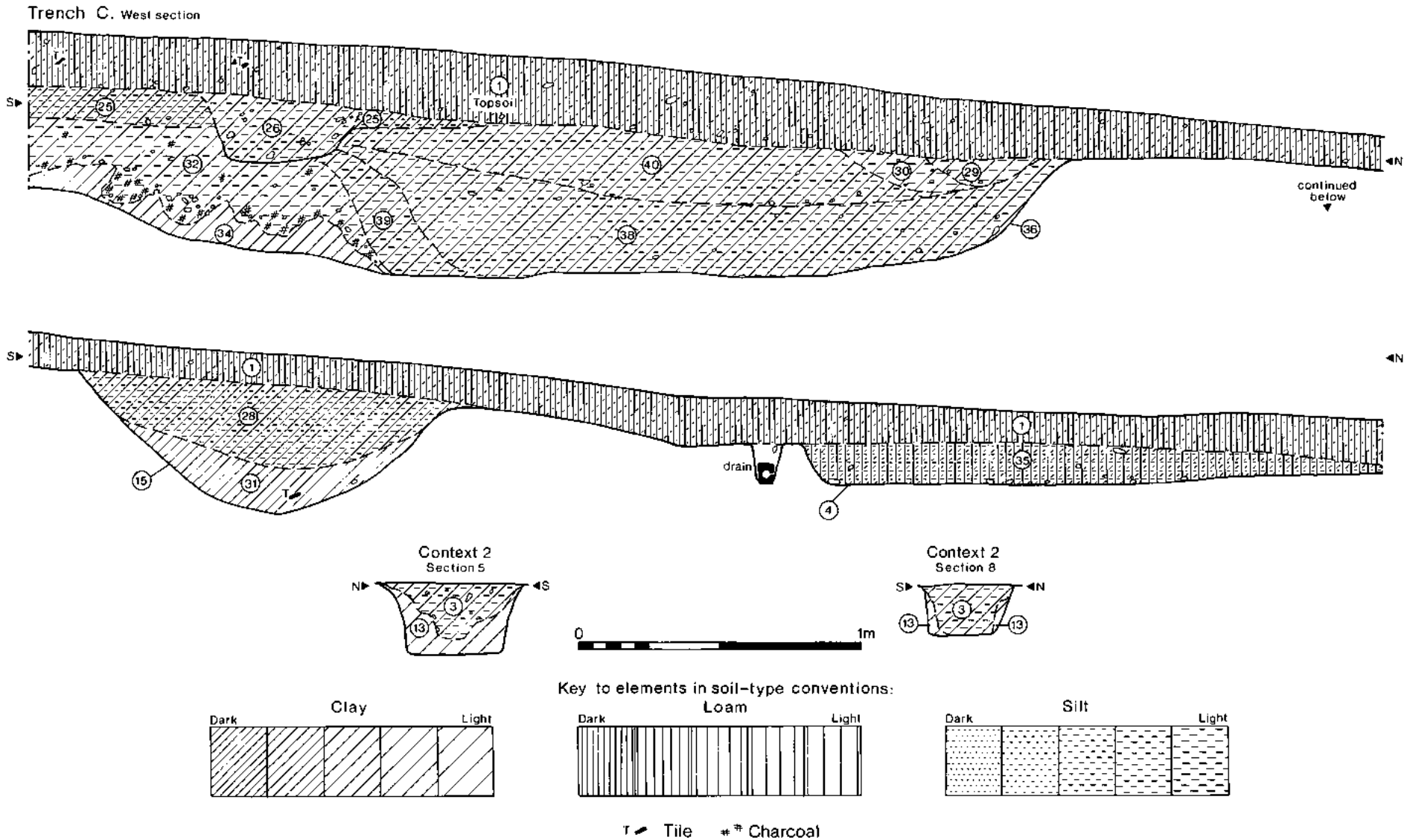

Fig. 4 Beacon Green 1987. Sections; refer to Fig. 3 for the position of these sections.

substantial sloping-sided hollow, context 36, cut 0.6 metres into the subsoil. The hollow measured *c.* 8 by at least 6 metres (the southern edge was not well established; Fig. 3), but about 80% of its profile could be seen (Fig. 4). Its upper fills were clearly cut by the slot, context 2 (with its fill, context 26, in Fig. 4), repeating the sequence observed with the separate hollow, MBF 11. The fills within the hollow were a series of buff-yellow, silty clays, most of which contained some small, rather abraded early Iron Age pottery, plus a little burnt daub and fire-cracked flint. These deposits were not easily distinguishable from one another, apart from the patchily charcoal-rich context 32, and the much cleaner, yellow fill of context 34. The highly irregular interface between contexts 32 and 34 is hard to interpret. It is suggested that this could derive from trampling of human and/or animal origin when the bottom of the hollow was wet.

Watching brief along the line of the projected burh

In May 1987, foundation trenches were dug for the 'new' Elmcroft (Fig. 2), and these were checked for evidence of archaeological features. One substantial feature was seen, cut at least 1.3 metres into the subsoil. Other dimensions were difficult to establish, because it was cut obliquely by the foundation trenches. All that can safely be claimed is that the feature was at least 3 metres wide and at least 10 metres long, with soft, dark grey, silty clay fills. Paul Brown recovered a sherd of grass-tempered pottery from these fills.

Specialist reports

Prehistoric pottery

by Nigel Brown

A substantial quantity of pottery was recovered (2465 sherds; 26.02 kg), the majority being derived from an irregular hollow, MBF 11 (2018 sherds; 23.37 kg). The pottery has been recorded using a system developed for prehistoric pottery in Essex (details in archive). Fabrics present in the assemblage are:-

Size of inclusions	S = less than 1 mm diameter
	M = 1-2 mm diameter
	L = more than 2 mm diameter
Density of inclusions	1 = less than 6 per cm^2
	2 = 6-10 per cm^2
	3 = more than 10 per cm^2

Fabrics

A	Flint, S 2 well sorted
B	Flint, S-M
C	Flint, S-M with occasional L 2
D	Flint, S-L 2 poorly sorted
E	Flint and sand, S-M 2
F	Sand, S-M 2-3 with addition of occasional L flint
G	Sand, S 3
H	Sand, S 2
I	Sand, S-M 2-3
N	Vegetable temper
O	Quartz and flint and some sand S-L 2 poorly sorted
P	Sparse very fine sand; may have occasional M-L flint or sparse irregular voids
Q	Flint, S-L, grog, S-M 2
R	Shell, M-L 2, soft fabric
W	Flint, S-L 2, with some sand and vegetable voids often on exterior
X	Quartz sand S-L, some S-L flint 3
Z	Unclassifiable

Where possible, sherds have been ascribed to the five vessel classes used by Barrett (1980), to characterise Late Bronze Age pottery. Some sherds can be assigned to a more specific form. Forms present are as follows:-

A	Jar, round-shouldered with short upright or flared rim
B	Jar, round or slightly angular shoulder with concave neck and everted flared or upright rim
E	Jar, slack-shouldered with upright or slightly everted rim
F	Jar, tripartite angular shoulder, flared rim
H	Bowl, round-bodied, open
J	Bowl, tripartite round-shouldered, flared or everted rim
K	Bowl, tripartite angular shoulder, flared rim
N	Jar, as F but with upright rim

Description

The illustrated sherds (Figs 5 and 6) represent the full range of variation and comprise 12% of the diagnostic sherds (by sherd count). Bowls are dominated by tripartite angular vessels (Form K); of all sherds which could be assigned to a specific bowl form, 86% are from form K vessels. The remainder are from round-bodied vessels, the decoration consisting of 1-3 grooved lines above the shoulder; one vessel (Fig. 5, no.2) has 4 rather irregular grooved lines. Another vessel has a discontinuous row of rounded impressions on the shoulder (Fig. 5, no.6). Of all the bases which could be ascribed to fine bowls, 59% were footring, 26% pedestal and 15% flat bases. Grooved lines were occasionally present above the base.

Three sherds fall outside this pattern. One vessel (Fig. 5, no.8) has an upright rounded rim with internal bevel and a high rounded shoulder. There is shallow furrowing on the neck, and part of a ?single finger impression survives beneath the shoulder. This vessel is the only bowl with red surfaces (the others being predominantly black). The colour may well result from application of an iron-rich slip. A single sherd has all-over horizontal grooved lines (Fig. 5, no.15), and one sherd (Fig. 5, no.14) has chevron decoration. A large part of a small lid (Fig. 5, no.16) was also recovered. No sherds of small cups were recognised in the large assemblage from MBF 11. This may reflect the rapidity with which the feature had to be excavated prior to its destruction; two sherds of such vessels were recovered from other features which were more carefully excavated.

Jars are dominated by vessels of form N; 61% of all sherds which could be assigned to a specific jar form were from form N vessels, 16% form E, 13% form A and 5% form F. Finger-tip or -nail decoration is not common; it occasionally occurs on the shoulders of some jars (e.g. Fig. 6, no.24). Rims are rarely decorated although 'cabled' decoration is sometimes present (e.g. Fig. 6, no.20). Jar bases are invariably flat; one (Fig. 6, no.29) had a series of impressions made by a pointed instrument stabbed from above, in three cases completely piercing the base.

Discussion

As noted above, the great majority of the pottery came from MBF 11. It is unfortunate that this feature had to be excavated rapidly under difficult circumstances. Although the pottery appears homogeneous and is discussed below as a contemporary group, it may have accumulated over some length of time. The pottery is largely unabraded (32% abraded by sherd count) and the abraded sherds frequently have only patches of wear, which may be the result of use rather than post-breakage damage. It seems likely that the pottery was dumped in MBF 11 soon after breakage. The pottery from the palisade slot, context 2, is quite different and likely to be residual. Where the slot cut MBF 11, it contained material derived from the hollow and joining sherds were found in both features. Abraded sherds comprised 55% of the pottery from the slot and the sherds were generally abraded all over.

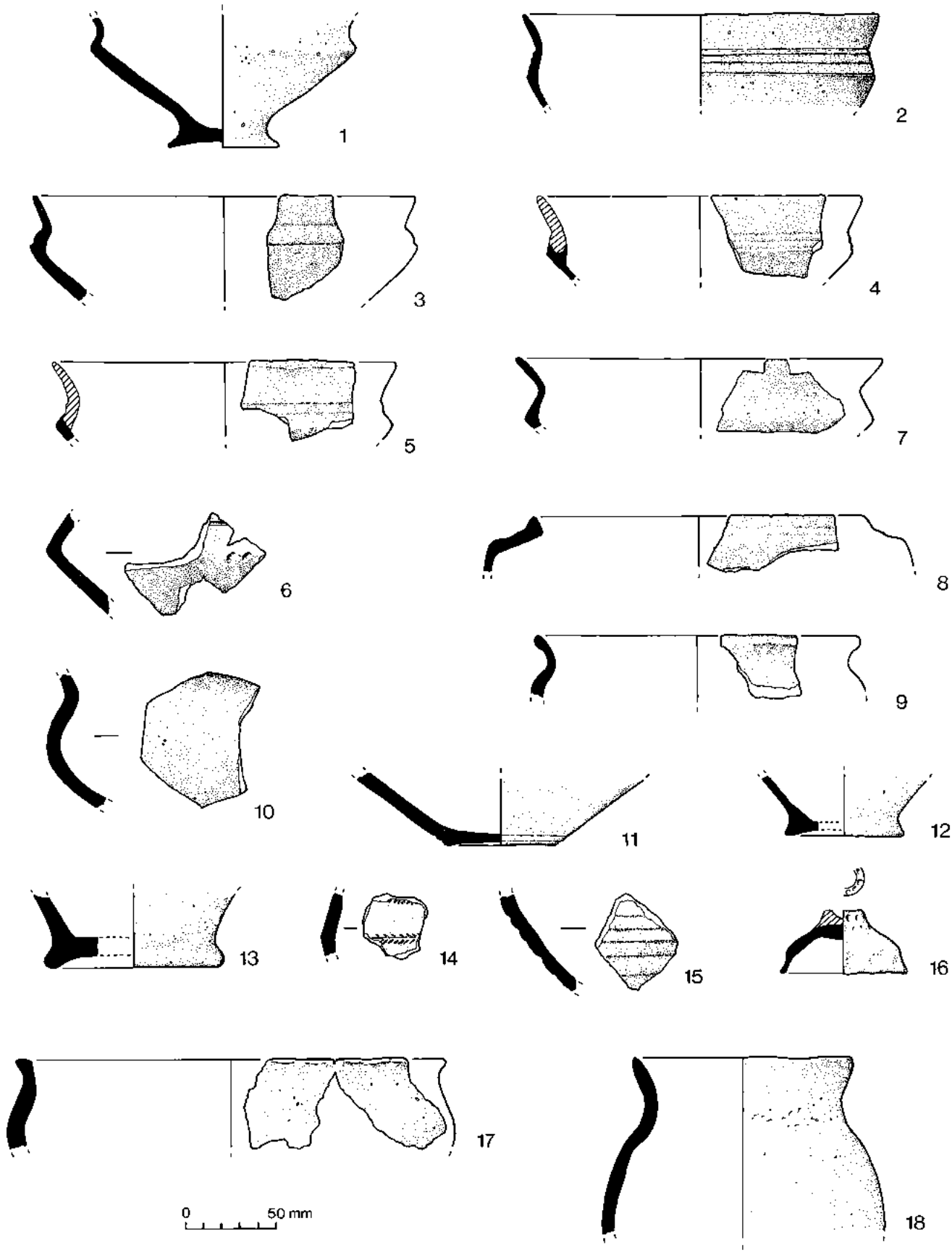

Fig. 5 Beacon Green 1987. Early Iron Age pottery.

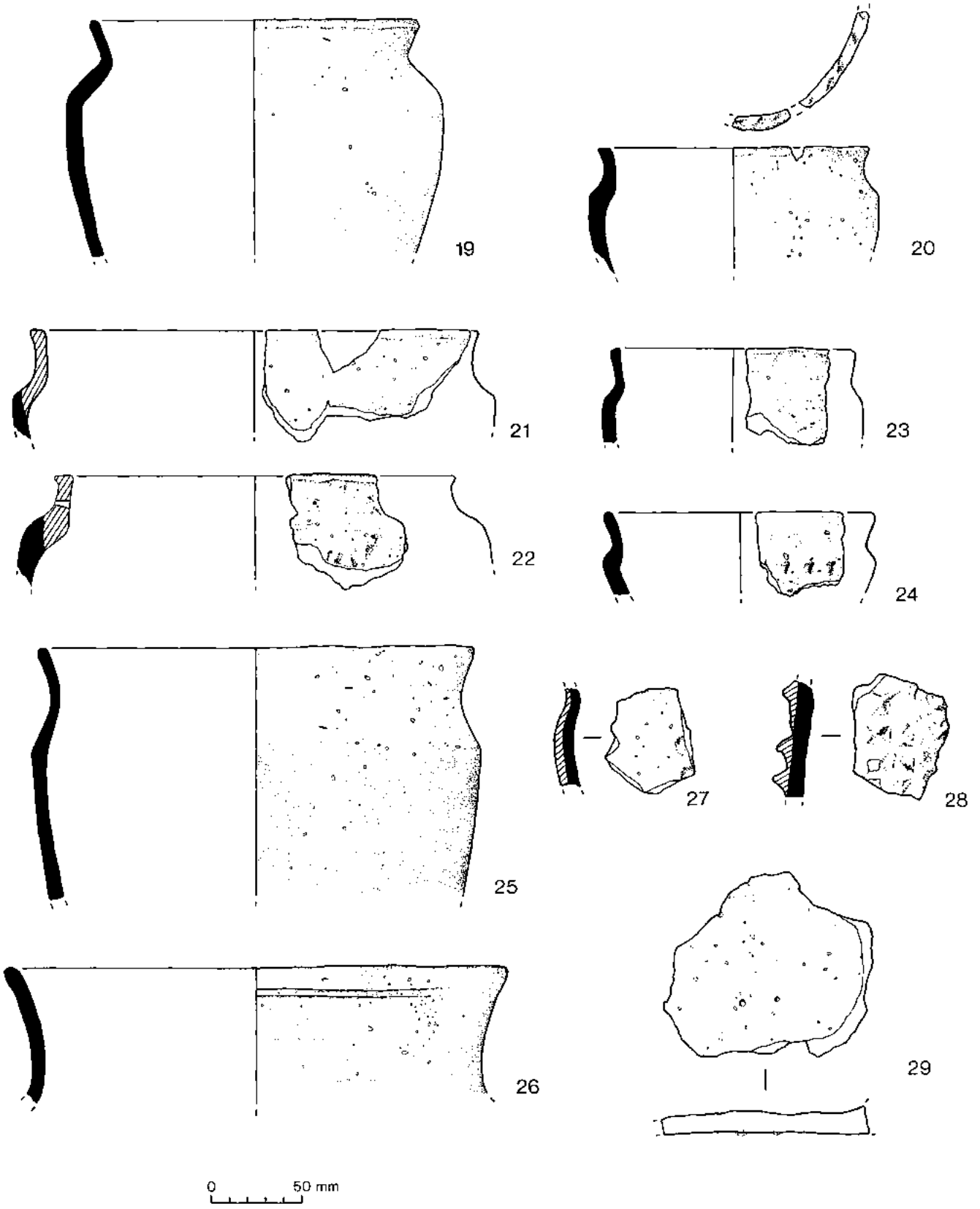

Fig. 6 Beacon Green 1987. Early Iron Age pottery.

The assemblage clearly belongs to the Darmsden-Linton style (Cunliffe 1968; 1978). The similarity of Darmsden-Linton pottery to continental material has long been recognised (Cunliffe 1968), and this is borne out by the Beacon Green pottery, particularly the bowl forms and sherds with extensive finger-pinched rustication. The diverse range of fabrics present is typical of early Iron Age assemblages in Essex (Brown, N. 1986; 1988). The pottery may be closely matched by material from the upper fill of a well at Lofts Farm, 3 km to the north-east (Brown, N. 1988). The uniformity of vessel form and colour noted in the Lofts Farm assemblage is also apparent at Beacon Green; moreover, the same manufacturing technique, with rims of form K bowls and form N jars added as separate strips of clay, is employed in both assemblages.

Despite the clear similarities between the material from the two sites, there are a number of significant differences. The frequent occurrence of the coarse fabric X at Lofts Farm is not matched at Beacon Green; this may reflect localised production of most coarse vessels. The high proportion of footring and pedestal bases at Beacon Green is in marked contrast to the Lofts assemblage, where flat bases are dominant and pedestal bases absent. This may represent a chronological difference between the two. Barrett (1978) has emphasised the chronological significance of pedestal and footring bases as a link with La Tène 1 continental ceramics. A date in the 6th or 5th century B.C. may be suggested for the Beacon Green pottery. The Lofts assemblage may be rather earlier and was associated with a radiocarbon date of 2680 ± 70 B.P. (UNCAL) [HAR-8524] (Brown, N. 1988).

The jar forms may also reflect a chronological difference between the two assemblages. The Beacon Green pottery is dominated by form N vessels, those of form D being largely absent. Form D vessels formed a substantial proportion of the jars at Lofts Farm. Form N vessels commonly occur in middle Iron Age assemblages (Drury 1978, forms 2 and 10B; Bedwin 1991), whilst form D vessels do not. Where decoration occurs at the shoulders of Beacon Green jars, it seems to take the form of continuous rows, rather than the broken or alternating rows noted at Lofts Farm.

The presence of a single body sherd from a large jar in the shell-tempered fabric R is of interest. Shell-tempered pottery commonly occurs on early Iron Age sites along the Thames and its estuary and dominates the large early Iron Age assemblage from North Shoebury (Brown, N. forthcoming). However, shell-tempered fabrics hardly occur in Late Bronze Age/early Iron Age assemblages along the Chelmer valley/Blackwater estuary. A few shell-tempered sherds were recovered from Heybridge (Brown, N. 1986), just to the north of Beacon Green. Heybridge also produced a sherd of Glastonbury ware, indicating that pottery from far afield was reaching the Maldon area by the later Iron Age. It seems likely that the shell-tempered sherd from Beacon Green may be part of a vessel brought to the site via the Blackwater estuary, possibly from south Essex.

Worked flint

A total of 75 pieces of worked flint were found. Of these, 70 were flakes, four were scrapers and there was one blade core. The raw material varied from good quality, glossy, grey flint to poor quality mottled brown or brownish-grey flint; the latter was probably derived from the local gravels. This small assemblage offers little in the way of diagnostic potential. The scrapers (one thumbnail, one notched and two side scrapers) were all rather battered, and were probably residual in early Iron Age features. The blade core may, however, be Mesolithic.

Brick and tile

The fills of the ditches 4 and 15 produced small amounts of post-medieval brick and roof-tile.

Faunal remains

A total of 20 fragments of animal bone and teeth were recovered. All were in a friable state due to unfavourable soil conditions. No conclusions can be drawn from such a small assemblage.

Discussion

This falls into three parts: a consideration of early Iron Age settlement in Maldon; an evaluation of the evidence for the line of the 10th-century *burh*, including a consideration of whether or not it was a re-fortified hill fort; and finally, a brief discussion of the post-medieval features at Beacon Green.

Early Iron Age settlement

There are now 3 separate locations of broadly contemporary early Iron Age material in Maldon (refer to Fig. 1). In addition to Beacon Green itself, there is the Youth Hostel site, excavated in 1973, and the 20 Spital Road excavation (Brown, P. 1986). The former produced *c.* 65 sherds from 10 contexts, though these were all residual in later (mainly Roman) contexts, and no early Iron Age features were detected. The latter produced a small early Iron Age pit beneath a bank interpreted as that of the *burh*, plus considerable residual early Iron Age pottery.

These 3 find-spots define a sizeable hill-top settlement overlooking the Chelmer and Blackwater valley and estuary. The fact that the palisade slot cut through the two hollows at Beacon Green may imply a phase of open settlement preceding the palisaded one. It is noteworthy just how similar in size and profile are the palisade slot, context 2, at Beacon Green, and the gully, context 6, at 20 Spital Road (Brown, P. 1986, 9). If these really were contemporary (and the latter is undated), it would indicate a palisaded enclosure *c.* 260 metres from north to south. No parallel for such an enclosure is known in Essex; it would imply the felling of huge amounts of timber.

Little can be said in detail about the nature of the settlement, apart from the fact that it would seem to be very large. All three excavations were rather small, and no structures were identified. At Beacon Green, it is likely that the excavation was at the periphery of the settlement, being just above the sharp break in slope. The purpose of the Beacon Green hollows is not clear. Perhaps the most likely explanation is that they were quarry scoops, the clay being used to provide daub for huts and other structures. Whatever their function, the hollows were later used as rubbish pits. The enormous amount of pottery dumped in MBF 11 implies a structure (or structures) not too far away.

The line of the 10th-century burh

The background provided by the Anglo-Saxon Chronicle is reasonably straightforward, though there may be some dispute about the precise dating of the events recorded.

> 912 .....After that in summer, between Rogation and midsummer, King Edward went with some of his supporters to Maldon in Essex, and camped there for the time the borough was worked on and built at Witham. To him submitted a good part of the folk who had been under Danish rule....

Table 1: catalogue of early Iron Age pottery
(Nos 1-18 are in Fig. 5; nos 19-29 are in Fig. 6)

No.	Feature and/or Context	Form and/or Class	Decoration/Surface treatment Condition	Fabric
1	MBF 11	J, IV	Smoothed surfaces, ?originally burnished, abraded interior, patches of abrasion on exterior.	E
2	MBF 11	K, IV	Smoothed surfaces, ?originally burnished, patches of abrasion on exterior and on interior of rim. Grooved lines above shoulder.	E
3	MBF 11	K, IV	Smoothed surfaces, originally burnished, patch of abrasion on exterior. Grooved line above shoulder.	E
4	MBF 11	K, IV	Smoothed surfaces, patches of burnish survive on exterior. Grooved lines above shoulder.	E
5	MBF 11	K, IV	Smoothed surfaces, with patches of burnish surviving. Grooved line above the shoulder.	E
6	MBF 11	K, IV	Smoothed partly abraded surfaces. Grooved line above shoulder; row of rounded impressions on shoulder.	E
7	MBF 11	K, IV	Smoothed surface partly abraded exterior, heavy abrasion on shoulder.	E
8	MBF 11	K, IV	Smoothed surfaces ?originally burnished, partly abraded. Slight furrowing on neck.	E
9	MBF 12	?J, IV	Smoothed surfaces with patches of burnish surviving.	A
10	MBF 11	H, IV	Smoothed surfaces, partly abraded.	E
11	MBF 11	K, IV	Smoothed surfaces, partly abraded; heavy abrasion of footring. Grooved lines above base.	E
12	MBF 11	IV	Smoothed surfaces, bottom of pedestal abraded.	E
13	MBF 11	IV	Smoothed surfaces, bottom partly abraded.	E
14	3	?, IV	Smoothed surfaces, row of impressions forming chevrons bisected by single horizontal line on shoulder. Part of similar decorative scheme survives on neck. Black deposit inside shoulder.	E
15	MBF11	?	Abraded; rows of horizontal grooved lines on exterior.	E
16	MBF 11	-	Lid, row of impressed decoration on top; top of rim abraded at one side.	G
17	MBF 11	A, I		C
18	MBF 11	E, I	Exterior of neck abraded.	B
19	MBF 11	N, I		D
20	MBF 11	N, I	Irregular 'cable' decoration on top of rim.	D
21	MBF 11	N, I		D
22	MBF 11	N, I	Pre-firing perforation below rim, horizontal grass wiping on exterior.	D
23	MBF 11	N, I		E
24	MBF 11	N, I	Row of finger impressions on shoulder.	C
25	MBF 11	E, I	Partly abraded exterior.	D
26	MBF 11	?F, II	Smoothed surfaces, partly abraded exterior; two grooved lines below rim. Black deposit on interior, slight sooting on neck.	C
27	32	I	Abraded, vertical row of finger impressions.	F
28	MBF 11	?I, IV	Heavy, finger-pinched rustication on exterior.	W
29	MBF 11	I	Flat base, with pre-firing perforations made with sharp point; only 3 go all the way through the base.	E

916 .....Before midsummer, King Edward went to Maldon and built the borough and founded it, before he went from there.

917 .....folk gathered in the autumn, from Kent, Surrey, Essex and from the nearest boroughs. They went to Colchester, besieged the town, and fought till they overcame it and killed all the people except those who fled away over the wall. Yet after this, the same autumn, a great force from East Anglia gathered, both the land force and vikings they had lured into their service. They thought they would avenge their injuries, and went to Maldon, they besieged the town and fought there until more help came to the town-dwellers from outside. The force forsook the town and left; then the men of the town went out after them, and those outside came to help. They put the force to flight and killed many hundreds, both ship-men and others..... [1]

The Anglo-Saxon word translated here as 'borough', is *burh*, and means a fortified enclosure. The original term *burh* is now more commonly used to avoid confusion with the modern meaning of borough. From surviving earthworks and excavated examples elsewhere in southern England, it is clear that *burhs* were substantial defended sites, though the extent to which they were occupied in the long-term is highly variable (cf. the most recent review of *burhs* in southern England; Haslam 1984).

The reference to the year 912 is somewhat ambiguous. It may imply a defensive enclosure already at Maldon by that time, used as a safe base while the Witham *burh* was under construction. On the other hand, there was already in Witham a large hill fort of Late Bronze Age origin, still in fairly good condition around most of its perimeter as late as the 18th century (Flook and Bedwin, forthcoming); indeed, it has often been claimed that it was this hill fort which was re-used by Edward in 912 (e.g. Eddy and Petchey 1983, 91), though unambiguous archaeological evidence is lacking. Whether the Witham hill fort was re-fortified or not in 912, it was almost certainly a defensible enclosure, or one easily re-usable as such, at that time. The fact that Edward camped at Maldon may reflect its superior strategic siting at the mouth of the estuary at a time when Viking raids were current, without necessarily implying an earthwork in existence there in 912.

The 916 and 917 references clearly indicate the presence of an earthwork strong enough to withstand a determined assault.

In spite of this, there is no obvious candidate in the landscape of modern Maldon which would qualify as an earthwork of this kind. However, there are two 18th-century antiquarian accounts of a large earthwork enclosure (Salmon 1740, 419; Strutt 1774, 25 and plate II). Both accounts locate it on the west side of the modern town, with the London Road running through it. Strutt also includes two sketches, one of which is a rough ground plan, showing a squarish enclosure with very rounded corners (Fig. 7). Its position, above a steep slope, directly overlooking the river (Fig. 1), is very similar to the siting chosen for many other *burhs* in southern England. The *burhs* of Edward the Elder, in particular, were often connected with bridges to form a defensive unit, with the intention of denying Viking warships access to major rivers (Haslam 1984, 263). The shape, size and setting of the earthwork observed by the 18th-century antiquarians are all comparable with *burhs* in central southern England (Haslam 1984), and the explicit assumption is made here that it is to be identified with the 10th-century *burh*.

Although the foregoing provides a link between the documentary sources and the topography, it has to be said that the archaeological evidence appears to be largely in conflict with this assumption. For example, there has been little in the way of 10th-century material from the earthwork itself or its interior (this will emerge in more detail later). By contrast, assemblages of 10th-century pottery, with evidence of contemporary structures, are said to have been found in

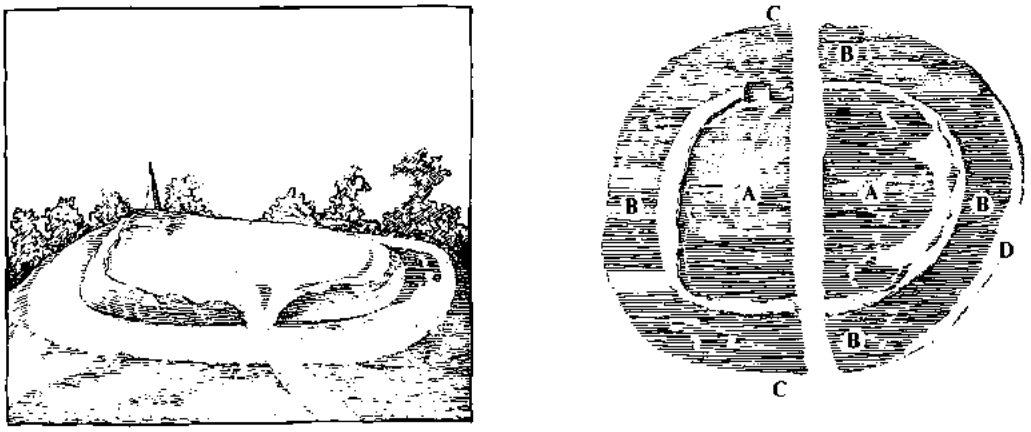

Fig. 7 Joseph Strutt's view of the Maldon earthwork (published in 1774). On the left, the view is from the west, with the London Road running through the middle of the earthwork. The spire in the background is that of All Saints church. On the plan at right, north is to the left.

the High Street, well to the east of the earthwork (Fig. 1). These came from rescue excavations at the Lloyds Bank site (68 High Street) and at 62-66 High Street (Eddy 1979 and E.C.C. Sites and Monuments Record PRN 7725-7, respectively). On an adjacent site, the former Chequers Inn, now Barclays Bank (60 High Street), the occupation sequence seemed to begin in the 11th century (Andrews 1988). Finally, at the Budgens site (40 High Street), 'late Saxon' pottery was recovered (Nunn 1985, 11).

These apparently conflicting observations may be reconciled by suggesting that a site on the highest point above the estuary (Fig. 1), chosen primarily for its defensive qualities, may have been less attractive for domestic settlement or commercial activities. (It is possible too, that there was already a settlement in existence by then; late 9th-century pottery is said to have been found at 62-66 High Street: Kate Steane, pers. comm.) The author therefore follows Eddy and Petchey (1983, 63) in assuming a model for the development of Maldon in which the *burh* was never occupied to any great extent, but the town grew up along the major route down to the Hythe, i.e. along the High Street. It should be pointed out that elsewhere in southern England, there are cases of *burhs* which have so far yielded little evidence of dense occupation (see Haslam 1984 for examples).

To return to the 18th-century descriptions; these are broadly in accord, except for a major difference in the size given to the area enclosed by the earthwork. Salmon (1740) gives the area 'within the vallum' (i.e. within the rampart) as *c.* 22 acres, whereas Strutt (1774) measures the 'inner enclosed space' as 220 by 290 yards, i.e. *c.* 13 acres, assuming a regular, rectangular shape. It is difficult to believe that they were describing different earthworks, so the discrepancy is puzzling. However, Salmon does say that 'three sides of the fortification are visible', implying that the fourth side was, to some degree, conjectural. This must cast some doubt too on the reliability of Strutt's plan.

Whatever the reason for the discrepancy, this part of Maldon has now been almost entirely built over, and even by 1906 the line of the earthwork had become problematical (Chalkley Gould 1909). Nevertheless, there are clues, above and below ground, and from early maps, as to its likely course. These were collated and published by the Maldon Archaeological Group (Brown, P. 1986) prior to the Beacon Green excavation, and are briefly summarised below. (This evidence has been used to derive the line of the *burh* indicated in Fig. 1).

1. There now exists only a single 50-metre stretch of broad low bank which might correspond to part of the east side of the enclosure described by Salmon and Strutt. This forms the boundary at the bottom end of several gardens behind properties fronting onto Spital Road; its existence prompted the excavation at the rear of 20 Spital Road (Fig. 1), which located a substantial ditch, 2 metres deep and over 8 metres wide. No Saxon material was found, however. The bank sealed a small, early Iron Age pit, and there was residual early Iron Age pottery throughout the ditch fills. This material closely matches the Darmsden-Linton assemblage from Beacon Green (Brown, N., pers. comm.). Some Roman and medieval pottery was also recovered. The published section (Brown, P. 1986, 9) suggests at least one re-cut.

2. At the east end of the London Road, two pertinent observations have been made (A in Fig. 1). On the south side, a 2-metre deep foundation trench for an extension to 9 London Road failed to reach undisturbed subsoil. The size of the archaeological feature responsible could not be fully determined, but it was at least 6 metres by 5 metres; its fills contained medieval pottery. On the north side of the London Road, directly opposite no.9, was a crack, recently repaired, in a substantial Victorian brick wall. This could well imply the existence of soft fills beneath, causing subsidence and cracking.

3. Strutt (1774) records the ditch as '20 yards across'. Even though nothing like it can be seen in present-day Maldon, a feature of that size would almost certainly have become 'fossilised', at least in part, in later property boundaries. In this respect, the Tithe Map of 1840[2] is revealing. Using the reasonably fixed points established by the 20 Spital Road ditch and the large feature seen in the foundation trenches of the 'new' Elmcroft (above), then much of the south-western perimeter of the earthwork between these two is plausibly indicated by early 19th-century property boundaries. The south-east corner of the ditch may have been marked on the Tithe Map by a substantial L-shaped pond; the dip in the surface of the modern Highlands Drive (Fig. 2) also lines up well with this part of the boundary.

4. At 33 Beeleigh Road (B in Fig. 1), a substantial feature was noted, though not fully explored, in 1980 (Eddy and Brown 1981). Although not identified as the earthwork ditch at the time, with hindsight it is felt that this is a good candidate (Brown, P., pers. comm.). Roman, late Saxon and medieval pottery were all present.

In summary, 1 to 3 above provide a plausible circuit south-west of the London Road, with the observations at Beacon Green representing the most recent sighting of the ditch. The grass-tempered pottery recovered from the feature seen in the footings of the 'new' Elmcroft is thought to have gone out of use around the mid 9th century (Tyler 1991), in which case it would have to be considered residual in an early 10th-century ditch.

The line of the earthwork to the north-east of the London Road is rather less certain, with only the large feature at 33 Beeleigh Road as a potential fixed point. (The house here was demolished because of long-standing problems with the foundations; Brown, P.

1986). Given the extent to which this part of Maldon is now built up, future opportunities to monitor the putative line of the earthwork are likely to be limited. As a final point, if the circuit indicated in Fig. 1 is roughly correct, then assuming a bank of *c.* 20 yards width (i.e. the same width as the ditch according to Strutt [1774]), the area enclosed by the bank would be *c.* 20 acres, a figure far closer to Salmon's calculations than Strutt's.

There remains to be considered the idea that the Saxon *burh* was simply a re-fortified Iron Age hill fort. This notion is now firmly embedded in the literature, even to the extent that a plan of the 'hill fort', corresponding to the earthwork described in the 18th-century accounts, has been published (Wickenden 1986, fig. 2). It is certainly reasonable to assume that Edward the Elder would have made use, wholly or in part, of a pre-existing earthwork in a suitable position. Examples of the re-use of both Iron Age and Roman defences are known elsewhere in southern England, though not necessarily by Edward the Elder (summarised in Ralegh Radford 1970). As far as Maldon is concerned, the crucial archaeological dilemma is that Saxon re-use of an early Iron Age hill fort would leave evidence very similar to a *de novo* Saxon *burh* built on the site of an early Iron Age settlement. Distinguishing between the two, especially where excavation opportunities are limited, would depend particularly on a careful investigation of the earthwork defences, but even here it could always be argued that a *burh* ditch had removed all traces of a hill-fort ditch. A section through the bank should at least show separate phases of construction, but whether such a section is now obtainable anywhere in Maldon is questionable.

Bearing these problems in mind, the rather scrappy evidence which has a bearing on the question of the existence of a hill fort is reviewed below:-

1. *Excavated evidence*

(a) *Beacon Green* The 1987 excavation identified a palisaded early Iron Age settlement. It is not unknown for hill forts to succeed fenced or palisaded enclosures on the same site. No examples are known from Essex (though this may be due simply to lack of excavation), but such a sequence has been identified elsewhere, e.g. at the Caburn and at Highdown Hill, both in Sussex (Wilson 1938 and 1940, respectively). What is noteworthy, however, is that the later defensive earthworks respect the line established by the earlier palisade. At Beacon Green, this is manifestly not the case, with quite different orientations for the palisade and for the feature interpreted as the *burh* ditch (Fig. 2).

(b) *33 Beeleigh Road* As noted above, part of a substantial feature found here (B on Fig. 1) has subsequently been interpreted as the *burh* ditch. There was some late Saxon pottery, but no early Iron Age material (Brown, P. 1986, 8).

(c) *20 Spital Road* The evidence of the finds is the reverse of (b), i.e. there was no late Saxon pottery, but there was an early Iron Age pit sealed by the bank plus early Iron Age pottery, regarded as residual, in the ditch. There is also the matter of a gully/palisade slot, which does appear to be respected by the (presumably later) ditch, the reverse of the situation at Beacon Green. The gully, however, is undated.

The ditch profile at 20 Spital Road (Brown, P. 1986, 9) is not particularly diagnostic, not least because the full width was not established. The profile does not resemble the nearby hill forts at Asheldham, 11 km away, where the early Iron Age ditch was 3.6 metres deep (Bedwin 1991), nor Chipping Hill, 9 km away, where the ditch (pre-middle Iron Age) was *c.* 4.0 metres deep (Flook and Bedwin, forthcoming). A closer parallel could be claimed with the late 9th/early 10th-century town defences at Thetford, where one of the ditches is *c.* 8.5 metres wide and 2.0 metres deep (Rogerson and Dallas 1984, 197 and fig. 94). The 10th-century defences at Norwich, on the other hand, are very different in profile, with at least 2 re-cuts (Atkin *et al.* 1985, 114 and Fig. 27). The 10th-century date could link the ditch with Edward the Elder's reconquest of 917, but could arguably relate to the late 10th-century Danish activity (Atkin *et al.* 1985, 1; B. Ayers, pers. comm.).

In short, (a) and (b) would argue against the presence of a hill fort, later re-used; (c) is more ambiguous, and cannot be claimed to rule out the possibility.

2. *Iron Age topography*

There are two issues here. First, there is the observation that the earthwork recorded in the 18th century pays little attention to the contours, dipping down markedly on the north, towards the river (Fig. 1); this departure from the contours is hardly characteristic of an Iron Age fortification.

Secondly, it is tempting to argue that because there were three hill forts nearby (Danbury 7 km; Chipping Hill 9 km; Asheldham 11 km), there is unlikely to have been another at Maldon. This would only be a strong argument if one or more of these were exactly contemporary with a putative hill fort at Maldon. If there had been one at Maldon, it would undoubtedly have dated to the time when Darmsden-Linton pottery was in use. The evidence from Danbury is exiguous (Morris and Buckley 1978); the small amount of diagnostic pottery there is of a rather later date than Darmsden-Linton material, and in any case cannot be satisfactorily linked to the construction of the hill fort. At Chipping Hill, the inner earthwork circuit could be as early as the Late Bronze Age (Flook and Bedwin, forthcoming). At Asheldham Camp, the latest pottery from beneath the hill-fort bank belonged to the early Iron Age, but could not be more closely dated (Bedwin 1991, 27).

In general, it is the author's belief that the hypothesis of the *burh* being a re-fortified hill fort cannot be

sustained by the evidence currently available; however, neither can it be conclusively ruled out.

The post-medieval ditches (contexts 4 and 15)
These represent relatively recent boundary ditches, of which context 15 was the later, with 19th-century pottery in its fills. Ditch 15, in profile, was similar to an open ditch marking the property boundary between the Beacon Green development and the houses fronting onto Beacon Hill. The line of ditch 15, plus that of the open one, seem to mark the boundary of All Saints parish, as noted on the 1840 Tithe Map.

The drainage pipe (Fig. 3) was of late 19th- or early 20th-century date (P. Ryan, pers. comm.).

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Postscript
As this report was being finalised, a large ditch of potentially late Saxon date has been unexpectedly found to the rear of 39 High Street, Maldon (Isserlin, this volume, p.107). A cut feature probably corresponding to the southern edge of this ditch was seen in a watching brief in 1978 to the rear of the Post Office (P. Brown, pers. comm.). The line of the ditch is shown tentatively in Figure 1. It is not proposed to speculate at length here on the significance of this ditch, which has a profile utterly unlike the ditch at 20 Spital Road, other than to say that it need not necessarily invalidate the model for the development of Maldon suggested above. This model supposes that the 10th-century *burh* was never occupied to any great extent, and certainly never urbanised, but the town developed as an essentially linear settlement along the High Street. It may be that this 'urban' settlement acquired its own town defences at some later stage, and it is perhaps this which has been found behind 39 High Street.

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Two recently-discovered Roman buildings in Colchester

by Stephen Benfield and Simon Garrod

East Stockwell Street

Early Roman occupation was observed in section beneath excavated levels, principally a wall of early colonial date. Over this, in the mid 2nd century, the levels of the site were raised to match that of the southern end of the insula creating a level platform for a large public building of uncertain purpose. In the late 12th to early 13th century the foundations of this building were extensively robbed. The area of the site was terraced in the 17th century removing the floor levels of the Roman building over the northern half of the site and post-Roman occupation over the southern area.

Introduction

Prior to the redevelopment of the site of the Vineyard Press, East Stockwell Street a rescue excavation was undertaken by the Colchester Archaeological Trust. This was carried out in three separate phases. Phase one ran from mid December 1989 to the end of January 1990 covering the area of the former Vineyard Press car park at the northern end of the site. Phase two saw the excavation of a small area within the Vineyard Press building for three weeks in March 1990 prior to demolition. Following demolition phase three ran for one week in April 1990 when much of the remaining area was examined. A watching brief was maintained until mid May 1990 during the reduction of site levels by the contractor and the underpinning of

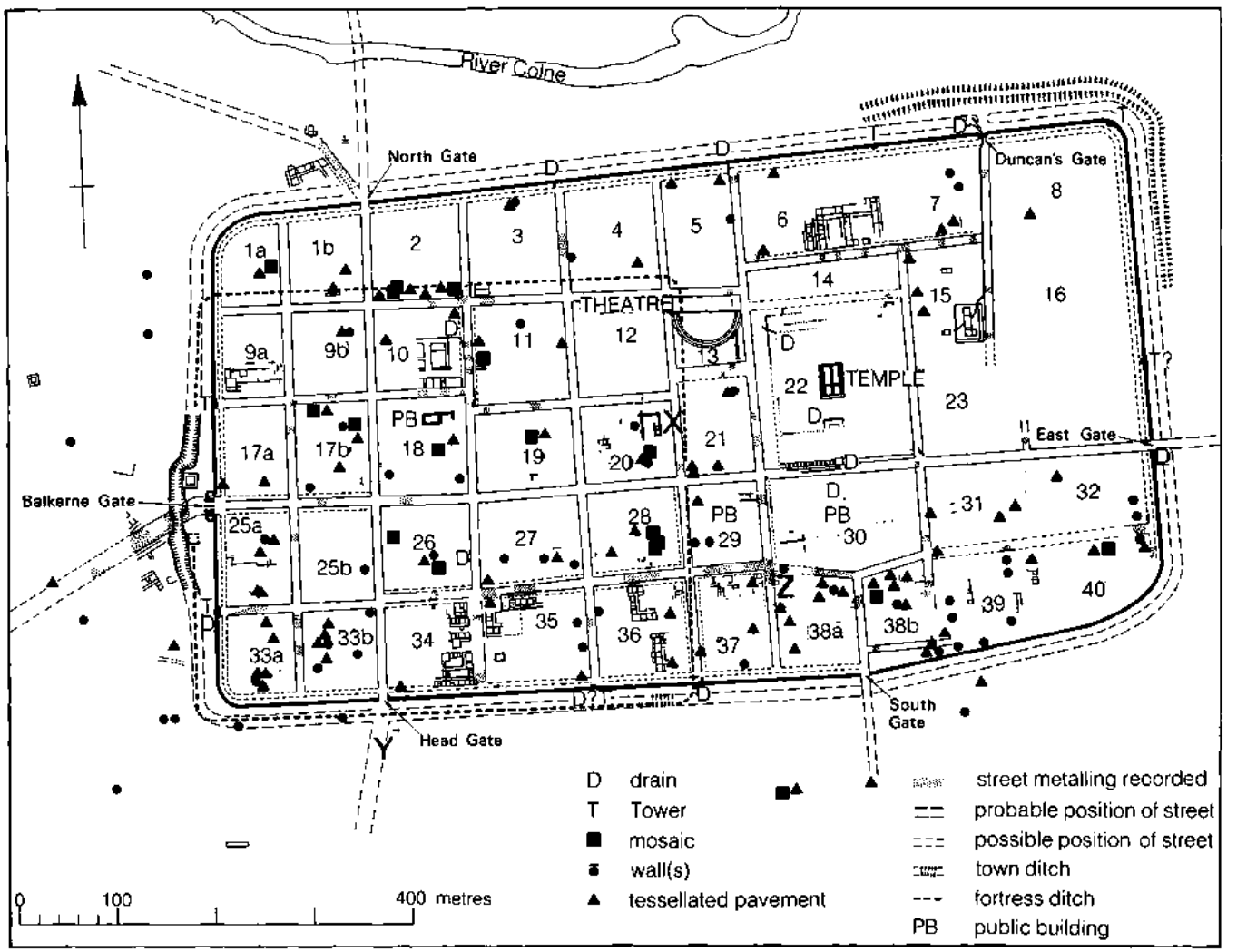


Fig. 1 Roman Colchester in the 3rd and 4th centuries showing the locations of the East Stockwell Street (**X**) and St John's Street (**Y**) sites.

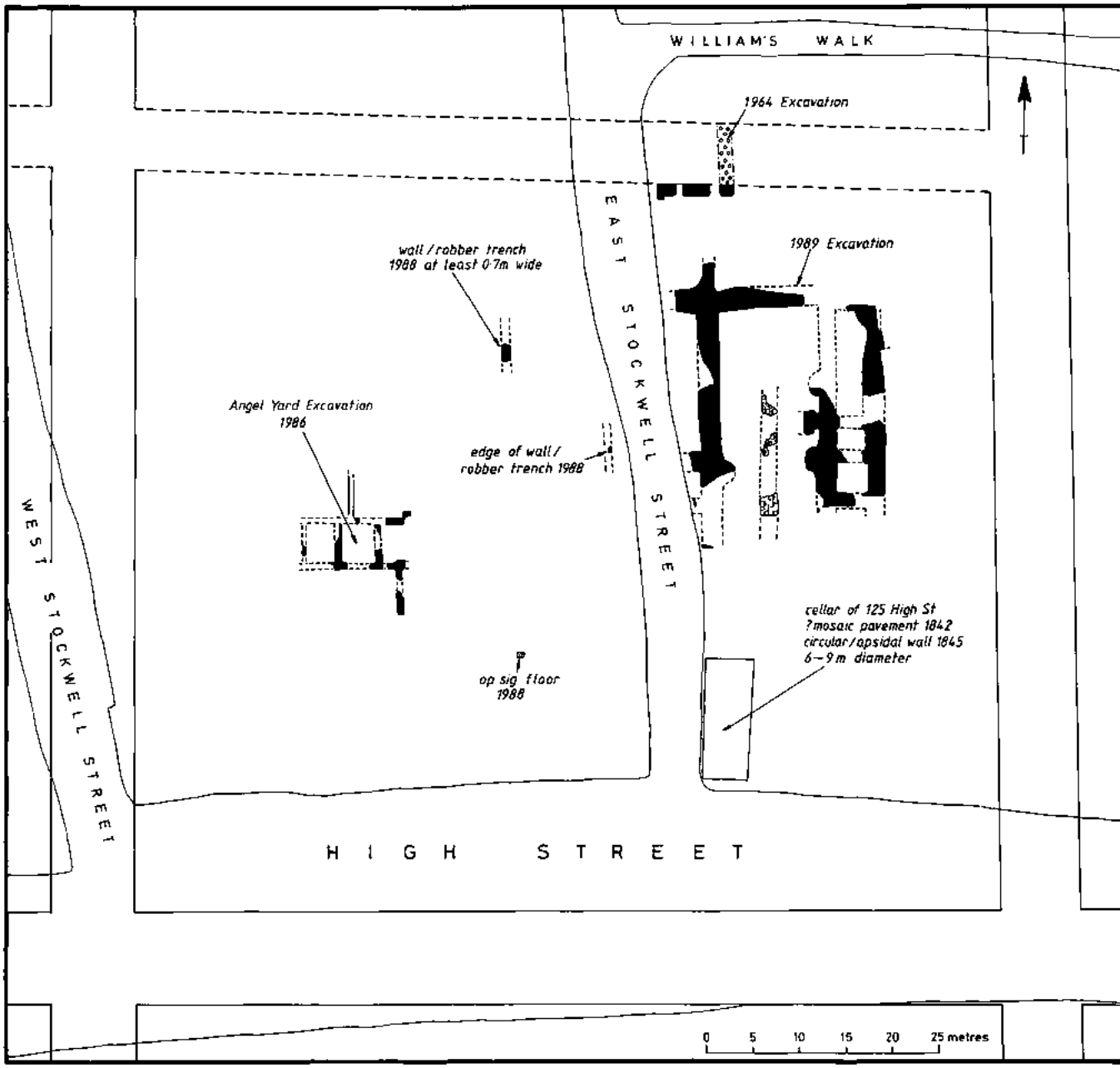


Fig. 2 Insula 20.

adjoining buildings to the south.

The site lies on the eastern half of Insula 20 of which previously little was known (Figs 1-2). In 1845 workmen had reported a massive circular/apsidal foundation beneath 125 High Street which prevented them from digging out a pit for a cellar to its intended depth (Hull 1958, 158-9). In 1964 a small rescue excavation was undertaken by Miss B.R.K. Dunnett at the corner of William's Walk and East Stockwell Street (Dunnett 1971, 38-42 & fig. 36). This revealed the northern street of Insula 20 on the southern frontage of which was a massive foundation of a building dated by Miss Dunnett to the Hadrianic period or later.

Site Phasing

The remains on the site are interpreted in terms of the following four periods.

Period 1 Roman: mid 1st to mid 2nd century
Period 2 Roman: mid 2nd century to 3rd/4th century+
Period 3 Medieval: late 12th to early 13th century
Period 4 Post-medieval to modern

Period 1 (mid 1st to mid 2nd century; Fig. 3; Plate 1)
The levels relating to this period were only seen in section where the Period 3 robber trenches were fully excavated at the junction of F10 and F13 (Plate 1).

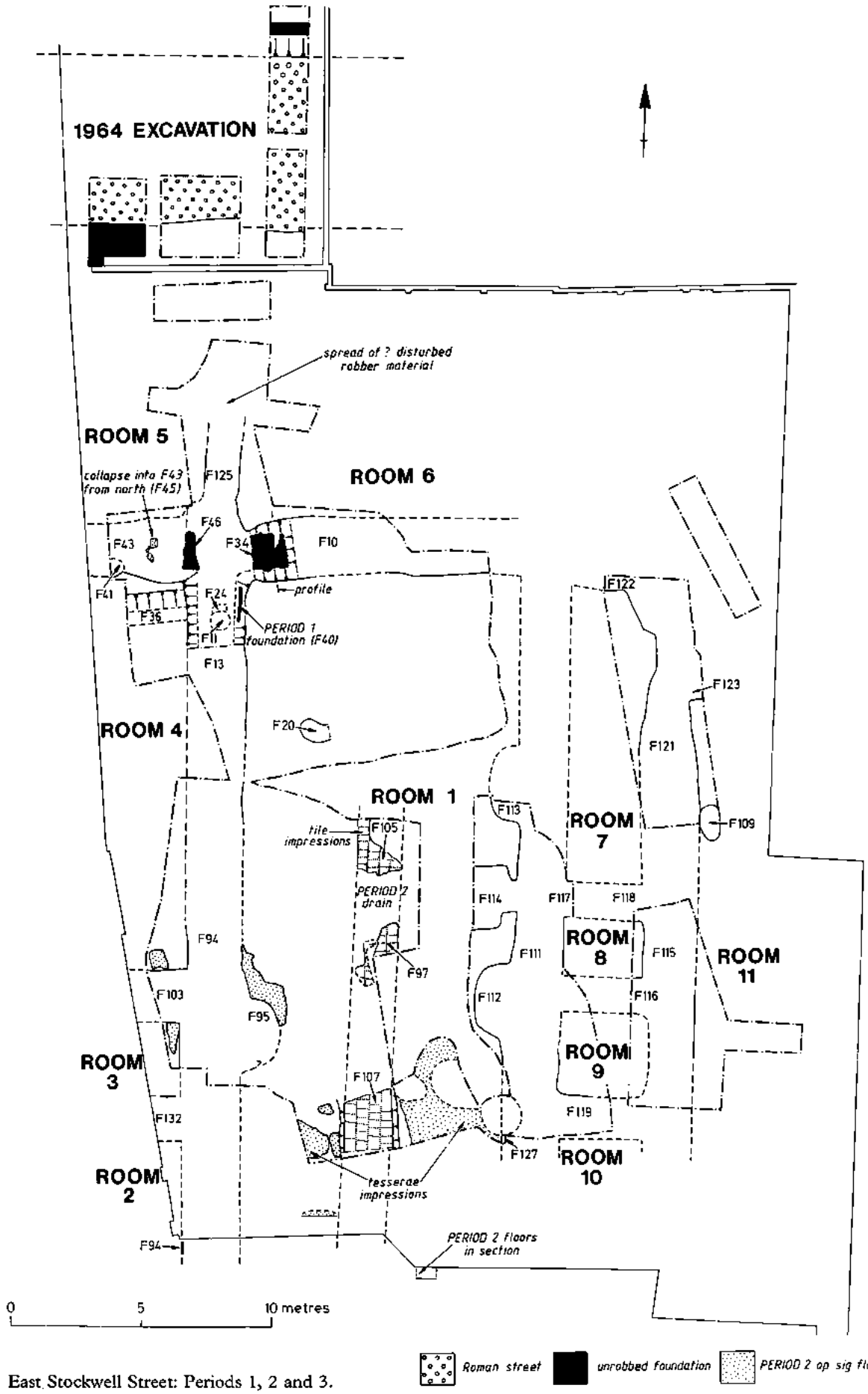


Fig. 3 East Stockwell Street: Periods 1, 2 and 3.

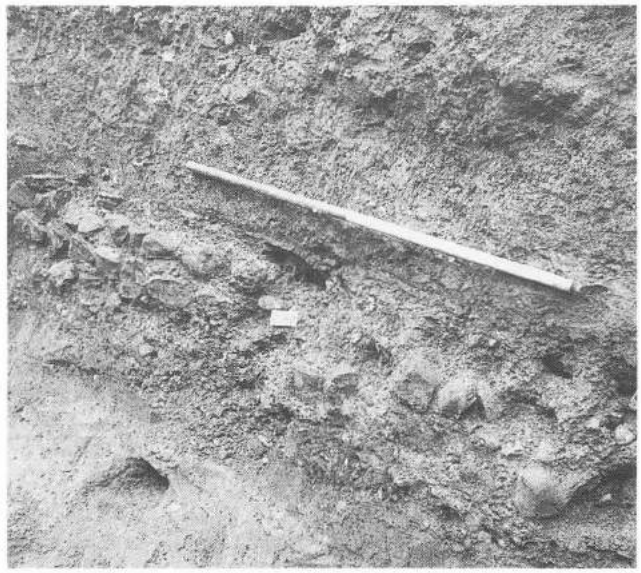


Plate 1 East Stockwell Street: Period 1 foundation (F40). Scale 1 m long.

The deposits were approximately 0.5 m thick (less in F10). They directly overlay the natural sand and were sealed by a thin layer of burnt material visible in the west section of F13 and the south section of F10. The only substantial feature was a short length of foundation (F40; Plate 1) which was noted in the section across F13. Approximately 0.5 m in depth, its west face consisted of septaria blocks set in mortar thereby demonstrating its colonial rather than military origin (*CAR* **3**, 20). The Period 1 levels were directly sealed by the make-up of Period 2.

Period 2 (mid 2nd century to 3rd/4th century+; Figs 2-5; Plates 2-3)

In the mid 2nd century, the site saw a dramatic change with the erection over the eastern half of the *insula* of a large building covering an estimated area some 50 x 80 m. That it occupied the whole eastern half of Insula 20 seems fairly certain. All but the west side of the building were bounded by Roman streets whilst excavations at the Angel Yard site in 1986 indicated that the

Plate 2 East Stockwell Street: Period 3 robber trench (F13) excavated to full depth. Viewed from the north showing a section through the backfill. Scale 2 m long.

western half of the *insula* had been occupied by buildings which were of a domestic scale. That it extended as far as the southern street of the *insula* can be inferred by the large foundation and floor surface(s) discovered during the last century at 125 High Street (Fig. 2).

The land sloped steeply away to the south so that a large quantity of material (mainly sandy loam mixed with some occupation debris) had to be imported on to the site to make a platform for the floors such that they would be on the same level throughout the building.

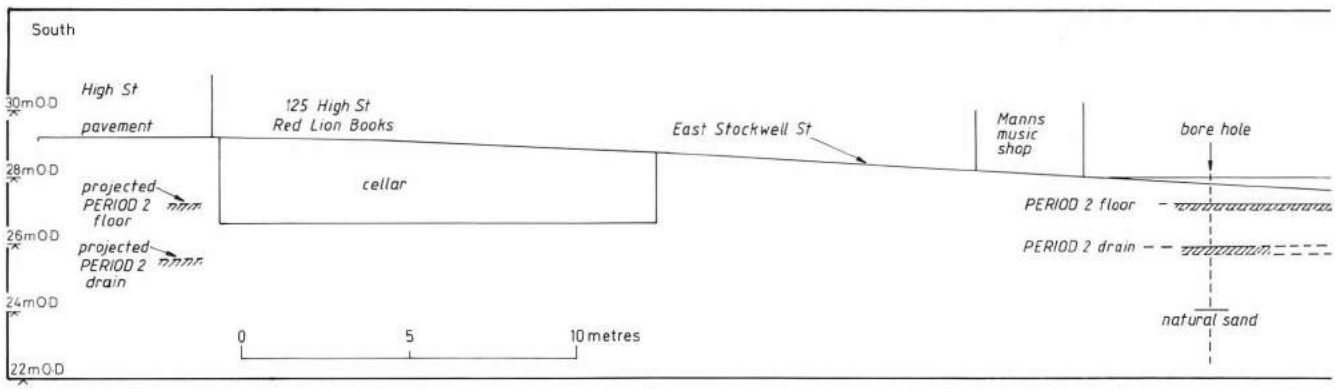


Fig. 4 East Stockwell Street: composite profile.

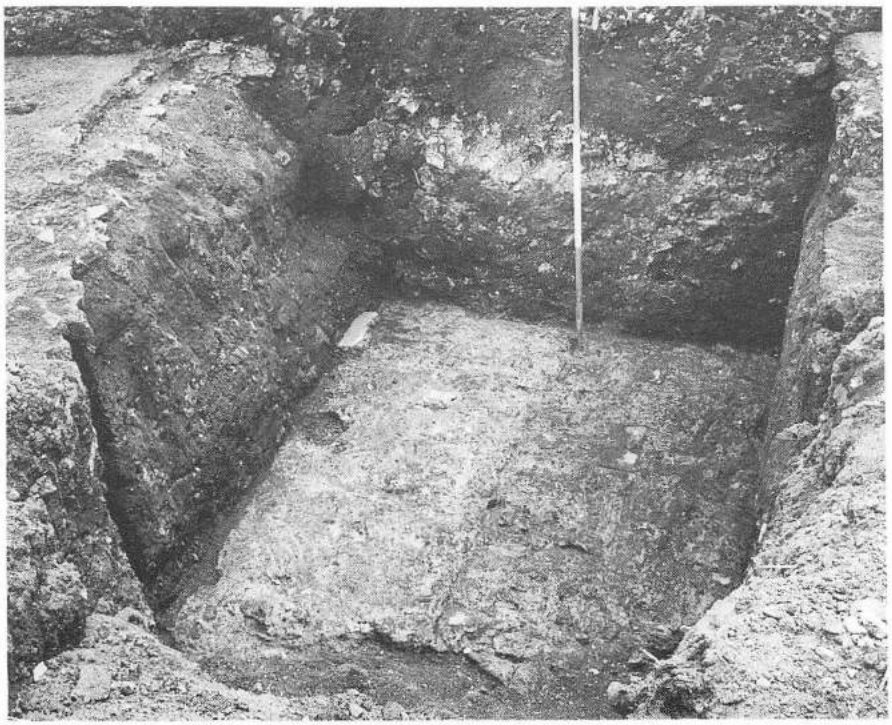


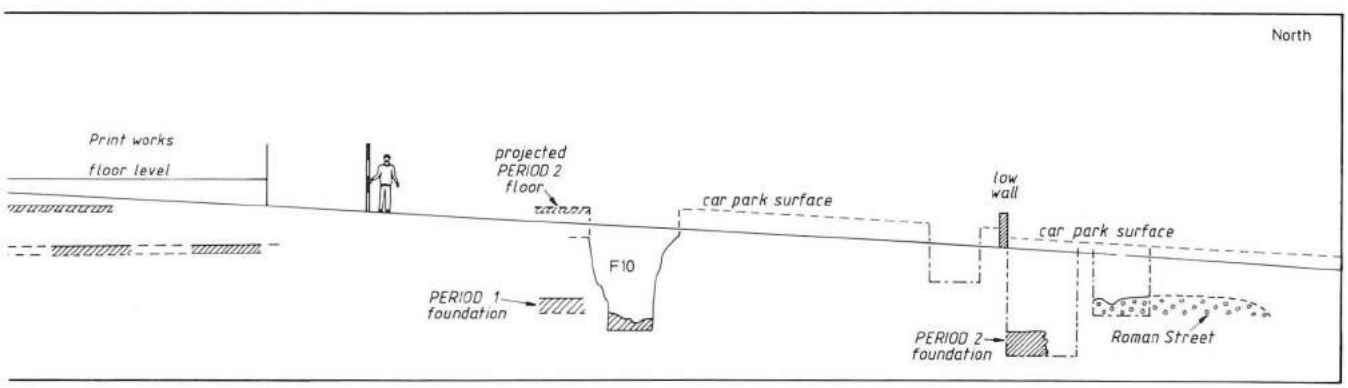
Plate 3 East Stockwell Street: Period 2 drain base (F107) below floor level in Room 1 with a section through the robber backfill at the southern limit of excavation. Scale 2 m long.

Little spits of mortar extending from the joints in the foundations in F10 into the body of the dump material indicated that the foundations had been surface-built and had been raised as the material was being dumped (Fig. 5). To achieve a level site, between 2.5-3.0 m of make-up had to be deposited at the northern end of building of which approximately 2.5 m still survived in 1989. At the junction of F10 and F13 were exposed two sections of the lower parts of the foundations which had escaped the Period 3 robbing (F34 & F46). These consisted of large septaria blocks set in mortar to a width of between 1.3-1.4 m. The bases of these foundations would have been 3.7 m below the projected floor level (Fig. 5). The robbed foundation trenches contained large quantities of discarded mortar, tile and septaria fragments.

On the western and south-western areas of the site, the make-up was close to the present street level and lay beneath 0.5-1.0 m of Period 4 deposits most of which was modern. There was some disturbance by modern cellars and stanchion holes. Over the eastern half of the site and part of the northern area, modern disturbance was more extensive and the surviving Roman levels were up to 2.0 m below the modern surface. Apart from the junction of F13 and F10, the robber trenches were excavated only sufficiently to allow definite edges to be discerned (Plate 2).

Over the excavated area the building plan suggests a series of rooms flanking a large central room (Room 1).

Room 1 The course of the walls of this room were located clearly along its west, north and eastern sides, the south wall being beyond the excavated area. The room was at least 10.5 m wide and 22.5 m long. Parts of the floor survived at the southern end of the room and around the north edge of the ?post-Roman pit F95. These consisted of *opus signinum* over a raft of



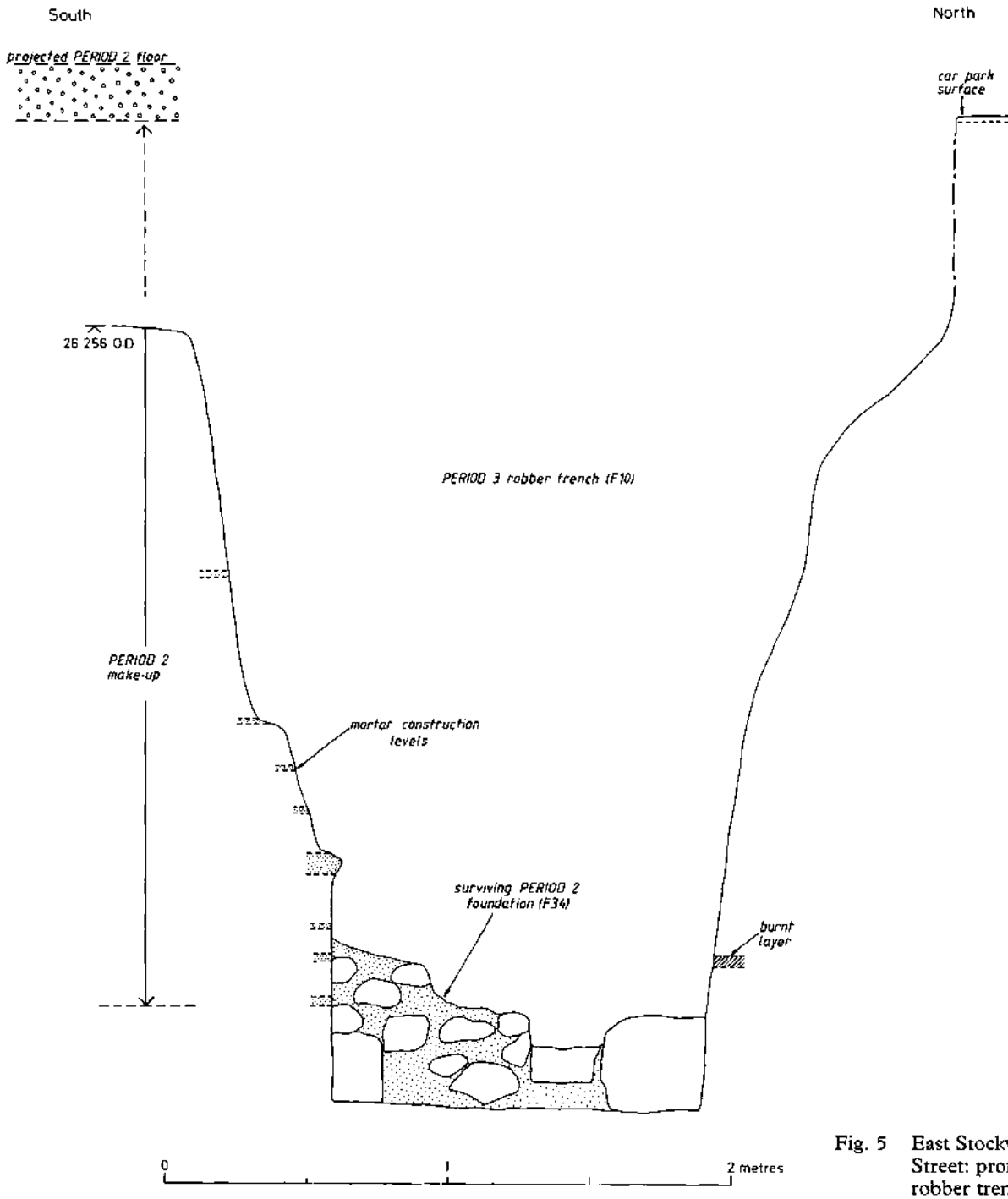


Fig. 5 East Stockwell Street: profile of robber trench (F10).

mortar with septaria lumps to make a base for the floor which was about 0.2 m thick. Impressions contained within a white mortar coat surviving on some areas of its surface indicated the former presence of tessellated flooring. Beyond the southern site boundary a trench dug by the contractors to underpin an adjacent wall revealed a 0.7 m long section. This showed a second floor of almost identical construction, i.e. *opus signinum* over a gravel and mortar base about 0.2 m thick sitting on a loose sandy mortar layer directly sealing the first floor. Some evidence of a second floor surface was retained to the west of F107; this also bore impressions of *tesserae*. In the northern area of the room, a small pit (F20) contained a small quantity of pottery of similar date to that of the make-up into which it was cut and thus may possibly have been contemporary with the construction of the building.

In the southern half of the room, set approximately 1.0 m beneath floor levels and central along its north-south axis, was a substantial feature (F97/F105/F107) which was probably a large drain. It was poorly preserved, its superstructure having been robbed in Period 3 to foundation level. The foundation was of mortar and septaria. It was about 0.3 m thick and

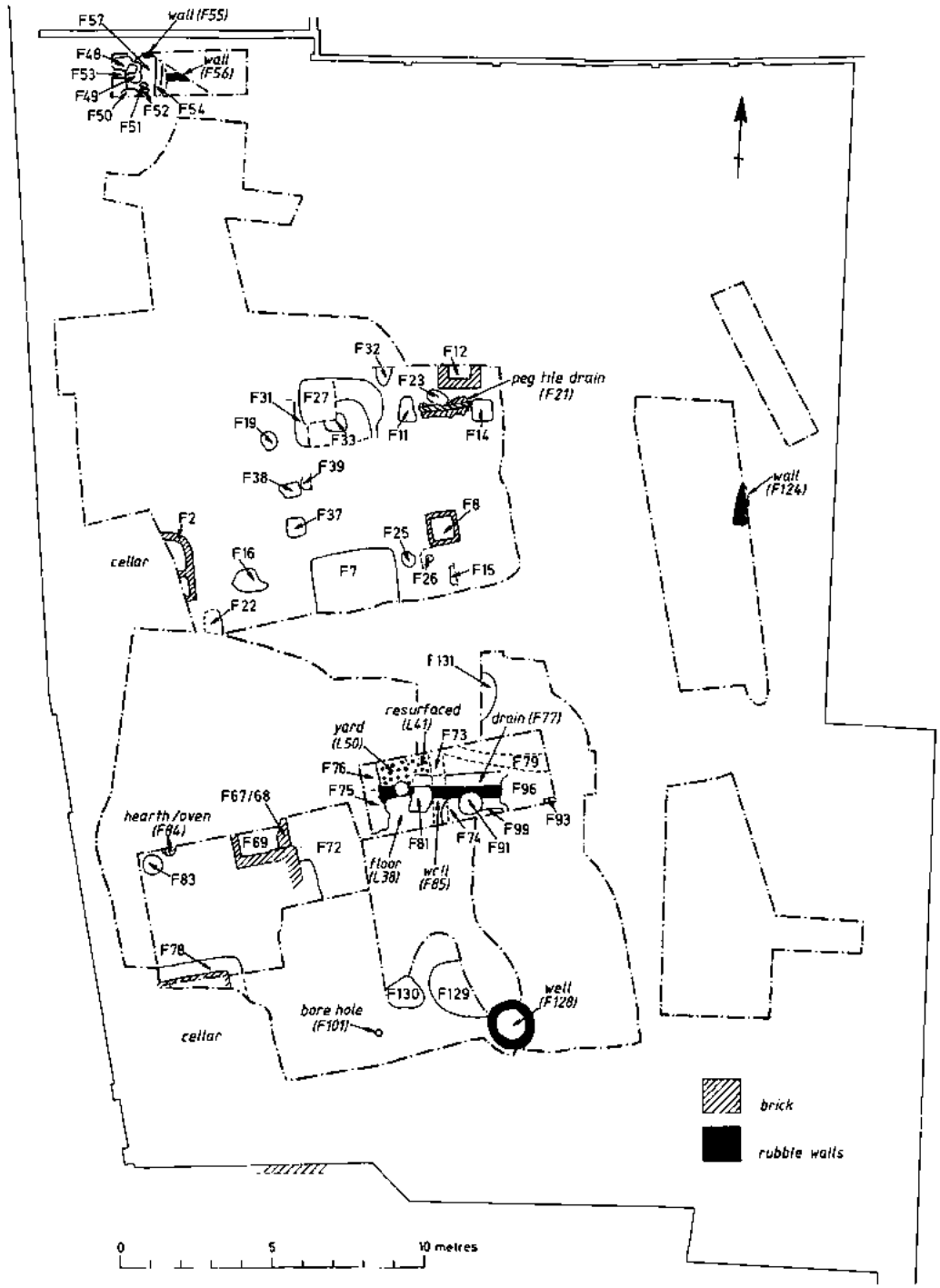


Fig. 6 East Stockwell Street: Period 4.

1.8 m wide and retained on its surface impressions of neatly laid whole *lydion* tiles (approximately 460 mm x 280 mm) in a consistent pattern of four laid end to end across its width (Plate 3). In places fragments of some of the tiles survived *in situ*. Traces of mortar around their edges indicated that the tile courses had been bonded together with *opus signinum*. The robber backfill over this feature was of a substantially different nature to that of the main robber trenches because it contained large quantities of *opus signinum* (many pieces encasing fragments of tile). This material derived not only from the drain itself but also presumably from the part of the floor which sealed it. The drain sloped downwards from north to south at a gradient of approximately 1:80. No trace of the drain was found further to the north so that therefore it must have began in the central area of the room.

The feature is seen as a drain rather than a foundation for two reasons. It was not bedded on natural sand but on the lower levels of the make-up thus indicating that it was not intended to be load-bearing. Moreover tile courses and *opus signinum* are not usually found in foundations, at least not in Colchester, but are a characteristic of drains.

Room 2 The north wall of this room was defined by the robber trench F132 (partly revealed during the watching brief) and the east wall was indicated by the continuation of F94.

Room 3 Only a small area of the north-east corner of this room fell within the excavated area. However this was sufficient to show that its floor was similar to that of Room 1 although no tesserae impressions survived on its surface. Its south wall was indicated by F132.

Room 4 The south and part of the east and north walls were located. It had the same type of floor as Room 3. Modern disturbance along its east side made impossible any investigation of further east-west wall(s) which may have divided this area. At the northern end of the room a large pit/trench (F36) had been cut into the make-up. It extended beyond the west section and its east end had been truncated by the robber trench F13. The pit/trench was probably contemporary with the construction of the building.

Room 5 Here only the south-east corner with short lengths of the south and east walls were revealed. Its floor was the same as that of Room 3. The floor had not survived *in situ* but, together with a layer of dark earth which had accumulated on its surface, a part had collapsed into the north side of the robber trench F43. The maximum possible northern extent of this room was defined by the wall bounding the Roman street (Dunnett 1971).

Room 6 Only the south-west corner of this room could be clearly defined. The maximum possible northern extent is as for Room 5.

Room 7 Most clearly defined is the east wall of this room, the north, south and west walls only being exposed for short lengths to give overall minimum dimensions of 11.5 x 3.0 m. As with Room 4, the possibility of a further east-west wall dividing its area cannot be eliminated.

Room 8 This was a small room which measured at least 3.0 x 2.3 m. The east and west walls were clearly defined except for the south-western corner. The northern wall was located only at its east and west ends, the south only at its east end.

Room 9 Short lengths of robber trench at the south-western corner of this room fixed its south and west walls. Its north wall was the south wall of Room 8 whilst the eastern wall, though poorly defined, could be confidently located to give overall minimum dimensions for the room of 3.0 x 3.1 m.

Room 10 Its north wall was the south wall of Room 9 and its west wall from the continuation of the north-south robber trench (F111/F127). Its east wall is assumed to be a southward continuation of F115.

Room 11 This room is assigned to the area east of the robber trench F115 and F121. Its north side was defined by F123. Midway along its west wall was a rubbish pit containing a large number of broken roof tiles and several broken nearly-complete pots. The pit is contemporary with the construction of the building.

Dating evidence

A mid 2nd-century date for the construction of the Period 2 building is provided by the pottery and a coin from the thick deposit of make-up. The coin was a worn *as* of Trajan bearing a portrait which resembles the style of the mint of Rome between A.D. 104 and 111.

Period 3 (late 12th to early 13th century; Fig. 3)

Apart from the robbing of the Period 2 building, three other features can probably be attributed to this period. A pit (F41) cut into the backfill of the robber trench (F43) contained a small quantity of 11th- to 12th-century pottery. Another pit (F24), again cut into a backfilled robber trench (F13), contained several tile fragments which sealed a layer of burning at its base. This was cut by another pit (F11) containing a large quantity of broken tile and small stones together with a small quantity of large pieces of 13th-century pottery. Nine of the flue tile fragments recovered came from this feature.

At the southern edge of the site, a well with sides of mortar and rubble was discovered but not excavated. Its date of construction is uncertain but the building materials suggest between the 11th and 15th centuries.

Period 4 (post-medieval to modern; Fig. 6)

In the early part of this period, two terraces were dug into the slope of the hill. The northern one resulted in the loss of the floors of the Period 2 building whilst the southern terrace stopped more or less on the top of them. In both cases all the deposits overlying the floors were lost.

No description of Period 4 is given here except for the most important of the early features. Several sleeper walls constructed from reused Roman material and peg-tile were revealed. One of these (F85) formed the north wall of a building which internally had a clay floor (L38). Externally a gravel yard (L50) was later resurfaced (L41) and a drainage gully (F77) provided. A short length of peg-tile drain (F21) was uncovered in the northern area and a hearth or oven base formed of peg-tile set on edge (F84) in the southern.

A series of irregularities (F95 & F112-14) along the inner of edges of the robber trenches F13/F94 and F111 looked to be integral parts of them and to reflect projections of some kind into Room 1. However a more likely explanation is that they were pits which

post-dated the robber trenches but were filled with very similar material as them.

Building materials

The extensive robbing of Period 3 and the destruction of the floor and later levels in Period 4 left little evidence for the materials used in the construction of the Period 2 building apart from what was in the robber trenches.

Substantial quantities of *tesserae* from all the robber trenches indicated plain red tessellation; a few small tesserae suggest that there may also have been a mosaic floor.

Of the fourteen box-flue tile fragments recovered, eight showed conclusive evidence of reuse with mortar covering breaks or internal surfaces. On the remaining fragments no traces of mortar were found. As such, this assemblage cannot be used as evidence for the past existence of a hypocaust in the area. However six of the fragments are assignable to Type B10 and two to Type B7 based on keying patterns (*CAR* 6, 1992, fig. 7.5). At the Culver Street excavations it was noted that the distribution of these two types was complementary and that the Type B10 had been fitted in Building 123 in the second half of the 2nd century. While a broad 2nd- to 3rd-century date for the assemblage as a whole may be preferred, this may indicate a hypocaust of later 2nd-century date or the refitting of a hypocaust of that date in the vicinity. In this respect, it should be noted that a hollow tile, presumably a box-flue, was reported built into foundations below the Hippodrome to the west (Fig. 2; Hull 1958).

Twenty-four pieces of Purbeck marble veneer were recovered which, in view of the size of the site, is a high number. Moreover much of the material was of good quality. However little of the marble probably came from the building. A high proportion had been reused as building material but presumably not as veneer. In addition half of the total quantity came from the Period 2 make-up and thus predated the building.

The only wall-plaster recovered was a small quantity from the robber trenches F10 and F13; this formed a readily identifiable group. A mortar render 250-300 mm thick had been applied in two coats, the first being light brown in colour and the second a reddish pink. This was coated with a thick white limewash on the surface of which were brush marks. The reddish colour of the second layer of rendering was probably the result of the use of an iron-rich sand rather than localised burning of the wall.

Four pieces of worked stone came from Period 4 levels. Three pieces can be confidently grouped together as architectural fragments of 14th-century date. The fourth is probably Oxford limestone and is a medium-sized block with evidence of possible 12th-century tooling on one face.

Several fragments of a large ornamental louver and parts of two glazed-crested ridge tiles were also recovered from Period 4 levels.

Discussion

The function of the building is obscure but the drain — if that is what it was — suggests that the building was a public bath-house and that Room 1 was a *frigidarium*. The plan and scale of the remains seem to rule out all the obvious alternative interpretations for the building (e.g. theatre, forum, forum basilica, curia, temple, *macellum*) although compared with other bath-houses, Room 1 seems to have been unusually long in relation to its width for a *frigidarium*. Parallels for a drain beginning in the centre of a *frigidarium* can be found in the legionary fortress baths at Caerleon (Zenkiewicz 1986, 60-65 & fig 9) and in the baths of the officers' temporary compound at Inchtuthil (Pitts & St Joseph 1985, 216 & fig 63). If this interpretation is correct, then the large curved foundation found below 125 High Street in 1845 (which was massive enough to prevent the lowering of the cellar) could have been part of a *laconicum* or an apse in a *caldarium*. Also the box-flue tile possibly found *in situ* to the west of the site suggests that a suite of heated rooms lay in that direction.

An alternative explanation is that the building was an aisled basilica and that Rooms 2-3 and 7-10 are illusory and instead were parts of east and west aisles flanking Room 1. Certainly the floor spaces of these rooms appears curiously small in relation to the widths of the walls and because of pressures of time and resources it was not possible to excavate the robber trenches fully and establish beyond doubt their true extent. However this interpretation provides no good explanation for the presumed drain and assumes a greater deviation from the basic interpretation of the features than the difficult circumstances of the excavation seem to warrant. Further excavation may resolve these problems.

St John's Street

An early road leading to the south-west entrance of the colonia was located and probable roadside occupation encountered. In the late 1st to early 2nd century, this road went out of use and a large quantity of make-up was deposited over the area. This formed a construction platform on the slope for a public building the north wall of which was located. This building was demolished and its foundations robbed in the later Roman period. No late Roman or post-Roman levels survived on the site.

Introduction

Rescue excavations were carried out for two weeks in April 1990 in advance of redevelopment of 2 St John's Street. The site is extra-mural and lies to the south of Head Gate, just beyond the later town ditch (Fig. 1).

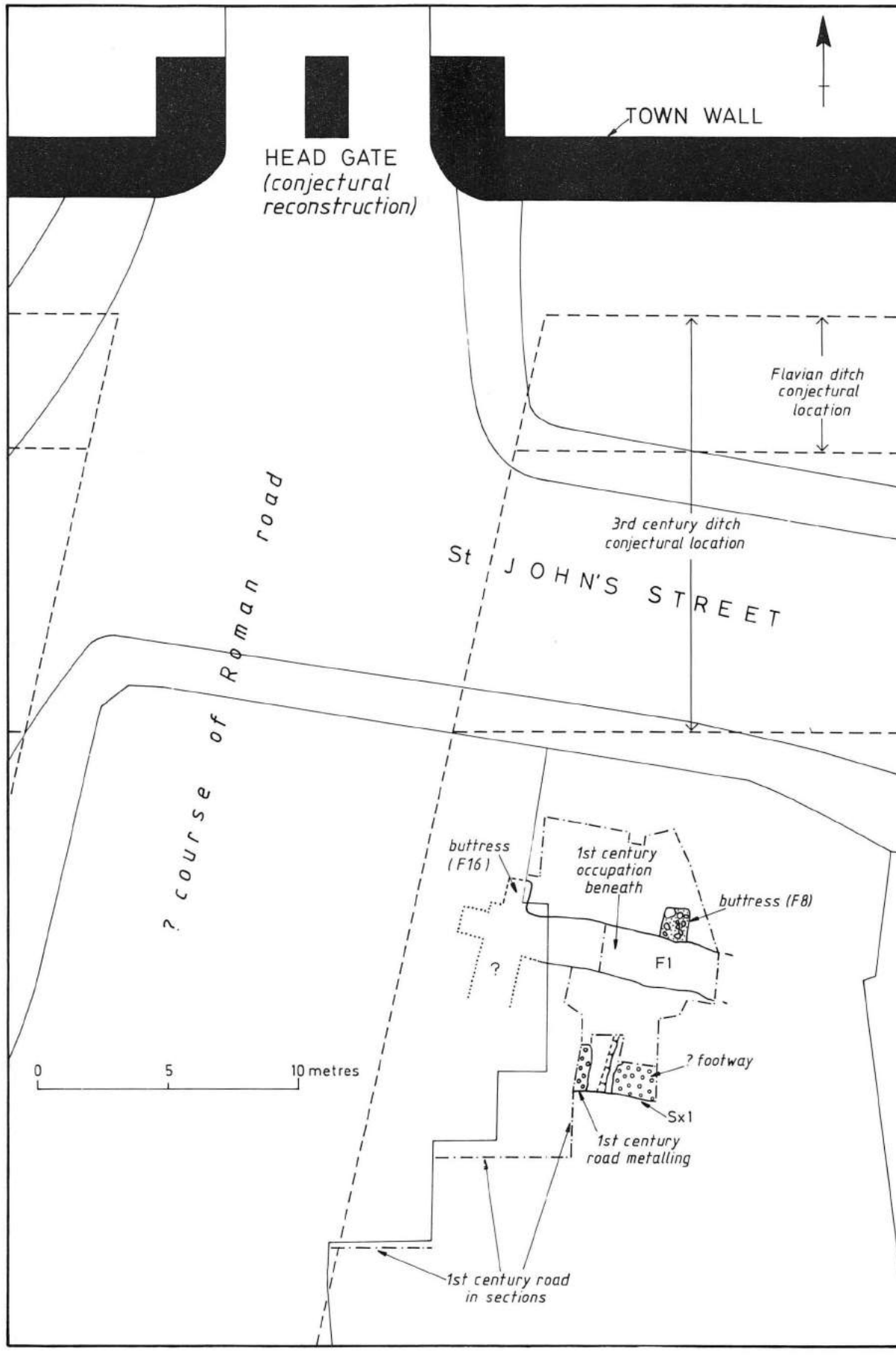


Fig. 7 St John's Street: site plan and conjectural reconstruction of the area south of Head Gate.

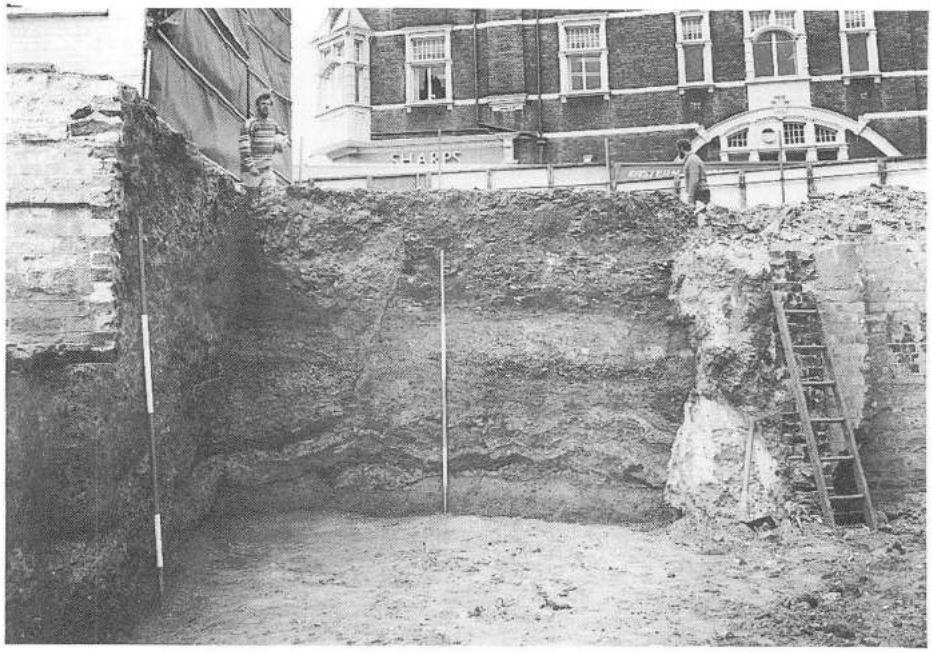


Plate 4 St John's Street: main section viewed from the south. Scale 2 m long.

Site phasing

The remains on the site are interpreted in terms of the following two periods.

Period 1 mid 1st to late 1st/early 2nd century
Period 2 late 1st/early 2nd to mid 3rd century+

Period 1 (mid 1st to late 1st/early 2nd century; Figs 7-8; Plate 4)

The natural sand was overlain to a depth of approximately 0.5 m by a series of mixed deposits of gravel and clay lenses with decayed organic material and silts. This was seen only in section and not properly understood but probably represents early dumping on the site. These deposits were sealed by a road, the eastern edge of which was located at the south end of the excavated area. The road led from the south-west gate of the *colonia*. Its construction must post-date *c.* 50 since it must pass over the backfilled fortress ditch. (There was no gate in this position in the military period.) In section, the road appeared as a 0.8 m deep accumulation of layers of gravel and silts in which were discernible at least two probable phases of resurfacing.

The road had to climb the north side of a steep valley as it approached the *colonia* from the south. Exposed sections across the site indicated that the gradient was at its greatest at the southern end of the site where it reached

Plate 5 St John's Street: Period 2 robber trench (F1) and unrobbed buttress (F8). Viewed from the east. Scales 2 m and 1 m long.

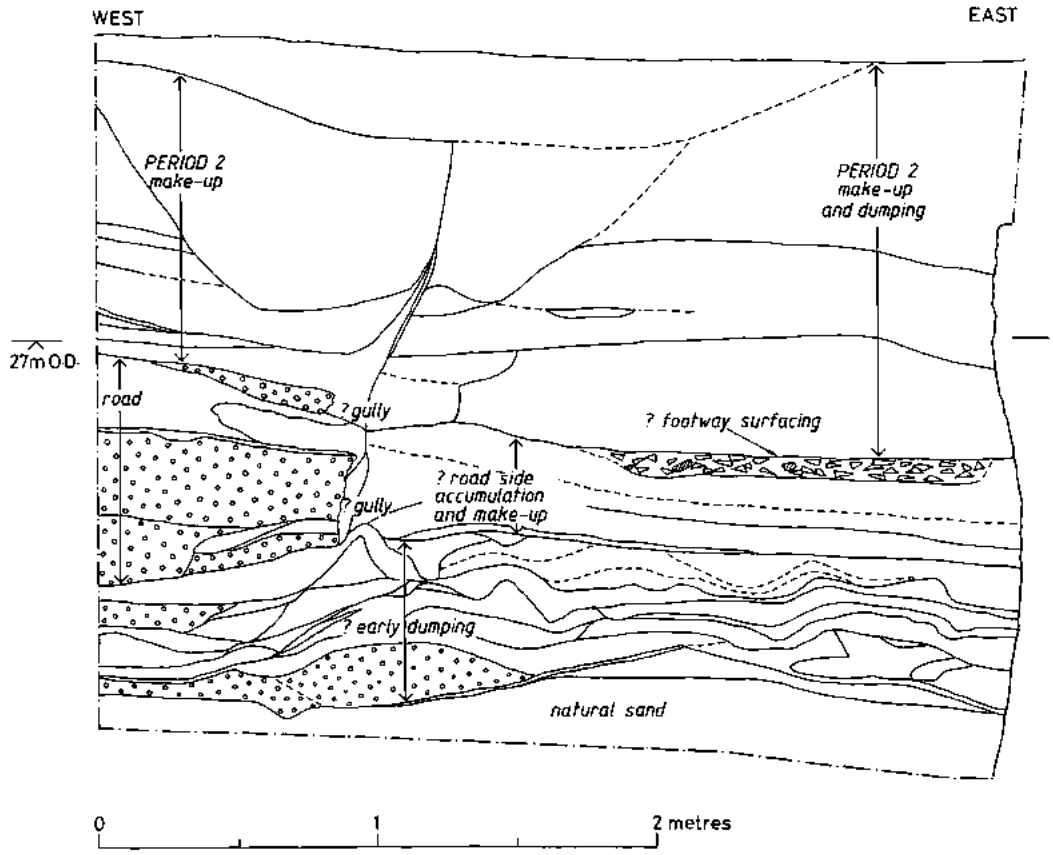


Fig. 8 St John's Street: section.

between 1:4 and 1:5. The edge of the road was exposed only for a short distance so that it is not possible to predict its course accurately. Contractor's foundations trenches excavated into the natural sand at the west end of F1 and along the entire northern boundary of the site revealed no evidence of the 1st-century road.

To the east of the road was an accumulation of silts and other deposits overlying which was a layer of a hard-packed septaria chips with some tile fragments. The layer was probably contemporary with the second surfacing of the road and may represent a footway. There was no sign of a ditch between the ?footway and the road. None may have been needed because of the slope although there were indications that small water-worn gullies may have existed at the edges of the road. Above the road and footway, thin silt layers had accumulated which were later sealed by dump of Period 2. The latter also sealed traces of probable roadside occupation beneath the base of the robber trench F1. The occupation consisted of a ?floor surface of sandy clay about 20 mm thick with sparse charcoal flecks. The floor overlay make-up of charcoal and burnt daub about 50 mm thick.

Period 2 (late 1st/early 2nd to mid 3rd century+; Figs 7-8; Plates 4-5)

In the late 1st to early 2nd century, a large quantity of mixed make-up was deposited over much of the western part of the site. The nature of this material suggests that it represented a series of deposits rather than one single episode. Sandy silts and organic material overlain by domestic refuse sealed the footway and the occupation to the north whilst sandy silts and sand with indications of decayed turf sealed the road to the south and west. These deposits were then sealed by further domestic refuse. When levelled, this material formed a platform for a substantial building. The north wall of this building was located as a 1.9 m wide robber trench (F1) cut into the surviving dump to a depth of about 1.0 m (Plate 5). The robbed foundation clearly had not been bedded on the natural sand. The wall extended into both west and east sections of the excavated area and had a substantial buttress (F8) on its north side. The buttress, 1.1 m long, 0.8 m wide and 0.8 m deep, was unrobbed and made up of large septaria blocks embedded in mortar. The edge was found of what appeared to have been a robbed-out second buttress (F16) 5.0 m to the west of the first one. At the east edge of the excavation, the base of the robber trench (F1) sloped quickly up to reduce to depth to 0.8 m. No other walls of this building or any associated floor levels were located on the site. The robber trench contained only Roman pottery, the dates of which indicate that the building was demolished in the late 3rd or 4th centuries.

Human remains (Plate 6)

Contained within the Period 2 dumping was the frontal portion of an adult human cranium which exhibited an ante-mortem depressed fracture with no signs of healing (Plate 6). This trauma was almost identical to one noted on a cranium from the legionary ditch at Balkerne Lane (*CAR* **3**, 97 & fig 86) and suggests that, as at the Balkerne Gate, the heads of people who were executed were displayed or discarded in this area. The only difference is that the context is about 50 years later.

Parts of twelve human bones from at least two adults were recovered from the backfill of the robber trench F1. Since the backfill of the trench is Roman in date, the bones presumably must have derived from disturbed Roman inhumations nearby and indeed remains of this kind have been reported as having been found in the vicinity of Head Gate in the past (Hull 1958, 293). During underpinning work in the area of F16 and its intersection with F1, workmen recovered three more human skulls and a human femur from the upper robber backfill. None of the skulls possessed a lower jaw and one had a white plaster-like deposit adhering to it. It is probable that these derived from nearby disturbed Roman remains of either inhumations or executed individuals.

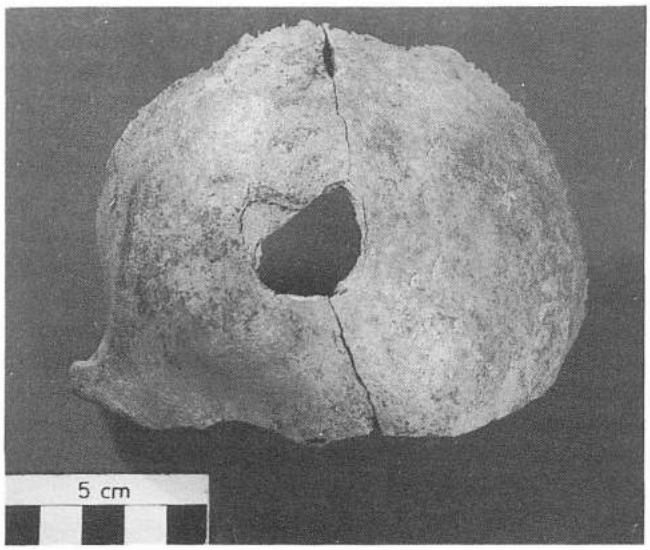


Plate 6 St John's Street: frontal portion of cranium from Period 2 deposits exhibiting a depressed fracture. Scale 5 cm.

Discussion

The ?floor surface beneath F1 would seem to represent early colonial extra-mural roadside occupation. A post-Boudican origin for the occupation is suggested by the fact that this surface sealed make-up of burnt red daub and charcoal and that there appears to have been time for only one surface to have existed without further build-up before the alterations of Period 2.

It is clear that there was substantial change in Period 2 with in effect the burying of the road and the associated roadside occupation levels under 1.0-1.5 m of dumped material. The presence of quantities of domestic refuse in this material points to the area having been used as a convenient rubbish tip for a period prior to the construction of the Period 2 building. The sequence of this dumping is reminiscent of that beneath the Romano-Celtic temple (Building 52) at the Balkerne Lane site (*CAR* **3**, 123). The date of the deposits and the way in which the road was covered over suggests official action of some sort which possibly was associated with major alterations to the town's defences.

Although only one wall was located of the building erected on the dumped material, the position of the buttresses indicates that this was the north wall. The nature of the building is uncertain but its position in relation to the gate and the presence of buttresses suggest that it may have been a granary, a mausoleum or a temple. The last possibility is perhaps the most probable in view of the two temples at Balkerne Lane which occupied equivalent positions to the building at St John's Street in relation to the town defences (*CAR* **3**, 111-15).

The building was clearly not aligned with the town wall and therefore presumably reflects the line of the road to its west. It is uncertain if this road was a new or pre-existing road or if it was the Period 1 road retained in Period 2 but of reduced width (the eastern part being buried under the dump).

This date for the demolition of the building (ie mid 3rd to 4th centuries) is in line with evidence noted elsewhere for a decline in the extra-mural built-up areas of the town (*CAR* **3**, 16-19).

Finds: East Stockwell Street and St John's Street

The resources available did not allow the preparation of detailed small finds and pottery reports. However there is nothing in this material which seems to be helpful in terms of interpreting the function of the associated structures; the principle value of the collection as a whole derives from the dates which the material provides for individual contexts. However the Roman pottery from the Period 2 make-up and the contemporary pit F109 at East Stockwell Street form two small 2nd-century but potentially interesting groups which probably merit further study in their own right. Similarly, the material from the Period 2 domestic dumping at St John's Street (of late 1st- to early 2nd-century date) is also worthy of detailed examination in view of the substantial size of the group and the low level of residual material in it. The finds and archives of both sites are in the Colchester and Essex Museum.

Acknowledgements

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Frincon Holdings (St John's Street) for granting permission and providing funding for these excavations. Special mention must be given to Donald Shimmin who directed the first phase of the excavation (East St0ckwell Street) and to Philip Crummy for his contributions and guidance. We would also like to thank the following for providing specialist contributions and for allowing them to be incorporated in the text: Stephanie Bellows (bone), Ernest Black (keyed tile), John Cotter (post-Roman pottery), Nina Crummy (small finds and tile), John Davis (coins), Chris Going (Roman pottery) and Andrew Harris (carved stone). Also thanks to Paul Sealey for his help and assistance, Terry Cook for redrawing the illustrations to publication standard and Alison Colchester for her photographic work. We also thank the digging team especially Nigel Rayner, Dennis Tripp and Mark Windred.

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Abbreviations

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Two rural medieval sites in Chignall St. James: excavations 1989

by Howard Brooks

Salvage excavations in Roxwell quarry revealed (site A) a 10th- to 12th-century building (possibly associated with a ridge-and-furrow field system), and (site B) a series of 13th-century ditches, possibly surrounding a structure of that date. Although no pre-medieval features were identified, residual prehistoric pottery, Romano-British tile, and a group of mesolithic flints were found.

Introduction

The sites were discovered by Deborah Priddy during a routine watching brief. Because of the circumstances of discovery, only a limited programme of work was possible.

The sites were located in that part of Roxwell quarry which extends eastwards into Chignall parish. Therefore although the site codes were RQ 89 A, B (TL 6672 1012, TL 6656 1015 respectively) and the finds were marked RQ, the correct geographical name (Chignall) is preferred in this report.

Background

The aims of work on site were: (1) to obtain a complete ground plan of all features, and (2) to ascertain the nature and date-range of the occupation. The sites lay at approximately 40m above Ordnance Datum, on the north side of the valley of the River Can, which lay 200m south-west of site A, and 150m south-south-west of B. The land sloped gently down from north-east to south-west from both sites towards the river, which was undoubtedly the source of water for both human and animal consumption on the sites.

Previous work

A number of archaeological sites are known in the western part of Chignall, and in the eastern part of Roxwell. The major site is the scheduled Roman villa north of Chignal Hall (Clarke, forthcoming), but the Essex Sites and Monuments Record lists a further thirteen sites within a 1km radius of the 1989 sites, ranging in type and date from prehistoric flints through to the medieval Chignal Hall, but with Roman discoveries featuring strongly. Apart from the villa site, the only other excavated site lay in the same quarry as the 1989 sites (Fig. 1). This was a small Iron Age and Roman enclosure in field no. 4327, excavated in 1986 (Bedwin 1987).

Excavation

An area of approximately 1,400m^2 was available for study on both sites A and B: adjacent areas had been badly disturbed by contractors' earthmoving equipment, and no features were visible. Within the study area, the surface of the glacial till (chalky boulder clay) subsoil had been scraped clean, but ridges caused by the machine tracks obscured the surface. The proportion of the surface which was clean enough to see archaeological features was between 50 and 60%. It follows that large or linear features could be traced, but small features such as post holes or small pits could have been missed. The identification of small features must therefore be seen as incomplete.

An initial examination of site A revealed that the visible features had fills of two distinct colours: grey, and orange/brown. The orange/brown features were cut by the grey features, and with the rather limited amount of time for excavation, this relationship was very useful in establishing the various phases of activity on the site. On site B, it was not possible to divide the site up into different feature types on the basis of their fills — all had a uniform grey fill.

Period discussion : Sites A and B

Period 1: Mesolithic to Iron Age

A number of residual mesolithic flints were found in medieval features. These indicate hunter-gatherer activity in what would have been a wooded riverside area in the mesolithic period. There were no mesolithic features. Other (undated) prehistoric flints have previously been found in the same quarry, possibly with associated pits (PRN 1943). Two residual sherds of Late Bronze or Early Iron Age pottery are an indicator of activity in the area, but whether they are merely from a manuring scatter or from some now unrecognisable domestic activity is difficult to say.

Period 2: Romano-British

There were no Romano-British features, but a considerable quantity of Romano-British tile was found in residual contexts in medieval features. The most likely explanation for this is that the material was carted out with manure from an adjacent Romano-British farm, was spread onto the fields, and subsequently became incorporated into the fill of later features.

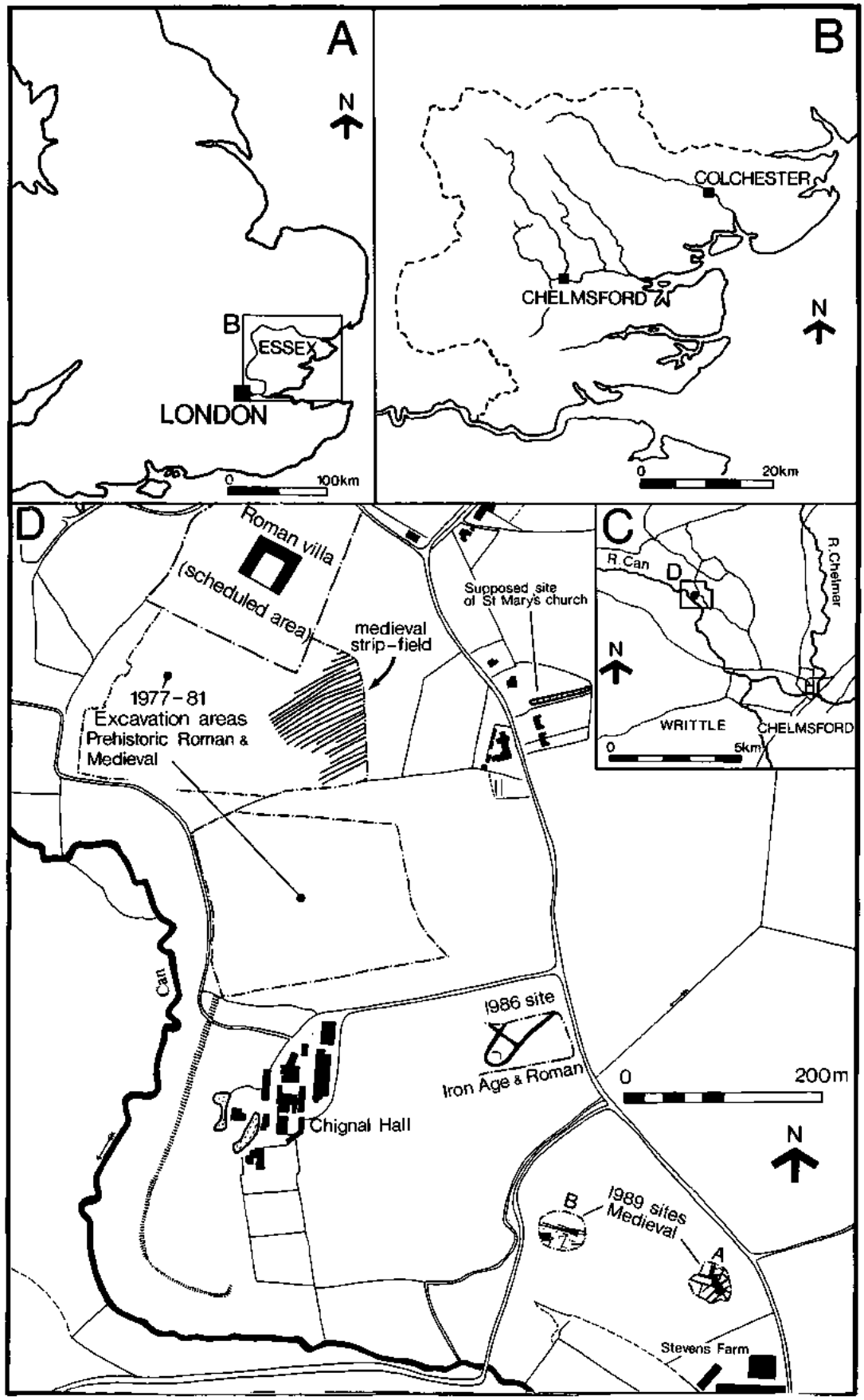

Fig. 1 Location of sites.

Period 3a: Tenth to Twelfth Century
Site A (Fig. 2)
Excavated remains A series of three parallel trenches (21, 23, 25: width 50-65cm, maximum observed length 42m) are interpreted as the furrows of a ridge-and-furrow field system. The single excavated section 18cm deep (Fig. 4, section 7) produced a sherd of prehistoric flint-gritted pottery. However, this is almost certainly residual. It is argued below that the furrow was a medieval feature.

Discussion Clarke (forthcoming) found a similar series of slots in his excavations south of the Chignall villa site (600m north-west of the 1989 sites). There, they covered an area of 0.69 ha, and were spaced between 2.9 and 6.5m apart (average, 4.76m). The alignment of Clarke's field system is precisely that seen again on site A (i.e. north-east to south-west). Clarke's site evidence only allowed him to prove that the field system dated to *c.* A.D. 360 or later, but he included it in his medieval period because of its similarity to other ridge-and-furrow systems which are generally accepted as medieval. The two field systems are shown together on Fig. 1. It seems sensible to suggest that they were both early medieval ridge-and-furrow systems. Fortuitously, the 1989 site evidence proves that the field system had gone out of use by the 13th century at the latest, when (site B) ditches were cut across an old arable field. It is not unreasonable to use the 1989 dating evidence to reinforce Clarke's (correct) dating, and to suggest that his field system is of a date comparable to the 1989 site ridge-and-furrow system, that is, broadly the 10th to the 12th century.

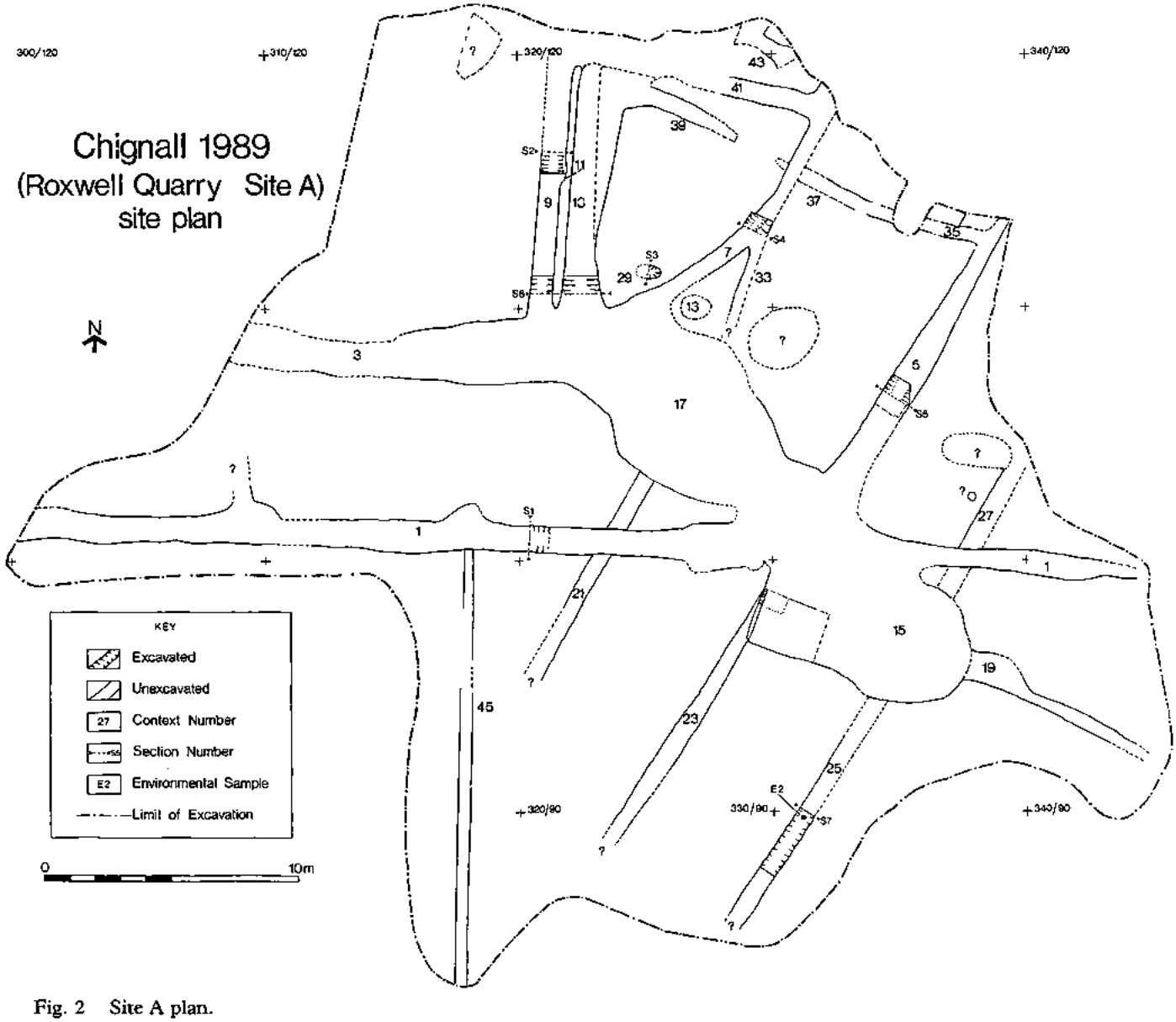

Fig. 2 Site A plan.

Site B (Fig. 3)

Excavated remains An 18' x 20' 8" (5.5 x 6.3m) timber building (99) was the main feature of site B in this period.

Despite the disturbance caused by contractor's machinery, the component parts of structure 99 were clearly visible. Several light showers of rain had softened the surface of the site sufficiently so that the area of structure 99 could be reasonably well cleaned up.

Structure 99 was a post-in-trench building. A north and a south wall were identified, with lines of six or more, and six or seven posts respectively. There was nothing to indicate a west or an east wall. It was not always possible to be certain whether the posts were free-standing, or in construction trenches. Although the generally dark grey fills of the posts were visible, the fill of the trenches was more difficult to make out. Thus on the north wall, construction trench 75 held two distinct posts, 71 and 73. The break between 73 and post 77 was obscured by a modern drain (89), but there was no apparent trench between 77 and 79. However, a construction trench could be seen around posts 79, 81, and 83. The south wall was far less clear. Post 61 and post 63 were certainly isolated posts. Traces of a possible construction trench were visible between post 67 and 51 (a slot probably created when two separate but adjacent posts were removed), but not clearly enough to state categorically that it existed. The length of 61 and 51 may suggest that they held two posts which were not as deep as, for example 71 and 73 on the north wall.

There were several features within the area enclosed by the two walls — 87, 91 and 93 — none of which were excavated.

Context 87 was possibly a post hole, 91 was cut by a modern drain (89), and 93 was of a size usually described as a stake hole. None of these features were particularly useful indicators of the internal arrangements of structure 99.

There were no finds from the fill of the construction trenches, the colour of whose fill was quite close to that of the natural subsoil. This must mean that the trenches were dug and quickly filled in, rather than standing open. By contrast, the fills of the posts were generally dark, and produced finds. The inference from this is that the trench digging coincided with the construction of the building, and the post holes were defined by the act of uprooting the posts from the trench when the building was demolished.

The only finds from the building were a sherd of Early Medieval Shelly Ware from slot 51, small pieces of residual Romano-British tile from 61, 71 and 81, daub fragments from 81 and 83, and oyster shell fragment from 61. The 11th- or 12th-century date for slot 51 is the best dating evidence for the structure as a whole. Unfortunately, it is not possible to be certain whether context 51 dates to the construction or destruction of the building. On balance, the fact that the structure was primarily post-built it is more likely that 51 dates from the destruction of the structure, when two adjacent posts were removed.

The other major feature in this period was the triple ditch running east-west across the site (55, 57, and 59). The pottery from the north and south ditches was Early Medieval Shelly Ware, whose date centres on the 11th century, but the central ditch produced that pottery and also 13th-century glazed pottery. The simplest interpretation is that the two outer ditches (and possibly the central one) were contemporary with building 99, and that at least the central ditch was still open in the 13th century.

Discussion Structure 99: Measuring from post-hole 71 on the north wall to a similar position in 61 on the south wall gives structure 99 a width of precisely 18 feet (5.5m). The north wall was truncated by 85, and cannot be reliably measured, but the south wall (measuring from probable post positions rather than the rather arbitrary length of the trenches) gives a length of 20 feet 8 inches (6.3m). The one-metre (three-foot) gap between posts 77 and 79 on the north wall probably represents a doorway, and this is matched by a slightly wider gap in the south wall.

The fundamental problem with structures such as 99 is knowing whether the excavated remains form the whole of the original structure. The absence of any end walls could be taken to indicate that more of the structure originally existed, but has not survived.

The only group of comparable excavated structures in Essex of the same period as 99 of which a ground plan is available is from Springfield Lyons, 3km north-east of the centre of Chelmsford. Here a group of 13 structures dating to the 10th or 11th centuries has been examined. Three of the Springfield Lyons structures (C, D, N: Buckley and Hedges 1987, 26), are comparable to structure 99, though none are an exact match in size or construction. It is interesting to note that these were not the primary domestic buildings of the Springfield Lyons settlement, but the smaller ancillary structures such as barns, cart sheds, and animal houses (*ibid.* 27).

As for the materials from which it was built: the walls were of timber. Posts 71 and 73 suggest the use of roughly pointed timbers roughly 12 to 15cm thick (5 to 6 inches). Daub fragments suggest that the infilling material around the main wall timbers included daub. There were no medieval roof tile fragments from anywhere on the site, therefore a thatched roof can be envisaged.

The interpretation of such structures as 99 is difficult. To deal with the wider context of the building first, its proximity to a contemporary ridge-and-furrow field system (on site A) may suggest an arable function. By contrast, its proximity to the river (and possible meadow areas) may hint at a pastoral function. It is fair to say that the site evidence is not strong enough to

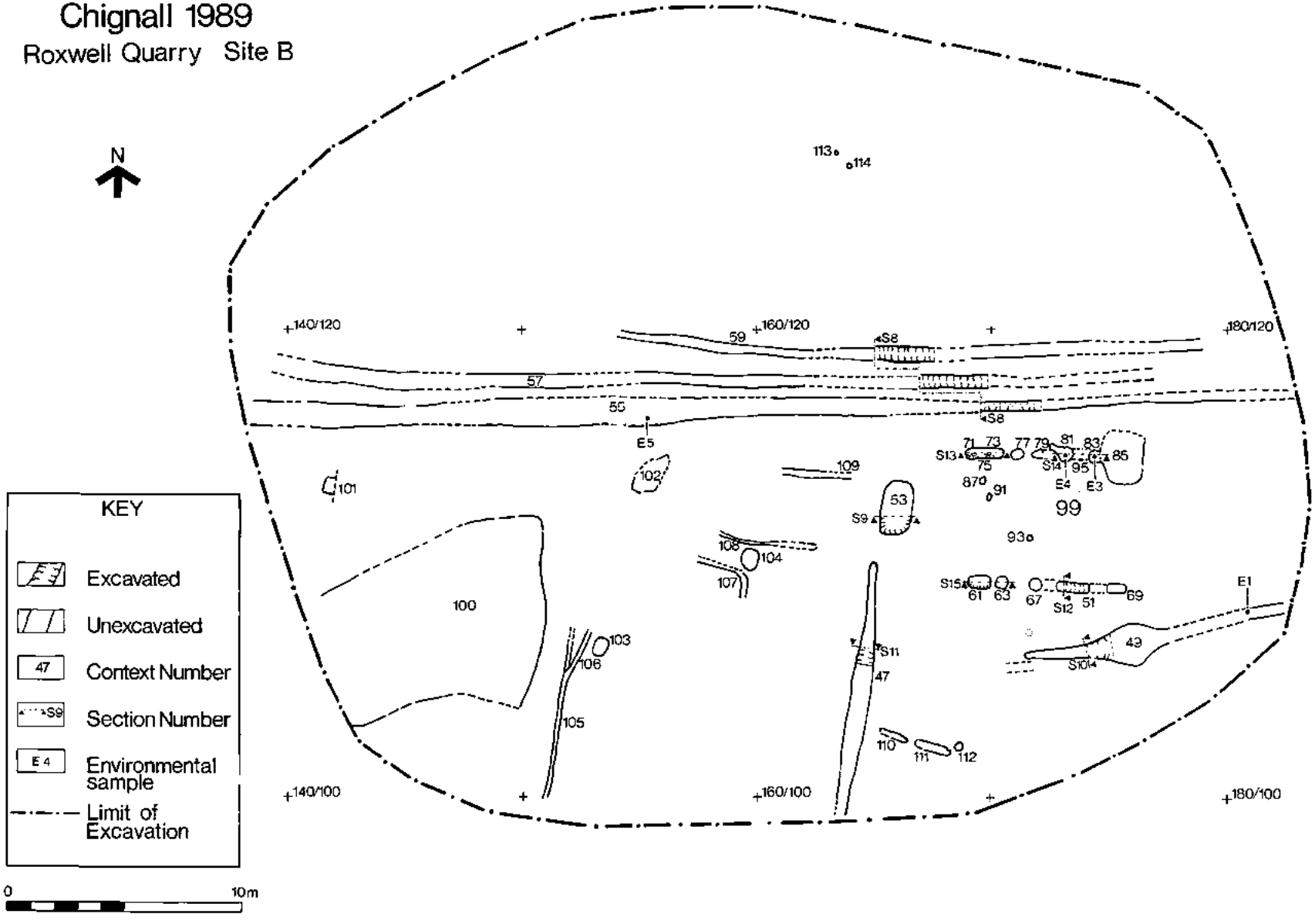

Fig. 3 Site B plan.

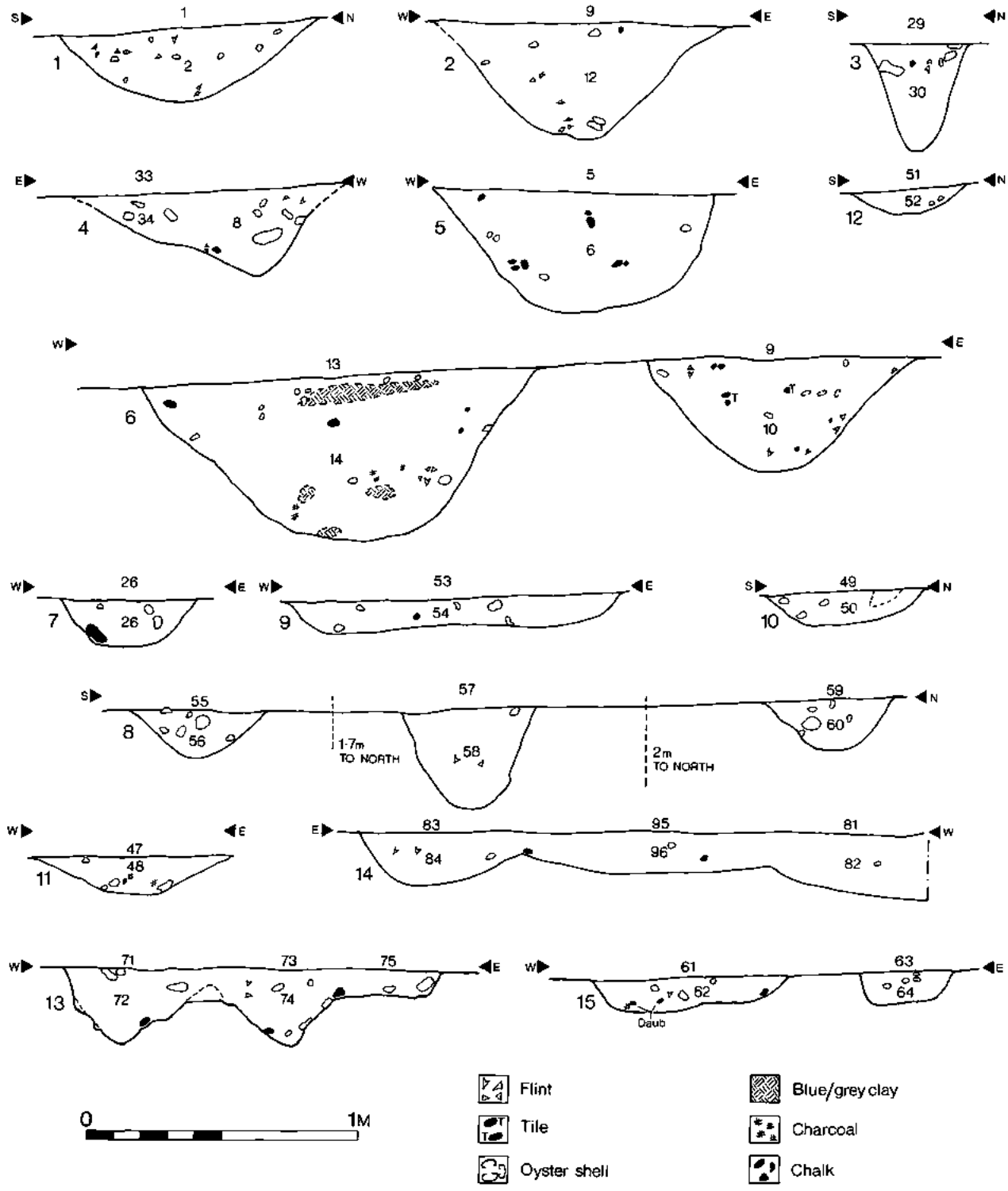

Fig. 4 Sections. Section 8 is staggered: the central ditch section was 1.7m further north than the southern ditch section, and the northern ditch section was 2m north of the central ditch section.

rule out either of these functions, and that a "mixed economy" is the closest we can come to describing its exact economic role. As for the building itself, it has been noted above that comparably sized structures at Springfield Lyons were probably ancillary farm structures rather than houses. This in itself may lend weight to interpreting 99 as a farm building. Although interpretation is made more difficult by plough damage to the site, one might also suggest that the absence of anything like a hearth, or any great quantities of domestic debris also hint at a non-domestic function. Again, the site evidence is not strong enough to support definitive statements, but the balance of the evidence suggests that 99 was not a house, but a farm building such as a barn or a shed.

The triple ditch: This was too shallow to have been a defensive feature, and (if the central ditch is later) the two outer ditches are surely too close together to have been the ditches of a trackway. The triple ditch is thus best seen as a boundary feature. Presumably the soil dug from the ditches was heaped up into a bank between them, but no evidence of this has survived centuries of ploughing. Double-ditched boundaries are known elsewhere. At Springfield (Chelmsford), Milton excavated a double ditch dated to the 11th or 12th century (Milton 1985). The Springfield ditches were *c.* 3.4m apart, and slightly wider than Chignall. At Wollaston, Northamptonshire, a double ditch served as a manorial boundary (Hall, undated, 12).

If the triple ditch is accepted as a boundary, the question arises — boundary to what? As the parish boundary follows the nearby River Can, it can be excluded from the reckoning. Similarly, the line of the triple ditch is not followed by any recent field boundaries. Perhaps the best interpretation is that it is a boundary between two farms or estates: the southern one containing building 99 and arable fields represented by the ridge-and-furrow on site A, and the northern one belonging to an unknown farm, but probably Chignal Hall or its predecessor.

Period 3b: Thirteenth Century

Site A (Fig. 2)

A double ditch (1, 3) was cut across the (now) defunct ridge-and-furrow system. The eastern end of the double ditch turned north as 5/7, whose course seems to have been influenced by the position of furrows of the previous period (23). The double ditch may best be interpreted as a trackway.

An unexcavated area of grey soil (15/17), probably to be interpreted as shallow ponds, cuts across the trackway. If the primary function of the trackway was to provide an access route, then the presence of 15/17 (and two ditches — 9/13 — apparently draining into it) must have made the trackway a much less attractive option. Although the absence of any visible "cut lines" here (as elsewhere on the site), makes it impossible to be certain whether the features are all contemporaneous or divisible into phases, the balance of probability suggests that 15/17 represents a later event than the digging of the trackway ditches, but one not separated by a very long period of time, to judge by the pottery evidence.

The presence of fragments and flecks of daub in ditch 3 (but not in 1) allows a further speculation on the function of the trackway. The daub might derive from the demolition of a structure which once stood to the north of ditch 3 (i.e. within the area enclosed by 1/3, 5/7). To go beyond this is to expect too much from the evidence, but if there were such a building, it could not have lasted long, because ceramic evidence suggests that the whole sequence of events (ditches cutting across arable, building of some kind erected, ponds and drains cutting across the ditches) occurred in the 13th century.

Ditch 45 was probably a boundary ditch, running south off the main trackway.

Site B (Fig. 3)

There was not much activity on site B in this period. The only features which could have been open were the central ditch of the triple ditch, and ditch 49 (south of building 99). The lack of datable material makes it difficult to say whether building 99 was still in use.

Period 4: 18th to 20th centuries

Two drains, presumably agricultural, cut across site B. The site had been arable for some time, prior to the recent quarrying operations.

Specialist reports

Iron

by Hilary Major

There is nothing in this group which is worth comment (details in archive).

Slag

by Hilary Major

The material from context 8 could be associated with iron working; it is unlikely that the material from contexts 14 and 58 was (details in archive).

Flint

by Robin Holgate

Six flakes were recovered from medieval ditch or post-hole fills: a flake (context 60) and a core (context 58) from site A and a flake (context 30), a blade fragment (context 10) and a piece of fire-fractured flint (context 4) from site B. With the exception of the flake from site A, which was flaked from a nodule of gravel flint and could be of any date, the flints have a blue and white patination and probably date to the mesolithic period. Both blade fragments and the flake were detached from good-quality nodular flint using soft hammers, whilst the core has two opposing platforms and was carefully prepared for detaching small blades and bladelets.

The site, situated close to the River Can at what would have been the forest margin in the mesolithic period, would have been an ideal place for hunter-gatherers to procure food and other resources:

it could have been visited for this purpose on several occasions, possibly from a camp or task-specific site situated elsewhere in the valley.

Lava
by Hilary Major
Small fragments of lava quern are often difficult to date, if there are no distinctive features present. The quern fragment from context 14 has a pecked grinding surface, which suggests that it is post-Roman; Roman querns usually have grooves on their grinding surfaces (details in archive).

Prehistoric pottery
by Nigel Brown
This group is too small for any sensible assessment, although Late Bronze/Early Iron Age is the most likely date for it.

Medieval pottery
by Helen Walker
Summary
A total of 196 sherds weighing nearly 1.4 kg of Saxo-Norman, early medieval and medieval pottery was excavated. All the pottery from site A belongs to period 3b and dates to the 13th century while the pottery from site B belongs to period 3a and is mainly 10th and 11th century. The sites were not related stratigraphically.

Method
The pottery has been classified using Cunningham's typology (Cunningham 1985, 1-4), Cunningham's fabric numbers are quoted in this report. The pottery has been summarised by means of a table (Table 1). Illustrations are shown in fabric number order (Fig. 5).

Fabrics

Fabric 10 St Neots ware; a Saxo-Norman ware. It is soft, containing finely divided, evenly distributed fossil shell naturally present in the clay. Examples generally have a black core and light brown or purplish surfaces, although some sherds are dark grey throughout. It has been found in 9th-century levels and was in full production by the early 10th century, probably continuing into the 12th century (Hurst 1976, 320-23). However by *c.* 1100 an increasing amount of sand temper was used (Haslam 1978, 11). As all the examples here contained only shell they are unlikely to be later than the beginning of the 12th century.

Fabric 12A Early medieval shell-tempered ware, this has an added tempering of crushed shell, usually oyster. Drury (forthcoming) suggests an extreme date range of 10th to perhaps mid 12th century for this fabric in central Essex. However, at Shoebury in south-east Essex, shelly-ware cooking pots continue into the early 13th century (Walker forthcoming). Therefore it is an extremely long-lived fabric, although presumably it underwent some changes through time. A possible early type of Fabric 12A was found on site B (described in the text). Fabric 12A was also found on site A; one sherd contains small quantities of crushed calcined flint as well as shell. Fabric 12A from site A tends to be grey-brown with oxidised surfaces or margins.

Fabric 12B Early medieval shell-with-sand-tempered ware. Nine sherds also contain crushed flint. Colour is typically dark grey, usually with oxidised surfaces except for some flinty sherds which are red-brown with dark surfaces. The date range is probably similar to that of Fabric 12A.

Fabric 12C Early medieval sand-with-superficial-shell-tempered ware. Again, some of the material also contains crushed flint (14 sherds). Colour varies greatly; from bright orange to dark grey. Amongst this fabric are examples similar to Mill Green coarse ware, in that

Table 1: Quantification of Medieval Pottery by context, fabric and sherd count.

AREA A												
Fabrics	10	12A	12B	12C	13	13st	20	20C	21	22	35	Comments
Feature												
Ditch 1	-	-	1	4	1	-	-	-	1	-	-	includes flinty Fabric 12B
Ditch 3	-	1	-	-	-	-	-	-	-	-	-	
Ditch 5	-	-	1	7	2	-	-	4	-	-	5	includes Mill Green-like Fabric 12C
Gully 7	-	-	2	-	1	-	-	-	-	-	-	
Ditch 9	-	-	1	3	2	-	-	-	-	-	-	parallel to Ditch 13
Ditch 9	-	3	2	7	2	1	1	-	2	-	-	inc. examples flinty Fabrics 12C, 13, 21
Ditch 13	2	5	10	15	6	4	-	12	9	1	5	inc. flinty Fabric 12A, 12B, 12C, & Mill Green-like Fabric 12C
Pit 15	-	-	-	4	9	-	-	5	-	-	2	surface find
Pit 17	-	-	-	-	-	-	1	-	-	-	-	flinty Fabric 12C
Gully 41	-	-	-	1	-	-	-	-	-	-	-	
Pit 97	-	-	-	-	-	-	-	-	-	1	-	
AREA B												
Feature												
Ditch 47	1	5	-	-	-	-	-	-	-	-	-	
Ditch 49	1	3	2	-	-	-	-	-	1	-	-	"smoothed" Fabric 12A
Slot 51	-	1	-	-	-	-	-	-	-	-	-	as above
Pit 53	1	7	-	-	-	-	-	-	-	-	-	as above
Ditch 55	1	1	-	-	1	-	-	-	-	-	-	as above
Ditch 57	1	3	-	-	-	-	-	-	1	-	-	as above
Ditch 59	-	4	1	-	-	-	-	-	-	-	-	

they tend to be oxidised and contain highly polished sub-rounded sands. Twelve sherds resemble Mill Green coarse ware. Fabric 12C was probably contemporary with the other shelly wares.

Fabric 13 Early Medieval ware. This has a very coarse sand tempering and usually possesses a light grey core with red-brown surfaces; it is thought to have merged with the medieval coarse wares *c.* 1200 (Drury, forthcoming).

Fabric 13 St Early Medieval "Stansted ware". This was first recognised at Molehill Green, Takeley, Stansted Airport, (Walker in prep.); it is tempered with abundant, ill-sorted, sub-rounded, usually white, grey or colourless quartz with a size range of 0.3mm to 1.5mm across. It always has a thick core with an oxidised external surface. Two examples have a green splashed glaze. As at Stansted, glazed sherds are always more highly fired with bright orange surfaces and blue-grey cores. The date range is unknown but it resembles pottery from Ascot Doilly, Oxfordshire (Jope and Threlfall 1959, 256-264) which is dated 1140 to 1170, perhaps lasting to the early years of the 13th century.

Fabric 20 Medieval coarse ware, spanning the 12th to 14th centuries.

Fabric 20C Mill Green coarse ware, described by Pearce *et al.* (1982, 289-92). It is tempered with moderate, clear and brown, polished sub-rounded quartz sand and tends to be oxidised, unlike other medieval coarse wares which are usually grey.

Fabric 21 Sandy orange ware; any medieval locally made, sand-tempered oxidised ware.

Fabric 22 Hedingham fine ware, dating from the ?mid 12th to end of the 13th century.

Fabric 35 Mill Green fine ware; described by Pearce *et al.* (1982, 266-289). It was imported into London from the later 13th to mid 14th century, although the industry may have been in existence before trade to London began.

Fabrics 12, 13, 20, 21 and 22 are described by Drury (forthcoming); see also Cunningham (1982, 351-67).

The pottery from Area B

Area B is considered first because it produced the earlier pottery. The majority of excavated contexts produced pottery, albeit in small quantities. A total of 35 sherds weighing 141g was excavated; sherd size was small. Shell-tempered ware (Fabric 12A) is the most frequent fabric; St Neots ware is also well represented. One St Neots-ware jar rim is present (Fig. 5.2). Undiagnostic sherds of sand-and-shell-tempered ware (Fabric 12B), Early Medieval ware and sandy orange ware were also found.

When examined more closely, sherds of Fabric 12A from contexts 50 to 58 are similar; the pottery has a crude handmade appearance, it is uneven in thickness but with smooth, almost burnished surfaces, as if wiped with a rag or with the thumb. Colour is dark grey throughout or dark grey with oxidised surfaces. One rim, perhaps from a cooking pot, is illustrated (Fig. 5.3). The fabric of the rim is slightly sandy but if the vessel was coil built there is no reason why tempering could not vary within the same vessel. This pottery either represents a sub-group within Fabric 12A or the sherds all belong to the same vessel, in which case ditch 49, slot 51, pit 53 and ditches 55, 57 were all open at the same time. Contexts 48 and 60 also produced Fabric 12A but the sherds are so small it is not possible to say whether they are of the "smoothed" type. There is a very small fragment of a shell-tempered, simple everted rim in context 48. Also in this context and fabric is a body sherd showing shallow horizontal grooves.

The most accurate dating is provided by the St Neots ware dating from *c.* 900 to *c.* 1100. The sherds of "smoothed" Fabric 12A with the simple everted rim could easily fit in with this date as could Fabrics 12B and 13, although they may not have appeared until the 11th century (Drury forthcoming). However, the sherds of sandy orange ware in ditches 49 and 57 must be later. A small glazed, (unmarked) sherd was found in ditch 49 and an unglazed, very abraded sherd was excavated from ditch 57 (it is too sandy to be Roman). Unless the sherds are intrusive then these ditches are unlikely to be earlier than 12th to 13th century.

The pottery from Area A

All excavated features produced medieval pottery except for pit 29, ditch 33 and furrow 25, which is prehistoric. A total of 145 sherds weighing 1026g was excavated, the largest group came from ditch 13 (sixty-nine sherds, weighing 503g).

A few body sherds of St Neots ware and Fabric 12A were found in parallel ditches 9 and 13, although the "smoothed" version of

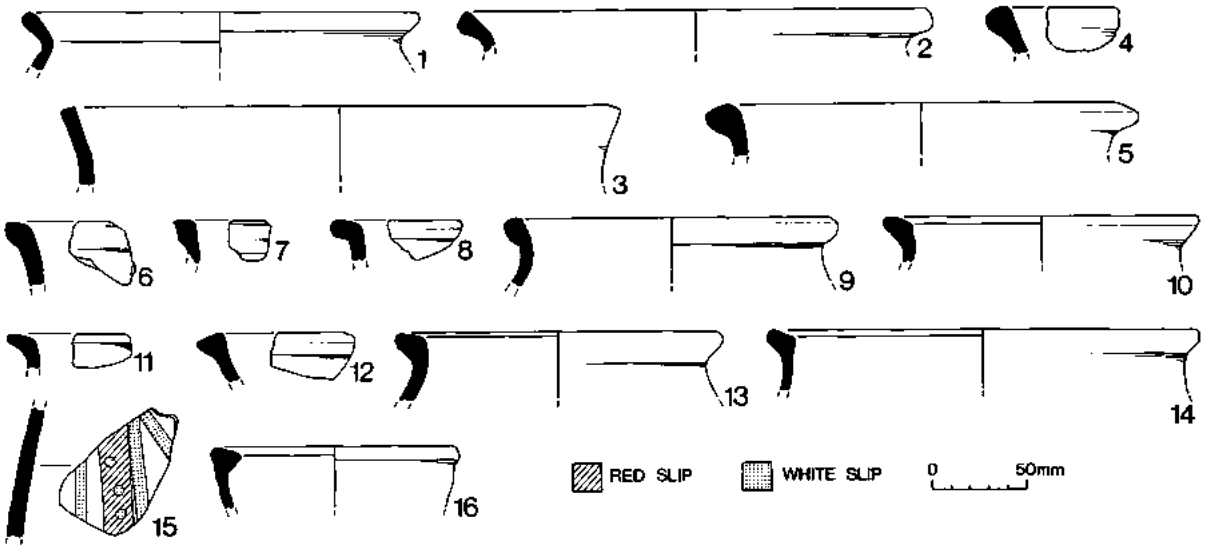

Fig. 5 Medieval pottery.

Fabric 12A is not present here. Shell-and-sand-tempered ware (Fabric 12B) is widely distributed throughout the site; three cooking pots with beaded rims are the only forms present (Nos 4-6). Sand-with-superficial-shell-tempered ware (Fabric 12C), is also widely distributed and is by far the most frequent fabric; forms comprise five cooking pot rims and a bowl rim (Fig. 5, 7-12). The cooking-pot rim types are very varied and a single source for this fabric type seems unlikely. Most of the rims are fairly developed, some are comparable to examples from Pleshey Castle period 1, dated *c.* 1200 (Williams 1977, fig. 31.7, 10; comparable to Nos 8 and 10 respectively). Form No.9 has a beaded rim and may be earlier, perhaps 12th-century.

Early Medieval ware is well represented but no forms were found. Sherds of Stansted ware were excavated from parallel ditches 9 and 13; one unglazed sherd from context 12 (ditch 9) displays incised wavy line decoration and there are three sherds of glazed Stansted ware in context 14 (ditch 13).

Only two sherds of medieval coarse ware were found, although Mill Green coarse ware is relatively common. One sherd of Mill Green coarse ware is slip-painted and one is slip-coated; types of surface treatment usually only found on the fine ware.

Nearly all the sandy orange ware came from context 14; again there are no forms but two sherds display cream-slip painting under a plain lead glaze. Another sherd exhibits what appears to be Rouen style decoration (Fig. 5.15). Rouen jugs (from northern France) were copied in London-type ware during the early to mid 13th century (Pearce *et al.* 1985, 19) so perhaps this sherd has a similar date range.

There is a single sherd of Hedingham ware in ditch 14. Examples of Mill Green fine ware were found in three features, sherds include a strap handle with cream slip-coating beneath a mottled green glaze and a thumbed jug base. From the table it can be seen that Mill Green ware always occurs with early medieval pottery dating to *c.* 1200; this presents something of a problem as Mill Green ware is thought to be more recent. It does not appear in Thames waterfront deposits until the later 13th century. The early medieval pottery is unlikely to be residual as there seems to be only one medieval phase, which leaves three possible explanations; the features may have had more than one fill not noted by the excavator; early medieval wares may have lasted well into the 13th century or Mill Green ware is earlier than hitherto realised. Because of this uncertainty, the sandy orange ware Rouen copy provides the best dating of early to mid 13th century. It is difficult to say whether all features were infilled at the same time; fragments from the same vessel (a flinty Fabric 12C base) were found in pit 15 and ditch 13, so these two features at least were contemporary. (Unless the sherds were from near the surface in which case they could have been moved by later ploughing). No other cross-fits were noted.

Catalogue of Medieval Pottery (Fig. 5)

1. Jar rim : St Neots ware; abraded on inside surface. *Unstratified*
2. Jar rim : St Neots ware; reduced, dark brown-grey. *Context 50 (Ditch 49)*
3. Rim: Fabric 12A; dark grey fabric with lighter red-brown patches on surfaces; some sand; surface rubbed or burnished; perhaps from a cooking pot, but rim too uneven to measure diameter, or find accurate orientation. *Context 54 (Pit 53)*
4. Cooking pot rim : Fabric 12B; grey core, oxidised surfaces; abraded. *Context 4 (Ditch 3)*
5. Cooking pot rim : Fabric 12B; fabric also contains crushed flint; red-brown with darker surfaces. *Context 14 (Ditch 13)*
6. Cooking pot rim : Fabric 12B; fabric also contains crushed flint; orange-brown with darker patches on surfaces. *Context 14 (Ditch 13)*
7. Cooking pot rim : Fabric 12C; grey core, orange external margin, brown internal margin, darker surfaces. *Context 2 (Ditch 1).*
8. Cooking pot or bowl rim : Fabric 12C; oxidised, pale orange throughout; resembles Mill Green coarse ware but with added shell. *Context 6 (Ditch 5).*
9. Cooking pot rim : Fabric 12C; grey core, red-brown surfaces; fire blackened on rim. *Context 10 (Ditch 9)*
10. Cooking pot rim : Fabric 12C; dark red-brown throughout. *Context 10 (Ditch 11)*
11. Cooking pot rim : Fabric 12C; fabric also contains crushed flint; dark red-brown with paler surfaces. *Context 14 (Ditch 13)*
12. Bowl rim : Fabric 12C; fabric also contains crushed flint; thick grey core, pale orange surfaces. *Context 16 (Pit 15)*
13. Cooking pot rim : Fabric 13; dark grey but with salmon pink patches; very small amount of shell. *Unstratified*
14. Cooking pot rim : Fabric 20; grey core, red-brown margins, darker surfaces. *Unstratified*
15. Sherd from jug : Fabric 2l; showing Rouen style decoration. *Context 14 (Ditch 13)*
16. Jug rim : Hedingham ware; splashes of plain lead glaze. *Context 98 (Pit 97)*

Pottery from isolated pit 97

Only one sherd was excavated, a Hedingham ware jug rim (No. 16). The rim form is typical of this ware.

Unstratified Pottery

Found unstratified were a St Neots-ware jar rim (No. 1); an Early Medieval ware cooking pot rim of a type perhaps dating to c. 1200 (No. 13) and a medieval coarse ware cooking pot rim perhaps belonging to the early to mid 13th century. Not illustrated is part of a sandy orange ware green-glazed jug handle; its fabric contains crushed flint as well as sand.

Roman tile

by Hilary Major

All the tile from the site, barring two unstratified pieces, is Roman, and includes pieces of all the usual tile types — *tegulae*, *imbrices*, one piece of thick "bonding tile", and two pieces of box flue tile, one with knife-cut keying, the other combed. Given the small amount of material, it was not considered worthwhile examining the fabrics closely, but it may be observed that only two pieces contained chalk fragments, a *tegula* flange from context 98 and an unstratified piece of spall.

Daub

by Hilary Major

The daub was in a rather crumbly reddish orange fabric with common lumps of chalk up to 6mm across, a few small pieces of grit, and rather sparse vegetable inclusions. A few fragments, particularly from context 6, contained more abundant vegetable inclusions.

A total of 190 fragments was examined. The average weight was only 2.2g so it may be appreciated that most of the pieces were small, and little can be said about this material, save that it was present, and very fragmented (details in archive).

Animal bone

by Owen Bedwin

The bone assemblage amounted to 56 pieces, in highly fragmentary condition. Only 20 fragments could be identified with any certainty, and all were from medieval contexts. Species present were: *Ovis* (9); *Bos* (8); *Sus* (2); *Avis* (1).

The sample is too small for conclusions to be drawn about medieval diet or economy (further details in archive).

Shell

by Hilary Major.

Most of the shell was edible oyster (*Ostrea Edulis*). The majority of these shells were between 5 and 7cm in length, with a very few larger ones.

There were three other types of shell present; single examples of mussel and common whelk from context 14, and an unidentified shell from 16. I think the latter is probably *Lutraria* (European Otter

Clam), which is edible, and occurs buried in mud. The size can be up to 15cm long, but this specimen is only 6cm long.

Carbonised plant remains
by Val Fryer and Peter Murphy

Introduction
Five samples were taken: from ditch 49, furrow 25, and post holes 81 and 83, all of 10th- to 12th-century date, and ditch 55 (13th century).

Methods
The samples were processed on site by wet-sieving through a 500 micron mesh. The dried flots were sorted under a binocular microscope at low power. The plant remains extracted and identified are listed in table 2. Modern contaminants in the form of roots and seeds were present in most samples. Although molluscs were recovered from all samples, they were not present in sufficient quantities to be useful as ecological indicators. Occasional small mammal bones were present in samples 1, 2 and 4 but these were possibly modern contaminants. A single, small droplet of metallic slag or residue was present in sample 4.

Crop Plants
Cereal grains and chaff were present in all samples. Both grains and chaff were in poor condition, the grains having become puffed and distorted during carbonisation, while the chaff was fragmented and abraded.

TABLE 2: Carbonised plant remains

CONTEXT NO.	50	26	84	82	56
SAMPLE NO.	1	2	3	4	5
Cereal indet. (caryopses)	3	1	8	13	3
(sprouts)	1	-	-	3	-
Triticum spp. (caryopses)	1	8	-	4	1
(rachis internodes)	1	1	-	4	-
(glume bases)	-	-	-	5	-
(spikelet bases)	-	1	1	-	-
(spikelet frags.)	-	-	-	3	-
Triticum spelta L. (glume base)	-	1	-	-	-
Triticum aestivum L. (rachis nodes)	1	-	-	1cf	-
Avena sp. (awn frags.)	-	-	-	4	-
Bromus mollis/secalinus (caryopses)	-	-	-	3	-
Graminae indet. (caryposes)	1	-	1	9	-
(culm nodes)	-	2	1	-	-
Brassica sp.	1	-	-	-	-
Chenopodiaceae indet.	1	-	-	3	1fr
Atriplex sp.	-	-	-	3	-
Vicia/Lathyrus sp.	-	1cf	-	-	-
Umbelliferae indet.	-	-	1	-	-
Rumex sp.	-	-	-	1	-
Corylus avellana L.	1fr	-	-	-	-
Euphrasia/Odontites sp.	-	-	1	-	-
Anthemis cotula L.	-	-	3	5	-
Indeterminate seeds	-	-	1	6	-
Indeterminate buds	1	-	-	-	3
% flot sorted	25	100	100	100	50

1: *Wheats.* Grains or chaff were present in all samples. A single glume base of *Triticum spelta* (spelt) was recovered from sample 2 and single rachis nodes of *Triticum aestivum* (bread wheat) were found in samples 1 and 4.

2: *Oats.* Four awn fragments of *Avena sp.* (oats) were recovered from sample 4. In the absence of floret bases it was not possible to determine whether these were from a cultivated or wild variety.

The Wild Flora
Carbonised seeds and buds were present in all samples, generally at a low density. A single fragment of *Corylus avellana* (hazel) nutshell was found in sample 1. All the seeds present were from common segetal species and included *Bromus mollis/secalinus* (brome), indeterminate Gramineae (grasses), *Brassica* sp. (cabbage family), indeterminate Chenopodiaceae (fat hen family), *Atriplex* sp. (orache), *Vicia/Lathyrus* sp. (vetch), Umbelliferae (cow parsley family), *Rumex* sp. (dock) and *Euphrasia/Odontites* sp. (eyebright/rattle). The clay soil of the site is reflected by the presence of *Anthemis cotula* (stinking mayweed).

Discussion
With only five samples producing a low density of carbonised material, it is difficult to draw any firm conclusions. Although all the material present is probably the result of cereal crop processing, there is nothing to indicate which specific stage of the processing is represented. At such low densities, it is unclear whether this process was being carried out on site.

Discussion and conclusions

Prehistoric
The earliest sign of activity is provided by a residual group of mesolithic flints: an indicator of the presence of mesolithic hunter-gatherer groups exploiting the riverside and forest-fringe resources.

Roman
In the Roman period, a number of pieces of tile found their way to both the 1989 sites. They were almost certainly carted out in manure from the Chignall Roman villa site (0.75km to the north west). The implication of this assumption is that the area of the 1989 sites was arable in the Roman period.

Post-Roman to tenth century
There is no evidence for any activity on the sites in this period. A similar picture has emerged from the excavations south of the nearby villa site (Clarke forthcoming). It is reasonable to suggest that a consequence of this lack of activity would have been the regeneration of woodland over the Roman arable farmland suggested above.

Tenth to twelfth century
The focus of interest in this period is the small timber structure (99) on site B, which lay in a paddock defined by gullies. The area west of the building could have contained a pond or animal watering hole. In view of the post-Roman regeneration of woodland proposed above, this must be seen as a period of expansion and assarting.

With no evidence to the contrary, site B is best interpreted as part of an agricultural establishment. The arable field (site A) is adjacent to it, and therefore probably to be associated with it. However, the proximity of both sites to the river means that a pastoral element in the function of this farm (meadows close to the river) is very likely. A mixed farming economy was probably in operation here.

The thirteenth century

In the 13th century, ditches were cut across the arable field on site A. Apart from the obvious conclusion that the arable field was now defunct, this points to a considerable reorganisation of the landscape, an impression strengthened by the fact that no later field boundaries follow the line of triple ditch. A building of some kind may have stood on site A (within the ditched area) but if so, it probably did not survive the 13th century.

The fate of the site after that date is unclear. In the case of this farm at least, arable farming ceased to be viable, and the land was either given over to pastoral use, or was abandoned.

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Site work was by Stewart MacNeill, David Schofield, and the writer. Original photographs and plans were by the writer. Publication drawings were by Stewart MacNeill, Alison McGhie and Nick Nethercoat.

This is a summary of the full level III Archive report, which should be consulted for further details (copies are held in the Essex Sites and Monuments Record in the Archaeology Section, Essex County Council, County Hall, Chelmsford, and with the finds in the Chelmsford and Essex Museum).

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A medieval sgraffito-decorated jug from Mill Green

by Beverley Nenk

with a neutron-activation analysis report by Michael Hughes

This article describes an unusual medieval anthropomorphic jug with sgraffito decoration in the collections of the British Museum (1899,5-8,33; Hobson (1903), B117; Fig. 1). The jug was found in London in the 19th century, and neutron activation analysis suggests it is a product of the pottery kilns at Mill Green (Christy and Reader 1918; Sellers 1970; Eddy 1980). It is one of a number of sgraffito-decorated vessels found in London and Essex.

Description

The fabric is a fine, sandy ware, orange-brown in colour, and conforms to the description of Mill Green fineware (Pearce *et al.* 1982, 277-9). The lower part of the jug is conical in shape, a common form among Mill Green jugs found in London (*ibid.*, 279), but has a constriction at the waist and a slightly flaring neck. The strap handle is attached to the jug by a plug inserted into a hole in the side of the vessel, smoothed over externally, and supported with extra clay. It is unclear whether the handle (hatched in the illustration in order to demonstrate the method of attachment) is wheel-thrown or hand-formed. The jug is knife-trimmed just above the base. The base is unthumbed and slightly concave, unusual features on a Mill Green jug, but also found on a squat jug from London (*ibid.*, 285, fig. 14, no. 35).

Decoration

Applied clay is modelled onto the jug to form a forked beard, distinctive capped sleeves, arms and hands, and a staff, held in the left hand. These features are luted on over lines scored in the clay, some of which are visible around the arms. The sleeves originally concealed the tops of the arms. An overall white slip covers the jug, including the underside of the base. The jug appears to have been dipped in slip, as the undersides of the capped sleeves are also coated, rather than having been slipped by hand (*ibid.*, 285). Details of the beard, sleeves and hands, and a row of five large buttons running down the front of the figure, are incised through the slip. Traces of lines representing the mouth and hair also survive. The external surface of the jug is covered with a mottled green-yellow lead glaze coloured by the addition of copper.

Date

The jug was found in London in the 19th century and acquired by the British Museum in 1898.[1] Mill Green ware found in London is dated to the period *c.* 1270-1350 (Pearce *et al.* 1982, 292). A date in the mid 14th century is suggested for the British Museum jug by details of the clothing, such as the tight-fitting sleeves (a cuff is indicated on the right arm) and the large buttons. Examples of similar clothing are found in manuscript illuminations of this period (Willett and Cunnington 1973, 55-7, figs 19c & d). The curious capped sleeves are unparalleled (F. Pritchard, pers. comm.). The forked beard is less closely dated: examples may be found in European art of the mid 14th century (Newton 1980), but the style was also fashionable at a later date (Willett and Cunnington 1973, fig. 48 b & d). The meaning of the figure with the staff, if any was intended, is unknown.

Discussion

The vessel belongs to the tradition of sgraffito-decorated pottery found predominantly in eastern and south-eastern England from the late 13th to 15th centuries, examples of which have been found in London and Essex.[2] Simple combed sgraffito decoration occurs on many Mill Green vessels found in London (Pearce *et al.* 1982, 285). A Mill Green sgraffito-decorated anthropomorphic jug from London (*ibid.*, 287, fig. 8, no. 16) also bears a modelled face and beard. The shape of the jug and its curving subsidiary handles differ from the British Museum jug, but both possess two applied, modelled arms. At Mill Green itself, sherds with sgraffito decoration formed a small proportion of the pottery found during the 1967 excavations, but nevertheless demonstrate that pottery with this type of decoration was produced there (E. Sellers, pers comm.). Among the sgraffito-decorated pottery found at Writtle (Rahtz 1969, 97, fig. 54, nos. 42-8), a fragment of a face-jug, dated *c.* 1400, is comparable in style (*ibid.*, 100, fig. 54, no. 48, Pl. VIB). The modelled face has a beard not unlike that on the British Museum jug. Elsewhere in Essex, sgraffito ware has been found at Maiden's Tye (Sellers *et al.* 1988, 189, fig. 10, nos 76-9), Chelmsford (Cunningham and Drury 1985, 64; E. Sellers, pers. comm.), Colchester Castle (Essex Fabric 21C; Cunningham 1982, 365, fig 27.38), Witham (Walker

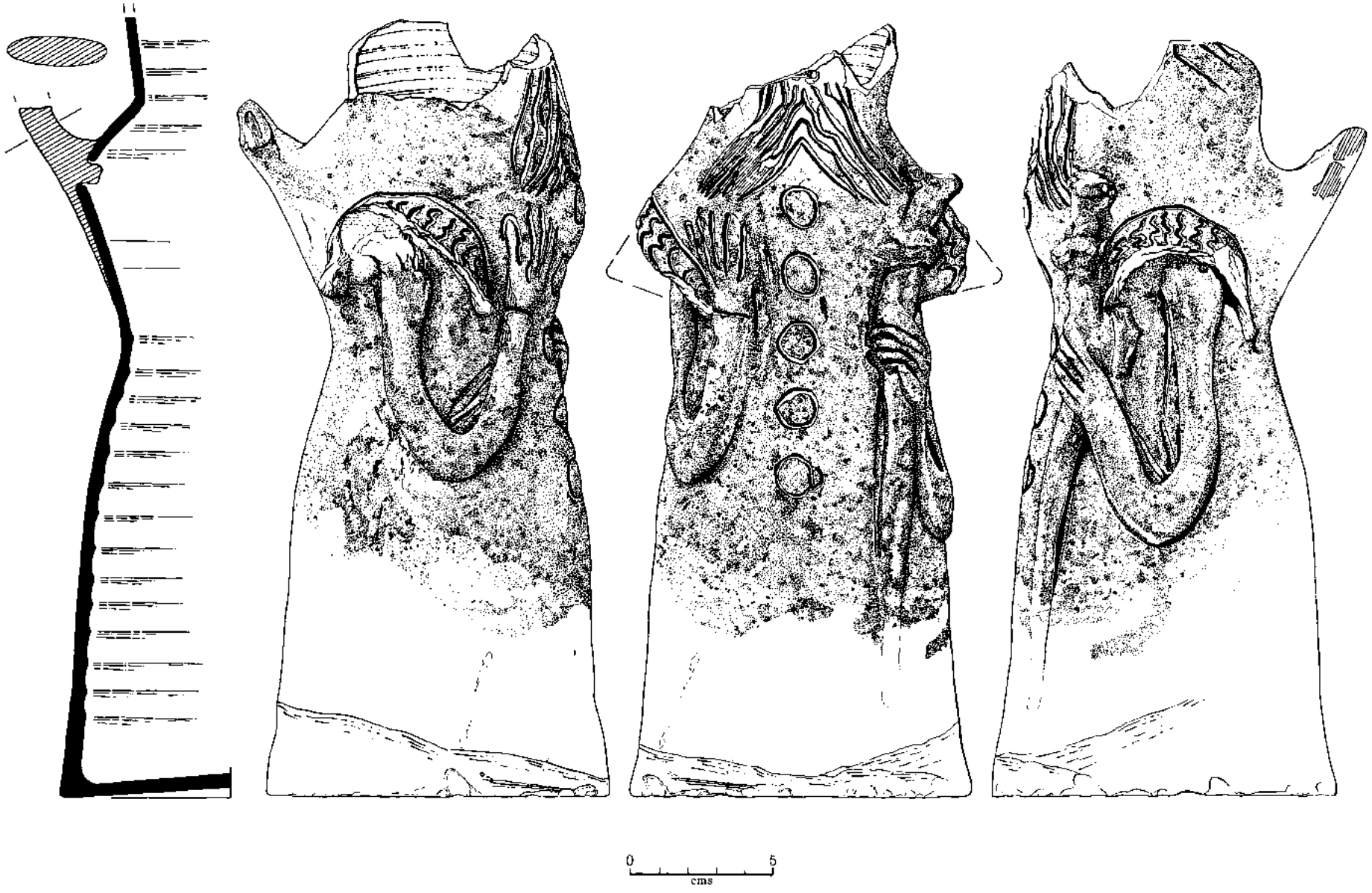

Fig. 1 *Mill* Green anthropomorphic jug with sgraffito decoration found in London (BM MLA 1899,5-8,33). Drawn by Lisa Humphrey, British Museum.

1988, 253-4) and Rivenhall (Drury forthcoming).

The pioneering studies of 14th- and 15th-century Cambridgeshire sgraffito-ware (Dunning 1950; Bushnell and Hurst 1953; see also Addyman and Biddle 1965, 114, fig. 16, Pl.V,B) remain the principal sources of reference for pottery with this type of decoration. A Cambridgeshire origin has been suggested for the Writtle sgraffito vessels (Rahtz 1969, 106), although differences in style exist between these and the Cambridge examples: modelled anthropomorphic details, for example, do not feature on the published examples from Cambridgeshire. Further fabric analysis is needed on the Cambridge vessels to enable comparisons to be made. Sgraffito-decorated pottery may have formed a proportion of the output of many industries where potters had access to white slip. Neutron activation analysis suggests that the British Museum jug was produced at the pottery kilns at Mill Green (see below), and other centres of production are also suggested: chafing dishes with similar applied, bearded heads are known in Colchester ware from Colchester Castle (Cunningham 1982, 365, fig. 28.39) and from Harwich (Essex Fabric 21A, unslipped; Walker 1990, 76, fig. 13.14), and a source other than Cambridgeshire is suggested for the Maiden's Tye sgraffito pottery (Sellers *et al.* 1988, 190) and for a large sgraffito-decorated jug or cistern from Chelmsford (Cunningham and Drury 1985, 64, fig. 40.9). In Norfolk, sgraffito-decorated pottery is known from North Elmham (Rigold 1962-3, 101, fig. 37, nos 10-13 & 15), for which Bawsey is suggested as a possible source. A common source of inspiration for these highly decorated products may have been the pottery produced in the kilns at Grimston; bearded face-jugs with similar incised features are found at Kings Lynn (Clarke and Carter 1977, 206-8, fig. 91) and at Norwich (Jennings 1981, 50-51, fig. 18). Grimston ware, widely distributed, may have been copied by the Mill Green potters, just as it was copied by the Colchester industry (Cunningham 1982, 365), and in the same way that the potters of Hedingham imitated the products of the Scarborough kilns (Cunningham 1983, 60-63, fig. 3). While the products of the Cambridgeshire industry indeed appear to have a wide distribution (Jennings 1981, 37-38, fig. 11, no. 242; Jennings 1985, 136; Cunningham and Drury 1985, 64; Clarke and Carter 1977, 220, fig. 98, nos 1-3), further work is required to identify other sources and distribution patterns of pottery with this type of decoration.

Neutron-Activation Analysis

by Michael Hughes

A neutron-activation analysis of the jug was carried out by the Department of Scientific Research at the British Museum to provide information about its place of production. This requires reference samples from the possible places where it may have been made: suitable samples were available from type-series from the Mill Green kiln-sites represented in the National Reference Collection of Medieval Pottery, housed in the British Museum, and from analyses in a current project by the Department on the post-medieval redwares and black-glazed wares of London and Essex (Bown, Hughes and Nenk forthcoming). Previous applications of this technique include Surrey whitewares (Cowell 1988) and imported Hispano-Moresque pottery (Hughes and Vince 1986; Gaimster, Nenk and Hughes 1991). The analytical technique used has been described elsewhere (Hughes, Cowell and Hook 1991).

The analysis results on the anthropomorphic jug were combined with the database of 83 samples of mainly post-medieval redwares and black-glazed wares from production centres at Stock and Harlow in Essex and from London and Surrey, together with similar pottery found on urban sites in London whose origin is to be determined. The database also included samples of medieval ceramics produced at the site of Mill Green near Ingatestone, Essex. The samples and the analyses are listed in Table 1. We routinely analyse for 23 elements in each sample, and fourteen of these elements were used in the statistical assessment. The elements not used include a few poorly-measured elements and others subject to changes during firing or after deposition, including barium, antimony, and arsenic. The calcium concentration in all the samples in Table 1 were below 0.5% so the clays are non-calcareous.

In order to interpret the neutron-activation analysis results, multivariate statistical methods were applied, namely cluster analysis and principal components analysis. Using logged data and Ward's method (Wishart 1987), cluster analysis finds clusters of samples with the same or very similar compositions, based in this case upon the concentrations of the fourteen elements indicated in Table 1. The results are more easily shown in a principal components analysis plot (Fig. 2) where some of the clusters of ceramics of similar composition in the redware project are shown, including those from Essex (Mill Green, Stock, Harlow) and from London (Woolwich; Pryor and Blockley 1978) and Surrey (Kingston and Cheam; Nelson 1981; Orton 1982). The figure only gives a general indication of the relationships between the samples; the cluster analysis which has been used to interpret the neutron-activation data is definitive in linking samples together, so the position of individuals on this figure should not be given undue weight. In this particular case the horizontal axis (PC1) is a measure of the total element concentrations (since it is correlated with most elements), so that samples with lower concentrations plot to the left and those with higher concentrations tend to the right. The vertical axis (PC2) is more strongly correlated with the heavy rare earth elements ytterbium and lutetium and with

No.	Description	Reg. no.	Na	K	Rb	Cs	Sc	La	Ce	Eu	Lu	Hf	Th	Ta	Cr	Fe	U	Sm	Yb	Tb
fineware:																				
1	Anthropomorphic jug	1899,5-8,33	.397	2.65	143.	8.78	18.4	44.8	93.8	2.13	.750	11.7	13.2	1.03	226.	4.64	2.5	9.27	3.65	1.20
2	Bung hole cistern	1989,4-3,21	.357	2.53	135.	8.95	18.6	44.7	97.5	2.00	.658	16.1	14.5	1.34	202.	5.84	3.3	9.03	4.12	1.23
3	Cistern rim	1990,10-13,1	.372	2.60	159.	10.8	20.8	41.9	91.0	1.83	.543	9.68	15.5	1.31	229.	5.67	3.0	8.28	3.44	1.10
4	Jug handle	1958,5-5,11	.342	2.61	130.	7.70	14.8	54.1	104.	2.08	.785	12.5	12.6	1.23	174.	4.38	3.3	12.0	4.54	1.28
5	Jug handle	1958,5-5,14	.301	2.28	98.8	5.17	13.8	47.8	77.7	1.37	.825	27.8	14.1	1.06	246.	4.02	4.2	9.37	4.58	1.04
6	Jug base	1958,5-5,16	.385	2.57	109.	6.89	15.1	39.9	62.5	1.05	.596	15.6	12.5	1.14	213.	4.42	3.8	6.81	3.53	.63
sandy ware:																				
7	Jug base	1989,4-3,15	.327	2.63	117.	7.71	14.2	44.9	74.1	1.35	.528	9.30	12.3	.88	146.	3.87	3.4	8.46	3.28	.80
coarse ware:																				
8	Cooking pot rim	1989,4-3,14	.263	2.08	90.5	6.43	12.5	36.9	59.2	1.01	.415	4.99	9.37	.89	116.	3.29	2.8	5.91	2.58	.69
9	Culinary mould sherd	1989,4-3,16	.252	1.96	91.3	6.04	11.4	34.2	56.1	1.11	.403	6.29	9.63	.82	124.	3.25	2.2	6.21	2.44	.66
Harlow kiln		average:	.396	3.02	112	6.88	15.1	30.8	53.5	.929	.416	10.1	10.4	.85	177	5.49	2.1	4.96	2.37	.59
(at Carter's Mead)		std. deviation:	.058	.23	5	.65	.5	1.1	2.6	.055	.021	1.1	.1	.07	11	.29	.2	.30	.15	.02
Woolwich kiln		average:	.206	2.31	140	7.70	15.7	36.9	85.2	1.76	.469	6.70	10.9	.99	157	4.46	2.3	7.45	2.80	1.05
(one sub-group)		std. deviation:	.018	.08	5	.66	1.2	.6	9.6	.10	.015	.36	1.1	.06	12	.38	.1	.24	.03	.03

Element identification: Na sodium*, K potassium, Rb rubidium*, Cs caesium*, Sc scandium*, La lanthanum*, Ce cerium*, Eu europium*, Lu lutetium*, Hf hafnium, Th thorium*, Ta tantalum*, Cr chromium*, Fe iron*, U uranium, Sm samarium*, Yb ytterbium* and Tb terbium*

Those elements marked with an (*) were used in the multivariate statistics.

Table 1 Results of neutron-activation analyses on anthropomorphic jug and pottery from Mill Green and other sites. (All results in parts per million except Na, K, Fe in per cent.)

tantalum, and negatively correlated with the alkalis sodium, rubidium and caesium — i.e. samples low in alkalis and high in the heavy rare earths are at the top.

A report on the post-medieval project will be published elsewhere, but in summary the results have shown that there is a broad distinction by chemical composition between production centres in Essex and London (Fig. 2). The Mill Green samples are fairly close in composition to those from Stock, which is not surprising since they are only about 5 km apart.

The cluster analysis places the anthropomorphic jug (**1**) into a cluster containing a sherd from a bung-hole cistern from Mill Green (**2**) and a sherd of a cistern rim from Stock (**3**). Also closely similar in composition to the jug are two fineware jug handles from Mill Green (**4,5**). No samples from production sites in London, such as Woolwich, come near in composition to the jug or the Mill Green samples, so the association between the jug and Mill Green is strongly suggested. The Mill Green samples show a division into small composition groups which seem quite significant despite the small sample numbers since the groups correlate closely with their fabric quality. For example, apart from **2,4,5,6** and **7**, the other samples from Mill Green are in the coarse fabric, and as Table 1 shows, the effect of diluting temper (which Pearce *et al.* 1982 have shown to be quartz using thin-section) on this fabric is to lower the concentrations of all elements compared to the finewares. Thus in Figure 2, the sherds in the fineware (**2,4,5** and **6**) and sandy (**7**) fabrics are further to the right on the principal components analysis plot (higher concentrations of elements) while the coarseware cooking pot (**8**) and culinary mould sherd (**9**; Hughes and Nenk 1992) are on the far left, forming another cluster. There is thus a strong correlation between fabric type and elemental composition, with the anthropomorphic jug nearest to the finewares from Mill Green.

It is not intended here to comment on the results of the other redwares plotted in Figure 2, although the indications are that composition subgroups exist for the kiln products of other redwares which can probably be explained by analogy with the Mill Green wares as representing different degrees of coarseness in the body fabrics. For contrasting with the Mill Green samples, the analyses of two groups of post-medieval redwares from Harlow and Woolwich are shown in Table 1, and are seen to differ in a number of elements.

In conclusion, the composition of the anthropomorphic jug is closely similar to ceramics made at Mill Green and strongly suggests that it was produced there. It also has the composition features of post-medieval redwares produced in Essex, including those made at Stock.

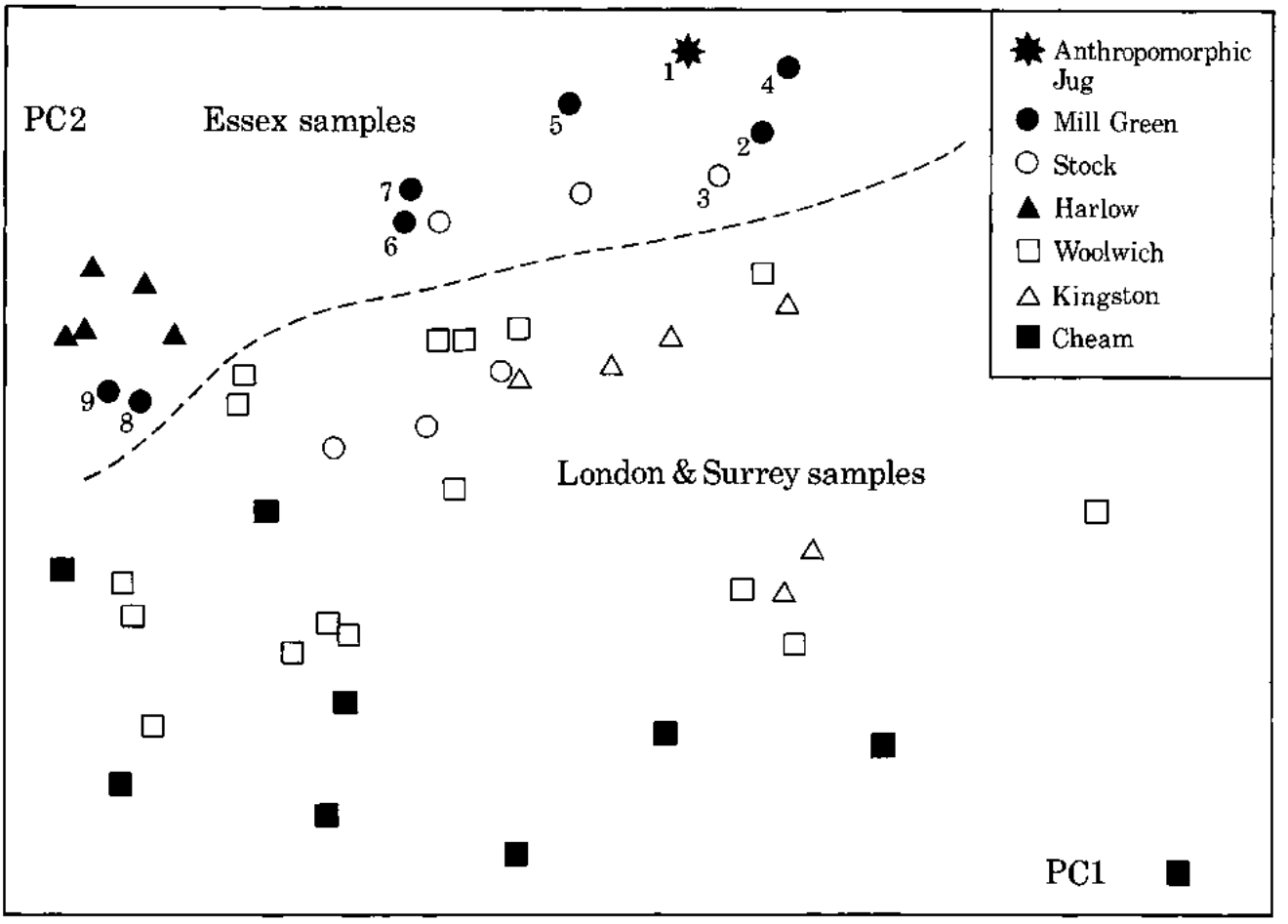

Fig. 2 Principal components analysis plot of neutron activation analyses of anthropomorphic jug and redware database. Numbers refer to list in Table 1. Drawn by Lisa Humphrey, British Museum.

Acknowledgements

Thanks are due to Elizabeth Sellers for providing information on sgraffito-decorated pottery from excavations at Mill Green, Lisa Humphrey for providing the illustrations, and Frances Pritchard for advice on details of clothing. We also wish to thank John Cherry, Deputy Keeper, Department of Medieval and Later Antiquities, for commenting on a first draft of this article, and Dr Sheridan Bowman, Keeper, Department of Scientific Research, for commenting on the scientific text.

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Notes

1. Sothebys sale, *Catalogue of the Collection of Antiquities and Works of Art, formed by the late Rev. S.M. Mayhew, FSA*, 8th-9th December 1898, possibly lot 298.
2. Sgraffito-decorated pottery was also produced at Rye, East Sussex (Vidler 1933, 1936), from *c.* 1300-1425 (Barton 1979, 219-21). The technique is also found on 'Guys'-type wares of the late 15th to 17th centuries, found in London and the south-east (Dawson 1979, 44-45, fig. 9, nos 127, 129 and 143; Pryor and Blockley 1978, 47, fig. 8, nos 10 and 14; Nelson 1981, 97-100, fig. 3, no. 17, fig. 4, no. 24).

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Mills and ferries along the lower Lea

by K.R. Fairclough

In 1678 John Holwell, a mathematician and astrologer who described himself as a philomath, issued a textbook, 'A sure guide to the Practical Surveyor'.[1] The purpose of this book was to provide step-by-step guidance, whereby detailed plans could be made of estates, roads or rivers, using simple instruments which Holwell called a semicircle and a wheel (Figs 2 and 3). Since Holwell lived in Clerkenwell, he chose local examples to illustrate the necessary procedures, one of which was a survey of a short stretch of the lower Lea (3 miles, 4 furlongs and 10 poles in length) in the vicinity of Tottenham, Walthamstow and Hackney. This survey is reproduced as Figure 1.

The map is reproduced to the same size as the original, and should be read from top to bottom, first down the right-hand side, and then the left. The formalised pattern of the course of the river is the result of the surveying methods used. Three men were needed. One stood at station A and used the semicircle to take a compass bearing on a second man at station B, a point chosen because it marked some change in the direction of the river bank. A third man then used the wheel to measure the distance between stations A and B. The same procedure was then repeated between stations B and C, and so on for all the 27 stations that appear on Holwell's survey.[2]

In his textbook Holwell emphasised the need to provide as much accurate detail as possible about bridges, mills, sluices, locks or other features along the river. He thought such care necessary, for he observed, "The Rivers in our County-Maps, nay of all Counties whatsoever, are most if not all of them, false." Whatever the truth of that last statement, his survey does provide one of the few useful maps of the Lea to survive before a complete survey of the navigable Lea was made in 1741.

Since it was a surveying textbook, Holwell provided no additional information about the features noted in the survey, so the purpose of this article is to provide such about the mills and ferries shown. Yet it can also be noted that the map provides possibly the earliest pictorial representation of Higham House, and also illustrates the very frequency of ditches in the surrounding fields and meadows. Such ditches were valued because they watered and drained the surrounding lands and provided cheap fences between neighbouring properties. It can also be noted that Holwell referred to Hackney River rather than the river Lea. Such localism was not unusual, and in the seventeenth and eighteenth centuries the river was as often called Ware River as it was the river Lea. It is also interesting that Holwell's survey does not note any bridges over the Lea, nor any lock or sluice in the navigable channel. Such features began to appear along this stretch of the river only after 1678.

Tottenham Mills

On Holwell's survey it is shown as "The Paper Mill", but this is only one of the various industrial uses to which the site was put during the seventeenth and eighteenth centuries. Location close to the London market, good transport facilities, and spare land on site, meant that many mills along the lower Lea below Waltham were put to industrial use, in contrast with mills along the upper river which were still usually used to grind corn for local and London markets.

In June 1619 Thomas Wilbrahim took out a 21-year lease on a corn and leather mill valued at £30 a year which was described as 'all new built of Tymbar worke and covered with Tyles', but by 1622 it was the 'oyle mill erected or used about Tottenham either in the highway or neare it which is soe offensive and noysome to his Majestie when he passeth that way'. Since the King expected to pass frequently, the Privy Council ordered that oil production should cease.[3] What happened next or in the ensuing decades has not been discovered, but in 1656 there were complaints that the mill was being used to produce gunpowder rather than grind corn. It seems likely that they had first been put to such use either during the Civil War or during the 1st Dutch War. Between 1665 and 1669 Thomas and John Worrall definitely made gunpowder there, but by 1669 the two brothers were in serious financial difficulty, and officers of the Ordnance Board were instructed to visit their works at Hackney (at a site so far unidentified) and Tottenham. Since they never supplied powder to the Ordnance after this date, it seems that production ceased in 1669. It cannot be assumed that powder was produced from 1656 to 1669, for although demand would have been high during the 1st Dutch War (1652-4) and the 2nd Dutch War (1664-7), demand fell during intervening years of peace and many mills which had been converted to powder during war years were put to other uses when peace came.[4]

By the time of Holwell's survey in 1678 paper mills had been erected at the site, and they are shown as such in John Sellar's collection of county maps issued in 1680. Richard Hill, citizen and haberdasher of

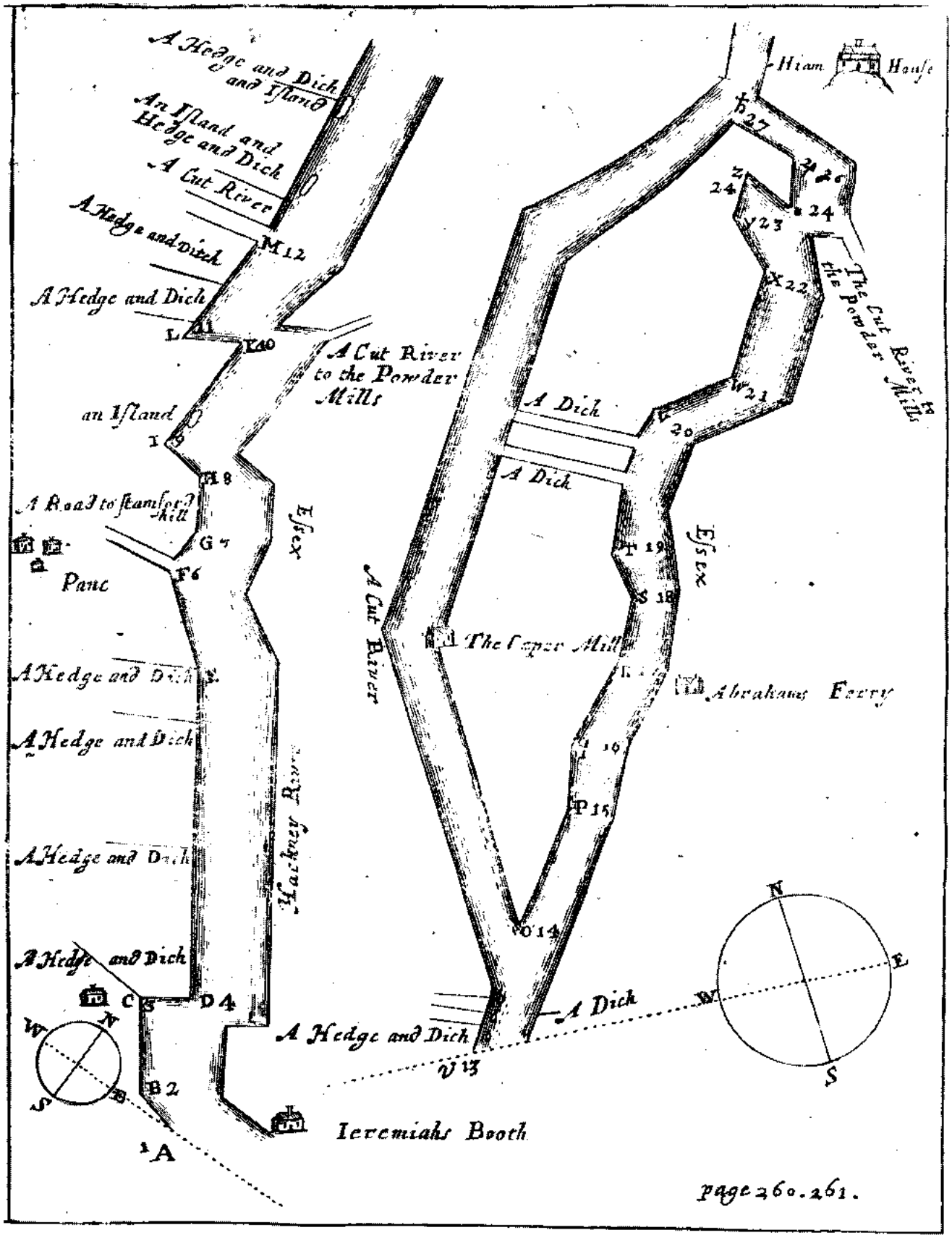

Fig. 1 Holwell's survey of part of the Lea, 1678. By permission of the British Library.

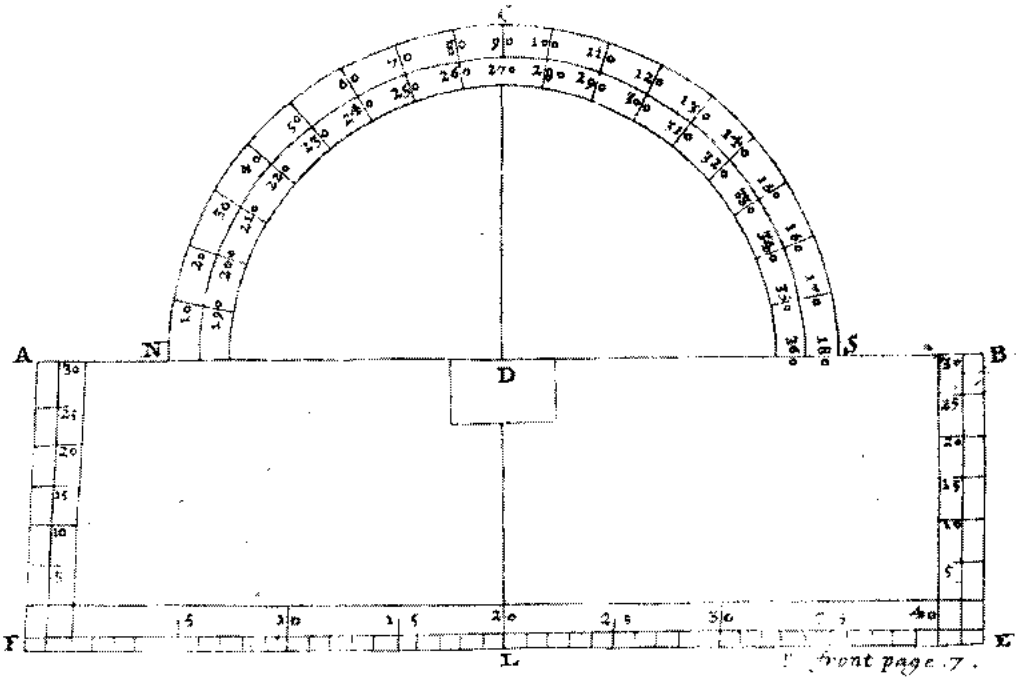

Fig. 2 Holwell's semi-circle. By permission of the British Library.
This particular print is taken from Holwell's textbook where it accompanies that section of his book which gives advice on which instruments are needed by prospective surveyors. Holwell called it a semi-circle, but it is a form of surveying compass now more generally known as a circumferentor. At this date a standardised version of this instrument was not widely available, so Holwell had to provide detailed advice on how to make one.

London, was the tenant of these paper mills. They remained in this use until shortly before April 1697, for in that month Jeremy Armiger of London, merchant, was granted a 31-year lease at £64 a year after having converted the mills to oil production once more. During 1705-6 John Howard was carrying linseed and rapeseed to Tottenham by barge, and in 1709 the unexpired lease to "Rape Mills...called Tottenham Mills" was advertised after Armiger's death. Armiger's will shows that he had intended that his niece, Susanna Adriana Armiger, take over the "sole management and direction" of the business in trust for other relatives, with the intent that any profits above £200 a year should be put aside in order to pay off the accumulated debts incurred by Jeremy. However, Susanna refused to take on executorship of the will, instead it passed to one of Jeremy's creditors, Robert Ewin. By December 1712 these debts had been cleared so a new grant could be made to Susanna. Her success with the new business is not known but by 1721 the mills were occupied by Edmund Brown, citizen and ironmonger, yet were still put to the same use, for in 1722 Brown, described as an oil miller, was declared bankrupt. In 1723 the mills were 'accidentally burned down and destroyed by fire', and by 1725 had not been rebuilt. By then the unexpired lease was held by Armiger's widow who then transferred it to Overbury Hale and William Dawson.[5]

What happened next has not been established, but by 1735 the mills had been converted to paper mills. In January 1736 Israel Johannot, paper maker, insured the following:- 'A Mill, timber and tiled' with the gear and utensils, £700; utensils and stock therein, £300; dwelling house next to mill, £300; household goods, £100; storehouse, £100; stock therein, £100; drying house in yard, £50; stock therein, £50; tenement in yard in occupation of his servants, £100. In 1749 Israel, whose name does suggest he was of Huguenot descent, died leaving the business to his wife Elizabeth who insured the mills in December 1750 for £700. By 1757 another paper maker, Thomas Cook, had taken over, insuring the paper mill with gears and utensils, £500; stock therein, £300; raghouse nearby, £100; stock therein, £300. Then in 1761 he insured the paper mills, £300; utensils and stock therein, £600; raghouse, £50; rags, £150; drying house, £50; stock therein, £20.[6]

By August 1769 Edward Wyburd, a Tottenham coal merchant, was the tenant, and in May 1770 he obtained a 51-year lease at £210 a year, but he had had difficulties gaining possession as Cook had tried to remain at the mills. When Wyburd did gain possession he converted them to grind corn and it was these corn mills that he obtained a lease to in 1770. Later, at some date shortly before 1780 he erected an oil mill as well and let it to Edward Turner, gentleman, who had entered a partnership to make oil with John Swincy. The partnership did not flourish, and in 1783 the partnership ended with Turner owing Swincy £7783, in addition to which there were joint debts of £8400.

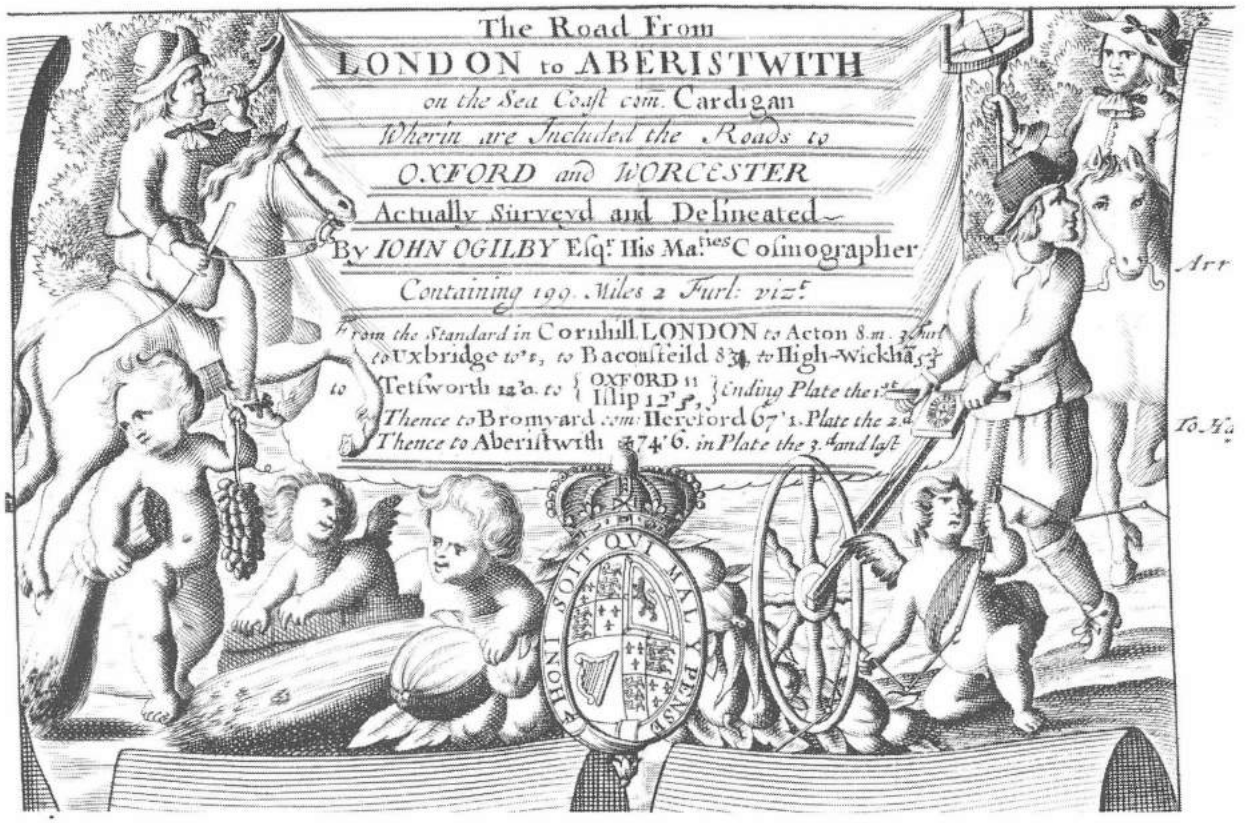

Fig. 3 The surveyor's wheel. By permission of the Science Museum.
The other instrument used by Holwell in his survey was the wheel, a contemporary example of which is shown above. This print is taken from John Ogilby's book Britania issued in 1675, the book being a guide for travellers to the principal roads of England and Wales. Holwell had been employed by Ogilby earlier in his career, to carry out some of the preliminary surveying work for a map of London which was issued in 1676.

After Turner's death in 1784, Swincy took over the lease to the oil mills and tried to pay off the debts. After a fire in February 1788 Wyburd rebuilt both mills. Before taking them over Wyburd had been a dealer in corn and a coal merchant, and in 1764, 1765 and 1766 he had insured stock that he held in Mouldwood Mill near Hertford and in granaries at Tottenham. In 1803 Wyburd sold the remainder of his lease to Tottenham Mills for £1200 to Charles Pratt, who had been the tenant since 1795 at least. In 1811 the only manufactory in Tottenham was said to be the oil mill in the occupation of Mr Charles Pratt. In 1815 Nathaniel Matthews and Charles Lockyer Curtoys, millers, took over the remainder of the lease from Pratt, but in January 1816 the mills were so damaged by floods that it took a year before they were back to full capacity. In 1826 Matthews took out a 14-year lease for himself at £800 a year, transferring it to Edward Bell, mealman, in 1832. In 1836 the New River Company purchased the mills which comprised a corn mill with seven pairs of stones and an oil mill. The Company continued to let them for some years (Fig. 4) until they were destroyed by fire about 1860 and never rebuilt.[7]

However in 1876 the New River Company received proposals to erect new mills, but after discussions with the East London Waterworks Company who were loath to see their water supplies threatened by such a development the latter agreed to pay the former £175 a year in return for an assurance that no new mills would be erected on the site for 90 years. Then in 1897 the East London Waterworks Company acquired legal possession of the mill race from the New River Company.[8]

Tottenham Mills stood along the road route from Tottenham to Walthamstow that passed over the Lea at Abrahams Ferry (see below). In 1770 a description of the mills noted a 'liberty and Licence to permit persons on foot and with horses Coaches and other Carriages to pass and repass over and through the said premises...to and from Walthamstow...and to take from them a reasonable Gratuity and Satisfaction...but so always as to avoid any Claim being made or set up to a right of passing or repassing as a Common Highway'. This route had been open throughout the seventeenth and eighteenth centuries, and as early as 1594 had been described by Norden as one of the most useful routes across the Lea. In 1868 the toll income at the bridge amounted to £288, out of which £5 was paid for maintenance of the bridge, and a toll keeper

was paid 12/- a week. In 1878 the New River Company sold these toll rights to the Bridges Joint Committee, and they were cancelled and the route became part of the common public highway. In 1915 the bridge was demolished and replaced by the present bridge which was erected a little lower downstream. In her reminiscences published in 1909, Harriett Couchman said the tolls had been 6d. for a carriage, 1d. for a horse, 3d. for a chaise, 4d. for a taxed cart, 1/- for a wagon pulled by four horses, 1/6 if pulled by five horse, and 2/- if pulled by more than five. There was also a charge of one half-penny for all foot passengers not resident in Tottenham.[9]

Walthamstow Mills

The mills are not shown on Holwell's survey, but the millstream is. At point 24 the head stream is noted as 'The Cut River to the Powder Mills', whilst opposite K10 the tail stream is noted as 'A Cut River to the Powder Mills'. For a long time during the seventeenth century Walthamstow Mills was one of two sites worked by John Samyne, one of England's leading producers of gunpowder, the other being at East Molesey in Surrey. After his death, his son Peter carried on the business, but on a much reduced scale, and only at Walthamstow. The father had originally begun production at Walthamstow to meet the demands of the Civil War, and since parliamentary supporters always controlled the Lea valley, other mills along the Lea, the Temple Mills at Leyton and Sewardstone Mills in the parish of Waltham were also converted to powder production during the 1640s.[10]

Details of the site at Walthamstow are sparse, but there were at least three powder mills, two in Clerks Holme and one in Smithy Marsh, and barges had the right to use the millstream to gain access to the mills.[11] The earliest evidence of production is an entry in the Walthamstow parish registers in August 1647, 'buryed George a servant to Mr Samine from ye powder mill', and there are further references to burials of powder workers or their children in 1661, 1666, 1678, and 1685, but none make any reference to explosions or accidents so often associated with the industry.[12]

Samyne suffered several business setbacks, including explosions at Walthamstow and at East Molesey in Surrey. By the end of his life in 1676 he was in such severe financial difficulty that all his real estate was mortgaged, his business was virtually moribund, and it required a private Act of Parliament to settle his estate. The last property mortgated by Samyne was Walthamstow Mills, on which he raised £500 in 1674 from George Swanley of Mile End. In 1687 a survey of the gunpowder industry noted that Peter Samyne had the capacity to produce four barrels of powder a day at Walthamstow Mills, but he was never to make a success of the business, failing to repay the mortgage his father had taken out. In February 1690 Swanley's widow sold the mills to Francis Gillow of London, gentleman, for £550. By this date Peter had probably left the country, for in August 1690 his widow submitted an inventory which noted very few possessions, all of which were distrained to the landlord of their dwelling house in St Brides, and she added that Peter had taken his account books abroad with him before he died in Port Royal in Jamaica.[13]

Within a year after Gillow purchased the mill it had been converted to a paper mill, worked by Joseph Church until his death in September 1694 and then by his widow. The Walthamstow parish registers suggest foreign involvement in the business for on 29 July 1696 it was noted that 'Ann, wife of ye French-man at ye Paper Mills' was buried, and this together with the fact that Joseph Church was a witness in support of a private bill introduced by the White Paper-makers Company does suggest that Church was in business to make the finer quality white paper. This Company played a major part in the expansion of white paper manufacture in England that took place in the decades after 1680, but Church was not one of the original petitioners who sought incorporation in 1686, and it is not known whether he was part of the Company or not. It does seem possible that Walthamstow is an additional site worked by the Company, one of those not known before.[14]

In December 1707 it was still a paper mill that a Mrs Le Feburs was buried from, but by April 1710 when Monsieur Pierre Montier was buried they were described as leather mills. It was to a Mr Mount (probably Montier) that Commissioners of Sewers issued instructions between April 1703 and April 1710. The VCH Essex states that Pierre Montier, skin-dresser, was the miller as early as 1703. This suggests a possibility that the mills were put to a dual use at this date, and the fact that after Montier's death the Commissioners of Sewers issued instructions to a Peter Lefevre in April 1711 and 1712 further suggests that either Lefevre took over the business or that Montier and Lefevre, both Huguenot refugees, had perhaps formed some sort of business relationship at the mills. From April 1713 until April 1723 it was to Daniel Lefevre that Commissioners issued orders. After that the commission's records are missing. In April 1718 the commissioners refer to a leather mill, otherwise there is no indication in their records as to what use the mills were put.[15]

By 1739 John Kemp had been the tenant at the mills for several years, and he was still there in 1747, whilst the mills are described as Kemps Mill in John Rocques' survey in 1754. From at least the early 1740s and probably earlier the mills had been used to manufacture linseed oil. From 1750 until 1778 rates on the mills were paid by Mr William Warren, after which there is a gap in the rating records until 1789 when a Mr Banister paid. Yet in 1778 John Towers of Walthamstow, oil maker, took out a 31-year lease at £60 a

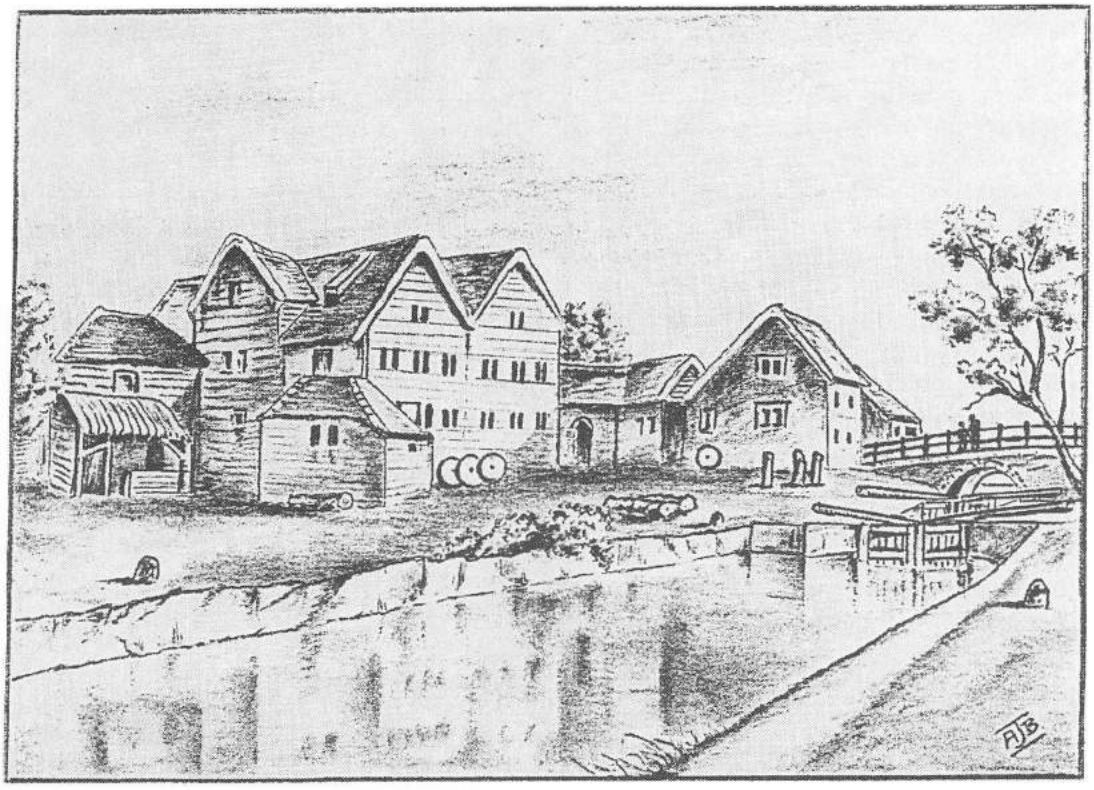

Fig. 4 Tottenham Mills. Sketched from an engraving by W.H. Prior. By permission of Vestry House Museum, Walthamstow.

year, and he was still there in 1793. Between 1805 and 1807 rates were paid by a Mr George Shipley. Just before the lease expired in 1809 the site was bought by the British Copper Company and the mills put to that use they are known by to this day, even though copper rolling ceased in 1857 and the mills were bought in 1860 by the East London Waterworks Company for use as a pumping station. The water authorities still use the building as a store and workshop.[16]

Abrahams ferry

The present day road route across the Lea valley from Tottenham to Walthamstow (Ferry Lane/Forest Road) follows the same route that can be deduced from Holwell's survey, leading to and from Abrahams Ferry. The present day Ferry Boat Inn stands as a further reminder of the old route. The ferry was owned by the lords of the manor of Walthamstow Toni or High Hall, and associated with it were fishing rights in the Lea and a ferry house or public house on the Essex bank. The Walthamstow parish registers often noted it as Tottenham Ferry, but it was as often known by the name of the tenant, as is the case in Holwell's survey. This particular route increased in importance with the decay of Lock Bridge in the early seventeenth century (see below). As early as 1626 a presentation at Quarter Sessions noted the poor state of the road, commenting that it was 'a lane that King James in his life time did much use the which is now a very dangerous lane for any man to wrid in especially for a stranger that know it not'.[17]

In 1678 it was Abrahams Ferry after Abraham Biggins who was definitely the ferryman as early as January 1675 and probably at least as early as 1673 if not earlier, remaining there until his death in June 1686. An earlier tenant had been Jeremiah or Jeremy Howard, from as early as September 1656 until his death in June 1667. One of his sons inherited the ferry, for in 1670 a jury enquiring into the liberties of the Forest of Waltham presented William Maynard, lord of the manor, for erecting a 'ferry house at Tottenham Bridge' which was occupied by Thomas Hayward. This ferry house was 18 foot long and 10 foot broad. Thomas died in 1672.[18]

Just why this reference mentioned a bridge is unclear. There had been a bridge over the Lea at this spot in 1642.[19] Had this bridge fallen into decay, to be replaced by a ferry in 1670? Or was there normally a bridge as well as a ferry, that for some reason was temporarily absent when Holwell made his survey? In 1766 a local inhabitant, aged 76, was to recall that when he had been a child there had been a ferry, but also a bridge for horses and foot passengers who paid halfpenny toll. He also recalled that carriages and carts had forded the river whenever possible to avoid using the ferry. Documentary evidence from 1722 supports this, and in 1741 a survey of the Lea described

the property as 'Tottenham Weir Publick House Ferry and toll bridge', whilst a map of Middlesex in 1749 shows a bridge.[20]

In June 1687, shortly after Abraham Biggins' death, James Lowen was the ferryman, and in 1698 it was stated that a Henry Lowen had been the tenant of the fishery and public house associated with the ferry for several years, at a rent of £14 a year. Henry was the ferryman until his death in May 1726. One major development to the property during his tenancy was that a fishing weir was built in the navigable channel of the Lea. The ostensible purpose of such a construction was to create a pool behind the weir from which more fish could be taken, but by this date it was far more important that the tenants of fishing weirs were entitled to a toll for providing a flash of water to assist barges in their passage along the Lea. A toll list in 1725 shows that a toll of 1/- had to be paid by every barge for such assistance from 'Lowen's als Abrahams Ware'.[21]

In 1738 Sir Henry Maynard's will noted his 'Ferry House, weir and fishery now in the possession of Thomas Green'. Maynard empowered his executors to let the property, for up to 41 years if it was necessary that a tenant had to rebuild the property. Green was a 'Gold & Silver Wyer Drawer' living in Walthamstow who paid poor rates for the ferry in 1739, 1742, 1743 and 1744, the rateable value of the whole property being £50. Rocque's maps in 1745 and 1754 still noted Greens Ferry, but Green had been buried in January 1745 and the ferry had passed to his daughter, Elizabeth, a widow. She soon remarried, and the ferry was taken over by her new husband Sacheverall Hellyer.[22]

Before this marriage Hellyer had been a victualler at the Horns near the Steel Yard in Upper Thames Street, but after his marriage he moved to Walthamstow and thrived. He gradually expanded his landholdings, became prominent in parish affairs, and was variously described as a dealer in spirituous liquors, a chapman, a dealer in coals and a publican, a victualler and a farmer before describing himself in his will in 1778 as a farmer.[23] It was during his tenancy that Sir William Maynard erected a private toll bridge for horses and carts to replace the ferry and the bridge. This bridge and its toll rights were purchased by the East London Waterworks Company in 1868, and in 1878 they in turn sold the property to the Bridges Joint Committee for £1568, thus bringing the bridge within the public domain. Harriett Couchman remembered the tolls as being identical to those charged at Tottenham Mill bridge further along the route.[24]

Jeremiah's Booth (Jeremy's ferry)

A survey of the manor of Hackney Lordshold in 1652 noted the 'profits of the Royal Fishing belonging to the said Manor in the River of Lee together with two Ferries over the said River' valued at £7 a year. Later documents name these two ferries as Jeremy's Ferry and Lockbridge Ferry. Holwell in his survey missed the latter (see below), but recorded the former as Jeremiah's Booth. A full description of the property in 1697 specified:-

> all that Ferry on the River Lee called Jeremys Ferry And all that the Free and sole Fishing of the River Lee and of and in all the Creeks and Streams running into and out of the said River soe farr as the same doe runne or pass within the limitts bounds of Territories of the said Mannor of Hackney And also all the Osyer Bedds or Islands being within the said River and the Creeks and Streams, thereof the said Mannor Together with the Bullivants and Lock Bridge

It was also called Hackney Ferry in the Leyton parish registers.[25]

The name Jeremy's Ferry came from an earlier tenant, the Jeremiah Howard who had died in June 1667 and who had also been the ferryman at Tottenham, but for some reason at this ferry the name stuck and did not change with each new tenant. After Howard's death the ferry passed to his infant sons, James and Charles Howard, under the guardianship of their mother, Maria Howard, but the new ferryman was Richard Jennings, who in 1668 issued a halfpenny trade token which depicted a man rowing a boat and was inscribed 'Richard Iennings at Hackny Ferry'. He remained the ferryman for ten years, but on February 15 1678 the Leyton parish registers noted 'Richard Jennings ye Ferryman drowned in a flood'. Entries in the private notebooks of William Holcroft, an Essex JP, suggest that Jennings may have become the ferryman by marrying Howard's widow. In April 1678, shortly after Jenning's death, Mary Jennings of Leyton (possibly Maria Howard?) laid a complaint against John Lee of Hackney for abusing her. Then in August 1680 John Lee was involved in a dispute with Daniel Walker, servant to James Haward 'at ye Ferry in Layton or Walthamstow'. Lee's servants had siezed Haward's boat in midstream and taken it to the Hackney bank where Lee chained it up and claimed the boat for his own use, with the assistance of the Hackney headborough. James Howard was to remain the owner of this ferry for many years, paying rates on it from 1679 until 1710.[26]

Shortly before July 1700, Francis Tyssen, lord of the Hackney manors, erected a fishing weir at Jeremy's Ferry at which a toll of 1/- was payable from every barge that required a flash of water. Then at some date between 1707-9 Tyssen erected a water works at the weir which took water out of the Lea up to a reservoir at Clapton from whence it was distributed to customers in Hackney. This waterworks still existed in 1715, but by 1724 it was derelict and schemes to rebuild it came to nothing. It needed a new initiative in the early 1760s before the residents of Hackney once more got their own waterworks.[27]

The Leyton parish registers note some burials from the ferry:- Mary, wife of Jewel in June 1710; William

Francis in October 1718 and Jane Francis in November 1719. The Leyton rate books provide some additional information. After Howard's death William Francis and then his widow paid rates on the ferry from 1711 until 1718, Mr Ganny or occupier paid in 1720-21, Joseph Barnett paid from 1723 until May 1728 when his widow Elizabeth paid, and then from October 1728 until 1733 when the records cease for some years the rates were paid by a Samuel Chevalier who had married Elizabeth soon after she became a widow. Samuel died in 1740.[28]

A survey in 1741 noted it as a 'Public house Ferry for coaches', whilst in 1755 Frances John Tyssen told parliament he was entitled to a ferry for foot passengers, horses, cattle and carriages called Jeremy's Ferry, and that there was then ten years left of a 21-year lease granted to Jeremy Cotherall. Tyssen was seeking authority to replace the ferry with a private toll bridge built at his own expense, but his plans were taken over by a turnpike trust who in 1757 obtained an act to erect a bridge over the Lea and to make new roads from Clapton and Snaresbrook to the bridge. One of the terms of this act was that Jeremy's Ferry was destroyed and Tyssen was paid £150 a year in compensation for the loss of his property.[29] Some indication of the growth in traffic before this date can be obtained from comparing the sums of £7 mentioned in 1652 for two ferries and the fishery with the £150 compensation paid Tyssen for the loss of one ferry.

Other Ferries

There were two other ferries along the short stretch of the river that Holwell failed to record as such. He did note a house near point C3, at the same place that a map of the Lea in 1741 showed a 'Publick House & Ferry', that Rocque's maps in 1745 and 1754 noted Smith's Ferry, and that a map made about 1777 noted as Crosby's Ferry. There was also a ferry in the vicinity of F6/G7 which was known as Lockbridge Ferry. A

Fig. 5 Robin Hood ferry boat, *c.* 1890. By permission of Vestry House Museum, Walthamstow.

map of the area in 1576 shows a bridge called 'Lok Bridge', and in 1594 Norden noted this bridge as one of the most useful in Middlesex. In 1611 and 1612 there was concern about the decay of this route from Walthamstow which 'hath been time out of mind a common highway for market folks, travelling about 4 days in the week to London market', but there was some difficulty assessing who was responsible for maintaining Lock Bridge and the twelve bridges across the marshes from Walthamstow to Lock Bridge, and in 1618 Lock Bridge was described as ruinous. The Victoria County History notes that Lock Bridge collapsed between 1612 and 1630, to be replaced by a ferry. In 1652 this was one of two ferries mentioned in the survey of the Earl of Cleveland's estate. Little else has been discovered except in 1741 there was a public house and ferry, that Rocque described it as Morriss's Ferry in 1745 and 1754, that in 1774 it was Taylors Ferry, whilst in 1869 it was known as High Hill Ferry and was let to Courages along with the Robin Hood Tavern which still stands on the site today. During the last century a rowing boat ferry operated from this point (Fig. 5). It was one of these ferries that was called 'Clems booth or ferry in Clopton' in the Hackney parish registers in May 1658 and at which Clement Sherby had been the ferryman as early as 1630. By 1667 Clems Booth, which had been owned by Clement Surby and then by William Surby and Henry Wisdome, had become the property of Jeremiah Howard who thus held an interest in three out of the four ferries along this stretch of the river.[30]

In his Journal of the Plague Year, Daniel Defoe talks of problems faced by some travellers fleeing from London in 1666. Having got to Stamford Hill they decided to try and reach Epping Forest but

> They had some difficulty in passing the ferry at the river-side, the ferryman being afraid of them; but after some parley at a distance, the ferryman was content to bring his boat to a place distant from the usual ferry, and leave it there for them to take it; so putting themselves over, he directed them to leave the boat, and he, having another boat, said he would fetch it again, which it seems, however, he did not do for above eight days.
>
> Here, giving the ferryman money beforehand, they had a supply of victuals and drink, which he brought and left in the boat for them; but not without, as I said, having received the money beforehand. But now our travellers were at a great loss and difficulty how to get the horse over, the boat being small and not fit for it: and at last could not do it without unloading the baggage and making him swim over

Since the travellers then went to Walthamstow, it must have been one of the four ferries discussed above where they faced their difficulties. Holwell's map suggests that it was the ferry at Lock Bridge that they used, for this is where the road from Stamford Hill came down to the Lea.[31]

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Notes

Abbreviations used in notes:-

BL	British Library
CLRO	City of London Record Office
ERO	Essex Record Office
GLRO	Greater London Record Office
PRO	Public Record Office
VCH	Victoria County History

1. John Holwell, *A sure guide to the Practical Surveyor, in two parts the first, showing how to plot all manner of grounds ...and how to convey water from any spring, to any appointed place: The second showing how to take the ground-plot of any city etc.* (London, 1678). For details of Holwell, see *Dictionary of National Biography.*
2. For further details of history of surveying and surveying instruments: J.A. Bennett, *The Divided Circle* (Oxford, 1987); A.W. Richeson, *English Land Measuring to 1800: Instruments and Practices* (Cambridge, Mass. & London, 1966); E.G.R. Taylor, *The Mathematical Practioners of Tudor and Stuart England* (Cambridge, 1954).
3. GLRO, Acc. 695/9, fo. 27-9; *Acts of Privy Council 1621-23*, 247.
4. VCH Middlesex, v.336; PRO, WO 47/19A, fos. 286, 287, 301, 317; WO 47/7 fo. 49; PC2/59, 4 May 1666, PC2/60, 16 October 1667.
5. BL, Maps K.1 TAB 18(10); GLRO, MDR/1721/4/103, MDR/1721/3/240, MDR/1725/4/103; CLRO, Accounts of Duty on fruit, malt, salt and passage of grain and coals, 29 October 1705 to 28 October 1706; PRO, PROB 11/507(66), PROB 8/105 fo. 239, PROB 8/102 fo. 84; *London Gazette*, nos 4534, 6069.
6. A.H. Shorter, *Paper Mills and Paper Makers in England* (Hilversum, 1958), 213; Guildhall Library, MS 11936/45, 69338, MS 11936/90,124170, MS 11936/120,160299, MS 11936/139,186611; PRO, PROB 11/772(253).
7. GLRO, MDR/1770/4/395, MDR/1836/3/201, Acc. 526/53; W. Robinson, *The History and Antiquities of the parish of Tottenham* (London,1840), 135-7, Appendix no. 1, pp. 14-15; Guildhall Library, MS 11936/154, 209638, MS 11936/163,223646, MS 11936/171,236636; PRO, PROB 11/1048(493); private communication of referee; D. Lysons, *Supplement to the First Edition of the Historical Account of the Environs of London* (London, 1811), 309; *VCH Middlesex*, v.336-7; Bruce Castle Museum, D/E 21a/1, D/E/21a/6-8, D/E/21a/14, D/E/21a/16, D/E/21a/19; CLRO, Kew Bridge & others 12.8; Harriett Couchman, *Reminiscences of Tottenham* (1909), 16.
8. GLRO, Acc. 2558/EL/1/41/1, 24 February 1876, 2 March 1876, 23 March 1876, 2 November 1876; 60 & 61 Vic c. 198.
9. GLRO, MDR/1770/4/395; CLRO, Kew Bridge & others, 12.3-12.9; *VCH Essex* vi.243; Couchman, *op cit.*, 16.
10. K.R. Fairclough, 'John Samyne: 17th Century Gunpowder Maker'. *Gunpowder Mills Study Group Newsletter no. 7* (May 1990), 2-6; Fairclough, 'Early Gunpowder Production at Waltham', *Essex Journal*, Vol. 20 no. 1 (1985), 11-16; Fairclough, 'Temple Mills as an industrial site in the 17th century', *Essex Archaeology and History* Vol 22 (1991), 115-21.
11. Thames Water Authority Stronghold, Box 81 no. 288 (now transferred to GLRO, but not yet accessible to the public).
12. Vestry House Museum, Walthamstow, W83.1 R1, Register of Baptisms, Marriages and Burials, St Mary Walthamstow 1645-1712.
13. PRO, SP 18/94 nos 47-49, WO 47/7 fos. 122, 132, 133, WO 47/19A fos. 411-12, WO 49/220, WO 55/1758, WO 48/26 unfoliated, debenture recorded 14 October 1687, PROB 32/14/2-17, PROB 32/31/278; 29 & 30 Car 11, c. 19PR;

Thames Water Authority Stronghold, Box 81 no. 288 (see fn. 10); PRO, PROB 11/397 (183).

14. Vestry House museum, W83.1 R1; G.H. Overend, 'Notes upon the Earlier History of the Manufacture of Paper in England', *Proceedings of the Huguenot Society of London*, viii (1909), 177-220; D.C. Coleman, *The British Paper Industry 1594-1860* (Oxford, 1958); W.R. Scott, *The Constitution and Finance of English, Scottish and Irish Joint-Stock Companies to 1720* (3 vols, 1910-12), iii.63-70; J.H. Thomas, 'The Company of White Paper Makers in Hampshire: An Inventory of Plant', *Post-Medieval Archaeology*, xi (1977), 22-35.

15. VCH Essex, vi.267; ERO, D/SH1, Court of Sewers, passim; Vestry House Museum, W83.1 R1; Further research would probably show that the Lefevres at Walthamstow Mill were related to Peter Lefevre who purchased the Three Mills at Stratford in 1727 and converted it to a distillery.

16. VCH Essex, vi.267; D. Smith, 'The Industrial Archaeology of the lower Lea Valley', *East London Papers* Vol. 12 no. 2 (Winter 1969-70), 99-100; House of Lords Record Office, 11583; PRO, RAIL 845/3, Trustees minutes, 25 June 1759; J. Coxall, *The Walthamstow Tokens*, Walthamstow Antiquarian Society, Official Publications no. 18 (1927).

17. ERO, Calendar of County Records, Sessions Records 1624-41, Q/SR 253/54.

18. ERO, D/DW el/6; Vestry House Museum, W83.1 R1.

19. Sir Edward Forde, *A designe for bringing a navigable river from Rickmansworth In Hertfordshire to St Gyles-in-the-Fields* (London, 1641), frontispeice.

20. London Borough of Tottenham, Bruce Castle Museum, D/E/21/19 *VCH Essex* vi.243; BL, K. TOP. VI. 6.VI; Warburton's *Map of Middlesex* (1749).

21. PRO, C8 519/103; Vestry House Museum, W83.1 R1; Thames Water Authority Stronghold Box 81 no. 288 (see fn. 10). For a description of the system of navigation along the Lea which relied on the provision of flashes from locks, fishing weirs and mills: K.R. Fairclough, 'The River Lea before 1767: an adequate flash lock navigation', *Journal of Transport History*, Third Series, Vol. 10 no. 2 (September 1989), 128-44.

22. S.J. Barnes, ed., *Calender of Deeds relating to Walthamstow 1595 to 1890*, Walthamstow Antiquarian Publications no. 11 (Walthamstow, 1923), 28-9; John Rocque, "*Survey of Hackney in 1745*", "*A Topographical Map of the County of Middlesex*" (1754); Vestry House Museum, W35 21/2 fos. 178-79, W55.61.P1-P4; PRO, PROB 11/737(13). Green also owned the Cock Ale House and other tenements in Marsh St, Walthamstow which he let out. In 1741 he insured the ale house for £350: Guildhall Library, MS 11936/59,87705.

23. Guildhall Library, MS 11936/46,71672, MS 11936/71,100441, MS 11936/75,103928, MS 11936/170,238558; Vestry House Museum W55.61/P5-P20, W35 21/2 fos.256-7, W35 21/3 fos. 113-14, 169, 195; PRO, PROB 11/1048 (493). One of the executors of Hellyer's will was Nicholas Pratt of Tottenham Mills. Besides the ferry Hellyer paid poor rates on property valued at £216 in 1751.

24. *VCH Essex*, vi.243; CLRO, Kew Bridge & others, 11.16,12.2; GLRO, Acc. 2558/EL/1/39/1 16 April 1868, Acc. 2558/EL/1/41/1, 28 February 1878; Couchman, *op cit.*

25. London Borough of Hackney Library Services, D/F/TYS 35 fos. 83-111, M1280, M3675; Vestry House Museum, Transcript of the Burials registers for the parish of Leyton 1617-1726.

26. London Borough of Hackney Library Services, D/F/TYS 38 fo. 5; G.C. Williamson, *Trade Tokens in the Seventeenth Century* (2 vols, New York, 1970), ii.617; G. Berry, *Seventeenth Century England: Traders and their tokens* (London, 1988); M. Dickinson, *Seventeenth Century Tokens of the British Isles and their values* (London, 1986); J.A. Sharpe, ed., *William Holcroft His Booke: Local office-holding in late Stuart Essex*, Essex Record Office Publications no. 90 (Chelmsford, 1986), 65-6, 68-9: Vestry House Museum, L55.4, L55.5.

27. E.M. Gardner, *History of the Three Mills* (London, 1957), 5; K.R. Fairclough, 'Hackney Waterworks', *East London Record* viii (1985), 7-21. In that article the writer wrongly identifies the site of Jeremy's Ferry. It should be as in this article.

28. Vestry House Museum, Transcript Leyton parish registers; L55.5; Leyton names index.

29. Vestry House Museum, Transcript Leyton registers; BL, TOP. VI. 6. VI.; *Commons Journals*, xxvii.97, 702-3, 721, 752, 829; 30 Geo 11, c. 59; W.G.S. Tonkin, *The Lea Bridge Turnpike and the Wragg Stage Coaches*, Walthamstow Antiquarian Society Monograph (New Series) no. 14 (Walthamstow, 1974).

30. PRO, MPF 282; Hackney, D/F/TYS 35 fos. 92-111, M3675, M3557; Rocque, *op cit.*; GLRO, P79/JN1/21 & 23; *VCH Essex*, vi.177; S.J. Barnes, *op cit.*, 18-19; Vestry House Museum, *Vestiges* no. 53; ERO, D/DYc 11/3; BL, 1240 (18); *Gentlemans Magazine* March 1774; ERO, Calendar of County Records (Essex), Sessions Records 1611-24, nos 196/116- 18, 197/145, 198/38, 22/26. Other photographs of the ferry at Robin Hood Tavern are reproduced in David Mander, *The London Borough of Hackney in Old Photographs* (Gloucester, 1989).

31. D. Defoe, *A Journal of the Plague Year* (London, 1966 Penguin ed.), 148-9.

Acknowledgements

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The noble household as a unit of consumption: the Audley End experience, 1765-1797

by J.D. Williams

The nobleman's ancestral home and estate were not the only physical expressions of his standing. It was his style of living that also distinguished the great landowner from the lesser, and this manifested itself, in part, in the level of household consumption. Essentially, this paper will analyse one noble household as a unit of consumption during much of the second half of the eighteenth century. It will touch upon the pattern of consumption within the household as well as quantify its relative weighting with the other main areas of the nobleman's overall expenditure. It will also comment upon the potential conspicuous consumption impact of the noble household upon the maintenance of the level of demand during a critical period of transition of the British economy.

The landowner in question is Sir John Griffin Griffin, first Lord Braybrooke and fourth Lord Howard de Walden, of Audley End, Essex. The activities of members of the Georgian landed group have been studied at different levels of motivation and some more recent research has indicated the various roles exercised by some of them, including this particular nobleman.[1] Although, perhaps, not strictly regarded as a career, the management of finances was an integral part of the landowner's existence, and supervising the steward and agents who managed estate and household affairs has been cited as one of the landowner's five main activities.[2] That Griffin concerned himself with this aspect is partly evidenced by his comment "from my first commencing Housekeeper":[3] this referred to 1749, although he did not formally succeed to Audley End House until 1762. In any event, by 1765 he had taken steps to place the household on what was to prove to be a sound basis, managed jointly with his house steward, Charles Higgins. Abstracts of vouchers,[4] estimated to be in excess of twenty thousand in number, were entered in bound account books[5] and for present purposes the series runs from 1765 to the year of Griffin's death in 1797. In all there are thirty-one volumes, as those for 1795 and 1796 are missing. The first volume has written on its cover "Higgin's Account Book 1765"[6] and apart from the very last volume there is an index for the separate sections. On average there are about twenty sections in each volume and these are fairly typical of similar approaches in comparable households. But the system differed from some others in as much as both country and town establishments are included. Some of the staff had their own account or day books, and others used separate vouchers, which they submitted to the steward at the end of each month.[7] After being checked by him the items were entered in summary form into his account book, and an abstract of total disbursements was made. The volume was then submitted to Griffin to be examined. This method continued down to a month before Griffin died, the last entry with his signature being in April, 1797. Methods of accounting varied from household to household,[8] but at Audley End monthly auditing was adhered to throughout the period. This arrangement was made from the angle of purpose, so as to make each volume a work of reference, as well as a record of current monthly and annual expenditure. It allowed Griffin to go through the monthly vouchers with his steward, and as well as acting as a check, it also enabled him to keep a close watch on household expenditure for the current year, and by calling for the previous year or years, volumes, he could also make comparisons. Thus together they were able to sustain the running of the household on a consistent basis, with accountability being afforded a high profile.

This was essential, for the household was above all else a unit of consumption, and by definition a recognised avenue for potential indebtedness.[9] But this expenditure level also demonstrated one further aspect of the 'power' of the landed group, and in addition revealed the expenditure priorities of the individual landowner, and as such it not only reflected a way of life, but also a particular way of life of one member of this ruling group. Accordingly, it affords a glimpse into aspects of life in one Georgian noble household. The division of the household into some twenty sections gives ample testimony to the depth as well as to the breadth of Griffin's role as an agent of consumption. For present purposes this can be divided into two main areas, provisions and interests.

Firstly, provisions: in return for service, and above the payment of wages, it was the master's responsibility to feed and clothe those of his servants who lived in, as well as to clothe some of the others who did not actually live in the great house, as well, of course, as himself and his family. At Audley End, during this period, the personnel involved would have been

around thirty in number. In the main, provisions consisted of housekeeping contingencies, food and drink on the one hand, and apparel, liveries and physical well-being on the other.

Between 1765 and 1794 a total of £25,493 0s. 11d. was spent on housekeeping contingencies: this averaged at £849 per year, and a projected total to the end of Griffin's life would be about £27,791. The least spent in any one year was £573 19s. 4d. in 1766, and the maximum, in 1794, when the figure was £1,123 11s. 2¼d. In monthly terms this varied from £26 4s. 10½d. to £219 11s. 0½d. For part of the period Higgins' account book can be supplemented by two other volumes. The first entitled "Housekeeping Book 1765"[10] commences in the week ending 10 May of that year and ends on Saturday night, 30 December, 1769. It is not continuous for there are gaps. Kept on a weekly basis these accounts are organised under three main headings, meat, bread and sundries, the last including food and such commodities as candles. Meat during these few years was supplied by a local butcher, William Turner, and included beef, mutton, veal, pork, hams, tongue, calves' heads, sweetbreads, pigs' heads, lambs' heads and ears and so on. A specific example for the week 10 to 17 May, 1765, shows that 291 pounds of meat was purchased costing £4 6s., and this included 268 pounds of beef, nine breasts and fourteen shoulders of veal. Two millers or bakers, James Edwards and John Rusted, both local men,[11] supplied bread which included French bricks at 6d. each, quartern loaves at 6¾d. each, and quartern bricks at 6½d. each. The third section combines purchases and produce from the home farm and estate. Items such as butter "paid for" and butter "made at home" are recorded. Other produce included milk, cream, cheese: among the game were rabbits, hares, pigeons, duck, partridge, pheasant, goose, green goose, fowl, quail, buck, turkey, woodcock, snipe and lark; the fish included tench, perch, eels, salmon, trout, crawfish, carp, oysters and lobsters. Other entries record sausages, "Cheina Orringes", "Cheser" cheese and "Mussoroms". The second volume[12] is a contingent book covering the years 1793 to 1796 and complements the earlier volume dealing with regular purchases such as tea, coffee, yeast, salt, and the like, but as with the first volume there are gaps.

Additional light on the procurement of some of the food consumed is gained from the home farm accounts. These farm accounts consist of three very large volumes covering the period 1772 to 1803,[13] and a slim volume covering the years 1775 to 1809, which is an abstract of the larger volumes.[14] The Home Farm[15] supplied the household with both meat and dairy produce and the person who was responsible for seeing to these transactions was Martin Nockold the nursery man or bailiff as he became. From 1772 onwards the produce from the Home Farm was carefully recorded and the amounts sent to the great house itemized separately. For example, between 1 January and 25 March, 1772, the following produce was sent: six sheep weighing 277 pounds at 4½d. per pound; five hogs weighing 288 pounds at 5d. per pound; 162 pounds of butter at 8d. per pound; 26 quarts of cream at 1s. per quart; and 69 quarts of milk at 1½d. per quart. This bill amounted to £18 13s. 7½d. The transaction was recorded in detail in the Home Farm account books and a copy was made for the monthly vouchers from which an abstract was entered into Higgins' account book. This usually reads: "To cash paid to Martin Nockold for Housekeeping had from the Farm as pr. Bill of Perticulers".[16] Early on the transaction between household and home farm was recorded after several months' business, but soon after the home farm was put on a commercial footing the amount of produce increased and the transaction was recorded on a monthly basis. Martin Nockold also saw to supervising the kitchen garden although there was a gardener who was helped by an additional labour force in working the seven acres to supply the household with some of its fruit and vegetables.[17] Among the produce recorded for this purpose were raspberries, strawberries, peaches, apricots, plums, a variety of beans, radish, turnips, carrots, parsnips, leeks, mustard, cress, spinach, onions, apples, pears, cherries, cauliflowers and broccoli. Outside purchases included sulphur, tobacco and Scotch snuff for destroying insects. Food continued to be purchased from tradesmen and included Turkish coffee, tripe from Norwich for Lady Griffin, salmon, oysters, turtle, and local, provincial and London shopkeepers enjoyed Griffin's custom in supplying run-of-the-mill items of food as well as delicacies.

Apart from the procurement of food the housekeeping department also included four other sections, namely, soap and washing materials, stores for the use of the housekeeper and her staff, candles and oil, and finally the purchase of coal, charcoal and wood. Here, as elsewhere, the same concern for detail was shown, and although each comes within the orbit of housekeeping in the widest sense, it is possible to analyse them independently. Between 1765 and 1794 the sum of £869 8s. 3d. was expended on soap and washing materials and this averaged at £28 per annum, giving a projected total of £938. On an annual basis it varied from £14 4s. 8d. in 1765 to £88 5s. 3 ½d. in 1766, and in monthly terms from as little as 1s. in October 1776 to as much as £11 17s. 1d. in December 1766. As with the general section on housekeeping, here, too, for most months it was a case of "cash paid to my Lady" who had oversight of this aspect of the household. As expected the vouchers and entries in the account books are repetitive, but the careful recording of such details perhaps indicates the importance attached to the cleanliness and personal hygiene of this particular household and its members.

The stores for the use of the housekeeper and her staff also touch upon the cleanliness of the house and

its offices. Between 1765 and 1794 the sum of £376 10s. 5 ¼d. was spent, averaging £12 per annum and giving a projected total of £400. Annually, expenditure varied between £2 12s. 10d. in 1778 to £19 19s. in 1779, and monthly as little as 1s. 3d. in May 1765 to as much as £14 12s. 1d. in June 1791. Again Lady Griffin had oversight of this sub-department and the commodities included soap, mops, brooms, flannels, clogs and turnery goods.

As might be expected the amount spent on candles and oil was considerably higher and between 1765 and 1794 it was £2,564 11s. 1½d., averaging £85 per year and giving a projected total of £2,797. The annual range was very marked rising from as little as £2 14s. 11d. in 1765 to £129 19s. 6d. in 1787, and monthly from 8d. in July 1776 to as much as £64 2s. 8d. in December of that year. Also coming under her Ladyship' supervision the individual items purchased included candles, cotton for the lamps, lamp oil and wax lights, and both London and local tradesmen were among the suppliers.

The fuel consumption was even higher. Between 1765 and 1794 the sum spent was £5,557 9s. 11½d. averaging £185 and giving a projected total of £5,958. On an annual basis this varied from £89 14s. 1d. in 1765 to £262 9s. 5d. in 1790, and in monthly terms from as little as 2s. in a number of months to as much as £204 7s. 6d. in December 1794. Fuel was purchased in most months but it was the buying of coal that pushed the expense up dramatically. Wood and faggots from the estate were collected and these were also purchased from outside dealers. The purchase of coal however called for the arrangement of its transportation. One dealer who served Griffin for many years was a certain Elsden of the Lynn Coal Company. This "sea" coal which included Dutch and "Scotch", was landed at Kings Lynn, shipped over inland waterway to Cambridge and then overland to Audley End. The vouchers record the payment of freightage charges as well as for the coal, and it was usually the estate steward, Thomas Pennystone, who saw to arranging the carriage of coal overland: "Cash paid for 30 journeys to Cambridge for coals pr. Mr.Pennystones account".[18] For example, in July 1771 thirty-five such journeys were made and the total bill for the coal and its transportation in that month came to £101 10s. On occasions the vouchers mention the number of waggons used by Sir John's tenants, such as in July 1773 when nineteen narrow-wheel and one broad-wheel waggons were used. On other occasions the coal was landed at Thameside and brought up the waterway as far as Stortford where it was met by Griffin's men and carried overland for the remaining part of the journey.

Although not a sub-department as such, contingencies were given a separate section between 1766 and 1794 when £1,375 17s. 11¼d. was spent, averaging £47 per annum and giving a projected total of £1,486. Annually this varied from £31 4s. 7d. in 1782 to £167 5s. 1½d. in 1789, and on a monthly basis from 1s. 4d. in August 1794 to £125 9s. 7d. in May 1789. This section is particularly interesting as it touches upon so many aspects of life in a Georgian household concerning both members of the family and domestic staff, and although frequently recording the trivia of everyday life, it also enables us to catch a glimpse of the human activity behind the statistics that characterise the household accounts generally. All sorts of details are recorded: for example, in 1768, a rat trap (1s. 6d.); 200 tooth picks (2s.); 6 packs of playing cards (9s.); 2 bottles of Seltzer water (3s. 6d.); the payment of 7s. 6d. for beating all the carpets in the Town house; the cartage of goods "into the City" (6s.); sweeping the chimneys in the London house (4s.); or in 1772, cash paid for loading the waggon with family goods (4s.); cash given to Lady Griffin's chairmen (2s. 6d.); to cash given to two "musick men" (5s.); cash given to two under porters at the House of Commons (5s.); to cash given to "two of the musick belonging to the Troop for their Expence from London to Audley End & Back again (two guineas); among the items in 1789 was the payment of £2 0s. 6d. to Mr.Dellar for hanging lamps for illuminations to celebrate the King's "happy recovery", and in 1794 a further £5 6s. 8½d. was paid for illuminations to celebrate Lord Howe's victory.[19]

Another item included financially with contingencies but given a separate entry in the account books was the payment of Christmas boxes. Altogether £170 17s. was spent on gifts given in London, and among the recipients were the yeomen of the guard, the porter and under porters at St. James', the postman, the New River waterman, the dustman, the watchman, the farrier's boy, the bellman and beadle, the hosier's boy, the foreign postman, the Chelsea waterman, the newsman's boy and the lamplighter. At Audley End the amount spent was £21 2s. and among the fewer recipients were the baker's boy, the butcher's boy, the collarmaker's boy, the tailor's boy, the miller's man and the mealman's man.

The procurement of wine and beer was a vital part of provisions and the need for adequate supervision was recognised by some contemporaries. "Take great care of your wine and other liquor, not only to keep them in good order, but likewise to prevent their being embezzled, or given away to any other persons besides those who have a right to them according to your instructions".[20] At Audley End the wine cellars were supervised by no less a person than Charles Higgins and references to special account books, which have not survived, suggest that he kept a close watch on this important department. Between 1765 and 1794 the sum of £4,880 3s. 11d. was spent on wine, averaging £162 per annum and giving a projected total of £5,258. Annual expenditure varied from £50 3s. 2d. in 1774 to £343 14s. 10½d. in 1766, and individual purchases from a few pounds to well over one hundred

pounds. This department was stocked from the first month of keeping of household account books and in January 1765 there is an entry for "Cash paid for wines as appears pr. bill".[21] Regular purchases were made in this first year and the peak in annual spending was reached in the following year, and only on three occasions did the level of expenditure fall below one hundred pounds per annum.

The aim to build up a "noble wine cellar...worthy of a great nobleman"[22] was dependent on quality as well as quantity, and prevailing favourable[23] conditions aided this landed group in its pursuit of luxury goods. Among the wines and spirits purchased were port, sherry, brandy, rum, claret, hermitage, Madeira, champagne, hock, Cape and Cyprus wines, and understandably these were bought in varying quantities at any one time.[24] The wine was procured in a number of different ways. On some occasions a member of Griffin's family obtained a particular wine on his behalf. This happened in February 1765 when his brother-in-law, the Count de Welderen, was paid £21 for Cape wine, and again in 1766 when a member of his wife's family supplied two pipes of port costing £66 4s. On other occasions it was Griffin who purchased sufficient quantities so that some of his friends might also be supplied, as was the case in November 1787. Of the seven pipes of port purchased only two were retained, the others being divided between Mr.Wolfe, and Mr.Fiske of Saffron Walden, Mr.Raymond, also a neighbour and one of his hunting friends, Mr.Peckard, one of his many ecclesiastical friends and Mr.Robinson, probably a military friend. This fairly large quantity costing over £267 in all was received and signed for by Charles Higgins.

Generally, however, it was a case of Griffin making direct purchase from a number of dealers. For instance, Mr.Jennings supplied Burgundy in March 1765; a dealer named Smith supplied two separate quantities of claret in 1767; Mr.Macintosh a pipe of Madeira in 1770; John Wild a quantity of old sherry in 1786; and in the same year Frisby and Company supplied four gallons of best cognac for £2 16s.; or Mr.Rowles who supplied over £256 worth of unspecified wine. Some of the bills give more precise detail of a particular transaction, as was the case with the firm of Paul Amsinck and Son, of Sise Lane, London, who supplied Madeira in June 1787. On this occasion a pipe of Madeira was landed from an East Indiaman and carried by Adcock's waggon from the Dolphin firstly to Sise Lane and then by cart to Bishopsgate Street. In the following year a letter to Sir John from John Bristow refers to the purchase of nine pipes of port costing over £174 with a further charge of over £17 for duties. This quota had been shipped and the writer added that the wines "are prime and of excellent quality"[25] and mentioned that Mr.D'Oyly would see to its disposal. D'Oyly was Sir John's agent and it is clear that as well as looking after other important aspects of Griffin's affairs, he also had a hand in the procurement of wine. On one occasion a letter addressed to D'Oyly mentions that the writer had been "desired by Lord Howard (as Griffin had become by this time) to acquaint you that we have shipped on board the Moy Active John Lawrence Master a Hamper of Wine marked LHS for his Lordship, who desired it might be addressed to you for the payment of Duties, but we being obliged to give security for them on the landing, they have been paid here and included in the account of Disbursements annexed...The Moy will arrive at Chester & Brewer Quay near the Custom House, from whence the wine will be sent to Burlington Street where it is directed".[26] On this occasion the wine was champagne shipped from Calais. In the same year D'Oyly saw to the payment of ten pipes of old port and a further ten pipes of port. This vast quantity of 2,520 gallons cost £405 4s. 6d. The wine had been shipped by Charles Page aboard "The Queen" and had been supplied by Wild and Greenwood. D'Oyly received 2½ % commission and the Bank Ledgers at Drummond indicate that the bill was paid by two drafts.[27] This firm continued to enjoy Griffin's custom and port was purchased in large quantities.

Nor were direct purchases limited to firms in England. For instance in June 1788 Messrs Ruinart and Sons of Rheims supplied £360 of champagne, £180 of red hermitage and £144 of Burgundy. A letter from Ruinart to Griffin accompanied the account. It transpired that the wine in question had been sent to Calais for shipment and the writer hoped that they would meet Sir John's expectations. He informed that "our wines,...are largely provided with some of the best qualities. Most of our own Vineyards. We hope therefore your Lordship will honour our house with the continuation of your commands and those of your friends and acquaintences".[28]

Although it is clear that Sir John usually bought in bulk, such as half a butt of sherry, a hogshead of claret, casks of Burgundy as well as several pipes, there were occasions when bottled wine was purchased. For example, Allan and Company supplied one hundred bottles of claret, and Messrs Challice at different times supplied quantities ranging from a half-dozen to seventeen and-a-half dozen bottles of wine. The latter account spread over a few years and one item records a discount on the return of eighteen dozen empty pint size bottles. Most of the wine purchased seems to have gone to his Town house at Burlington Street in the first instance where it was divided into town and country consumption, and for the latter purpose careful arrangements for its transportation to Audley End were made. Thus wine purchased from various dealers and imported from Spain, France, Portugal, the Canaries among other countries would ultimately find its way into the cellars of this ruling group, advertising the style of living enjoyed by its members. That Griffin spent on average £3 per week over the whole period at

a time when old sherry was purchased at 30s. per dozen, and port was purchased by the pipe, gives some indication of what that style of living might have amounted to.

But if the procuring of wine was a luxury activity, the brewing of beer was one way in which the great household demonstrated its self-sufficiency in procuring part of the staple diet.[29] Between 1765 and 1794 the sum of £3,908 4s. 7½d. was spent averaging £130 per year and giving a projected total of £4,222. Annual expenditure in this department rose from £45 18s. 8d. in 1766 to £227 16s. 8½d. in 1794. From 1768 payments included cider as well as beer, and although some beer was purchased, the bulk of it was home-brewed.The actual brewing per month varied from as infrequently as only once in 1782, to entries for ten separate months in 1769. The brewer throughout the period was Bennet Reeves, whose longevity of service suggests that his particular brew met with the approval of the Audley End household in general, and with his master's in particular.

As well as giving regular employment to Reeve this activity also impinged on other areas. The cooper, for instance, was called in and among his many tasks he fitted the tubs for brewing, putting staves in the casks, mending and seating iron hoops and the like. On other occasions new barrels and butts were purchased. For instance, Thomas Pennystone, the estate steward, acted on behalf of his master and made a number of purchases in 1765. He also contributed in other directions by supplying one of the essential ingredients, hops, supplying both pale and brown for the different brews. On other occasions hops were supplied by London firms, such as Nicks and Nixon, whose speciality seemed to be "best Condition Kent hops".[30] The other basic ingredient, malt, was supplied at local level and one of the Saffron Walden tradesmen to enjoy Griffin's custom was one member of the Archer family. Barley, drink corn and bread corn, was also cultivated on the Audley End estate including the home farm.

But not all the beer consumed was home brewed. For instance the firm of Thomas Taylor of King Street, Golden Square, London, supplied beer from time to time, seven casks of unspecified beer in January 1766 or small beer in January and February 1783. Another London supplier was Mr.Hawkins, also of Golden Square, but the quantities purchased were modest. Cider was also bought from time to time. Thomas Chappel of Southwark, who supplied 105 gallons at 1s. 2d. per gallon in April 1765, or William Hill who supplied 36 gallons of best pippin cider at 1s. 6d. per gallon in 1789.

Over the period about £2 10s. per week was spent on beer and some cider. This level of consumption was necessitated not only by the maintenance of about thirty domestic servants but also by the other activities on the estate and park and rebuilding of the great house itself, all of which made heavy demands on a large labour force. For although it is probable that quantities consumed over and above the allowance were paid for, it is also probable that with such a large labour force over many years the demand for this staple commodity would have been very considerable. Further, when the occasion warranted, Sir John was ready to direct the making of a strong brew to celebrate a worthy cause such as Lord Howe's famous victory against the French in 1794.

It was also the master's responsibility to clothe some of those persons in his service, and although dress was not uniform amongst this occupational group the "clothing worn by servants was, after all, more visible than either their living quarters or their diet".[31] There was a diversity of dress worn within the household and this was in part due to the division of labour but partly because it was considered that the servant's appearance should express his or her position within the servant hierarchy. But although the senior staff might be dressed much like their employer, others whose duties were more public were the vehicle through which the master might "display his wealth on the backs of his liveried staff".[32]

At Audley End, between 1766 and 1794, the sum of £3,175 was spent on servants' clothing averaging at £112 per year and giving a projected total of £3,401. Annual payments varied between £36 13s. 6d. in 1777 to £151 15s. in 1775, and on a monthly basis from as little as 5s. 6d. in January 1766 to £122 7s. 6d. in November of the same year. Generally purchases were spread over the year rather than livery being obtained at a particular time. The usual pattern was for livery material to be purchased from a number of tradesmen some of whom also supplied members of the family with their needs. One such person was John Davenport who supplied over £89 worth in 1766, over £28 in 1769 and over £14 in 1770. Another firm was that of Messrs Roberts and Sheppey whose bill came to over £40 in July 1770, to over £49 in June 1775 and further quantities were purchased in December of the same year. Some of these bills mention the different items such as the green shalloon and drab coloured livery green cloth, livery lace, frocks, hats, caps, and livery buttons, on one occasion from a Mr.Taylor of Birmingham who supplied six double gross of them. Other bills specify the member of staff for whom the particular livery was intended. In July 1769 for instance, green livery cloth was purchased for garments to be made for the gamekeeper and huntsman. In January 1770 livery caps were bought for the coachman and postillion and the latter also got two flannel waistcoats. In 1791 the "little" postillion was fitted out with a new hat, a pair of gloves, boots and shoes.[33] On other occasions garments were mended such as a waistcoat for the coachman, a coat for the groom, a jacket for the postillion and a coat, jacket and waistcoat for the footman. Understandably a very considerable amount of tailoring work was necessary and two such persons to enjoy

Griffin's custom were a Mr.Searle and a Mr.Cook. When some of the liveries were renewed allowances were made for the old suits or they were reimbursed for "their livery frocks & westcoats to give to poor men".[34]

A separate section entitled apparel recorded the amount spent on materials and clothes purchased mainly for Sir John and Lady Griffin. Between 1765 and 1794 the sum of £3,550 17s. 5d. was spent averaging £118 per annum and giving a projected total of £3,788. The least spent in any one year was £64 0s. 6d. in 1769 and the most in 1766 when the sum was £302 5s. 5d. On a monthly basis this might vary from as little as 1s. in July 1774 to as much as £207 7s. 6d. in November 1766. Due to the practice[35] of purchasing quantities of material to be followed by tailoring work, a number of bills frequently came in at about the same time. For example in April 1765 cloth costing £15 4s. was purchased from John Davenport; mercery goods from Mr.Palmer amounted to £18 8s.; Mr.Plumpton the milliner supplied goods to the value of £28 2s.; Mr.Yeats the hosier's bill came to £3 0s. 7d.; and finally Mr.Regnier was paid £51 15s. for tailoring work. Other vouchers record the individual articles purchased. These included a variety of wigs, shirts, waistcoats, silk breeches, boots, buttons, garters, hats, stockings, buckles, or on occasions military uniform. On other occasions the bills mention Griffin, for instance, a bill "for Cambrick for Ruffles for my master by Mr.Pincott", or "To cash paid by Lady for Pocket Handkerchifes for my master".[36]

That the relationship between master and servant might develop into a family bond is perhaps evidenced by the concern shown for the health of members of the household. "Employers who were willing to go to the trouble and expense of having their servants properly looked after in time of illness could scarcely have been indifferent to the way they were fed, clothed and housed".[37] The well-being of the household in terms of the health of its members was carefully recorded being given a separate section in Higgins' account books. Between 1765 and 1794 the sum of £965 16s. 10d. was spent averaging almost £32 per year and giving a projected total of £1,030. Unlike some other sections understandably there is no even pattern in the expenditure level and monthly out-goings varied from as little as 1s. 6d. in March 1775 to as much as £44 7s. 6d. in April 1792. These figures suggest a healthy or unhealthy period within the household, but are not always precise due to the time lag between the time when the doctor or apothecary was actually called in to the time when the bill was paid. The payments also include a standing fee paid for services rendered over the year. Over the period five apothecaries served both members of the family and staff, and although it was in the interests of the master and mistress to ensure that the staff enjoyed good health, it is no less true to suggest that as part of a nobleman's household they enjoyed many facilities that would otherwise have been denied them in another station.

One apothecary was Robert Mapletoft, probably a local man. His attendances included bleeding James Button and applying a "discutient limbrocation" after he had sustained a fall from a waggon at the end of May 1765;[38] bleeding the coachman and dressing his hand; giving purging powder to the housekeeper and drawing the cook's tooth. Another apothecary, William Fordyce, gave a powder to one of the maids, a gargle to Charles Higgins and a purging powder to the cook. Yet another apothecary, William Wootton, gave an "Electary" to one servant, a draught to another and an opening powder to Higgins.[39] Nor was medical attention confined to the great house. In June 1784 the postillion was taken to the "small pox hospital",[40] another went to London and his board was paid while he received attention to his eyes, and yet another was sent off to be inoculated.[41]

As far as the family was concerned the first Lady Griffin's last illness was recorded and among the items mentioned are antiseptic drops, "the vomit", doses of pills, strenthing draughts, and one of the apothecary's expenses in attending her Ladyship.[42] The second Lady Griffin was considerably younger than her husband and she seems to have enjoyed reasonably good health. Among the "cures" prescribed from time to time were opening draughts, powder valerian, asperiant pills and mixture, purging portions and paper of Columbo root. Despite his serious wound sustained during the Seven Years' War, Sir John himself seems to have made a near complete recovery, although he, too, from time to time was supplied with powder of bark, emetic, opening medicine, draughts, asperient pills and mixture, papers of rhubarb and so on. He enjoyed a long and active life in which he showed a keen and sustained appetite for outdoor activities, and hunting, shooting, fishing and riding around the estate were very much a part of his world as attending Parliament and executing his other duties.

It is not surprising, therefore, that the kennels and stables in particular but also travel and the collection of books, should, in varying degrees, make up such an important part of household consumption, and accordingly reflect the particular life style and interests of this nobleman. The gamekeeper's detailed contracts suggest that his department was an important one in the Audley End establishment, and this is confirmed by the attention to what Higgins in his account books called "Game" and which included shooting, hunting and the menagerie. Between 1766 and and 1794 the sum of £4,153 18s. 3¾d. was spent in this department averaging £143 per annum and giving a projected total of £4,518. On an annual basis the lowest expenditure was £45 8s. 1d. in 1769, and the highest £201 17s. 1½d. in 1794.

The first gamekeeper was George Lemon and he was quickly succeeded by William Gibson. By 1766

John Chapman had arrived and he remained in Griffin's service for the remainder of the period. His several contracts indicate not only the conditions of his service but also portray some of the duties that he was expected to undertake. For a number of years a huntsman named Charles Dawkins and a menagerie man were employed and the growing activity in this department is also reflected by the employment of additional help from time to time. The individual vouchers add further details to some of the tasks carried out by Chapman and his staff. The procuring of horse flesh, rye, barley, milk, bread, for the seven pointers and three greyhounds; peas for the pigeons; buckwheat for the pheasants and other birds in the menagerie and beans for the deer in the park.[43] Much of this food was purchased from the home farm although Chapman also dealt with some of the local tradesmen. Buying ammunition and shot "for my master's use";[44] keeping the guns in good order; purchasing fishing tackle lark, hawk, partridge and pheasant nets; paying game preservation subscriptions; taking action against poachers; killing vermin; obtaining young foxes; and breeding fowls for the river that runs through the park. He also travelled on behalf of his master, for instance delivering hares and fetching a calf from his master's close friend Richard Neville at Billingbear in Berkshire. On this particular occasion his travels involved a stop at Sawbridgeworth for beer, bread and cheese for himself and corn for the horses; beer, supper and breakfast at the White Hart, Woodford; dinner and beer at midday; turnpike charges; a further night's supper and then breakfast and similar expenses for the return journey. Chapman submitted a travelling claim for £1 19s. 10d. Although he does not seem to have kept an account book most of his activities were recorded on loose vouchers and submitted initially to Charles Higgins for scrutiny. That he travelled, was allowed the use of two horses and occupied his own cottage on the estate all point to the importance of his position in the Audley End hierarchy. His longevity of service suggests that he gave satisfaction and that his master was able to enjoy the outdoor activities of shooting pheasant and partridge, hare coursing, hunting, and the improvement of the River Cam running through the park facilitated good fishing.

Occupying the same position as the kennels were the stables, standing to the west and slightly north of the house. Between 1765 and 1794 the sum of £16,562 16s. 3d. was spent in this department, averaging £552 per annum and giving a projected total of of £17,822. The least spent was £349 17s. 5½d. in 1768 and the most two years earlier in 1766 when the figure was £917 4s. 1½d., and on a monthly basis this varied from £10 to over £200. This very high level of expenditure is partly explained by the social standing and particular interest of the owner and partly by his army career as he was colonel of the First Troop Horse Grenadier Guards between 1766 and 1788. This department contrasts with most of the others as there was a greater turnover of staff. There were at least half a dozen different coachmen during the period and the composition also changed from two coachmen, two postillions, a groom and whipper-in, as well as employing extra help from time to time.

Likewise the size of the stables in terms of horses varied, sixteen at one time and eleven at another. However, it is clear that there were usually sufficient horses for the stables to be organised under the groom's stable, the coachman's stable and the common stable. Although occasionally horses were hired the vouchers record the purchase of the different types of horses over the years. In July 1770 a pair of brown coach horses were purchased for £48; in March 1771 £35 was paid for a bay gelding and in November a bay was procured for Lady Griffin costing £15 18s.; in the following March £26 5s. was paid for a Tartar gelding; in March 1783 three black geldings were purchased for £113; in 1790 a pair of black geldings "warranted sound"[45] were bought for £100; in May 1791 four grey ponies cost £37 16s. On other occasions horses were purchased for regimental purposes. In March 1782 two troop horses were supplied and in June 1788 Griffin paid £100 through his adjunct for four troop horses. The name of his adjunct, Wheatley, also appears quite frequently in connection with the stabling of the troop horses. Sir John also rented a stable in Town. In January 1766 Mr.Blagrave was paid £50 for "five quarters" rent for stables and coach houses near Golden Square.[46] By June 1787 he was paying Mr.Nash £20 10s. for half a year's rent for stables and coach houses at Crane Yard, Leicester Street, and in 1795 Thomas Smallbones was called in to survey "the dilapidation of your Lordship's Stable in Leicester Mews held on lease from Mr.Nash" for which work he was paid one guinea.[47] The vouchers for this department record the payment of corn, straw, oats and hay, and again most of these were supplied by the home farm, and the further needs of the stables impinged upon the special skills of the blacksmith, saddler, wheelwright, collarmaker and the farrier. The latter's work in particular indicated the attention lavished on the horses from time to time, such as applying oils to a saddle horse's shoulder, giving purges to coach and saddle horses, dressing the eye of Sir John's riding horse, and providing strong spirits and wine "for a favourite horse".[48]

That this should be so was understandable for the possession of stables, horses and the appropriate liveried servants were the symbols of social standing and a sign of prosperous competence. To this list can be added the family coach which "served admirably for the display of livery".[49] In 1765 Griffin possessed four four wheel carriages and one two-wheel carriage; in 1772 the composition had changed to five four-wheel carriages ; and by 1781 there were six four-wheel carriages. At the time of his death five four-wheel

carriages were recorded and they were assessed at £7 each per year for tax purposes.

In 1765 work was begun on overhauling one of his coaches. The task was undertaken by the firm of Ringstead and Poole and the bill came to £103 15s. 8d., and further work was carried out in the same year by Joseph Edmonton. On another occasion he purchased a second-hand phaeton for fifteen guineas, and at another traded in one of his old coaches against a new one. Fifteen guineas were allowed for the old one and the new coach was built by Mr.Benwell for £143 6s. after the deduction. The new coach was painted a dark brown with the family arms on the door panels in buff and was well varnished. It was lined with a super fine buff colour and trimmed with the best worsted lace. The leather was japanned and there were handsome head plates. There were mahogany shutters, double steps trimmed with red leather and wainscot under the seats. This body was hung on a light but strong perch carriage with the best German steel springs, iron axles screwed at the ends and leather boxes, and it was to be drawn by four horses. Another coachmaker to enjoy Griffin's custom was John Hatchet, who also enjoyed royal patronage. On one occasion he supplied a new coach costing £209 9s. and on another a coach costing £223 1s. This second coach was made of the best materials and was of the most fashionable shape, the framing of the body was neatly fluted, and among its many features were its fine buff coloured cloth, lace trimmings, four large diamond cut glass plates, Venetian blinds, all the wood was neatly carved, the ironwork town made, and the body painted a fine chocolate brown and the carriage and wheels buff. The arms were displayed on the doors and the crests on the ends and footboards and the Knight of the Bath star on the quarters. Drawn by six horses there can be little doubt that this magnificent vehicle brought a sense of pride to its liveried handlers as well as symbolising the social standing of its owner and advertising his professional advancement.

With so many carriages and two establishments it is not surprising that there should also be a fair amount of travelling of one sort or another. Charles Higgins certainly considered that the movement of persons and materials warranted a separate section in his account books. Between 1765 and 1794 the sum of £6,919 14s. 4½d. was spent averaging £230 per annum and giving a projected total of £7,412. The lowest figure was in 1792 when the amount was £126 2s. and the highest in 1785 when the figure was £380 15s. 7d. As might be expected some expenditure is recorded for most months although this varied from as little as £1 2s. 2d. in July 1768 to as much as £110 2s. 3½d. in August 1770.

As far as the master and his Lady were concerned only occasionally are there direct references to their movements. For example, in July 1776 there is mention of a tour to Peterborough, on another occasion travelling to Oxford and on yet another occasion travelling into Kent. The comings and goings of the Whitwell and Clayton families are also recorded. The member of the household who was responsible for initially recording travelling expenses was the *valet de chambre*, but regrettably his detailed accounts have not survived and it is the abstract entries that found their way into Higgins' account books. However, the considerable payments made to the *valet de chambre* indicate the extent of Sir John and Lady Griffin's activities. For instance, the Peterborough tour cost £74 19s.; payments in August and October 1776 came to £71 14s., and in September 1789 his travel accounts totalled £85 10s. 9½d. Other sources record visits to Bath, Tombridge, Harleyford in Buckinghamshire, Billingbear in Berkshire, Hurstbourne Park in Hampshire, Denston in Suffolk, Exeter, as well as regular journeys between Audley End and Burlington Street.

It was along the Audley End to London road that most of the domestic staff travelled from time to time. Charles Higgins in particular frequently made this journey, sometimes alone and at other times in company with lesser servants. Another senior member of the staff to travel on a regular basis to the capital was Nockold the bailiff who organised and frequently supervised the carriage of the family goods between the country and Town residences. The housekeeper, too, seems to have travelled quite frequently, and other entries in the accounts show that individual servants sometimes went by chaise marine and on other occasions "by my master's coach".[50] It is clear that there was a doubling up and only a skeleton staff was left at the Town house when the family was in the country. On other occasions the master's business took some of the staff to places other than the capital. For example, Charles Higgins is recorded as "goeing to Cambridge about Coals";[51] the huntsman was sent to bring "the little grey horse home";[52] another to fetch a boat at Bishops Stortford; and another to get a sick horse left at Norwich.

What emerges from these particular accounts is the hustle and bustle of a way of life that not only centred around two establishments, but also the demands made on the staff who managed these establishments and on whose careful organisation the smooth progression of persons, food and other goods between the country seat and London depended. That such details were meticulously recorded is in itself an indication of the importance attached to this aspect of the economy of a Georgian household in its widest sense. It is equally clear that through Higgins Griffin was able to exercise a close control over the movement of his staff, and in the light of the total sum spent in this department, that movement was not inconsiderable.

There is finally the section entitled books, newspapers and stationery. Between 1765 and 1794 the sum of £1,651 7s. 9¾d. was spent averaging £55 per annum and giving a projected total of £1,784. Annual

expenditure varied between £23 13s. 11d. in 1775 and £101 8s. 5½d. in 1791, and on a monthly basis this rose from as little as 1s. 6d. in July 1781 to as much as £56 16s. 11½d. in September 1774. Bearing in mind the very considerable amount of paper work that the administration of the household needed to sustain its working efficiently over the years, it is not surprising that the purchase of stationery should warrant the house steward's attention. Different types of account books were procured for members of the family as well as for some of the staff. "To 3 Books Bought for my masters use for Accounts".[53] "To an Account Book for my Lady".[54] Among the many staff who had their own account books were Charles Higgins who on one occasion entered "To cash paid for this Account Book" costing 2s. 6d.;[55] the cook had a special book and one was provided for the servants' hall, a wages receipt book with one hundred and fifty-two stamps, cellar books, memoranda books, and a special book with a lock attached were all recorded. Large quantities of paper were also bought for Sir John and Lady Griffin, for the porter and a slate for the dairy maid. Among the other stationery items were sealing-wax, cartridge paper, pens — one hundred at a time — for the use of the family and for the use of the House. Ink was usually purchased by the quart and at times ingredients for ink were also purchased. Blank cards, cards of thanks, gift cards, message cards, blotting paper, visiting books as well as packing and kitchen paper were all carefully entered.

Likewise with the purchase of newspapers, London and country, were meticulously recorded. Among the suppliers to enjoy Griffin's custom were Bryan Marshall and Bridgett Robinson. The newspapers taken included the *Gazetteer*, *St. James Chronicle*, *Daily Advertiser*, *Worlds Advertiser*, *English Chronicle* as well as the Essex and Cambridge papers. These papers were filed for reference purposes and it is clear from following other aspects of Griffin's life and career that he was fully conversant with the growing importance of the press.

During his tenure of Audley End Sir John built up quite a considerable library. Some books he inherited from his aunt and came from Billingbear after her death, but the bulk were purchased by himself. Among the subjects that for one reason or another attracted his and Lady Griffin's interests were the following. As a soldier it is understandable that he should want to purchase military works and they included Major Bell's *First Principles of War*, Smith's *Military Dictionary*, various subscriptions towards Prince Ferdinand's *Campaigns*, Sime's *Military Library* and it is clear that he followed the campaigns in the American War of Independence. As a Parliamentarian he procured - *Journals of the House of Commons*, *Minutes of the House of Lords*, Debrett's *Parliamentary Register*, and copies of Acts of Parliament. *The Annual Register*, the *Gentleman's Magazine* and the *Court Register* were also taken. As a landowner it was natural that some of the titles should reflect his interest in this sphere and some of these were purchased for his estate steward. Various farming books, a three volume work entitled *The New System of Husbandry*, *The Complete Grazier*, *A Treatise on the Forcing of Early Fruits*, Stephenson's *Gentleman's Gardener*, a gardening dictionary, botanical magazines, as well as literature relating to game laws and sporting life were among the many purchases made.

His interest in the arts was reflected in such titles as *English Architecture*, *Adam's Architecture*, and at a more practical level the taking of many numbers of the *Builder's Magazine*. The ancient world was represented by such works as Le Roy's *Ruines de la Grece*. Heraldry included the *Complete Body of Heraldry* and Dugdale's *Baronage*, and Morant's county history of Essex and Bridges' history of Northamptonshire as well as a number of works on the history of England and Europe were bought. Contemporary affairs were catered for by subscriptions to *Revolution in France*, *Canal Navigation Plans*, the *Trader's Companion* and two volumes of *Arts, Manufacturers and Commerce*, travel books were popular as were maps and guides. An extra copy of the *New and Complete Guide to London* was purchased for the use of John Dean, the porter. Literature was well represented and included Bell's *Lives* of Milton, Pope, Dryden, Spenser, Swift, Addison, as well as his *Lives* of the poets, and a number of contemporary plays were purchased, some specifically for Lady Griffin. Books on religion included Dr.Clarke's *Paraphrase of the Four Evangelists*, Blair's *Sermons*, prayer books, psalm books, and a "School Bible for Little Postillion".[56] There are also references to medical works, mathematics, philosophy and science.

But as well as the purchase of books there was also the binding and during part of this period there was a boom in the West End bookbinding trade. Generally the books were bound in London and there are frequent references to the actual binding process. However there were occasions when specialist binders travelled to Audley End and one such instance mentions that three of them were there for seven weeks during which time eggs and flour among other ingredients were used in the process of binding, lettering and ornamenting books. The collection of books and the building up of a library had long been associated with the nobleman and his mansion and although motives for doing so varied, by the eighteenth century the nobleman's books would be clothed in half or full morocco, often with elaborate gold tooling. The library at Audley End formed part of the south wing ground floor suite decorated to Adam's designs, and the crimson and gold binding of Griffin's books were designed to harmonise with Adam's schemes for in "interiors the keynote is unity of effect, due to the architect having taken the finishing and fitting of the room into his province".[57] Many of these books can still be seen in the present library at Audley End. All in

all, the books purchased by Griffin reflect a general rather than a specialist interest in any one field.

In turning to the consumption pattern within the household it is seen that housekeeping, including toiletries, stores and contingencies, comes top of the table accounting for 28.9% of the global sum. The stables come second with 16.8% and servants' wages a close third with 16%. All other sections fall below 8%. Travel accounted for 7%; fuel for 5.5%; wine for 4.9%; game for 4.2%; beer for 3.9%; apparel for 3.4%; liveries for 3.2%; lighting for 2.5%; books and stationery for 1.6%; and health for 0.9%.[58] Including servants' wages,[59] the total household expenditure amounted to £105,677, averaging £3,302 per annum for both country and town establishments, during the period 1765-97. The amount spent in each section or department understandably varies from household to household and in part reflected the interests of the individual landowner. For example, in 1759 the Marquess of Rockingham spent more on his stables and kennels than on housekeeping. At Audley End, less was spent on books than on any other section except health. That there were no comparable figures to the gamekeeper and huntsman is not surprising, for Griffin was not a man of letters, but essentially a man of action who enjoyed the pursuits of an outdoor life. The section that is relatively high at Audley End is the stables, explained partly by professional career, as well as his interests, and particularly his social status. 'For as long as the horse and carriage were the symbols of social standing, and possession of stables and groom the signs of a prosperous competence, the English landed aristocracy retained its predominant place'.[60]

In quantifying the relative weighting of household consumption with the other main areas of this nobleman's overall expenditure, it is seen that it is the single largest area of his known total expenditure, which amounted to at least £381,564. Of this global sum Audley End House and furniture came to £86,214; the London house and furniture to £10,412; the estates to £96,100; the home farm to £21,627; and miscellaneous expenditure to £61,534.[61] The household at £105,677 represents about 27.9% of the total known to have been spent by Griffin.

What then of the potential conspicuous consumption impact of the noble household upon the maintenance of the level of demand during a critical period of transition in the British economy? It has been suggested that household consumption and the accumulative expenditure of the land-owning group had repercussions beyond the framework of the household and the boundary of the estate. The maintenance of country and London establishments at group level had a bearing on the economy of the capital as well as on that part of the country in which the great house was located. The Audley End household accounts show that local tradespeople as well as London and others benefited from Griffin's demands for a wide variety of commodities. It was Malthus' view[62] that as a group the English landowners were pre-eminently consumers, and on the whole modern scholarship has confirmed this verdict. But Malthus also recognised that the existence of this group sustained effectual demand which in turn had the effect of helping to stimulate economic progress. Indeed, the landowners' large scale consumption habits might well have had the effect of not only maintaining the level of demand, but also in helping make the transition of the economy from agrarian to industrial a smoother progression than it might otherwise have been. Some modern scholarship has also emphasised that consumer demand in the home market as one explanation of economic growth and has recognised the part played by the wealthy household in increasing the scope even of the industrial market. 'Whilst the rich might have bought little for their personal use that was mass produced, their households needed metal and textile manufactures, their servants needed dress and equipment and the building of their houses involved increasing consumption of glass, iron, lead and brass.'[63] Another scholar has discussed the 'multiplier effects'[64] that the building activities of this group had upon the economy, and the historian[65] of the domestic service class in his discussion of the role of this occupational group in the process of cultural change mentions certain native products, standards of dress, personal cleanliness, and this not only from class to class, but also from city to country. To this can be added that the rich did buy what another scholar has called "common consumer goods":[66] candles, paper, starch, soap, beer, malt, hops, spirits and the purchase of coal in particular impinged directly upon the industrial market. The same scholar has warned that few commodities can be considered as being for the consumption of the rich only. To this can be added that the payment of servants' wages also assisted capital circulation further with the attendant potential purchasing power of this largest single occupational group during a critical period of transition in the economy.

As far as this particular noble household was concerned, it is evident that a significant proportion of the £105,677 was spent on housekeeping, servants' wages and on purchasing a variety of common consumer goods. But even in some of those areas reflecting Griffin's social standing and particular interests, the cash spent, had, in part, the effect of offering employment and of helping sustain the income of craftsmen and tradesmen in his locality as well as in the metropolis, with further potential 'multiplier effects' for the economy.

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Notes

I have kept these footnotes to a minimum, only indicating the main collections or classes of documents consulted, other than specific references and quotations.

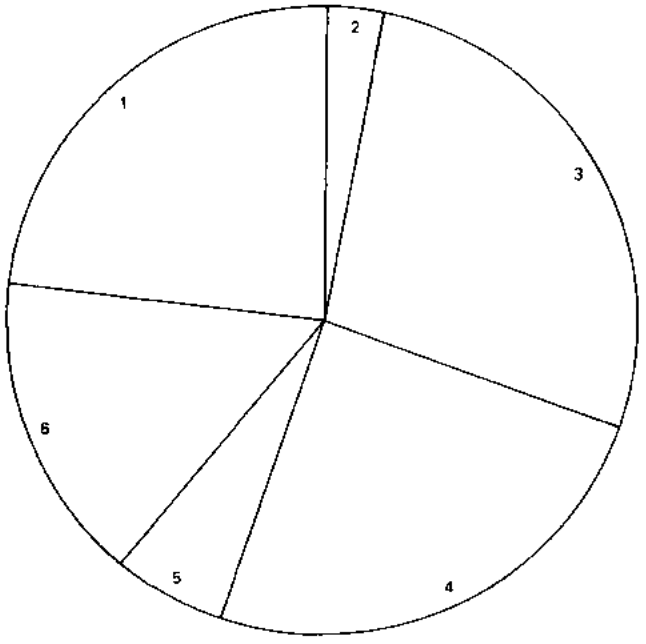
1 For example, see J.D. Williams, 'The Landowner as Manager', *Essex Journal* (Winter 1980-81), 74-82.
2 F.M.L. Thompson, *English Landed Society in the Nineteenth Century* (1963), 95.
3 E R O D/DBy F46.
4 E R O D/DBy A23-55.
5 E R O D/DBy A196-226.
6 E R O D/DBy A196.
7 Unfortunately these have not survived.
8 At Wentworth Woodhouse, for instance, it was quarterly accounting between 1765-1782: Sheffield Central Library, Wentworth Woodhouse MSS.A2-7, and 8-24 (even numbers only). At Thoresby it was annual accounting between 1760-1772: Nottingham University Department MSS.M4419-21.
9 See Ray A. Kelch, *Newcastle A Duke without Money: Thomas Pelham-Holles 1693-1768* (1974), 207.
10 E R O D/DBy A18.
11 E R O D/DBy E8.
12 E R O D/DBy A377: see Hannah Glasse, *The Servant's Directory or Housekeeper's Companion...* (MD CCLX), for a similar housekeeping system.
13 E R O D/DBy A262-264.
14 E R O D/DBy A291.
15 See J.D. Williams, 'The Management of an Eighteenth Century Essex Home Farm', *Essex Journal* (Spring 1981), 19-23.
16 For example, E R O D/DBy A204: March 1773.
17 On a monthly basis these bills usually showed work done in the plantation and kitchen gardens.
18 E R O D/DBy A200: July 1769.
19 E R O D/DBy A225: the illuminations cost £93 18s. and included 510 lamps.
20 A. Heasel, *The Servant's Book of Knowledge* (1773), 70.
21 E R O D/DBy A196.
22 Gladys Scott Thomson, *Life in a Noble Household: 1641-1700* (1937), 183.
23 See W.E. Minchinton, *The Growth of English Overseas Trade in the Seventeenth and Eighteenth Centuries* (1969).
24 See H.E.S. Fisher, *The Portugal Trade: A Study of Anglo-Portuguese Commerce 1700-1770 (1971), particularly 'The Wine Trade'*, 77-86.
25 E R O D/DBy A46/10/88.
26 E R O D/DBy A48/6/90.
27 E R O D/DBy A48/12/90: Drummond Bank Ledgers, 1 & 10 December 1790.
28 E R O D/DBy A52/12/93: see also, A. L. Simon, *Bottle Screw Days Wine Drinking in England During the Eighteeenth Century* (1926), 193.
29 See P. Mathias, *The Brewing Industry in England 1700-1830* (1959).
30 E R O D/DBy A45/4/87.
31 J.J. Hecht, *The Domestic Servant Class in Eighteenth-Century England* (1956), 120.
32 Phyllis Cunningham & Catherine Lucas, *Occupational Costume in England From the 11th. Century to 1914* (1967), 156.
33 E R O D/DBy A222: November & December 1791.
34 E R O D/DBy A202: March 1771.
35 See Iris Brooke & J. Laver, *English Costume of the Eighteenth Century* (1945).
36 E R O D/DBy A214: July 1783.
37 Hecht, *op. cit.*, 98.
38 E R O D/DBy A23/5/65.
39 E R O D/DBy A33/11/75.
40 E R O D/DBy A215: June 1784.
41 E R O D/DBy A197: January 1766: to this can be added that some of the Town house servants were sent to Audley End for 'Easter Holidays'; D/DBy A200, 31 March 1769.
42 E R O D/DBy A24/11/66.
43 Among the birds were various types of pheasant, partridge, pigeon, parrot, goldfinch and nightingale.
44 E R O D/DBy A203.
45 E R O D/DBy A48/5/90.
46 E R O D/DBy A24/1/66.
47 E R O D/DBy A53/11/95.
48 E R O D/DBy A45/7/87.
49 Cunningham & Lucas, *op. cit.*, 173.
50 E R O D/DBy A210: April 1779.
51 E R O D/DBy A207; May 1776.
52 E R O D/DBy A210: September 1779.
53 E R O D/DBy A198: November 1767.
54 E R O D/DBy A200: February 1769.
55 E R O D/DBy A202: January 1771.
56 E R O D/DBy A224: December 1793.
57 M. Jourdain, *English Decoration and Furniture of the Later XVIIIth. Century (1760-1820)* (1922), 23.
58 See Appendix 1.
59 To be treated separately in a forthcoming article.
60 Thompson, *op. cit.*, 1.
61 See Appendix 2.
62 T.R. Malthus, *The Principles of Political Economy* (1951 ed.), 316-28.
63 D.E.C. Eversley, 'The Home Market and Economic Growth in England, 1750-1800', in E.L. Jones & G.E. Mingay (eds.), *Land, Labour and Population in the Industrial Revolution. Essays presented to J.D. Chambers* (1967), 212. See also, W. Bowden, *Industrial Society in England towards the end of the Eighteenth Century* (1965), 66: this scholar mentions the 'very great increase of wealth and consequent expansion in demand for consumption goods at home'. He also quotes a contemporary source of 1761: '...whoever will look into the possession and expenses of individuals, their houses, furniture, tables, equipages, parks, gardens, cloths, plate and jewels, will find everywhere round him sufficient marks to testify to the truth of this proposition'.
64 F.M.L. Thompson, 'Landownership and economic growth in England in the eighteenth century', in E.L. Jones & S.J. Woolf, *Agrarian Change and Economic Development. The Historical Problem* (1969), 57.
65 Hecht, *op. cit.*, 200-228.
66 Eversley, 'Home Market', *op. cit.*, 248.

APPENDIX 1: HOUSEHOLD RELATIVITIES TABLE *

	DEPARTMENT/ SECTION	GLOBAL SUM	PERCENTAGE	ANNUAL	WEEKLY
		£		£	£
1.	Housekeeping**	30,615	28.9	956	18.3
2.	Stables	17,822	16.8	552	10.6
3.	Servants' wages	17,072	16.0	533	10.2
4.	Travel	7,412	7.0	230	4.4
5.	Fuel	5,958	5.5	185	3.5
6.	Wine	5,258	4.9	162	3.1
7.	Game	4,518	4.2	143	2.7
8.	Beer	4,222	3.9	130	2.5
9.	Apparel	3,788	3.4	118	2.2
10.	Liveries	3,401	3.2	112	2.1
11.	Lighting	2,797	2.5	85	1.6
12.	Books	1,784	1.6	55	1.0
13.	Health	1,030	0.9	32	0.6
	Total	105,677			

* D/DBy A196-226: these are the projected totals.
** Housekeeping includes stores, soap and contingencies.

APPENDIX 2: EXPENDITURE PATTERN



(b) DEBIT
1. Audley End House and furniture, 1763-1797: £86,214
2. London house and furniture, 1763-1797: £10,412
3. Households, 1765-1797: £105,677
4. Estates, 1754-1979: £96,100
5. Home Farm, 1772-1797: £21,627
6. Miscellaneous, 1749-1797: £61,534

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John Horace Round and Victorian Colchester: Culture and Politics, 1880-95

by W.R. Powell

John Horace Round is well known as one of the outstanding historians of Anglo-Norman England. He was also a pioneer in the study of scientific local history, and his early writings on Colchester — like much of his work — are still valuable more than a century later. While reconsidering these writings, this paper also discusses the interests in the arts and in politics which Round displayed as a young man on his frequent visits to Colchester. All these activities sprang from his family connexions with the town.

In July 1880 John Horace Round was staying at East Hill House, Colchester as the guest of Mrs Margaret Round ('the Aunt'), and helping her to organize a bazaar that was to be held there in aid of the local hospital. He wrote to his father:

> The sun is shining upon our labours...Besides the main shed, about 400 feet long, there are two others about 100 feet long...three large marquees, and three tents. It is really a pretty sight. The backs of the sheds are well trimmed with broad red and white stripes, and along the top run flags and all the names of the ladies, on a vast scale. It is expected that there will be about 80 or 100 stall-holders and assistants. The house-party is again altered. The William Tufnells come to us for certain, and Mrs T. has written to ask if she may bring her very objectionable niece Lucy de Crespigny. Then Miss Gurdon Rebow comes here on Thursday, Col. Learmonth may come, if not then Basil Harrison, and the beautiful Lally de Crespigny is asked.[1]

Horace duly stuck into his scrapbook newspaper accounts of the bazaar.[2] It was a grand affair lasting two days, opened by the High Sheriff of Essex and James Round M.P., accompanied by five military bands. On the opening day Margaret Round entertained 80 guests to lunch at East Hill, and gave an evening ball for 200. Mrs Marian Round, of Lexden House, presided over the Art Needlework stall, assisted by Violet Round, Horace's sister.

Into this family party Horace entered with gusto. Having recently come down from Oxford with a First in History, he was not lacking in self-confidence. To his father he wrote:

> I wish you were here. You could make such a pretty scene at the bazaar. 'Who is that very clever person, whom the General is consulting so deferentially on politics?' asked an officer of Nellie yesterday. 'That person is Mr Horace Round', she replied. So you see, the old boy and I are great chums as ever.[3]

The lively bulletins of gossip which Round sent home from Essex that summer, show that the social life of the gentry in 1880 was not very different from that portrayed by Jane Austen at the beginning of the century, with much entertaining, and mothers scheming to secure suitable husbands for their girls. At East Hill, Round reported:

> We are all agog to see if the affair between Frank Round ('the Great Auk'), and Emily Tufnell ('Little Em'ly'), can at last be brought to a crisis, but Mrs T., in her eagerness, is over-reaching herself, and, meaning to have two strings to her bow, has brought Constance her sister as well. Frank consequently hesitates hopelessly between the two.[4]

Frank, a younger brother of James Round M.P., was in the Colonial Office. Emily was a daughter of John Jolliffe Tufnell of Langleys, in Great Waltham.[5] A few weeks later Horace was able to report their engagement, and they were married in the following spring. Many years later, after his retirement, Frank was recruited by Horace to work for the *Victoria County History of Essex*.[6]

Horace Round never lived in Essex, but he had family connexions with the county, and especially with the Colchester district. His grandfather John Round (1783-1860), was born at Colchester and was High Steward of the borough from 1818 until his death. He was also for many years a deputy-lieutenant and a magistrate of Essex. He was Tory M.P. for Ipswich borough, 1812-18, and for Maldon borough, 1837-47. As the owner of Danbury Park, near Chelmsford, he built the house which later became the seat of successive bishops of Rochester and of St. Albans. John Round's wife Susan brought him in marriage the manor of West Bergholt, near Colchester, and this eventually descended to Horace Round.[7] Horace's uncle, Edmund Round Q.C. (1820-91), lived for much of his early life in Essex, and later had a holiday cottage and a yacht, *Elaine*, on the river Colne at Wivenhoe, where Horace spent many holidays during the 1870s and 1880s.[8] Horace also forged close links with a number of Essex relatives descended from his grandfather's uncle, James Round (d. 1806), of Birch Hall.[9] By his marriage, that James Round had acquired Colchester Castle and the adjoining Holly Trees house. Charles Gray Round (d. 1867), James's grandson, was Recorder of Colchester, and served as Tory M.P. for North Essex from 1837 to 1847. At the 1847 general election he stood as a candidate for Oxford University, supported by 'the old high and dry party and the evangelical party combined', but was defeated by Gladstone in a memorable contest.[10]

Charles Gray Round's heir was his nephew James Round (1842-1916), of Birch Hall, Conservative M.P.

for East Essex (1868-85), and for the North-East (Harwich) division of the county (1885-1906). James had two brothers, Francis (Frank, 1845-1920), who has already been mentioned, and Douglass Round (1846-1916), a barrister. Horace came to know all three brothers well, and in later life James was his closest friend. As a young man Horace was also friendly with several relatives living at Colchester. Mrs Margaret Round, his hostess at East Hill, was the widow of the banker George Round (d. 1857), a cousin of Charles Gray Round. Close by, at Holly Trees, lived James Round's unmarried sisters, while Lexden House was the home of Marian Round, widow of Edward Round (d. 1875), George Round's nephew.[11] The Rounds had long been among the leading Essex families. As heir to West Bergholt, Horace took his place among them, and came to regard himself as an Essex man, and particularly as a Colchester man.

Horace Round never entered regular employment. His health would have made it difficult, though not, perhaps, impossible in his younger days. In 1878, when he came down from Balliol College, there was no immediate need for a decision about his future, and he chose to remain at home in Brighton to care for his father, who was beginning to suffer from mental illness. For the next year or two he seems to have spent much of his time reading and compiling scrapbooks of press-cuttings, the first of a series which he kept for the next twenty years.[12] From this lonely life he occasionally escaped to Essex, helping his uncle in the garden at Wivenhoe, fishing from the yacht, and joining his relatives at Colchester for parties, outings, and lawn tennis. He had played his first game of tennis on the court at Holly Trees in 1875.[13] Lawn tennis had just been introduced in this country, and in that very year was added to the programme of the All England Croquet club at Wimbledon.[14] Round took it up enthusiastically, and continued to play for several years.

Round liked Essex much better than Brighton. He wrote in 1880:

> In Brighton I am asked nowhere, and treated as nobody, while in Essex I am asked everywhere and treated with a consideration to which I am quite unused, and all because of the position which my family holds [in Essex].[15]

Well-connected, clever, and heir to an estate in the county, he was no doubt a guest welcomed by match-making mothers in Essex. There is no evidence that he was attracted by any of their daughters, but he certainly enjoyed his visits to the county, and before long he was contributing to its cultural and political life. In 1881 he compiled the catalogue of a loan exhibition held at Colchester.[16] In July 1883 he was one of the guides to the Noviomagians — a small social club restricted to members of the Society of Antiquaries — when they visited the town.[17] Among the visitors were Henry Stevens, a distinguished American bibliographer living in London, and George Bullen, keeper of printed books at the British Museum.[18] Round showed them the Harsnett library, which had been left to the town in the 17th century by Samuel Harsnett, Archbishop of York, and was then housed in the castle, along with books belonging to James Round. Stevens and Bullen urged that the library should be properly catalogued, and Horace Round undertook to organize this, reporting to the mayor, John Bawtree Harvey. Harvey, a local printer and a Liberal, was an outstanding figure in 19th-century Colchester.[19] In spite of their political differences, he and Round worked amicably together.[20] It was at first agreed that Henry Stevens himself should catalogue the library, but he fell ill, and although Round brought him down to his own home in Brighton to convalesce, his recovery was not permanent, and the work was eventually done by Gordon Goodwin. Colchester corporation published the catalogue in 1880, acknowledging Round's help. His part in it had included interviews and correspondence over two years, and personal examination of the library. He had incidentally proved that three incunabula in the castle — one by Caxton and two by Wynkyn de Worde — were not part of the Harsnett library, but belonged to James Round.

During the 1880s Round was beginning to make his mark as a historian. Here, as in genealogical writing, his choice of subjects tended to be influenced by personal loyalties, and much of his early work related to Colchester. His essays on the town were a way of thanking his relatives there for their kind hospitality. But the subject was, of course, fascinating in itself. Local interest in the town's history had been stimulated by the visit of the Royal Archaeological Institute, which held its annual Congress there in 1876, under the joint presidency of Lord Carlingford, Lord Lieutenant of Essex, and the historian Edward Augustus Freeman.[21] Freeman, who gave an opening address on 'Colonia Camulodunum', mentioned the occasion in a letter to his friend James Bryce:

> There [Colchester] Clements Markham and I had much striving with a mad cavalier, which is still going on in print. We — that is, self, wife and Helen — dwelled in the house of all the Rounds, nephews and nieces of the late Round-round-round who stood against Gladstone. They are very good kind of folk, and have the castle, of which Parker spake much — some folks still hold that it is a Roman temple.[22]

The 'mad cavalier' was John Pigot, who had criticised Clements Markham's paper on 'The Siege of Colchester' of 1648 for defending the execution of the royalist leader Sir Charles Lucas. In later years Horace Round was to join in the debate on the royalist side. 'The late Round-round-round' was, of course, Charles Gray Round. The house where Freeman stayed in 1876 was probably Holly Trees, where his hostess would have been Mrs J.T. Round, the mother of James Round M.P.[23] James himself certainly attended the Congress.

Did Horace Round attend the Congress of 1876, and was he among the 'very good kind of folk' who

entertained Freeman? He was already a welcome visitor to Holly Trees,[24] and as an undergraduate about to embark on his History Honours course he would probably have jumped at the chance of meeting one of the leading historians of the day. Round never mentions having been at the Congress,[25] but he knew all about it, and had studied the reports of its proceedings. This can be seen from two substantial essays which he published in 1882: 'The Domesday of Colchester', and *The History and Antiquities of Colchester*. In both of these he discussed Freeman's contributions at the Congress. He had, at first, greatly admired Freeman's work. In 'The Domesday of Colchester' he described his *Norman Conquest* as 'perhaps the noblest monument of modern historical literature'; and he went on: 'I shall hope, with its assistance, to illustrate the statements of the record [Domesday Book] so as to enable a qualified observer to draw his conclusions from the facts.'[26]

This fulsome tribute to Freeman comes strangely from the man who was later his fiercest critic, but it was probably sincere enough, and it shows that Freeman's example had inspired Round's first important contribution to Domesday studies. It may be further suggested that Round had deliberately taken up the challenge thrown down by Freeman in his address to the Congress in 1876:

> Of Colchester itself the record in the [Domesday] Survey is one of the fullest among the boroughs of England. It ought to be fully illustrated by someone who to local knowledge adds the power of comparing what the Survey tells us about Essex and Colchester with what it tells us about other shires and boroughs. A general historian from a distance cannot do it; a dull local antiquary cannot do it; it needs a man on the spot who knows the ins and outs of the land, but who also understands historical criticism, and who knows something of other parts of England as well as of his own.[27]

Horace Round was, indeed, such a man.

Round's 'Domesday of Colchester' does not make easy reading. Though comprising only 24 pages, it was published serially.[28] It is disfigured with footnotes indicated not by numbers but by asterisks, daggers, and double-plus signs. The style is discursive, some of the classical comparisons are otiose, and Round's discussion of Old English settlement rests on the 'mark' theory, which was soon to be discredited. But the paper shows that he also had the scholar's power of wrestling with his subject, for example in discussing the distinction between *burgus* and *civitas*. Not least important, in a Domesday study, was his intimate knowledge of local topography, shown particularly in his neat sketch map. A revised, and much more readable edition of 'The Domesday of Colchester' was published twenty years later as part of Round's introduction to the Essex Domesday, in the *Victoria County History of Essex*,[29] but the original version still repays study.

The History and Antiquities of Colchester Castle, which appeared soon after 'The Domesday of Colchester', was published anonymously by the local firm of Benham & Co., but there is no doubt that Round wrote it. With 150 pages, it is the most ambitious of his early works. The title page bears some words from Lord Carlingford's address at the Congress of 1876, and in the text of the book there are several references to Freeman's address on the same occasion. The scope of the book is wider than the title suggests. In his preface Round says:

> I have endeavoured to give life and interest to the 'dry bones' of Archaeology by using the castle as a means of elucidating some fresh facts on the History of Colchester, and of throwing occasional light on the manners and customs of the time. I would hope that, by grouping historic events around this one building, I may rouse among those who have it ever before their eyes, a new and keener interest in the general history of their country.

These aims were probably achieved. Round found it difficult to write in a style that was 'readable and interesting', as he once admitted,[30] but he could do so when he tried, and this account of Colchester Castle contains some good narrative passages, for example on the arrival of King John in 1216 (p. 42), and on Lord Capel's sortie from the town during the siege of 1648 (pp. 124-5).

Round put into the book much original research, some of it in the muniments of James Round, owner of the castle, and much material from secondary sources. He argued that the castle was not Roman nor Saxon, as sometimes suggested, but Norman. He further contended that it was built before it came into the hands of Eudo *dapifer* — probably by William I, *c.* 1080-85 — and he put forward the theory, then novel,[31] that it was similar in design to the Tower of London, having originally comprised four storeys. These views, now generally accepted, contradicted some of those advanced by Freeman in 1876, as Round emphasised. In support of them, Round quoted a charter, supposedly of William II in 1091, granting the town and castle to Eudo.

Freeman discussed Round's book in the following year, when he re-issued his Congress address of 1876 in a volume of essays.[32] That seems to have been the only time that he publicly noticed any of Round's attacks upon him, and although his reply was, on the whole, unconvincing, he was able to correct Round on one point. He wrote:

> I have left what I wrote attributing the castle to Eudo. But last year there appeared an anonymous book, seemingly by a local writer, called *The History and Antiquities of Colchester Castle*, which shows some research and criticism (though the form of the criticism is sometimes a little captious).

Freeman went on to discuss the charter to Eudo, admitted that it had previously escaped his notice, but pointed out that one phrase in the charter, while it could not have been used by William II, would be appropriate to Henry I in 1101. He concluded:

> It is, perhaps, safest to leave the matter open. The anonymous writer attributes the castle to the Conqueror. It is too great a work for Eudo. There is, perhaps, something in this. On the other hand there is the absence of any mention of the castle in Domesday.

This, again, is only a presumption, as the notice of castles in the Survey is a little capricious. But one would certainly have looked for some mention of it in so elaborate a description as that which Domesday gives of Colchester.

There is no doubt that Eudo *dapifer's* charter was, as Freeman said, issued by Henry I in 1101.[33] It seems that Round had not seen the full text of the charter, but had accepted uncritically the statement of T.C. Chisenhale Marsh and others that the grantor was William II.[34] Such an elementary blunder is all the more remarkable because Round is celebrated as an expert in the use of record sources. It must be admitted, however, that the later dating of Eudo's charter actually reinforces Round's theory that Colchester was a royal building, erected before it came to Eudo.

The History of Colchester Castle was well received by reviewers. The *Essex Standard* described it as 'the most important contribution to the history of Colchester since ... Morant', and complimented the author on avoiding 'dryness of style', on his 'extensive research', and 'wide knowledge of history'.[35] *The Builder* accepted the view that the castle was built in the time of William I,[36] and *The Times* praised the Round family for preserving the castle.[37] One reviewer, however, pounced on Round's light-hearted suggestion (p. 8) that Camulodunum was the Camelot of Arthurian legend, and that King Arthur was to be identified both with the Celtic chieftain Cunobelinus and the Roman emperor Constantine. 'It is dangerous', said the *Morning Post*, for a writer who has in mind the excellent object of disproving an absurd theory [that the castle was Roman] to venture on a conjecture of so daring a character'.[38]

In his preface to *Colchester Castle*, Round referred dismissively to two recent books by J. Yellowly Watson, *Sketches of Ancient Colchester* (1879) and *Tendring Hundred in the Olden Time* (1877) saying that they were 'virtually copied from Morant'. This provoked a retort from the author of the books, who was a country gentleman living at Thorpe-le-Soken.[39] In the correspondence which followed Round (still cloaked in anonymity) found it easy to ridicule Watson for asserting, on the authority of Camden, that Camulodunum was Maldon and that Colchester Castle had been built by Edward the Elder. But Watson got in one telling thrust when he likened Round to a man who says:

I am Sir Oracle,
And when I ope my lips let no dogs bark.[40]

A few weeks after the publication of Round's *Colchester Castle* there appeared in the prestigious *Archaeological Journal* a paper on the same subject by George T. Clark.[41] Clark, then in his seventies, was a professional engineer who in the course of his career had helped to build the Great Western Railway, planned the sewerage system of Bombay, and revitalized the Dowlais Ironworks, while devoting his leisure to the study of medieval fortifications, on which he was now the leading authority. He was a vice-president of the Royal Archaeological Institute and a field-lecturer of 'massive vigour'.[42] His paper on the castle did not attack Round's book — of which Clark was unaware when he wrote — but it contained many errors, some of which were crucial. What was Round to do? If he remained silent, Clark's paper would be accepted as authoritative; while a mildly-worded note reiterating the views of an anonymous write would make no impact. So he took the offensive with a paper in two parts entitled 'Colchester Keep and Mr G.T. Clark. By the author of *Colchester Castle*'.[43] Most of Clark's factual errors related to the written evidence for the history of the castle. In the first part of his paper Round listed these with pungent comments. In the second part he concentrated on the architectural evidence, hammering home his conviction that the castle originally had four storeys: Clark, following Freeman and others, had supposed that it never had more than two.

G.T. Clark seems to have ignored these criticisms. In the following year he published his *Medieval Military Architecture*, a monumental work which increased his high reputation.[44] Round, for his part, never lost the interest in Norman castles that he had first displayed in studying Colchester. In 1892 he included in his *Geoffrey de Mandeville* an essay explaining the distinction between *castellum* (fortified enclosure) and *turris* (keep).[45] In two later papers he argued that the motte and bailey castles, which played such a great part in consolidating the Norman conquest, were thrown up by the Normans themselves, and were not, as Clark though, Saxon *burhs* (forts) occupied and converted by the Normans.[46] This view, soon generally accepted, was elaborated by Mrs Ella Armitage, who acknowledged Round as its author,[47] and revered him as a master of the subject.[48]

The history of Colchester continued to engage Round's attention throughout the 1880s. His 'Municipal Offices: Colchester' is a useful guide, based on the borough archives.[49] 'The demolition of the Burghold' records a Norman building in the town demolished in 1886.[50] 'Church Endowments' lists benefices in Colchester and elsewhere in Essex augmented since 1536.[51] 'How Parliament was opened in 1485' was based on a description in the 'Red Paper Book of Colchester'.[52] More important was a booklet on *St. Helen's Chapel, Colchester*, printed for private circulation in 1887,[53] This was the first independent publication to which Round put his name. St. Helen's, an ancient building once belonging to St. John's Abbey, had recently been bought by Douglass Round, who employed William Butterfield to restore it for use by the rural deanery. Horace Round's account was probably written to oblige Douglass.[54] He expanded Morant's account of the building, using Douglass's title deeds, and appending Latin transcripts of several medieval documents. He gave a useful summary of the

legends of St. Helen, and made a good case for supposing that the chapel originally served the royal demesne in Colchester. But in supposing that it might have been founded by Offa of Mercia in the 8th century he lost touch with reality.

During his research for the book on *Colchester Castle*, Round discovered in the Birch Hall archives an 18th-century copy of a diary of the siege of Colchester compiled in 1648, which contained many details not recorded elsewhere.[55] This had been used by Morant in his *History of Colchester* but had since been forgotten. One of its longest entries was a description of a day-long battle, early in the siege, when Fairfax tried unsuccessfully to storm the town from the south. In May 1884, at J.B. Harvey's suggestion, Round gave a public lecture on this battle, in Colchester town hall.[56] He prepared it carefully, and used 17th-century weapons as visual aids. His account of the battle, as reported in the press, was challenged by J. Yellowly Watson, with whom Round had previously clashed over the history of the castle.[57] Another sharp exchange of letters followed, in which Watson alleged that the lecture had been a financial disaster, raising only £1 7s. 6d. for the local hospital.[58]

During this correspondence with Watson, Round wrote privately to Harvey: 'The roots of [Watson's] contention lie far back ... in certain statements about the Rounds which are not to be found elsewhere, and have no foundation in fact.'[59] This was a reference to Watson's book *Tendring Hundred in the Olden Time*, in which it was alleged that a retired sea-captain named Wegg had made a fortune from smuggling and had built a house at Jaywick, in Great Clacton, out of the proceeds. If true, that would have been embarrassing for the Rounds, who had succeeded to the estates, including Jaywick, formerly held by their ancestor George Wegg (d. 1747) and his son George (d. 1777).[60] Watson again referred to 'Smuggler Wegg' in a note published in December 1884, and this time he was strongly challenged by 'Enquirer' whose pen-name almost certainly masked the identity of Horace Round. In the ensuing correspondence, lasting four months, it appeared that Watson had been quoting local gossip which had hopelessly confused the names of Wegg and Webb.[61]

In June 1885 Horace was largely responsible for a Fine Art exhibition at Colchester in aid of the Albert School of Art, then being projected for the town. Among the exhibits were a Regency tea-pot and some Chelsea china lent by Round himself.[62] He had served on the steering committee which had planned the School, but seems not to have been involved in the later stages of its work, and in August he published in the *Essex Standard*, again under the name 'Enquirer', a critical letter regarding the recent appointment of the headmaster.[63] At the School's formal opening in October the chairman paid tribute to Round, 'who had a large technical knowledge in many branches of art', for his 'valuable assistance', but Round himself was not present.[64]

A notable event in theatrical history, which took place at Colchester in August 1886, was a performance of *As You Like It* in Holly Trees garden, by drama students led by (Sir) Ben Greet.[65] Greet had formed the company only a few months earlier, so that this was among the first of the many open-air or 'pastoral' productions of Shakespeare which he staged in forty years as an actor-manager.[66] Round put a report of the Colchester performance into his scrapbook, and it is not unlikely that he had a hand in arranging it. Like his father, he was interested in the theatre, and in later years he was friendly with the actor-manager Arthur Bourchier and his wife, the actress Violet Vanburgh.[67]

In spite of his love of books, Horace Round had no sympathy for rate-supported libraries. Colchester adopted the Public Libraries Acts in 1891, after two previous attempts had failed.[68] While the issue was still in doubt — at that time a local referendum was required — Round wrote to the *Essex Standard* under the name 'Student' opposing the extension of the public library movement, as 'based on false pretences'.[69] It was claimed, he said, that public libraries were necessary for the education of working people, who would thus be enabled to 'compete with the highly educated citizens of Germany and America'. But what was most likely to happen was that most of the books demanded would be works of fiction. Calls for technical education had been overdone. 'What are really and badly wanted, at home and abroad, are good ploughmen and good cooks'.

Round's reactionary views on popular education sprang from a fierce, almost fanatical Conservatism. Besides being the grandson of a Tory M.P., he had become active in politics through his friendship with James Round M.P. James, who was twelve years older than Horace, had succeeded to the family estates at Birch and Colchester in 1867, and in 1868 he had entered the House of Commons as one of two Conservative members for East Essex. Educated at Eton and Christ Church, he was a first-class cricketer, and was one of the founders of the Essex County Cricket Club, and its first captain.[70] Carruthers Gould described him as:

> a man of incurable moderation, never betraying enthusiasm or panic...without being eloquent he always says the right thing; without any effort he avoids doing the wrong thing...an old Parliamentary hand...[he has a] habit of respecting his adversaries, who respect and like him.[71]

James Round was not a scholar, but, like Horace, he was devoted to Essex and its history, and he served for nearly fifty years as honorary treasurer of the Essex Archaeological Society, as well as providing accommodation in Colchester Castle for the Society's office and museum. He possessed, at Birch, a fine archive collection — now in the Essex Record Office — to which he allowed Horace free access. But their

strongest common interest in the 1880s and 1890s was political.

East Essex was a two-member constituency formed under the 1867 Reform Act. The county franchise, though extended by the Act, was still limited to £5 freeholders and £12 tenants, thus excluding most farm workers, and the electorate of East Essex in 1868 was only 6,564, out of a total population of about 129,000. The constituency included the area around Colchester, but not the ancient borough itself. Much of it lay within the area of the present borough. In mid-Victorian Essex the Conservatives usually dominated the county constituencies, the Liberals were mostly Whigs rather than Radicals, and elections were gentlemanly affairs. James Round topped the poll in East Essex in 1868 and 1880, and was returned unopposed in 1874.[72]

Even as an undergraduate Horace Round was following James's career with thoughtful interest. He wrote to his father in November 1875:

> I am glad of what you say about James, but it is not from his own party nor for the present that he need dread defeat. No Conservative but Duncan would be allowed to stand, and no Liberal would stand a chance yet awhile. But when the reaction comes, he will be glad enough of all the popularity he can get.[73]

Among Horace's press-cuttings are many reports of James Round's political meetings in East Essex. The first of them described the annual dinner of the Hinckford Agricultural and Conservative Club, held at Castle Hedingham in November 1878.[74] The chair was taken by Edmund Round, Horace's uncle, who praised Lord Beaconsfield's foreign policy, and added that, although he was not a jingo ('laughter') 'sooner or later we shall have to thrash it out with Russia'. One of the other speakers recalled the help that Edmund had given to the party in the 1868 election.

At the 1880 general election James Round and his Conservative colleague, (Sir) Samuel Ruggles Brise, held their seats quite easily, but the Liberals swept the country. James disliked the contentious atmosphere of the new House of Commons. Horace saw him on 7 August, and reported that James:

> had only just escaped from the House the night before, just after Forster's scandalous speech on the House of Lords. He is quite low-spirited at the violence and rancour of the Radicals, who, he says, are carrying all before them. Everyone hears the same talk of the fearful indignation of the Whigs, both in town and country, and their gradual conversion to Conservatism under the heel of the Dictator [Gladstone]. The House of Lords threatens to be the overpowering question.[75]

At a constituency dinner later in the year James spoke in the same vein. He feared the rise of the Radicals in the Liberal party, 'elbowing from among themselves the moderate Whigs and old-fashioned Liberals'. He went on:

> Many a time this year my colleagues and I have gone down to the House to support the moderate men of the other side, and if it had not been for the Conservative party assisting the moderate men of the Liberal [party] you would have had measures of a far greater innovating tendency.[76]

Horace Round shared James's fear of Radicalism. Among his press-cuttings is one entitled 'Mr Mallock on latter-day Radicalism', which discussed a recent article in *The Nineteenth Century*.[77] William H. Mallock, who had been at Balliol just before Horace, had made his name with *The New Republic* (1877), a satire containing cruel caricatures of Jowett and others.[78] In *The Nineteenth Century* he used the colloquy method to demonstrate that Radicalism (equated with Communism) was destructive of freedom, the family, individual genius, and private property; and that:

> Its ideal government is a vast system of police, in whose eyes the chief crimes are exceptional talent, exceptional industry, any form of individuality, any personal attachments, or any craving for freedom.

Soon after Mallock's article appeared Horace Round himself attacked Radicalism in an anonymous pamphlet entitled *The Coming Terror*.[79] In spite of the arresting title, this reads for the most part like a poor undergraduate essay. The writer contends that *laissez faire* — until recently widely accepted by British politicians — is now threatened by those, within the Liberal party, who are advocating Socialism. 'Socialism, being essentially antagonistic to society in its present form, can only be upheld by force, and the force it employs is — Terror'. The pamphlet ends with a rhetorical attack on all forms of terrorism, particularly that of the Irish Fenians. It must have been printed at the author's expense, for no publisher would have risked money on it.

Round's later political writing was confined to letters, notes, and short articles in newspapers, particularly the Colchester *Essex Standard* and the London *St. James's Gazette*. These were far more readable than *The Coming Terror*: terse, punchy, and often spiced with history. While not profound, they must have been effective as Conservative propaganda. Between 1880 and 1885 Round was able to capitalize on the errors and misfortunes of Gladstone's second government, as can be seen from the titles of some of the letters: 'Government by garotte'[80] (on the closure proceedings in the House of Commons), and 'The reign of anarchy'[81] (on the weakness of government policy in Egypt, South Africa, and Ireland). Some of the letters were aimed at William Willis Q.C., one of the Liberal M.P.s for Colchester borough. Willis, the son of a straw-hat manufacturer, was a Radical and a leading Baptist as well as a successful barrister.

> According to his biographer he was a man: of fervid temperament, and very voluble of speech, [who] would identify himself absolutely with the interests of his client, and assail his opponents with as much zeal and indignation as if his own honour and property were at stake. He came into frequent collision with both the bar and the bench, but nothing could daunt him.[82]

In the 1880 general election both Colchester seats had been captured by the Liberals, for only the second time since 1832, and Willis, coming second in the poll, had defeated the leading Conservative by a single vote.

For James Round and his supporters the Liberals' triumph in this neighbouring constituency was particularly alarming. During the next five years Willis made many Radical speeches, both in Parliament and outside. As a graduate of London University he tended to flaunt his learning, and Horace Round enjoyed deflating him. When Willis likened himself to Agamemnon and Gladstone to Nestor, Round riposted with a passage from the *Iliad* describing Agamemnon's terror at the sight of the enemy host.[83] In March 1884 Willis caused a sensation in the House of Commons by proposing that bishops should be excluded from the House of Lords. In a speech a few days earlier he cited, in his support, the action taken against the bishops during the Long Parliament, in 1640-41. Round immediately challenged his historical interpretation, in a long letter to the *Essex Standard*, signed 'Historicus', and quoting from Ranke, Hallam, and Clarendon.[84] This effusion in a local paper can hardly have been expect to sway the House of Commons, which passed Willis's motion in the teeth of opposition from the Liberal front bench as well as the Conservatives. But in the long run Round's letters to the *Standard* may have helped to ensure that in 1885, when Colchester became a single member constituency, Willis was not selected as the Liberal candidate.

The general election of 1885 was fought under new conditions. All county constituencies would now return a single member, while their electorates were greatly increased by the extension of the householder franchise. In Essex the old Eastern Division was abolished, but James Round was adopted as the candidate for the new North-East or Harwich Division. Even before Gladstone's government resigned, the parties had begun their election campaigns. In May Horace Round, writing as 'Englishman', was condemning the Radicals for unruly conduct at a Conservative meeting at Layer Breton. '[They] trust to win by their hard lying, and they dare not let the people listen to the truth'. He went on to condemn mob violence by Radicals elsewhere.[85] In July he proclaimed the same message at two open-air meetings in support of James Round, while attacking the views of James's Liberal opponent, John Jackson. Horace's uncle Edmund Round took the chair at both meetings, which were also addressed by 'a working-man lecturer'.[86]

Horace Round was also following political events at Colchester. In August 1885 he published a sharp note on the visit to the town of two Liberal leaders, G.O. Trevelyan and Arnold Morley.[87] In September he made effective use of a case in which the Liberal agent for the borough had engineered the disfranchisement of a voter for receiving, as poor relief, a coffin in which to bury his child. At that date, before universal suffrage, both parties scrutinized the electoral registers before a revising barrister, seeking to disqualify their opponents' supporters. In this case the Liberal agent had the law on his side, but, as Round wrote, 'If such an objection had been raised by the Conservatives, it would have already been denounced from a hundred platforms as "a Tory atrocity".'[88]

In October 1885, with the election imminent, the Conservatives held a meeting at West Donyland, attended mainly by seafarers. Edmund Round, well known as a local yachtsman, was again in the chair. Horace Round made a rousing speech:

> Theirs was in truth a national cause ... The Conservatives were, above all, the supporters of the Empire. To them, the seamen of the Colne, the Empire was more than a name. They who had seen the British flag waving beyond the seas — to them the Empire was a mighty reality, the vastest and most wondrous empire the world had ever known ... An American statesman had once described it as a power to which even Rome, at the height of her glory, was not to be compared ... whose morning drumbeat, following the sun, circled the earth with one unbroken strain of the martial airs of England. And that Empire was their heritage.[89]

The integrity of the Empire [Round went on] was a matter of life and death to Britain, and the navy was vital to the defence of the Empire. The Radicals cared nothing for the Empire, and neglected the navy. Peace was the aim of the Conservatives, but how was that to be sought?

> By inviting the world to come and kick them ? By proclaiming that whatever happened nothing should make them fight ? No! But by being prepared for war. They need not listen to the Tories, or be guided by the wicked Jingoes. He asked them to listen to Cromwell, the head of the English Commonwealth ... What was the motto that Cromwell chose to be engraved on the seal of his Commonwealth? *Pax quaeritur bello*. Peace must be sought by the sword.

Round concluded his speech with 'the words of a great living poet':

> Sail on, O Ship of State,
> Sail on, O England strong and great,
> Humanity, with all its fears,
> With all the hopes of future years,
> Is hanging on thy fate.

It was a speech nicely tuned to its nautical audience. The poetical peroration was especially apt, though Round, if correctly reported, had perverted Longfellow to suit his purpose.[90]

Among the burning issues in the 1885 election was Disestablishment.[91] Horace Round, as a staunch defender of the Church and a historian, was particularly concerned to show that the Church's endowments came not from public funds but from the voluntary gifts of the faithful down the centuries. During the summer of 1885 he published several letters on the subject, under the pen-name 'Truth', controverting the views of James Wicks and other Colchester Radicals.[92] In the following autumn he spoke at 'Church Defence' meetings at Messing, Copford, and Colchester; at Copford he also attended a Disestablishment meeting and heckled the speaker.[93] In connexion with the Copford meetings he fired off a barrage of open letters, on the origin of tithes, against John Moss of Kelvedon, a Radical seed-grower, whom he advised to 'leave history to those who have studied

it'.[94] He followed these up in January 1886 with similar letters aimed at Edmund Miller, minister of Headgate Independent Chapel, Colchester.[95]

Another controversial issue at this time was land reform. As heir to West Bergholt, Round had a vested interest in the subject, and he had for some years been arguing the landlords' case. During the 1870s England had suffered an unusual run of bad weather, which was especially disastrous in corn-growing counties like Essex. While this depression affected all who depended upon the land for their living, its immediate effects were felt most painfully by the farmers, who in 1879 formed the Farmers' Alliance to defend themselves, and in 1881, with Radical support, introduced a Bill to reform agricultural tenancies. James and Horace Round were both strongly opposed to the Bill. Horace attacked it in several letters in the *Essex Standard*,[96] and he advised James on the arguments to be used against it in the House of Commons:

> Against [the Bill] we can obviously urge: 1) That they are selecting the very moment to crush free contract between landlord and tenant, when the tenant is freer to make his own terms than ever. 2) That while demanding 'the simplification of ownership' with one breath, viz. in doing away with limited ownership as in life tenants, they are claiming to introduce a limited ownership of the landlord, in favour of the tenant...The key position is *the right of free sale* from the outgoing to the incoming tenant. This is virtually converting the tenant into the landowner, and the landowner himself into a mere rent-charger...'The policy of plunder' is the cry to raise. If we can prove...that the Bill is *sheer pillage* we hit the Alliance hard.[97]

Three weeks later Horace wrote to congratulate James on the defeat of the Alliance Bill, adding, 'Gladstone's speech was fatal to the motion, let alone Hartington's some time before. I thought your own remarks read excellently — very happily expressed.'[98] In 1885, with Radical politicians like Chamberlain preaching land reform, ahead of the general election, Horace Round again opposed them in the columns of the *Essex Standard*. Typical of his arguments is the following passage on the 'Theory of Rent':

> No reduction of rent, however sweeping, not even the total abolition of rent, can make it pay to cultivate land which has fallen out of cultivation, because, at present prices, it will not pay to cultivate it, even rent-free.[99]

North-East Essex went to the polls on 28 November 1885. During the election campaign Horace Round addressed meetings at Great Bentley, Ardleigh, Wivenhoe, and Brightlingsea.[100] He was probably responsible, also, for a press report on polling-day riots at Clacton:

> An organized band of roughs was imported by the Radicals and dissenters, who, headed by a band, marched to the attack on Mr Round's committee rooms. These they attempted to storm, the police being powerless to interfere. Conservative voters were intimidated, stoned, and covered with mud and dirt, and the rioters expressed their determination to 'do for' Sir John Johnson of St. Osyth's Priory, a well-known Liberal who had recently joined the Conservative party. In this patriotic intention they were, however, ingeniously foiled.[101]

James Round won the seat with a comfortable majority, and in the following February his supporters celebrated it with an oyster party at Brightlingsea. Standing beneath a portrait of Lord Beaconsfield, Horace Round proposed the toast of 'The Army, the Navy, and the Reserve Forces.' What was needed, he said, was a strong ruler like Cromwell, or one of the great ones gone from amongst them (pointing amidst immense cheering to the portrait of Lord Beaconsfield):

> One still, strong man in a blatant land,
> Aristocrat, Democrat, what care I?
> Who will rule, and who dare not lie.[102]

The quotation — somewhat garbled — is from Tennyson's *Maud*. Round had already used it in a letter to the *Essex Standard* some years earlier.[103]

At the 1886 general election, following the defeat of Gladstone's Home Rule Bill, James Round was opposed in the Harwich Division by James Wicks, a Colchester wine merchant and borough councillor campaigning as 'the People's candidate'. Wicks, a pugnacious and controversial figure in the town, had recently caused outrage by his intemperate attacks upon the mayor, Henry Laver, and he was standing against the advice of his own party.[104] James Round's supporters, on the other hand, were now reinforced by a number of Liberal Unionists, including Charles Page Wood, who had stood against Round in the 1880 election.[105] At a Unionist rally on 10 July, held in the quadrangle of Colchester Castle, Page Wood took the chair, and Horace Round assailed Home Rule in a speech garnished with literary and historical quotations. Again comparing the British Empire to that of Rome, he proclaimed his conviction of England's mission to rule the nations and spread throughout the world the reign of peace, of order and of law.

> Englishmen, will you be false to that glorious destiny? Will you 'the heirs of all the ages, foremost in the files of time'[106], quail before a dark conspiracy among the foes of freedom and of law? Will you, in the words of Andrew Johnstone, 'surrender to Mr Parnell and his hireling hordes?' (Cries of 'No!')[107]

During the 1886 election Horace Round spoke at four other meetings, including one in his own manor of West Bergholt.[108] At the last meeting, held at Brightlingsea on the eve of the poll, it was clear from the results already declared elsewhere that there had been a Conservative landslide in the country, and James Round's supporters were cock-a-hoop. Horace, in his speech, paraphrased the words of Bishop Latimer when he was being burnt at the stake in 1555, 'We have lighted such a candle in England this night as, by God's grace shall never be put out.' Round went on:

> These words have come true. From borough to borough, from county to county, that torch has been handed on till the blaze of our triumph has been heard throughout the Empire...What we are hearing at the polls today is the voice of a free nation that has burst the bonds that Mr Gladstone has been forging, of a nation which is proclaiming a great deliverance, not only for the Protestants of Ulster, but also for our own children, which is proclaiming in accents of thunder in the ears of an impervious master that Britons never were and never will be slaves. (Loud cheers!)

On polling day, 17 July 1886, James Round was returned with an increased majority. At a Primrose League meeting at Thorpe-le-Soken a month later Horace thanked the Liberal Unionists for their help, including the passive support of men like John Jackson (James Round's opponent in 1885), who had refused to oppose the 'righteous cause' of the Conservatives, and had done their best to avert the disastrous candidature of James Wicks. Although Wicks had not succeeded in giving the election a semblance of a contest, said Horace, he had succeeded in inflicting on the constituency 'no small trouble and annoyance, and making them waste their labours, and in interfering with trade and business.'[109]

Between 1886 and 1892, with Lord Salisbury's government in power and a large majority behind them in the constituency, the North-East Essex Conservatives had less obvious need of Horace Round's help, while he was busier than ever with historical writing, and — after his father's death in 1887 — he usually wintered abroad. As squire of West Bergholt he was president of the village's Conservative club, and occasionally attended its annual dinner, regaling the local yeomen with tales of the wider world. In 1889, when proposing the toast to 'the Queen', he mentioned that had himself had witnessed the meeting, on Spanish soil, of the queens of England and Spain. He then toasted 'the Prince of Wales', remarking with exaggeration that the Prince and 'their member' [James Round] had 'been at college together'.[110] At the Club's dinner in 1891 he discoursed on the recent revolution in Chile, 'as showing the weakness of republican government' and 'entered into a general defence of monarchical government.'[111] The dinner ended with a toast to Horace Round himself, 'drunk with musical honours, followed by the singing of "for he's a jolly good fellow".'

Although Round always remained a strong Conservative, he disagreed with some of Lord Salisbury's policies, and hankered after a more authoritarian form of government than the British parliamentary system. Among his press-cuttings for 1888 are several referring to the theories of the Prussian political scientist H. Rudolph von Gneist. In his *History of the English Constitution* (1882), Gneist had predicted a realignment of British political parties, and this had subsequently taken place. He had also suggested that increasing Radicalism might provoke a violent reaction, leading to a dictatorship, and the writer of an unsigned note in *St. James's Gazette* wondered if that, too, would come about. The note — possibly occasioned by a recent account of Gneist's writings published by G.W. Prothero[112] — may have been written by Round himself; and three months later he contributed to the same journal a signed letter quoting Gneist's views in favour of 'magisterial self-government'. At that time the Bill transferring county government from the magistrates in Quarter Sessions to elected councillors was going through the House of Commons. It was abhorrent to Horace, who wrote to James Round:

> You won't bless me, I fear, for signing my letter to the *St. James's* tonight as 'The Champion of the Constitution'. But I doubt whether you or I love either the Bill or the ministry just now. It will give you something to talk about at your press-club dinner (which I have not forgotten) whether you like it or not![113]

Later that year Horace published two articles criticising the government's naval policy, and recalling similar naval weakness in the 17th century; and two other articles attacking Gladstone.[114]

At the 1892 general election James Round had a new opponent in Robert Varty, a Radical from south Essex. During the last fortnight of the campaign Horace spoke in his cousin's support at Wivenhoe, Rowhedge, Great Clacton, and Brightlingsea.[115] At each meeting he abused Varty and condemned Home Rule. 'Why were the English invited to Ireland seven centuries ago?' he asked his audience at Great Clacton, and gave his own answer:

> Because the Irish, when left to themselves, cut one another's throats. Why are we ruling Ireland now ? Because the Irish, when left to themselves, break one another's heads. There, in a nutshell, is the need for the Union.

At the final election meeting, at Brightlingsea, Round evoked appreciative laughter by comparing the Liberals with Home Rule to a dog with a tin kettle tied to its tail. He attacked Varty for failing to mention foreign policy or national defence in his election manifesto. Varty had said that the Conservatives had done nothing for the working man: but what about factory legislation, which was carried in the teeth of Radical opposition? Round went on to deride Varty for advocating salaries for M.P.s, ending with a sly quip in which, not for the first time, he poked coarse fun at Varty's name:

> Mr Varty wants to be paid for representing you in Parliament; therefore, if you want him to do anything for you, you must put a penny in the slot.

The 1892 election brought the Liberals back into power at Westminster, with a narrow majority dependent on the Irish members, and Gladstone took office for the fourth time. In the Harwich Division James Round held his seat, but only by 304 votes — the smallest majority in all his Parliamentary elections. In such a close contest Horace's help must have been invaluable, and he was duly rewarded, by being appointed a deputy-lieutenant of Essex.[116] The honorific post — enabling him to wear a ceremonial uniform with a cocked hat — gave him lasting pleasure. He wrote to James Round four years later:

> Although I have told you more than once...how *immensely* gratified I was at my 'D.L.', I should like to say even more, namely, that you can't think what a *real* 'solatium' it has been to me in my unfortunate position, after being brought up to such very different prospects from those that have fallen to my lot. It shows at least that I *have* a position by birth, which is all that is left for me to cling to.[117]

In complaining of his 'unfortunate position', Horace was referring to the financial difficulties caused by declining rents from his West Bergholt estate. This was reflected also in his political writings, which during the 1890s were increasingly concerned with the problems of agriculture. The threat of land reform — never as great as some had feared — had receded, but the landowners were now suffering severely from the depression that had started in the 1870s, and had been prolonged by increasing imports of cheap produce from the United States and eastern Europe. From time to time, after 1892, Round still engaged in party skirmishing. He criticised the death duties in Harcourt's 1894 Budget,[118] and rebuked Robert Varty for referring to the 'robber squire and the robber parson'.[119] But most of his political writing from 1894 to 1896 was devoted to preaching agricultural Protection. At that time free trade was still the policy of the Conservatives as well as of the Liberals, in spite of the fact that many foreign countries were imposing tariffs or were subsidising exports. Round was thus taking an independent line in advocating a return to Protection. He did so in a long series of articles, notes, and letters in *St. James's Gazette*, and occasionally in the *Morning Post*, the *Sunday Times*, the *Spectator*, and the *Essex Standard*. Several of these attacked the views of Richard Cobden, the prophet of free trade. Cobden was long dead, but the 90th anniversary of his birth fell in 1894, and the 'Jubilee of Free Trade' [of the repeal of the Corn Laws] in 1896. Typical of Round's polemics are some passages in an article on 'the Legacy of Cobden':

> If we seek the dominant note in the speeches and writings of Cobden, we find it not in love for the people, but in bitter and virulent hatred of the agricultural landlord. He compared the country gentlemen to the robber barons of the Rhine, and spoke of them...as 'feudal corn law plunderers.' He boasted that the mill-owners could teach them how to work their estates on sound business principles.
>
> Every thoughtful man must know [said Round] that the social danger of the present day is the divorce of wealth from responsibility...yet the whole tendency of Radical legislation is to increase that peril by penalizing landlords, and discouraging capitalists from purchasing landed estates...In Essex...land is derelict because no man will farm it even rent-free. But it is announced — not in Bedlam or in Colney Hatch but in the columns of the *Daily Chronicle* — that on the one condition of the overthrow of 'English landlordism', our agriculture might be as prosperous as any in the world. But for Cobden's legacy of hate, a democracy would scarcely be so blind as treat as criminals the one class that had spent so much for the public good.[120]

In some of his letters Round cited Germany and France to illustrate the benefits of Protection;[121] in others he advocated agricultural subsidies and bounties;[122] and he did not shrink from attacking Lord Salisbury's views on Protection.[123]

In the 1895 general election, following Lord Rosebery's brief administration, Robert Varty again stood for the Liberals in North-East Essex. After 1892 he had encountered opposition from members of his own party, who — as we should say — tried to deselect him as their candidate. He fought back and secured the nomination, but in the election he made a poor showing.[124] 'He seems still slow to renew his campaign,' Horace wrote to James Round on 1 May.[125] Horace was then on holiday at Biarritz, and was complaining that he was not strong enough to do much work. But he returned to England in time for the election, and wrote to James on 9 July:

> I hope you read the long letter I wrote to you (as desired) when returning Varty's yellow documents. I *must have these documents* when speaking tomorrow at Walton (or anywhere else) as I mean to devote myself to Varty and his programme, assuming that *you* will expound the Unionist faith.[126]

On 17 July Horace wrote again, congratulating James on his election victory — this time by nearly 2,000, a good margin in those days — and adding:

> I am glad I went to Witham last night to speak for Strutt. I expect a majority of several hundred for him tomorrow...At Witham station they told me that 35 out of 40 railwaymen had voted for Strutt.[127]

The Hon. Charles Strutt — a brother of Lord Rayleigh, who as Lord-Lieutenant of Essex had appointed Horace as a deputy-lieutenant — did, indeed capture the East Essex (Maldon) Division for the Conservatives, by a majority of several hundred, as Horace had predicted.

The 1895 election was the last in which Horace Round was actively involved. In 1900 James Round was returned unopposed. As a senior backbencher he was sworn of the Privy Council in 1902, and he retired in 1906, after 38 years in the House of Commons. He had won all six of his contested elections — a record unmatched by any other Essex M.P. in the 19th century. Much of his success was due, no doubt, to his own pleasant personality, his moderate views, and his standing as a local country gentleman and sportsman. He was, said a speaker at West Bergholt in 1889, 'the *beau ideal* of an M.P.', who had been 'born and brought up among us and knows our needs and our wants.'[128] He also had an efficient party organisation, built up by Henry Jones, the formidable Colchester solicitor who was his constituency agent.[129] In that organisation Horace Round played an important part in all four elections from 1885 and 1895. Between elections he helped the local party both as a propagandist and by taking upon himself the role of an honorary political adviser to James Round, especially on the Church and on agriculture.[130] And he was also quite prepared to volunteer for administrative chores, as in March 1890, when he wrote to James:

> I was so pleased with the portrait of you in *Agriculture*, and the nice account of your career. Would you secure twelve copies for me? They would be very nice for Conservative clubrooms &c in the Division.[131]

After 1895 Horace Round visited Colchester less frequently. In 1902, when the Royal Archaeological Institute once again held its Congress there, he acted as a guide.[132] In June 1908, as a deputy-lieutenant, he escorted Princess Louise, Duchess of Argyll, on an

official visit to the town.[133] As a member of the Council of the Essex Archaeological Society, from 1885, he made a point of attending annual general meetings — in those days usually held at Colchester — when his health permitted. A photograph taken in 1907 shows him, along with James Round, in a group of the Society's members at Colchester Castle: a sad-looking bowler-hatted figure among the summer straws and felts.[134] He attended the Society's A.G.M. for the last time on 29 April 1913, when he read a paper on 'Lionel de Bradenham and Colchester' — a lively study of the 14th-century dispute between the burgesses and the lord of the neighbouring manor of Langenhoe.[135] From 1915 to 1921 he was President of the Society, but by then he was an invalid, and could no longer attend meetings.

In December 1927, six months before his death, Horace Round confided that as a young man he had hoped to write a complete history of Colchester.[136] Although that never materialized, he maintained an active interest in the town to the end of his life. Between 1916 and 1928 he contributed to the *Transactions of the Essex Archaeological Society* a dozen articles and notes relating to Colchester,[137] while his last major article in the *English Historical Review* (1922) was on 'The Legend of Eudo *dapifer*' — an account of the foundation of Colchester Abbey, containing a merciless attack upon Walter Rye, an old Norfolk antiquary who, until then, had been one of Round's friends.[138] By that time the Round family, who had dominated Colchester society in the 1870s and 1880s, were no longer prominent in the town, but Horace, now a scholar of international reputation, was still in touch with local friends like Gurney Benham and the borough librarian, George Rickword. Housebound in his mansion on the seafront at Brighton, where 'such was his conservatism, every glass shade and every antimacassar occupied exactly the same place that it had occupied when his father was alive in the seventies',[139] he continued to reflect upon the history of Colchester. Among his papers at his death was an unpublished paper, on the origins of the borough, that opened with a delightful passage which has already been quoted in an earlier volume of this series.[140] This is one of the occasions — not frequent in Round's writing — when he displays a feeling for the Essex countryside and an artist's eye, as well as the learning of a great scholar.

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Notes

1. E.R.O., D/DRh F13, J.H. Round's letters to his father [Sunday 18 July 1880].
2. Ibid. D/DRh Z10/1, pp. 90-94.
3. Ibid. D/Rh F13 [18 July 1880]. Horace's father was an amateur artist.
4. Ibid.
5. *Essex in the Twentieth Century* (1909), 207; *Burke's Landed Gentry* (1914), p. 1902.
6. *V.C.H. Essex*, **ii** (1907), Editorial Note; V.C.H. Records, J.H.R. Letters to General Editor, Feb.-Mar. 1908.
7. W.R. Powell, 'John Round of Danbury Park', in *Essays in Honour of Sir William Addison* (1992).
8. E.R.O., D/DRh F25, John Round's Diaries, *passim*; E.R.O., D/DRh F13, *passim*; *Kelly's Dir. Essex* (1882 to 1890 edns.), s.v. Wivenhoe.
9. For the Rounds of Birch see *Burke's Landed Gentry* (1952), pp. 2205.
10. J. Morley, *Life of Gladstone*, i. 329 f.
11. Cf. *Kelly's Dir. Essex* (1874, 1878 edns.).
12. E.R.O., D/DRh Z10/1.
13. Ibid. D/DRh F13 [Summer 1875].
14. J.M. Heathcote and others, *Tennis, Lawn Tennis, Rackets, Fives.* (Badminton Libr. Ashford Press, 1987), Chap. II.
15. E.R.O., D/DRh F13 [Mid-Aug. 1880].
16. Ibid. D/DRh Z10/2, p. 3.
17. Colchester Libr., J.B. Harvey Coll., Vol. V, p. 393; J. Evans, *Hist. Society of Antiquaries* (1956), 231, 361; *Antiq. Jnl.* **xxvii** (1947) 183-5.
18. For Stevens (1819-86) see *Dictionary of American Biography.* For Bullen see *D.N.B.*
19. A. Phillips, *Ten Men and Colchester* (1985), 4 &c.
20. Colchester Libr. J.B. Harvey Coll., Vol. II, pp. 3-16, 24, 110: Letters, mainly from J.H.R. to J.B. Harvey re Harsnett Libr., 1883-9. See also D. Stephenson, 'The Early Career of J.H. Round', *Essex Archaeology and History*, **xii** (1980), 5-6.
21. *Arch. Jnl.* **xxxiii** (1876), 403-55; **xxxiv** (1877), 1-10, 47-75, 107-20 &c; *The Architect*, 12 Aug. 1876, pp. 85-96. For Carlingford see: *Complete Peerage*, **iii**. 30, 279; *V.C.H. Essex*, **iv**.144. Freeman's opening address was reprinted in his *English Towns and Districts* (1883), 383-417.
22. W.R.W. Stephens, *Life and Letters of E.A. Freeman* (1895), **ii**. 140. For Sir Clements Markham (1830-1916) see *D.N.B.* J.H. Parker was one of the Congress organizers. See also *D.N.B.*
23. *Kelly's Dir. Essex* (1874). Mrs J.T. Round died in 1877.
24. E.R.O., D/DRh F13, Letter 14 Sept. [1875]: 'I toddled over to Holly Trees.'
25. Few of his letters survive for the summer of 1876.
26. 'Domesday of Colchester', *Antiquary*, **v**.245.
27. E.A. Freeman, *English Towns and Districts*, 407.
28. *Antiquary*, **v**. 244; vi. 5,95,251.
29. *V.C.H. Essex*, **i**.414.
30. V.C.H. Records, J.H.R. Letters to General Editor, 29 Jan. 1908.
31. So described by Round himself: E.R.O., D/DRh Z8, 'Notes for notice of J.H.R.'s writings'.
32. *English Towns and Districts*, 416-17.
33. *Regesta Regum Anglo-Normannorum*, ii, no. 552.
34. Cf. Round's quotation from Chisenhale-Marsh on p. 21.
35. *Essex Standard* 29 July 1882. For cuttings of this and other reviews see E.R.O., D/Rh Z10/2, pp. 16-20.
36. *Builder* 2 Sept 1882.
37. *The Times* 4 Oct. 1882.
38. *Morning Post* 5 Jan. 1883.
39. *Kelly's Dir. Essex* (1882).
40. *Essex Standard*, 19, 26 Aug., 2, 16 Sept 1882. Watson was quoting Shakespeare, *Merchant of Venice*, **I**, i. 93-4.
41. *Arch. Jnl.* **xxxix** (1882), 239.
42. *D.N.B.*
43. *Antiquary*, **vii** (1883), 45, 157.
44. Cf. *Bibliog. English Hist. to 1485*, ed. E.B. Graves (1975), no. 827.
45. Appendix O, 'Tower and Castle', p. 328.
46. 'English Castles', *Quarterly Rev.*, **clxxix** (1894), 27; 'Castles of The Conquest', *Archaeologia*, **lviii** (1902), 313.

47. E.S. Armitage, *Early Norman Castles of the British Isles*, (1912) p. viii, quoted by J.H.R., *Family Origins*, 258n. Cf. *Sources and Literature of English History to 1485*, ed. C. Gross (1915), no. 435a.
48. In 1927 Mrs Armitage wrote to Round: 'The greatest service my book has ever done me...[is] to have the favourable verdict of such a *maestro de color che sanno* as yourself: I.H.R. MS 616.
49. *Antiquary*, xii (1885), 240; xiii (1886), 28, 87.
50. *Colchester Gaz.* 13 Oct. 1886; cf. *Antiquary*, xiv (1886), 229.
51. *Essex Standard* 21 Nov. 1885.
52. *St. James's Gaz.* 9 Aug. 1886.
53. London: Elliot Stock, 52 Paternoster Row.
54. J.H.R. mentions the booklet in a letter to Douglass Round on 30 July 1886: E.R.O., D/DRc Z36.
55. E.R.O., D/DRg 1/197.
56. *Essex Standard* 10 May 1884: cf. E.R.O., D/DRh Z10/3, p. 8.
57. *Essex Standard* 17 May 1884: E.R.O., D/DRh Z10/3, p. 8.
58. *Essex Standard* 24 May, 7, 14, 21 June 1884: E.R.O., D/DRh Z10/3, pp. 11-14.
59. Colchester Libr., J.B. Harvey Coll., Vol. II, p. 8.
60. J. Foster, *Noble and Gentle Families of Royal Descent*, 166; *Genealogist*, N.S. xi (1895), 19; Morant, *Essex*, i. 477.
61. *Essex Notebook* (1884-5), 1, 38, 48, 55, 59, 66-7, 70, 76. Mr K. Walker kindly drew my attention to this correspondence.
62. *Essex Standard* 6 June 1885: E.R.O., D/DRh Z10/3, p. 60.
63. *Essex Standard* 8 Aug. 1885: E.R.O., D/DRh Z10/3, p. 67.
64. *Essex Standard* 31 Oct. 1885: E.R.O., D/DRh Z10/3, p. 61.
65. *St. James's Gaz.* 6 Aug. 1886: E.R.O., D/DRh Z10/3, p. 136.
66. For Greet see *D.N.B.* and *Oxford Companion to the Theatre.*
67. E.R.O., D/DRh F15, J.H.R.'s letters to Arthur Bourchier and Violet Vanburgh. For A.B. and V.V. see *D.N.B.* and *Oxford Companion to Theatre.*
68. *V.C.H. Essex*, Bibliography (1959), 328.
69. *Essex Standard* 15 Aug. 1891: E.R.O., D/DRh Z10/4, p. 123.
70. *Essex in the Twentieth Century* (1909), 147; *Essex Review* **xxvi** (1917), 32-3; D. Lemmon and M. Marshall, *Essex County Cricket Club*, 37-8, 41-2, 44-8.
71. *Essex Review* **xii** (1903), 223-4.
72. *McCalmont's Parliamentary Poll Book*, 1832-1918, ed. J. Vincent and M. Stenton (1971), 107.
73. E.R.O., D/DRh F13, 2 Nov. [1875]. 'Duncan' is probably Major (later Colonel) Francis Duncan, R.A. (1836-88), later M.P. for Holborn: see *D.N.B.*
74. E.R.O., D/DRh Z10/1, p. 86-7.
75. E.R.O., D/DRh F13 [8 Aug. 1880]. Forster was the new Chief Secretary for Ireland. For his speech on the House of Lords see: T.W. Reid, *Life of W.E. Forster* (1888), **ii**. 247-8.
76. E.R.O., D/DRh Z10, p. 125f.
77. Ibid. 171.
78. For Mallock see: *D.N.B.*; G. Faber, *Jowett*, 376.
79. Published by John Beal & Co., printers, of Brighton, in May 1881: cf. E.R.O., D/DRh Z10/2, p. 3.
80. *Essex Standard* 4 Feb. 1882.
81. Ibid. 2 Sept. 1882.
82. *D.N.B.*
83. *Essex Standard* 24 Feb. 1883, 'Mr Willis and the Kilmainham Treaty.'
84. Ibid. 29 Mar. 1884, 'Mr Willis and the Bishops': E.R.O., D/DRh Z10/3, p. 5.
85. *Essex Standard* 23 May 1885: E.R.O., D/DRh Z10/3, p. 54.
86. *Essex Standard* 4 July 1885.
87. Ibid. 15 Aug. 1885.
88. Ibid. 28 Sept. 1885.
89. Ibid. 17 Oct. 1885.
90. The verse is from Longfellow's *The Building of the Ship*, which reads: 'O Union strong and great.'
91. For the Disestablishment debate in the 1880s see H.H. Henson, *Retrospect of an Unimportant Life*, **i**. 12, 13, 19.
92. E.R.O., D/DRh Z10/3, pp. 52-3, 58; *Essex Standard* 30 May, 20 June, 8 Aug. 1885.
93. *Essex Standard* 24 Oct., 11 Nov. 1885.
94. Ibid. 31 Oct., 14, 21 Nov. 1885. For Moss see *Kelly's Dir. Essex* (1886), s.v. Messing.
95. *Essex Standard* 16, 23, 30 Jan. 1886; *Essex Telegraph* 16 Jan. 1886.
96. *Essex Standard* 17, 31 Dec. 1881; 7 Jan., 18 Feb. 1882.
97. E.R.O., D/DR C1, 22 Dec. 1881.
98. Ibid. 15 Jan. 1882.
99. *Essex Standard* 7, 18 Mar. 1885.
100. Ibid. 21, 28 Nov. 1885.
101. *St. James's Gaz.* 30 Nov. 1885: E.R.O., D/DRh Z10/3, p. 77.
102. *Essex Standard* 20 Feb. 1886.
103. Ibid. 10 May 1882.
104. For Wicks see: A. Phillips, *Ten Men and Colchester*, 5, 94-6, 105-15, 129, 147-8; *Essex Review*, xiv. 112.
105. For Wood, landowner and sportsman see *Essex Review* **xiv**. 33; **xxiv**. 104.
106. Quoting Tennyson's *Locksley Hall.*
107. Andrew Johnstone of Woodford, who had been Liberal M.P. for South Essex, 1868-74, was now a Liberal Unionist: *Essex Review* xii. 36; xxxi. 112.
108. *Essex Standard* 10, 17 July 1886.
109. Ibid. 14 Aug. 1886.
110. E.R.O., D/DRh Z10/4, p. 87. The Prince was at Christ Church, Oxford, for a few months in 1859-60, but did not live in college, and had hardly any contact with other undergraduates. James Round was at Christ Church from 1860 to 1864: J. Foster, *Alumni Oxonienses*, 1715-1886, p. 1227.
111. *Essex Standard* 31 Oct. 1891.
112. 'Gneist on the English Constitution', *E.H.R.* **iii** (1888), 1-33. For Gneist's theories see J. Redlich and F.W. Hirst, *Local Government in England*, (1903), **ii**. 380f.
113. E.R.O., D/DR C1, 21 Mar.[1888].
114. *St. James's Gaz.* 5 Apr., 9 June, 6 and 7 Sept. 1888.
115. *Essex Standard* 2, 9, 16 July 1892.
116. For his commission as D.L. see D/DRh F11.
117. E.R.O., D/DR C1, 26 Feb. 1896.
118. *St. James's Gaz.* 17, 18, 19 Apr., 10, 12 May 1894.
119. *Essex Standard* 2 June 1894.
120. *St. James's Gaz.* 16 Aug. 1894.
121. Ibid. 3 Apr., 26 Nov. 1895.
122. *Sunday Times* 27 Oct. 1895; *Morning Post* 20 Nov. 1895.
123. *St. James's Gaz.* 25 Nov. 1895.
124. E.R.O., D/DRh F28, Papers and newscuttings re Varty's candidature, 1895.
125. E.R.O., D/DR C1.
126. Ibid.
127. Ibid.
128. *East Anglian Daily Times* 12 Nov. 1889.
129. For Jones see A. Phillips, *Ten Men and Colchester*, 4, 87-9 &c.
130. E.R.O., D/DR C1.
131. Ibid. 15 Mar. 1890.
132. E.R.O., Libr. File, Colchester.
133. V.C.H. Records, J.H.R. to General Editor, 17 June 1908.
134. In the Society's archives. This photograph is reproduced on the front cover of this volume. An annotated key is shown facing page 1.
135. *E.A.T.* n.s. **xiii**. 86, cf. 147.
136. D. Stephenson, in *Essex Archaeology and History*, **xii** (1980), 7.
137. *Family Origins*, pp. lxiii-lxiv.
138. *E.H.R.* **xxxvii**. 1-34.
139. *The Times* 26 June 1928.
140. *Essex Archaeology and History*, **xii** (1980), 34.

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Work of the Essex County Council Archaeology Section, 1991

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, as well as final reports on a number of smaller excavations. Summaries of the larger excavations can be found elsewhere in this volume (pp. 114-64).

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 providing specialist reports and museums who have allowed finds to be published here. The illustrations are by the following: Lesley Collett (Fig. 1); Nick Nethercoat (Figs 2 and 3); Stuart McNeill (Fig 4).

Full details of all sites can be found in the County Sites and Monuments Record.

Bures, Ferriers Farm (PRN 9399)

Richard Havis

Following information provided by a local resident concerning damage to a circular cropmark, a visit was made by two officers. This was followed by a visit by an English Heritage fieldworker with a view to possibly scheduling the site under the emergency procedures of the Ancient Monuments legislation. Following that visit it was discovered that a number of trenches had been excavated in the proximity of the cropmark. A single feature was visible in the section of one of the trenches. When the feature was excavated several pottery sherds of Late Bronze Age date were found (Fig. 1).

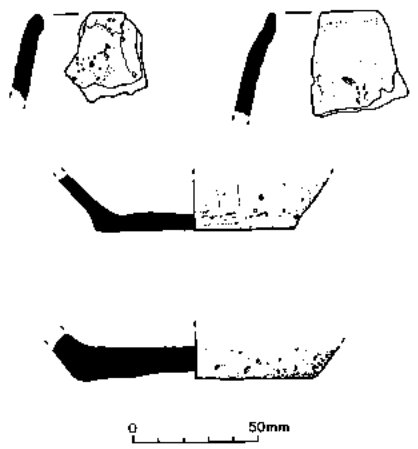

Fig. 1 Late Bronze Age pottery sherds from Bures.

The site is situated on the crest of a south-east facing hill sloping down to the River Stour and comprises a circular cropmark 26.5m in diameter with a ditch *c.* 3m wide and an entrance way 4.5m in width on the south-eastern side. The finds suggest the feature is of Bronze Age date, possibly similar to the enclosure at Springfield, near Chelmsford, although smaller in scale.

The cropmark is now scheduled and is being monitored in case of further damage.

Alphamstone, South of St Barnabas' Church (PRN 9317)

Colin Wallace

Finds made by Mr Peter Simpson of Alphamstone, from the field to the south of the church in the area of a known Roman-period site (Hull 1963), were kindly lent to the Archaeology Section for recording.

The large collection of pottery sherds, together with Roman tile, *tesserae* and wall fragments were of mainly 3rd/4th-century date. Pottery fabrics consisted of: late shell-tempered ware, BB1, Nene Valley colour-coat, Oxfordshire white ware mortarium and greyware dishes, bowls and jars, with some earlier pieces.

Finds: in private possession

Ashdon, Money Field

Colin Wallace

Recent fieldwalking by Mr R. Grayston on land to the south of the modern village produced a collection of mainly Roman pottery and tile which were brought in to the Archaeology Section for recording.

The bulk of the Roman pottery falls into a 3rd- to 4th-century date range: Nene Valley colour-coat, Hadham wares and Oxfordshire mortaria. The latest Roman pottery, of the later 4th century plus, is Oxfordshire red colour-coat and late shell-tempered ware. Only the samian, which is notoriously long-lived in use, is any earlier. Of interest among the other pottery are jar rims in Horningsea ware, from kilns to the north-east of Cambridge. The small amount of identifiable post-Roman pottery was largely post-medieval (identified by Helen Walker). All the tile was Roman, consisting mainly of roof-tile (identified by Hilary Major).

Finds: in private possession

Brentwood Halfway House to Herongate Reservoir Pipeline (TL 6311 8933-TL 6328 9153)
Howard Brooks

The Essex Water Company were putting a third pipe into an existing two-pipe run between Halfway House on the north side of the A127, and Herongate Reservoir, a distance of 2.3 km. A watching brief on the pipeline was funded by Essex Water Company.

The watching brief consisted of scrutiny of the scraped easement over the southern 1.8 km of the pipe line (TL 6311 8933 to 6338 9107), observation of 300 m of open pipe trench (where visible between TL 6311 9022 and 6320 9054), and scrutiny of the nearside of the spoil heap on the eastern side of the easement. At the time of the visit, only the southerly 1.8 km of the pipeline had been stripped, the northern 0.5 km (north of TL 6338 9107) was therefore not seen.

Ground conditions were not ideal for spotting archaeological features, for the easement had been thoroughly run over by contractors' plant. It quickly became clear that it was useless to inspect the ground surface, therefore only the open trench and the spoil heap can be said to have been properly investigated.

No features were visible in the exposed section of the pipe trench. However, several finds were made. Whenever a find was spotted, the ground surface and both sides of the spoil heap were carefully scrutinised 10 m either side of the find-spot.

Finds were as follows:

1 fragment of Roman brick; 18 mm thick; TL 6308 8948.
4 fragments of fire-cracked flint; largest 58 x 53 x 48 mm, smallest 33 x 27 x 23 mm; presumably prehistoric; TL 6307 8953.
1 fragment of Roman? brick; 15mm thick; TL 6305 8966.
1 fragment of greenish granite recovered (others seen).

Other finds not recovered were several brick fragments, and plaster, all very modern-looking. It appears that debris from the demolition of a building has been dumped here; TL 6302 8988.

1 corner fragment of medieval or post-medieval peg tile; small patch of buff mortar adhering to one surface; TL 6326 9070.
2 peg-tile fragments with green glaze adhering to both surfaces.

Helen Walker has commented that although identification is not certain, sometimes tile fragments were used in kilns, and glaze may have dripped onto them in this way.

Conclusions

The fire-cracked flints are probably prehistoric. There are no reported finds of prehistoric material from this area, so this may be regarded as a new find-spot.

The fragments of Romano-British brick are also in an area where no Romano-British finds are known. Even if the fragments are merely derived from a manure scatter, we still lack a source. The nearest Romano-British material recorded on the Essex Sites and Monuments Record (ESMR) is at the site of St Nicholas Old Church, Ingrave Hall, 3.5 km to the north of the present discoveries, and in Bulphan, 3.5 km to the south. These sites are too far away to be our source. A previously unknown Romano-British site may therefore be postulated, somewhere in the vicinity of the present finds.

The green glazed tiles are also worthy of comment. If they were used in a kiln, where was it? The nearest known evidence of potting is from outside Brentwood, where the ESMR records "Potters Field" close to Babshole Farm and north of Sudbury Farm Road, 4 km north east of the present find-spot. That is perhaps too far away, and (as with the Romano-British material) one might postulate a nearer source for these finds, as yet undiscovered.

Castle Hedingham, near Crouch Green (PRN 6888)
Colin Wallace

Recent fieldwalking by Mr Charles Bird of Castle Hedingham over this known Roman rural site in north Essex (Hull 1963, 145; Lindsay 1958, 231-8) has yielded a small amount of Roman pottery and tile and a distinctive three-nozzled lamp. These were kindly lent to the Archaeology Section for recording with the permission of the landowner, Mrs B. Crowther of Nunnery Farm.

The tile (identified by Hilary Major) comprised two pieces of *tegula*, two pieces of unidentifiable tile and seven probable tesserae, which may be indicative of a Roman building in the vicinity.

The nine sherds of pottery comprised 2nd-century Central Gaulish samian (cup form 33, two examples of bowl form 18/31R and decorated bowl form 37), oxidised wares (flagon and bowl rims) and a coarse jar rim (Chelmsford form G45).

There were also four pieces of post-medieval tile, one medieval sherd and one post-medieval sherd (pottery identified by Hilary Major and Helen Walker respectively).

The three-nozzled lamp (Fig. 2) is basically a 'Factory Lamp' or Firmalampe. Two-nozzled examples are 'not common' (Bailey 1988, 15: a London example Q1612, plate 7, compares with the present specimen in overall appearance). Bailey only mentions the lower half of a mould for a three-nozzled lamp (Museum of London, accession no. 81.369/1: pers. inf. Jenny Hall) which had been made by taking three impressions from a single-nozzled lamp.

Finds: in private possession

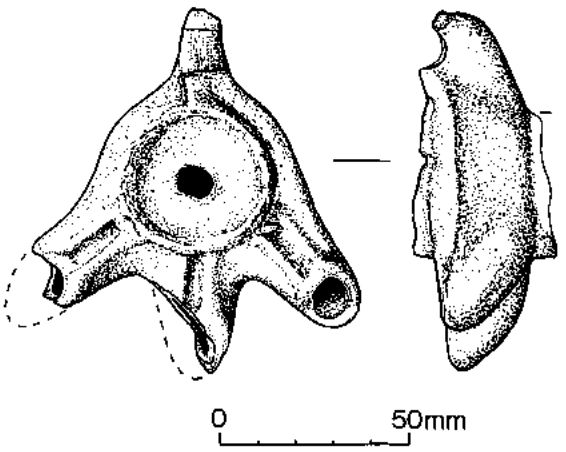

Fig. 2 Three-nozzled lamp from Crouch Green, Castle Hedingham.

Great Horkesley, Near Slough Grove
Steve Wallis

During a watching brief on Anglian Water's pipeline between Bures and Great Horkesley a scatter of pottery, tile, and quernstone fragments was found near Slough Grove. The datable finds were of 2nd- to 3rd-century date. In 1916 finds of "Roman pots and ashes" (E.C.C. SMR PRN 9171) came from the same field.

With the assistance of a mechanical excavator loaned by Anglian Water, the surface of the subsoil was cleaned along one edge of the trench. The cleaned area was 175m (E-W) by *c.* 1m. Only one feature was identified, containing two sherds of medieval pot.

Thorrington, Elmstead Market to Clacton-on-Sea water main
Steve Wallis

A watching brief was carried out on the Tendring Hundred Water Company's main in November 1991. Viewing conditions were far from ideal, but two sites (A & B) were discovered, both in Thorrington parish.

Site A was probably a medieval occupation site.

Site B had occupation and metalworking evidence, much of the latter from the fill of a pit. The metalworking debris (identified by O. Bedwin) was chiefly thought to be hearth lining, but pieces of charcoal in a spongy matrix of heavily fired, largely vitrified clay were interpreted as deriving from smithing, and pieces of tap slag indicated smelting. Datable finds were limited, merely showing that the site dated from the Roman period or later.

Dovercourt, Church of All Saints
David Andrews

Following stripping of the pebbledash from the tower, it was seen to be constructed of blocks of septaria, laid to courses, with the top in red brick, laid to English bond. Also present are some brick and tile, mainly red, but also some medieval white bricks, often round former putlog holes and in the buttresses. Re-used ashlar and moulded stones are also present in the buttresses. The tower appears to be all of one build up to the top of the buttresses. Several lifts are evident but these probably do not represent significant interruptions to its construction. The top of the stair turret may have been rebuilt at the same time as the building of the remainder of the tower in brick. The porch has also been revealed as being built in bricks of similar dimensions to the tower.

The RCHM (vol. III, 86) dates the tower to *c.*1400 and notes that its top stage and the porch were rebuilt in the 19th century. Two old prints in the Essex Record Office show the church in 1827 and 1867. In 1827 the tower buttresses had three weatherings as opposed to two in 1867 and today, and two string courses rather than one above the clock. The differences between the two prints show that the tower was not simply rebuilt but also lowered in height between those two dates. The brickwork of the tower and porch is consistent with such a date.

Felsted, Church of the Holy Cross
Howard Brooks

A watching brief was conducted on a trench for a new heating pipe being dug from the west door of the tower to the lane on the south edge of the churchyard. Two features of interest were observed. The first was a brick-built tomb, located 9m south of the south edge of the tower, and approximately 2m west of the line of the west face of the tower. The tomb's north-east corner had been clipped by the trench, thus allowing an examination of part of the coffin-shaped tomb's interior. The walls were built of 6 or more courses of 18th- or 19th-century bricks, and the corbelled roof of much thinner, "Tudor" shaped brick. In internal cross-section, dimensions were approximately 30cm wide by 60 cm high. The burial was clearly visible inside the tomb, though obscured by recent debris at the foot end. There was no tomb-stone or grave slab marking the position of this burial.

The second point of interest was the discovery of a large lump of sarsen stone 1m south and west of the tower. This had previously been disturbed by a gas pipe laid outside the west face of the tower, and in whose construction trench the sarsen lay. The occurrence of large stones in churchyards is beyond the brief of such a note as this, but a local parallel is provided by Great Bardfield Church, where large sarsens underpin the corners of the structure (Rodwell and Rodwell 1977, 95).

Little Dunmow, Church of All Saints
David Andrews

Examination of one of two test pits on the north side of the church revealed medieval mortared flint foundations. This hole was located between the third and fourth lancet windows and seemed to be opposite one of the piers of the former arcade separating aisle and chancel. Inside the church it can be seen that there may be masonry running off on the north side of these piers, which would seem to correspond with the foundations visible externally.

Little Burstead, Church of St Mary
David Andrews

Three test holes were examined, situated against the south wall of the chancel, against the south nave wall and against the west wall. That against the chancel wall indicated that the original ground level from which the church was built may be as much as 600-700 mm below the existing ground level. The coursed conglomerate of the chancel walls is probably contemporary with the nave and datable to the 12th to 13th centuries. The test holes showed that the south chancel wall and the west wall of the church have been refaced or rebuilt. This is consistent with the conclusion of the RCHM, which thought the south wall of the chancel to be of later date.

Sible Hedingham, Broak's Wood, Southey Green
Helen Walker

A chance find of 34 sherds of pottery, weighing 488g, by Simon Leatherdale of the Forestry Commission from 3 locations within the wood were examined. Nearly all the pottery is Hedingham ware (later 12th- to mid 14th-century (Coppack 1980, 223)) and many represent waster material from a kiln. This is indicated by faults visible in the sherds: small bits of clay adhering to the glaze; blistered glaze; dull, powdery glaze; and glaze on breaks. More fine than coarse ware was collected.

Fine ware sherds included a jug rim decorated with applied ring and dot stamps; a twisted rod handle; a continuously thumbed jug base; and two body sherds showing vertical applied strip decoration. These are typical of Hedingham ware and probably come from the same type of vessel, a rounded strip jug. Examples found elsewhere in Essex come from contexts dating to the early and mid 13th century (Rahtz 1969, fig. 52.15; Drury 1977, fig. 8.11b). There was also an example of a pinched applied strip, paralleled at Harwich (Walker 1990, fig. 13.10) and a small partially-glazed rod handle.

The coarse wares are unusual because they are glazed; this has not been seen by the author before. Fragments from a decorated coarse ware jug have a partial covering of mottled green glaze. There are two other glazed coarse ware sherds, with the glaze in runs or splashes so that glazing could have been accidental.

Also found was a small, nearly complete jug (Fig. 3). This is not Hedingham ware but a much coarser sandy orange ware, having a hard fabric with rough pimply surfaces. The jug is wheel-thrown, not particularly well finished, and decorated with incised horizontal lines around the neck and shoulder. There is a 'bib' of decayed plain lead glaze at the front of the vessel below where the spout would have been. This vessel represents a 14th- to 15th-century tradition where jugs became much plainer and glaze cover was reduced.

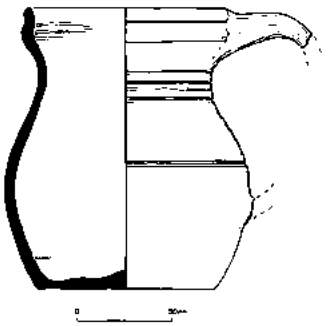

Fig. 3 Hedingham ware jug from Southey Green, Sible Hedingham.

Brentwood, London Road
Howard Brooks

During drain-cleaning operations, a brick chamber was observed. It was part of the surface water drainage system running under the pavement on the south side of London Road. Sue Clark and Brian Lawrence of Brentwood District Council kindly reported it to the Archaeology Section.

A modern manhole cover gave access through the corbelled roof of a rectangular, brick-built chamber. Dimensions were: width 1.8m; length 2.7m; height 0.9m high to the spring of the corbelled roof, and 1.2m to its highest point (not quite high enough to stand up in). The ceramic inlet and outlet pipes (probably modern replacements) were located centrally at the top of the end walls. Bricks were as follows: wall — 220 x 60 x ?mm buff stocks; floor — unmortared 205 x 95 x ?mm reds. Centrally within the floor was a brick-lined soakaway, of unknown depth. When found, the entire chamber was full of silt up to the level of the present man-hole.

The brick size points to a late Victorian construction date. In function, it was probably a silt trap, which had done its job very well.

Stisted, Church of All Saints
David Andrews

The partitioning off of the south aisle of this church to serve as a meeting room and social area involved the

renewal of the suspended floor in concrete, in the course of which four grave slabs and two brick vaults were found. All were aligned east-west, and situated south of the iron grill that covers the heating duct. Three of the slabs are to the west of the south door and one to the east. They range in date from 1794 to 1826. The easternmost slab appeared to be still associated with a brick tomb. The other tomb lay between two of the slabs. The soil exposed in the aisle was an orangey-brown sandy silt, now rather dry and dusty.

These stones seem to have marked the position of individual tombs, doubtless brick lined and vaulted. Only one seems definitely to still relate to a brick-lined tomb. The others may have been moved at the time of the Victorian restoration when the floor was laid. The wear on them is consistent with their having been set in the earlier floor. However, the moulding on the edge of the westernmost stone could indicate that it was originally located on a box tomb outside the church.

Aerial Survey 1991

Alison Bennett and Caroline Ingle

1991 was less productive for aerial photography than previous years as a result of the weather. Rain in June and early July disrupted the flying programme and had a detrimental effect on cropmark development and even at the time of flying many crops had been affected by strong winds. Six flights were undertaken, most of the flying being done during late July and early August. Despite the problems a number of new sites were recorded, some again on the Boulder Clay plateau, and the opportunity was also taken to record standing monuments and buildings. The water-logged fields east of Coggeshall Abbey revealed the outlines of the Abbey fish-ponds. It was also interesting to note that some features, particularly old field boundaries, showed as flattened crops. The most interesting of the new cropmarks are described below.

Great Tey

Circular feature (Fig. 4.1) *c.* 15-20m in diameter, the size suggests a ploughed out barrow.

Stebbing Green

A curvilinear enclosure (Fig. 4.2) *c.* 40x23m. (0.09 ha), with an entrance to the north, with a sub-rectangular enclosure *c.* 60x45m. (0.27 ha) attached to it, to the south-west. A ring ditch with a diameter of *c.* 10m lies just to the north. The curvilinear enclosure is almost D-shaped, and most closely responds to Priddy and Buckley's type Ciii (1987, 74) i.e. sub-rectangular/D-shaped enclosures ranging from 0.10-0.25 ha. The majority of excavated enclosures of this type in Essex date to the Middle or Late Iron Age, and several have external subsidiary enclosures. Domestic and agricultural functions are implied. This site adds to the growing number of possible prehistoric sites known from the Boulder Clay plateau.

Ashdon

The most interesting site recorded in 1991 is a soilmark (Fig. 4.3) rather than cropmark to the east of Ashdon village. The complex site includes a large sub-rectangular enclosure, *c.* 80x80m (0.64 ha), smaller sub-rectangular enclosures and a large ring ditch/small circular enclosure lying to the north of the large enclosure. The large enclosure abuts or intersects a rectangular enclosure at the SW corner *c.* 100x22m (0.22 ha), apparently divided into two or three smaller enclosures. A smaller enclosure *c.* 23x11m (0.02 ha) lies within the large enclosure with a subsidiary enclosure attached. There may be other features at this end of the field but the soilmarks are indistinct. The circular enclosure is *c.* 20m in diameter. This may be presumed to represent a ploughed-out barrow.

The various sub-rectangular enclosures are similar in form to excavated examples which indicate a Middle to Late Iron Age date (Priddy and Buckley 1987, 73-4). There are possible signs of internal features although these are obscure.

The SMR records mesolithic flints from the same field but not in the area of the soilmarks [PRN 4829].

Great Bardfield

This group of cropmarks (Fig. 4.4) consists of the cross-shape marking the position of a windmill (PRN 1524) known from the Chapman and André map of 1777; a double-ditched trackway running approximately north-south, of unknown date; another linear feature, partly double-ditched; and part of a small enclosure, with a width of 10m and a minimum length of 20m. This enclosure may fall within Priddy and Buckley's type Ci (1987, 74), sub-rectangular enclosures under 0.10 ha. Excavated examples date from the Middle and Late Iron Age and domestic and agricultural functions are suggested.

Little Canfield

Part of a large rectilinear double ditched enclosure of unusual shape (Plate 1); the cropmark is not traceable across the modern field boundary and its overall shape is unclear. Excavated double ditched enclosures in the county encompass a wide time-span and the date and function of this example is uncertain.

Boreham

A sub-circular enclosure, possibly *c.* 70m in diameter; there is no apparent break in the ditch. It is situated on a south facing slope overlooking a tributary of the River Chelmer. Its form can be placed within Priddy and Buckley's type Ai (1987, 72) single-ditched circular enclosures over 50m in diameter. This category contains a range of forms, but despite this, all the

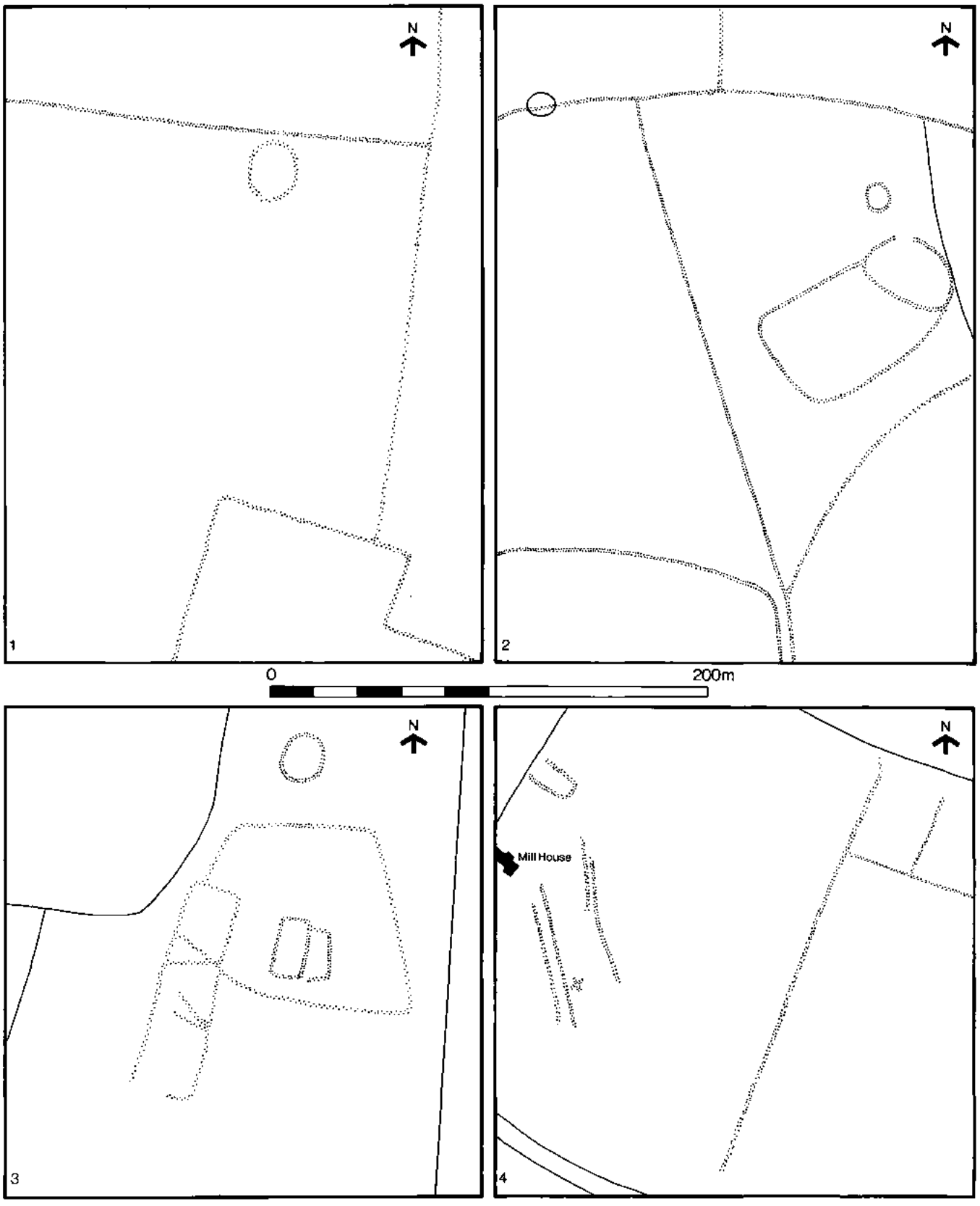

Fig. 4 Cropmark sites at Great Tey (1), Stebbing Green (2), Ashdon (3), Great Bardfield (4).

Plate 1 Cropmark site at Little Canfield.

excavated examples (Great Baddow, Mucking North Ring, Springfield Lyons) are contemporary, dating to the late Bronze Age.

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Essex Archaeology and History 23 (1992), 98-113

Archaeology in Essex 1991

Edited by P.J. Gilman

This annual report, prepared at the request of the Advisory Committee for Archaeological Excavation in Essex, comprises summaries of archaeological fieldwork carried out during the year. The longevity of many projects often results in a lengthy post-excavation and publication process. The publication of these summaries therefore provides a useful guide to current archaeological research, and the opportunity to take an overview of significant advances. This year 63 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 finds and places of final report are listed, where known. Excavations continuing from previous years are indicated by reference to previous summaries in the relevant 'Excavations in Essex 19 '.

Contributors are once more warmly thanked for providing information. The illustrations are by: Lesley Collett (Fig. 2), Mark Ingram (Fig. 4), Alison McGhie (Fig. 3), and Nick Nethercoat (Fig. 1).

The original reports have been added to the County Sites and Monuments Record held by the Archaeology Section at the Essex County Council, Planning Department, County Hall, Chelmsford. For details of sites in the London Boroughs, contact the Passmore Edwards Museum, Stratford.

Progress in Essex Archaeology 1991

Introduction

The title and format of this report have been altered, in order to more accurately reflect recent changes in archaeological practice. These are largely a consequence of the introduction, in 1990, of the DoE's Planning and Policy Guidance Note 16 (PPG 16),

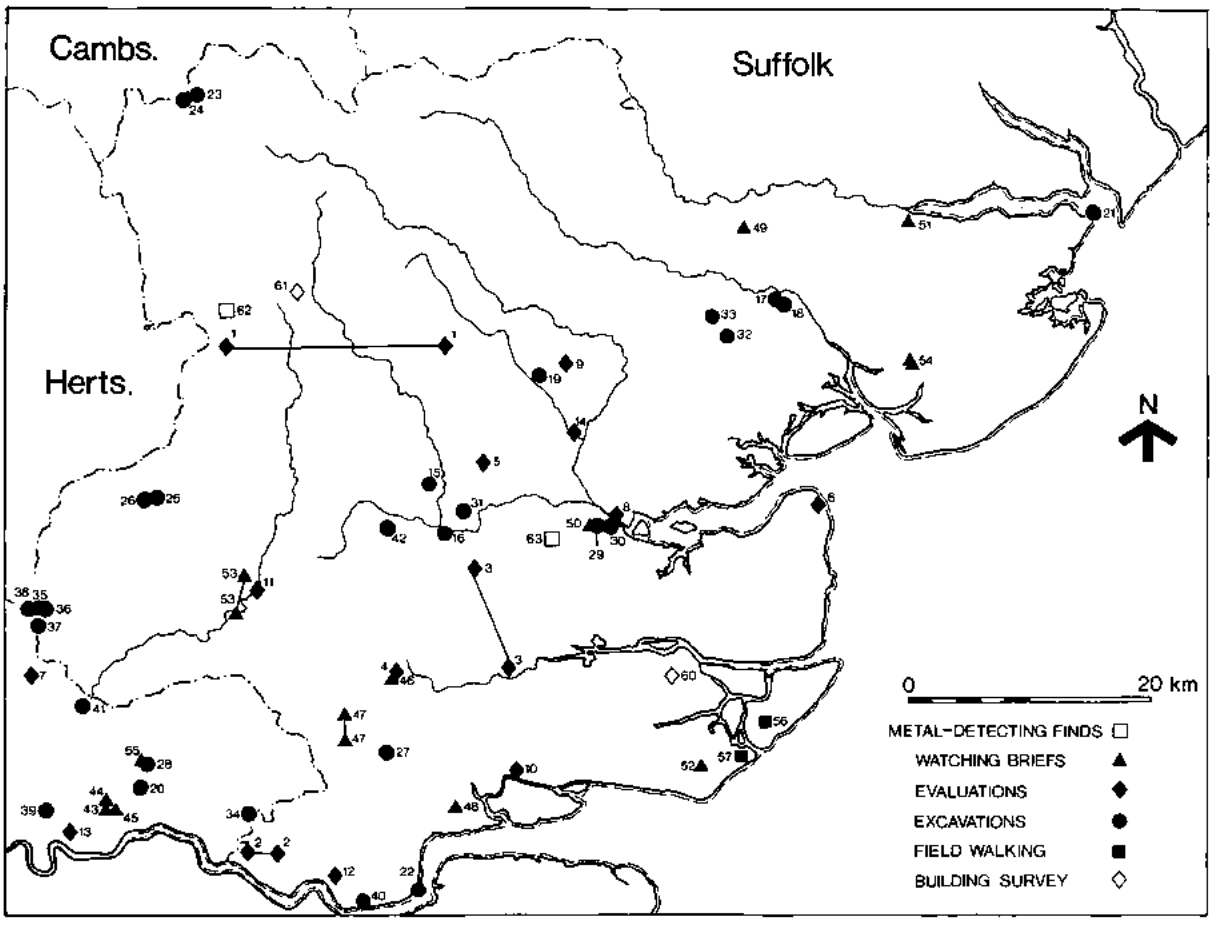

Fig. 1 Locations of archaeological projects in Essex 1991.

'Archaeology and Planning', as referred to in last year's report (Gilman ed. 1991, 148-61). The report has, therefore, been retitled 'Archaeology in Essex' in order to embrace the various kinds of fieldwork carried out in the county. The list of projects has been sub-divided by type, i.e. evaluation, excavation, watching brief, fieldwalking, building survey, metal-detector finds, and aerial survey. Within each category, projects are ordered alphabetically by parish and location.

The number of projects (63) is up on last year, partly due to the increase in field evaluations as a result of the implementation of PPG 16. The value of such exercises is illustrated by the discoveries of new archaeological sites at Bradwell (6), Heybridge (8), and Rivenhall (9).

As a response to the PPG and to views expressed by English Heritage as to what constitutes 'best practice', the County Archaeology Section has been restructured. Within the Section, there are now three distinct units: development control, field projects, and graphics/illustration. The development control group maintains the Sites and Monuments Record, and provides specialist advice to planning authorities, land owners, developers etc. The field projects group carries out all kinds of archaeological fieldwork, including watching briefs, surveys, evaluations and full-scale excavations. Support services are provided to both these groups by the graphics/illustration team.

In the few instances of competitive tendering for archaeological field projects, contracts were usually awarded to local organisations.

Prehistoric

Two of the year's evaluations in the Thurrock area related to Palaeolithic remains. However, although Clactonian deposits were found at Rectory Road, Grays (12), they were on the margins of the proposed development. It is possible that more positive results may be forthcoming from the A13 (2). No Mesolithic sites were reported for 1991, but further work at Springfield Lyons (31) has helped clarify the form of the causewayed enclosure discovered in 1990. The Bronze Age produced several interesting discoveries. Two gold torcs were reported from Woodham Walter (62), and settlements were investigated at Broomfield (15) and Harlow (26). The Broomfield enclosure illustrates the difficulties of attempting to date cropmark sites on form alone. Prior to excavation, it was thought that this enclosure could probably be attributed to the Iron Age; it was in fact Late Bronze Age. This discovery is an important addition to knowledge of settlement at this period, particularly in the Chelmer valley (Buckley and Hedges 1987). Bronze Age remains were also found at Dagenham (20) and Upminster (35). The Iron Age was also well to the fore, including the discovery of a hitherto-unknown settlement at Heybridge (8). The important excavations at Stanway (32) promise to shed much-needed light on high-status Iron Age funerary practices.

Roman

In many ways, the most spectacular discovery from this period was the smallest, the tiny bronze box or *pyxis* from Elsenham (61). This is the first of its kind to be found from this country. Other interesting rural sites included a possible villa at Boreham (5), and confirmation of the suspected extra-mural settlement at the Saxon Shore fort at Bradwell (6). Red hill sites continue to be found (47, 55, 56), adding to the urgent need for survey and protection for this important monument class. Urban sites were less prominent, but the Great Chesterford Archaeological Group is steadily adding to our understanding of this enigmatic small Roman town (23, 24). In Colchester the top of the podium of the Temple of Claudius was uncovered for the first time for hundreds of years (17).

Saxon

As usual, there is little to report for the Saxon period, but the evaluation at Bradwell (6) may have uncovered remains associated with the Saxon monastery, and the unexpected find of a large ditch, possibly of this period, behind Maldon's High Street (30) has prompted reconsideration of the vexed question of the *burh* defences and associated settlement (see also Bedwin, this volume, pp.10-24).

Medieval

Some of the evaluations in the county's medieval towns were disappointing (e.g. 4 and 14) but continued excavation at Chelmsford (16) has uncovered interesting evidence about the early history of the medieval town. In addition work at Horndon (27) and Waltham Holy Cross (35) has produced useful results. There has also been noteworthy work on some of the county's religious houses, at Colchester (17), Maldon (29), Stratford (39), Tilty (61, see also this volume, pp. 152-7), and Waltham Holy Cross (36). There is less to report for rural sites, apart from King John's Hunting Lodge, Writtle (42), where buildings have been added to the plan known from the 1950's excavations (Rahtz 1969).

Post-medieval

Work in post-medieval archaeology continues to be dominated by the county's coastal defences at Dovercourt (21), East Tilbury (22) and West Tilbury (40).

Evaluations

1 A120 Trunk Road (TL 540 220-TL 722 220)
M. Medlycott, E.C.C.

Six possible archaeological sites discovered during field survey of the route of this new road (Gilman ed. 1991, 149) were trial-trenched. One of these evaluations, close to Takely church, produced a clay-lined Roman pit filled with the remnants of a bonfire and animal bones. Two others, at Stebbingford, contained the

remains of an early medieval farmstead dating to *c.* 1000-1200 A.D. Excavated features included the side wall of a wattle-and-daub structure. No archaeological features were found on the other sites.

Previous Summaries: Gilman (ed.) 1991, 149.
Finds: E.C.C.; to go to S.W.M.

2 A13 Wennington to Mardyke
(TQ 548 803-TQ 574 800)
M. Germany, E.C.C.
To date, three of the seven hectares available for fieldwalking along the route have been surveyed. Although nothing of archaeological interest was found, analysis of borehole logs suggests that deposits of interest for the Palaeolithic period are present along some parts of the route. The remaining four hectares, including a suspected Roman site, were scheduled for fieldwalking in the Spring of 1992.

Finds: E.C.C.; to go to T.M.

3 A130 Sandon to Rettendon
(TL 742 034-TQ 772 952)
M. Germany, E.C.C.
Fieldwalking along the route of the new A130 located two areas of possible archaeological interest. A concentration of Roman tile and pottery was found on the south-facing slope of a hill near Downhouse Farm (TL 746 015). The second area of interest is near Lacey's Farm, Rettendon, where the projected course of the Roman road from Chelmsford is expected to be cut by the line of the new road. This possibility is supported by the discovery of a light scatter of Roman pottery at this point (TQ 757 986). It is anticipated that these areas will be further investigated in the Autumn of 1992.

Finds: Ch.E.M.

4 Billericay, 51 High Street (TQ 674 947)
N. Lavender, E.C.C.
Trial trenches were excavated to the rear of this property in advance of development proposals. It was possible that traces of medieval settlement would be found in this area between the High Street and Western Road, both of which are known to be medieval in origin. However, the earliest feature discovered was a late 16th- or early 17th-century ditch, and the rest were late 18th-century or later.

Finds: E.C.C.; to go to Ch.E.M.
Final Report: E.C.C. SMR Archive Report.

5 Boreham, Great Holts Farm (TL 7515 1190)
M. Germany, E.C.C.
A Roman site was discovered during fieldwalking in advance of gravel extraction. A relatively large amount of tile was found, suggesting the presence of a villa or farmstead. The proximity of this site to a Roman cremation cemetery immediately east of the survey area (*V.C.H.* **3**, 51) makes it likely that the two sites are associated. It is anticipated that further burials may be found within the survey area.

Finds: Ch.E.M.

6 Bradwell-on-Sea, Othona Community Site
(TM 030 084)
M. Medlycott, E.C.C.
Archaeological evaluation in advance of the construction of new community buildings revealed remains of extra-mural settlement to the north of the Roman Saxon shore fort. Evidence was also found for occupation during the Saxon and early medieval periods. The site seems to have been abandoned to farming use by the late 12th century.

Finds: C.M.

7 **Chingford,** Drysdale Avenue (TQ 3775 9495)
P. Moore, P.E.M.
In advance of house construction, test trenches were excavated in a former school playing field revealing various 19th- and 20th-century pits and ditches. To the west of the site two definite, and one possible, ditches lined with horn core, and some pits could be dated to at latest the 18th century. Fieldwalking produced a mid 16th- to 18th-century concentration of pottery and clay pipes, including metropolitan slipware. This activity relates to a concentration of settlement along Lower Street (now Sewardstone Road) which dates from at least the early 18th century. To the east of the site ditches were found, associated with agricultural activity.

Finds: P.E.M.
Final Report: P.E.M. Archive Report

8 Heybridge, Heybridge Hall (TL 859 076)
S. Bryant, E.C.C.
Trial trenching around, and to the north-west of, the 14th-century Heybridge Hall (Fig. 2) revealed well-preserved medieval occupation levels at 70-100 cm below modern ground level in the general vicinity of the Hall. Above these levels, there was considerable post-medieval build-up, partly associated with landscaping of the garden areas, especially to the south of the Hall. To the north-west, a more surprising discovery was that of a Late Iron Age ditched enclosure, defined by a double ditch, *c.* 1 m deep and *c.* 5 m across at the top. There were a number of internal features (pits, postholes, slots) but, because of the narrowness of the trial trenches, it was not possible to interpret them fully. However, the presence of pottery in most of them (especially in the form of dumps of large, unabraded sherds in the enclosure ditch) strongly suggests that this was a settlement. It is expected

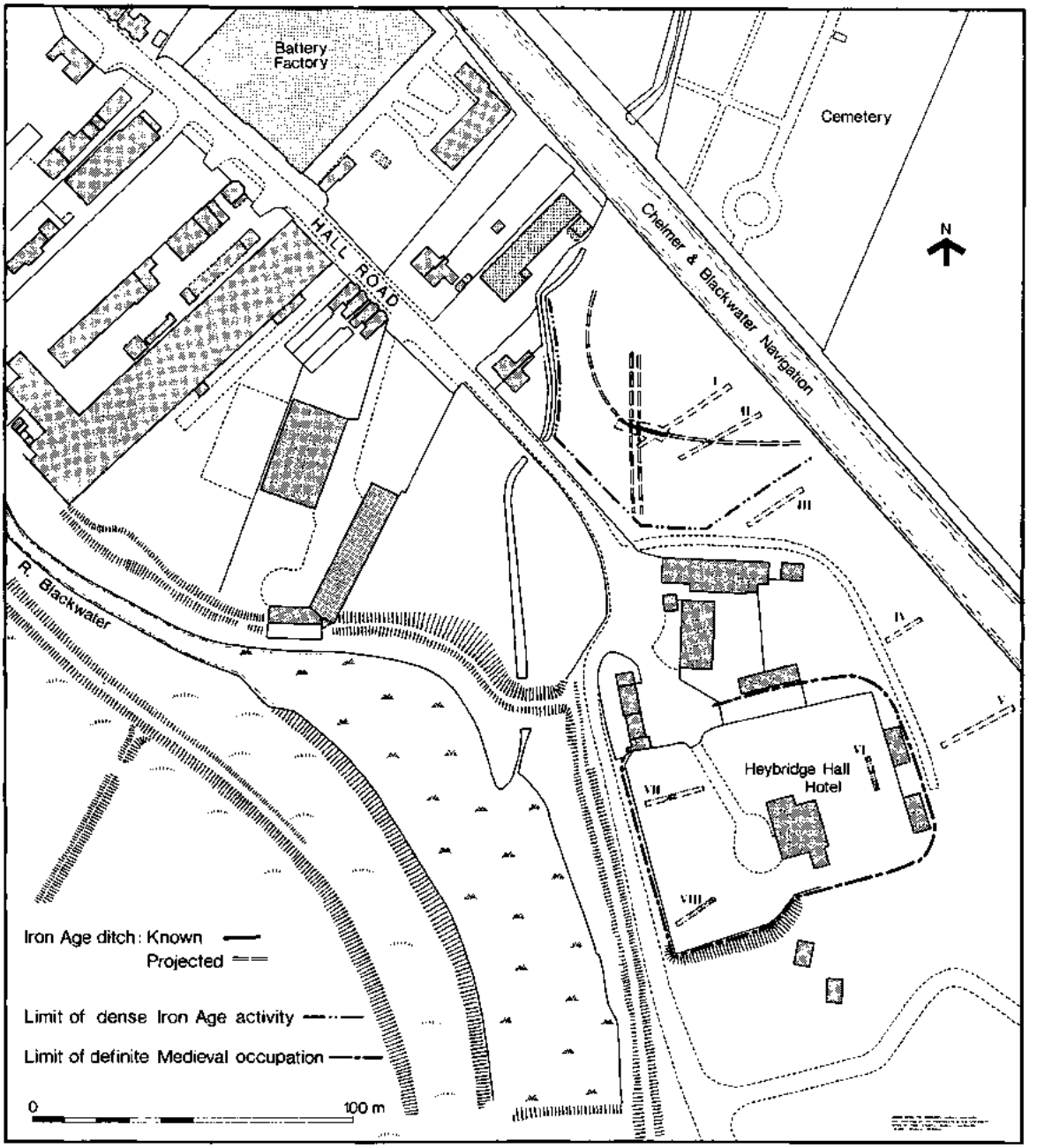

Fig. 2 Heybridge. Plan of evaluation trenches and archaeological features.

that this site will be fully excavated prior to development.

Finds: C.M.

9 Rivenhall, Rivenhall Airfield (TL 8222 2026)
M. Medlycott, E.C.C. and T. Johnson, O.A.
Fieldwalking in advance of proposed mineral extraction revealed 15 concentrations of finds, interpreted as possible archaeological sites. Six were prehistoric, two Roman, one medieval, and six post-medieval. Further evaluation is anticipated, involving geophysical survey and trial-trenching. Geophysical survey along a proposed route identified a possible Late Iron Age site. This is provisionally interpreted as including at least two round-houses and linear ditches. This site will also be further assessed by trial trenches.

Finds: E.C.C.

10 South Benfleet, High Street, Anchor Public House (TQ 778 861)
N. Lavender, E.C.C.
Trial trenches were dug in advance of proposals for residential development in an area on the east side of the High Street, opposite the parish church of St Mary the Virgin, and to the east of the presumed site of the Danish camp mentioned in the Anglo-Saxon Chronicle for 894 A.D. The evaluation uncovered a sequence of occupation ranging from the late 11th to

17th centuries A.D., but this consisted merely of a series of property boundaries, and a post-medieval ground build-up along the street frontage.

Finds: S.M.
Final Report: E.C.C. SMR Archive Report.

11 Stondon Massey, Hallsford Bridge (TL 563 019)
M. Atkinson, E.C.C.
Trial-trenches were excavated in advance of the proposed extension of the Hallsford Bridge Industrial estate. In 1939, Mesolithic, Neolithic and Iron Age artefacts and features had been found, some of which were interpreted as the remains of pit dwellings. In the evaluation, only one artificial feature was found, which contained one flint and has been tentatively interpreted as a prehistoric ditch, possibly a field boundary. The negative result of the evaluation suggests that the 1939 discoveries were made further to the north, perhaps on the opposite side of the River Roding.

Finds: Ch.E.M.
Final Report: E.C.C. SMR Archive Report.

12 Thurrock, Rectory Road (TQ 6252 7819)
D. Bridgland (Earth Science Consultancy) and C.P. Clarke, E.C.C.
Trial trenches were excavated in advance of proposals for housing development adjacent to the Globe Pit. Clactonian artefacts had been found in this pit on several previous occasions (Snelling 1964; Wymer 1957; Wymer 1985, 307-11). During the evaluation no trace of Pleistocene deposits was found within the proposed development area. However, a small reserve of the artefact-bearing gravel terrace/layer was found to exist on its southern boundary.

Finds: T.M.
Final Report: E.C.C. SMR Archive Report.

13 West Ham, Plaistow, Cumberland School (TQ 4069 8188)
P. Moore, P.E.M.
Two trenches were excavated in advance of house building in a school yard revealing a possible medieval ploughsoil and post-medieval dump layers. A large cut was found in the northern trench which may date to the 18th century. A *c.* 10m length of water-borne silty fills was excavated down to a depth of 1.40 m though neither the bottom nor another side of the cut were seen. The earliest fill excavated contained post-medieval redware sherds and a residual sherd of Roman pottery. The cut is probably a clay-extraction pit for brick making at a time when the expansion of settlement east out of London was changing the use of traditionally agricultural land.

Finds: P.E.M.
Final Report: P.E.M. Archive Report

14 Witham, Collins Lane (TL 824 146)
R. Havis, E.C.C.
A single trench was excavated across a proposed development area where documentary evidence suggested the possible presence of a medieval market place. Evidence for activity in the area during the medieval period was present, though limited. In particular, remains of early 13th-century market surfaces were absent, as were any traces of mid 13th-century and later buildings (with the possible exception of a single gully). Medieval activity was represented by a single large, deep pit, interpreted as a quarry. A large pottery assemblage dates this to the 13th century with sherds of Hedingham fine wares and Mill Green jugs being found. It is anticipated that a watching brief will be maintained when development takes place.

Finds: B.T.H.C.

Excavations

15 Broomfield, Windmill Field (TL 705 105)
M. Atkinson, E.C.C.
A subrectangular cropmark enclosure was partially excavated in advance of residential development. Investigation was restricted to the two-thirds of the site which would be destroyed. The enclosure was defined by a shallow ditch, measuring 1 m wide x 0.7 m deep in places; the interior contained a large number of post-holes, gullies and pits. A circular concentration of post-holes formed the remains of a roundhouse with a doorway facing the entrance. A large gully to the north of the house and the post-hole fills themselves, produced Late Bronze Age pottery and burnt material. The latter suggests that the structure may have been destroyed by fire; there was no evidence for rebuilding. A single line of post-holes running east-west to the south of the house denoted a fenceline and hints at the subdivision of the interior of the enclosure — perhaps into animal pens. The lack of rubbish pits within the enclosure supports this theory. The provisional interpretation is that this is a small, Late Bronze Age farm settlement dating to *c.* 700 B.C. Earlier activity is indicated by the discovery, just outside the enclosure entrance, of a single Late Neolithic/Early Bronze Age pit containing Grooved Ware pottery, a flint knife blade and a number of waste flakes. The enclosure ditch was found to have been cut by a linear ditch, provisionally interpreted as a Late Iron Age or Romano-British field boundary.

Finds: E.C.C.; to go to Ch.E.M.
Final Report: Essex Archaeol. Hist. or Proc. Prehist. Soc.

16 Chelmsford, Kings Head Meadow (TL 7106 0641 & TL 7102 0660)
P. Allen and N. Lavender, E.C.C.
Area excavation and machine investigation in advance

of redevelopment were carried out in several parts of a large site which straddles the junction of the rivers Can and Chelmer. As a result of earlier trial work (Gilman ed. 1991, 152) two areas on the Baddow Road frontage were excavated, and the sequence recorded in the trial trench has been reinterpreted in the light of better evidence. The results of trial and salvage work in other parts of the site were largely negative.

On the Baddow Road frontage, Roman activity was limited to quarries cut into the alluvial gravels, some of which were filled with dumped fire-debris. A rammed gravel surface, with a lateral drain acting as a flood-break, formed a gravel hard along the south bank of the river Can, dated to *c.* 1200 (not to the 4th century as was initially thought). This reclaimed marginal land at the edge of the river flood-plain, and was most likely related to the initial laying-out of Baddow Road. A more extensive reclamation of the flood-plain followed, and a gravel track was laid out, leading down towards the river. After further levelling, a timber-framed building was constructed alongside Baddow Road, possibly in the form of a cross-winged hall-house. The building was destroyed by fire, and traces of a replacement were recorded. These buildings are dated to the late 13th to mid 14th century. Subsequently, only occasional ditches and pits of 15th- to 16th-century date were recorded, and John Walker's map of 1591 shows that the site occupied by the buildings had become an orchard.

A trial excavation on the frontage of 44-45 High Street showed that no Roman or medieval stratigraphy survived above the flood-plain silts. Trenching and watching brief work to the rear of this area confirmed that the Roman London-Colchester road did not cross the rivers Can and Chelmer and their flood-plain by the most direct route, but must instead have followed the line of the modern High Street and Springfield Road.

Previous Summaries: Gilman (ed.) 1991, 152.
Finds: E.C.C.; to go to Ch.E.M.
Final Report: East Anglian Archaeol.

17 Colchester, Colchester Castle (TL 9987 2532)
C. Crossan, C.A.T.
To permit the installation of a lift pit, a 2.5 m square shaft was excavated at a point midway along the east side of the Roman temple podium. The podium masonry was encountered at a depth of 3.15 m from the modern floor. Above that level, the podium had been robbed and replaced by a loose mortar fill containing clay tobacco pipes, the dating of which suggests that the robbing may be attributable to John Weeley's demolition works in the late 17th century.

Finds: C.A.T.; to go to C.M.
Final Report: Essex Archaeol. Hist.

18 Colchester, St Botolph's Priory Church
(TL 9999 2497)
C. Crossan, C.A.T.
A selective investigation within the scheduled area to the east of the standing remains of the nave has located the south transept and square east end of the priory church. The transept was found to incorporate an undercroft or asymmetrical crypt which extended into the area beneath the crossing, but terminated at some point short of the north transept. Excavation of deep post-medieval disturbance at the east end of the church yielded glimpses of an underlying late Roman building of unknown purpose.

The archaeological investigation was the first stage in an improvement scheme for the monument which will include landscaping and the marking out of major features in the eastern ground plan of the priory church.

Finds: C.A.T.; to go to C.M.
Final Report: to be decided.

19 Cressing, Cressing Temple (TL 799 187)
T. Robey, E.C.C.
Excavations in 1991 centred on the walled garden, the Court Hall, and the bullock shed near the toilet block. In the south-west corner of the garden, the remains of the earliest flower beds were removed, contemporary with the 16th-century brick pavement and garden walls, together with the thick layer of make-up originally deposited to create the garden. Below this was an eroded gravel surface, perhaps a yard, beneath which were a number of early Tudor and medieval features, including two roughly parallel ditches.

In the room at the north end of the Court Hall, excavations revealed a brick sluice and drain associated with the stone-built steeping pit in the corner. Just beneath the surface a well-preserved late medieval tiled hearth, 1.5 m in diameter, was discovered. Other features included a 14th-century deposit of tiles in a shallow cut, and an earlier shallow ditch running north to south across the room. Nearby, in the bullock shed, the remains of two brick retaining walls were uncovered, into one of which was built an arched brick culvert. These formed the south and west sides of a 17th-century moat which was partly filled-in during the next century or so. The shed, built in the 19th century, extended over the old moat, with its north wall founded on the backfill and its west wall built against the corresponding section of moat wall. The area inside the shed was levelled up at the time, but the dry ditch left to the north of the shed was only filled in quite recently.

Previous Summaries: Gilman (ed.) 1989, 161-2; 1990, 130-1; 1991, 153; Brown and Flook 1990.
Finds: E.C.C.
Final Report: Essex Archaeol. Hist.

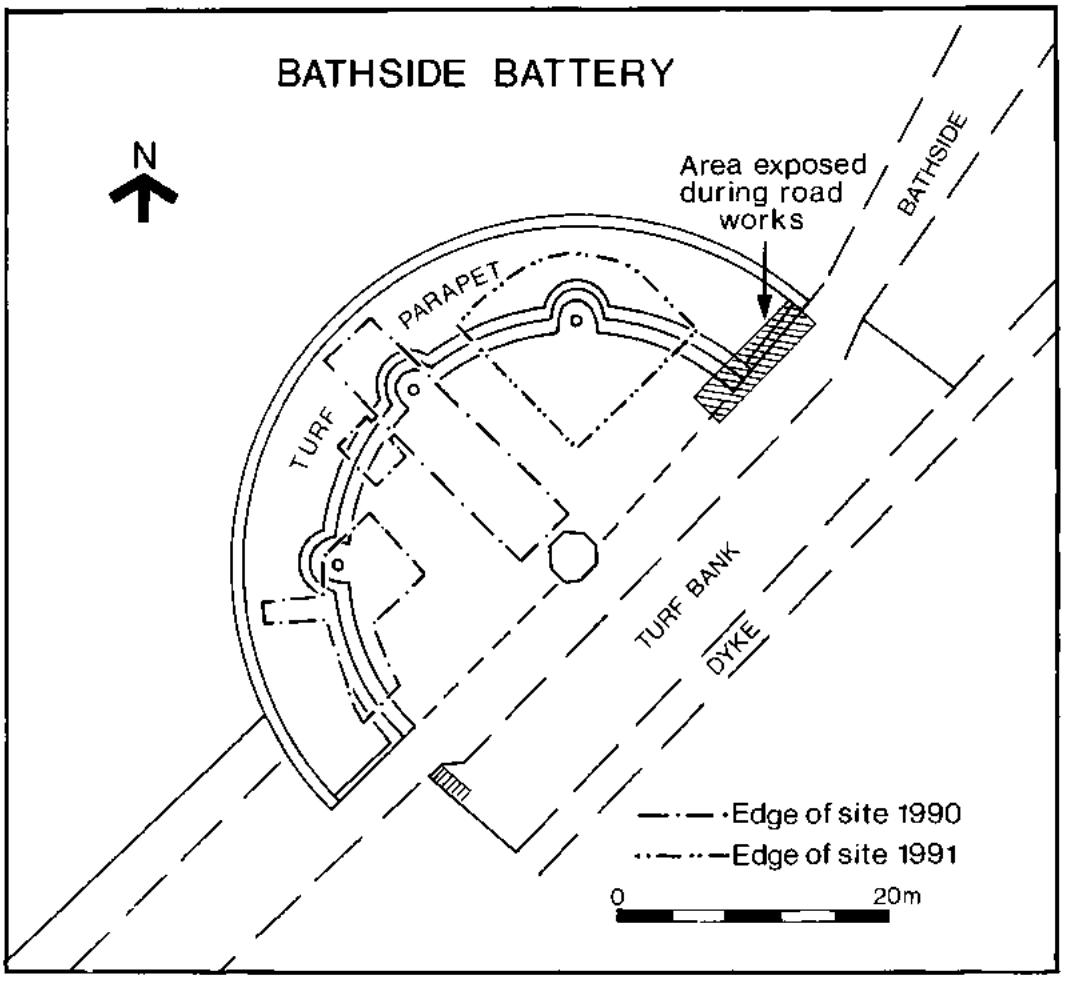

Fig. 3 Dovercourt. Plan of the Napoleonic gun battery.

20 Dagenham, East Brook End Park (TQ 4650 8560)
K. MacGowan, P.E.M.

A 3.5ha area of the northern part of this Park was investigated in advance of gravelling and redevelopment as a sports field. A number of test pits were cut through the top soil to determine the degree of disturbance by ploughing. This showed that any features would have been destroyed and there was no differentiation in the deposition of finds. The topsoil was then removed by box scraper and the area fieldwalked. Fieldwalking produced pottery of most periods from Roman to the 19th century. Trenches (each measuring 5 x 3 m) were then opened to examine features found during fieldwalking and to examine blank areas. This method revealed two large boundary ditches of a late date together with a number of ceramic field drains. Of greater importance was the discovery of a field boundary that ran north and west and was approximately 40 m long and 0.5 wide by 0.3 m deep. The fill of the ditch contained Middle Bronze and Middle Iron Age pottery. The whole of the natural revealed by box-scraping showed evidence for ploughing but it was not possible to date this activity.

Finds: P.E.M.

21 Dovercourt, Bathside Bay (TM 258 324)
S. Godbold, E.C.C.

In 1990 two of the three known gun platforms of the Napoleonic (1811) gun battery at Bathside Bay were excavated in advance of construction of the Dovercourt by-pass (Gilman ed. 1991, 153). Although these investigations were very thorough, they did leave an unanswered question as to why both platforms had been extended beyond the rampart walls during the course of construction. The pivots of the guns' traversing carriages and the brick-built racers for the carriage wheels had also been moved forward. These modifications must have caused considerable trouble. The answer to the riddle was provided, in 1991, by the uncovering of the third platform (Fig. 3). Unlike the others, the rampart walling survived on either side of this platform. There was evidence that the walling had been smashed through to create a gap into which the platform had been extended. The gap had been sealed by a semicircular embrasure which projected 1.8 m beyond the rampart wall. It would appear that a simple D-shaped rampart was originally planned, but during construction it was realised that, by advancing the gun position to the centre of the wall, a much wider angle

of fire could be provided for each gun. The battery was abandoned in 1817 and left to decay. Because of its short life the battery was never upgraded to accommodate new artillery. Therefore, it is thought to be the only battery solely of the Napoleonic period to have been excavated in Britain. The outline of the east and west platforms has been laid out in brick in the verge alongside the new by-pass.

Previous Summaries: Gilman (ed.) 1991, 153.
Finds: E.C.C.; to go to C.M.
Final Report: Essex Archaeol. Hist. or Post-medieval Archaeol.

22 East Tilbury, Coalhouse Fort (TQ 691 768)
J.P.J. Catton, T.M.
Re-excavation of the fortress dry ditch of 1874 continued with the removal of a further 1.5 m of clean river clay backfill. Evidence for the former existence of two caponier buildings within the ditch is provided by blocked-up doorways leading out from the ground floor magazines of the fort, and by substantial Kentish ragstone semi-circular supporting walls set in the outer slope of the ditch earthwork. Three test trenches revealed that a further metre of clean backfill remains to be removed before the caponier destruction level is reached. However, it has been clearly demonstrated that at least two buildings were completely removed. Debris of ragstone and granite blocks still litter the site. One trench revealed that the floor and foundations of the caponier had apparently been completely removed. Likewise the semicircular supporting wall of the external ditch had been robbed of all the large dressed rectangular Kentish ragstone blocks, probably for the rebuilding of the bell-tower of St Catharine's church during the First World War. One trench cut into the outer bank slope revealed material such as red coarse stock bricks, septaria, slate and tile which might be derived from the previous 1799 or 1855 East Tilbury batteries. Excavation will continue in 1992 to complete the restoration of the 1874 vista of the fort along its southern aspect.

Previous Summaries: Priddy (ed.) 1986, 160; 1988, 264; Gilman (ed.) 1990, 131.
Finds: T.M.

23 Great Chesterford, Park Cottages, Rose Lane (TL 5109 4275)
P.E. Dey, G.C.A.G.
A watching brief on an extension to Park Cottages in June 1990 (Brooks and Wallis 1991, 44) recorded the edge of a 0.1 m thick gravel surface running approximately north-west/south-east under the house extension at a depth of 0.65-0.8 m (due to incorrect reading of a scale, the dimensions previously given in the report on the 1990 watching brief were twice the actual size). In 1991, five trenches were excavated, which found that the gravel surface measured *c.* 4 m wide, north-south, with an observed length of slightly over 10 m. Auger testing indicated that it did not continue any further to the east.

Below the gravel layer and extending further to the south was a single layer of smaller gravel. Roman pottery and other materials were sandwiched between the two layers. A linear, foundation-like feature consisting of chalk and gravelly soil, 1 m wide and 0.4 m high, stood on top of the lower gravel area. Patches where the lower gravel layer had worn away (or been removed) suggest that it was later than the gravel layer. This chalk and gravel feature is interpreted as the foundation of a rectangular building, with a long axis aligned roughly north-west/south-east. The north-east and south-west walls were located in trenches, and the south-east wall was located by auger. Due to the restrictive nature of the site, the north-west wall could not be located. The building measured *c.* 4.2 x (at least) 8.2 m internally, and 6.3 x (at least) 10.3 m externally. There was no sign of surviving floor levels within the building, in the small area which was visible. No further work is anticipated on this site.

Previous Summaries: Brooks and Wallis 1991, 38-45.
Finds: E.C.C.; to go to S.W.M.
Final Report: Essex Archaeol. Hist.

24 Great Chesterford, Vintners (TL 5028 4273)
H. Brooks, E.C.C. and P.E. Dey, G.C.A.G.
Aerial survey and excavation, in 1978, identified Roman ditches, burials, a roadway, and other remains in the vicinity of Vintners (in the angle between the Newport and Ickleton Roads). Further excavations were prompted by an application for development of the field to the rear of Vintners.

A ditch shown on the aerial photograph appeared to run both west and north-north-west from a central point close to the rear boundary wall of Vintners. Two trenches were dug to locate the ditch but no features were found, apart from an undatable pit, and a few sherds of Roman pottery in the topsoil. A third trench uncovered a cambered gravel roadway about 5 m wide. This appeared to have been originally built in a hollow, and thin layers of dark soil interspersed with layers of gravel indicated that it had been raised in stages over time. On each side were gullies filled with dark grey soil. To the north-east and adjacent to this roadway lay what seemed to be three layers of medium to large stones extending the full 9 m of the trench and beyond. Unfortunately, the stratigraphy had been interrupted by the excavation of a modern feature, which broke the continuity of the stony layers. Other notable features included a post-hole in the southern section of the trench which penetrated the stony layers about 2 m east of the roadway, and a depression in the middle of the stony layers which may have been caused by an earlier gully below. Beyond the roadway, to the south-west, the trench was crossed by a striated

feature. Pottery from the stony layers ranged in date from Late Iron Age to the 4th century A.D. The presence of slag in the upper two stony layers suggested iron working in the area over a prolonged period. A bronze brooch, as yet undated, was found in the bottom stone layer to the east of the disturbed area. Finds: E.C.C.; to go to S.W.M.

Final Report: Essex Archaeol. Hist.

25 Harlow, Potter Street, Old House (TL 484 097)
R. Bartlett, H.M. and M. Medlycott, E.C.C.
A Romano-British farmstead, and evidence for earlier, Late Iron Age settlement, was revealed during topsoil stripping associated with the Church Langley (formerly known as Brenthall Park) development. Excavation revealed a number of features including a roundhouse, ditches, pits, and a kiln structure enclosed within a circular ditch. The features date mainly to the 2nd to 3rd centuries A.D. with some ditch fills producing Iron Age material. Finds included the skull of a toddler, a baby's feeding bottle, a dog-burial, and imported Gaulish and Rhenish pottery. Part of a Palaeolithic axe was found, as well as Neolithic and Bronze Age flints. Subsequent fieldwalking showed that the site was more extended further to the south of the excavated area. Prehistoric flints, Bronze Age pottery and one piece of Bronze Age metalwork were also recovered. Further excavation is anticipated in advance of development.

Finds: H.M.

26 Harlow, Perry Springs Wood (TL 473 095)
R. Bartlett, H.M., and M. Medlycott, E.C.C.
A Late Bronze Age/Early Iron Age settlement site was found during building works in connection with the Church Langley development. Limited trenching uncovered ditches, shallow pits and post-holes, sealed by a layer of occupation debris. A large amount of flint-tempered pottery, daub, worked flint artefacts and slag was recovered. Subsequent machine-trenching revealed occupation extending over 1700 m. Further excavation is anticipated prior to development.

Finds: H.M.
Final Report: Essex Archaeol. Hist. or East Anglian Archaeol.

27 Horndon-on-the-Hill, Mill Lane/High Road Corner (TQ 669 883)
S. Wallis, E.C.C.
Two trenches were excavated in advance of a housing development, and a watching brief was kept on the digging of house footings. Two substantial ditches found in one of the trenches had been backfilled in the 13th century. Continuations of both ditches were located in the other trenches. A shallower ditch, a post-hole, and a rubbish pit were also excavated and were roughly contemporary with the two large ditches. These, and possibly the other ditch, may be interpreted as boundaries of house plots fronting onto the High Road. It is significant that these boundaries apparently ran parallel to Mill Lane, rather than at right angles to the High Road. Finds included a large amount of shell-tempered wares of the 11th-12th centuries and perhaps earlier. Other medieval fabrics were Early Medieval ware, medieval coarse wares, sandy orange ware and 13th-century Hedingham fine ware. The most interesting piece of post-medieval ware was an almost complete chafing dish, dating to the 16th-17th century. It is anticipated that there will be further work on this site.

Finds: E.C.C.; to go to T.M.

28 Ilford, Goodmayes, Kinfauns Road
(TQ 4670 8738)
F.M. Meddens, P.E.M.
Rescue excavation on the site of Goodmayes Hospital found that deep ploughing had unfortunately left only relatively ephemeral features at the site. These consisted of evidence of a boundary ditch, remains of what probably were two small ring ditches, and the corner of an angular structure, with their associated post and stake holes. A small number of tiny eroded potsherds was associated with these features. Their date is uncertain at this stage, and no parallels currently exist in the Museum's prehistoric or early medieval type series. Features associated with 19th-century and later farming activities were also identified.

Finds: P.E.M.

29 Maldon, Maldon Friary (TL 850 069)
S. Bryant and R. Isserlin, E.C.C.
Excavation in 1991 concentrated on the presumed location of the cloisters following the discovery of an outbuilding of the medieval friary during trial trenching in 1990 (Gilman ed. 1991, 155-56). Work in 1991 involved the investigation of a wide area to the rear of the White Horse Lane frontage and on the frontage itself (Fig. 4). To the rear of the frontage, the northern and eastern parts of a cloisters were revealed. The ambulatory was, possibly, 2 m wide and the cloister area 27 m wide. A series of burials was found, set into the cloister floor. A large building, *c.* 9 m wide, and divided into two bays, was found in the frontage area, to the north of and abutting the cloister, and probably the same length. This building may be the church, although no burials were found within the excavated area. Alternatively, this building could be the refectory and dormitory, which are known from documentary evidence. In which case, a feature found in the corner of the cloisters could represent the base of a night stair leading to a dormitory over a refectory.

All the structures had been extensively robbed, either to foundation level, indicated by flint cobbles in

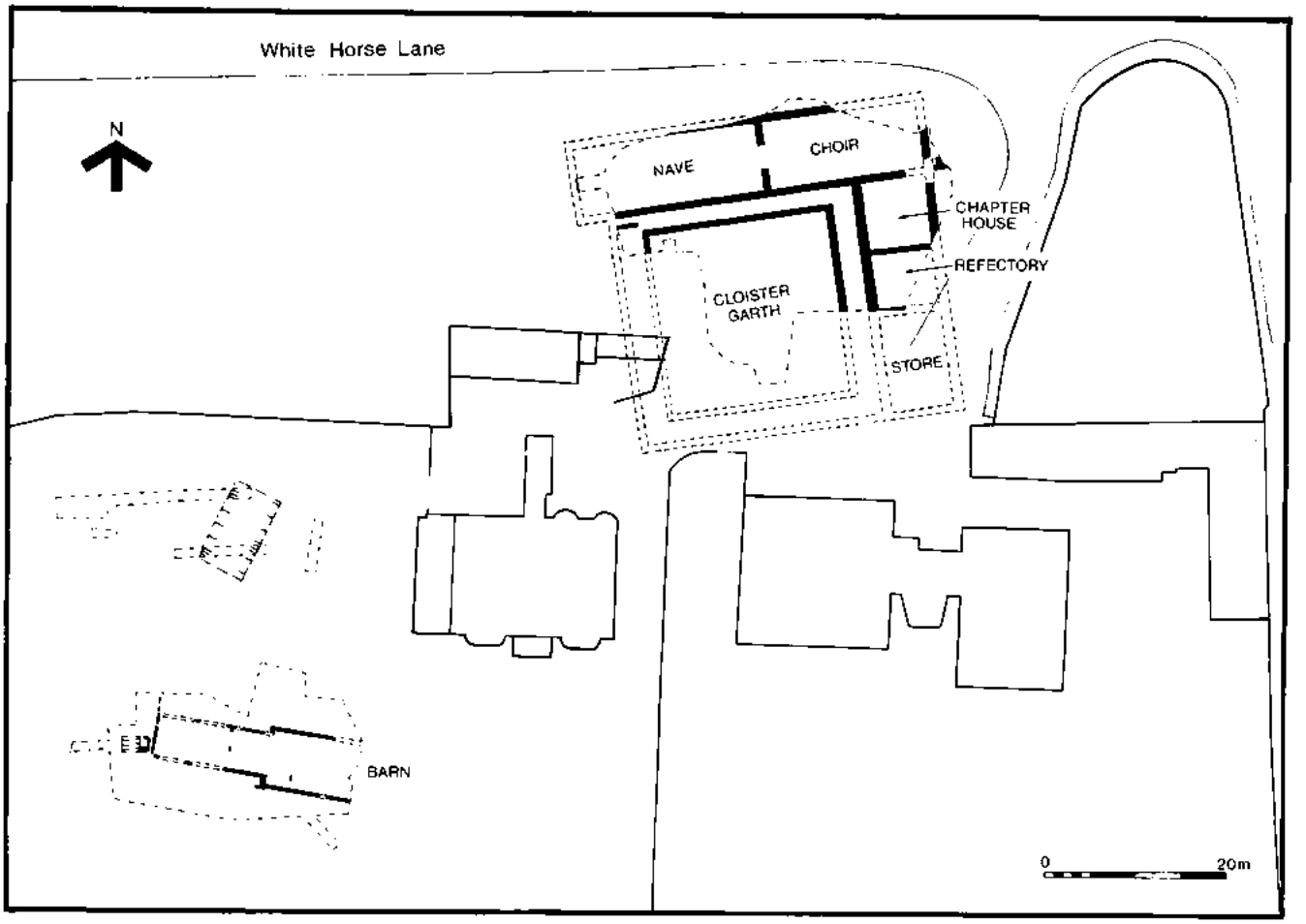

Fig. 4 Maldon. Provisional plan of the Friary.

yellow mortar, or to the level of the gravel raft which supported the foundation. The raft was set in a trench sunk below the water level. The buildings were aligned south-west/north-east, some 6 degrees off the alignment of White Horse Lane. By contrast, the outbuilding located during trial work may have been a barn or stable, and lay on a different south-east/north-west alignment.

Portions of a post-Dissolution structure were also found.

Previous Summaries: Gilman (ed.) 1990, 155-6.
Finds: C.M.
Final Report: East Anglian Archaeol.

30 Maldon, 39 High Street (TL 849 070)
R. Isserlin, E.C.C.

A trench was excavated by machine to the rear of 39 High Street, in advance of an extension of a frontage building. It was thought likely that the rear of a courtyard building could be in this area, probably part of the 'Moot Hall' or 'D'Arcy Tower' complex. Work might thus help to reconstruct the plan of an enigmatic building of which only the frontage portion remains above ground. It was initially suggested that a strip be cleared by machine to the top of the medieval stratigraphy and excavated by hand thereafter. However, the high survival level of the site (oyster shell dumps less than 0.3 m below ground surface) and the limited resources available led to the decision to dig to natural in a single trench and record in section. This revealed a complex sequence of stratification with a notional average depth of 1.2 m. ?Medieval yard and ?floor surfaces were observed, punctuated by a series of post-medieval pits. A portion of robbed brick wall may be *part* of the rear of the Moot Hall, or a boundary work. It was rebuilt at least once, and was preceded by a series of hearths/ovens. An unexpected discovery was that of a portion of a ditch aligned south-west/north-east, and not parallel to the High Street. This had been recut at least once and may have had a bank to its north. The ditch measured over 6 m wide at its broadest extent and the bottom of the feature lay 3.5 m below the present ground level. For safety reasons excavations went no deeper but the ditch may have been another 0.6 m deeper. A second trench was opened to confirm the line of the feature.

The date and function of the ditch are not clear, though it was sealed by layers containing late medieval pottery. Immediately to the east of this site, a trench dug behind the Post Office was observed some time ago may have encountered part of the same ditch (P. Brown pers. comm.).

Finds: C.M.
Final Report: Essex Archaeol. Hist.

31 Springfield Lyons (TL 736 082)
D.G. Buckley, E.C.C.
Trenches were excavated across the projected line of the Neolithic interrupted ditch enclosure discovered in 1990 (Gilman ed. 1991, 157). Two further pits were located, confirming the interpretation of these features. In addition, Roman, Saxon, and medieval field boundaries identified in previous seasons were also observed. Two Neolithic post-holes were also located just to the west of the Neolithic enclosure. The Neolithic pits were subsequently fully exposed. Although this showed that there was no regularity of size and shape, most of the pits were elongated along the line of the enclosure, and were between 7-10 m long.
Previous Summaries: Priddy (ed.) 1982, 142; 1983, 168; 1984-5, 134; 1986, 163; 1987, 108; 1988, 268; Gilman (ed.) 1989, 165; 1991, 157; Buckley and Hedges, 1987.

Finds: E.C.C.; to go to B.M.
Final Report: East Anglian Archaeol.

32 Stanway, Stanway Hall Farm (TL 9545 2255)
D. Shimmin and C. Crossan, C.A.T.
A series of five large ditched enclosures located immediately west of Gryme's Dyke and about ¾ of a mile from the Gosbecks site are being destroyed by mineral extraction over a five-year period. Previous seasons' excavations within Enclosure 1 and the northern part of 2 revealed a scatter of pits of middle and late Iron Age date. This included an inurned cremation burial and the remains of an iron and bronze-bound ?chest similar in some respects to that from the Lexden Tumulus.

In 1991, limited excavation in Enclosures 3 and 4 has recovered an increasing body of evidence pointing to their funerary function. Notable features include a large timber-lined mortuary chamber, containing scatters of cremated bone, broken pottery and other objects, in each of Enclosures 3 and 4.

A preliminary assessment of evidence provided by the large quantities of pottery recovered indicates a date of between A.D. 20-30 for the Enclosure 3 chamber and a post-conquest date, probably *c.* 60-75, for the burial in Enclosure 4.

Dominating the southern part of Enclosure 4 was a rectangular 'sub-enclosure' with a small amount with a small amount of cremated bone in association with much burnt material and pottery in its ditch fill. Partial investigation of its interior has currently uncovered one small area of charcoal and molten copper alloy. Other major features located in the course of this season's work include the main boundary ditches and entrances to both enclosures.

The two mortuary chambers are outstanding discoveries: although different in several important respects, the remains have much in common with the Lexden Tumulus and seem to indicate a new variation of Iron Age funerary rite and are thus a significant contribution to a poorly understood and little studied class of monument.

Previous Summaries: Priddy (ed.) 1988, 270; Gilman (ed.) 1989, 168; 1990, 135; 1991, 159.
Finds: C.A.T., to go to C.M.
Final Report: to be decided.

33 Stanway, Church Lane (TL 943 239)
C. Crossan, C.A.T.
Excavation in advance of gravel extraction confirmed the Iron Age origin of an 8 m wide ditched trackway previously noted as a cropmark feature. The course of the trackway was traced and examined at intervals over a length of 300 m west from the boundary ditch of a large enclosure to a point where it passes a smaller enclosure evident as a cropmark on land adjoining the threatened site. The north ditch of the enclosure was sectioned and a small quantity of Iron Age pottery recovered.

Finds Location: C.A.T., to go to C.M.
Final Report: E.A.H.

34 Upminster, (London Borough of Havering) Hunts Hill Farm (TQ 560 831)
P.A. Greenwood, P.E.M.
The second phase of work on this 16 ha site involved the excavation of a further 1.5 ha. This area is to the south of phase one, where relatively few cropmarks were known. Some Roman features continued into the second phase. The main features revealed late in 1991 were ditches, pits and post-holes, many of which are probably Late Bronze Age in date. This part of the site is 800 m north-west of the LBA-EIA field system and other features excavated in 1982 (Greenwood 1986).

Previous Summaries: Gilman (ed.) 1991, 159; Greenwood 1986.
Finds: P.E.M.
Final Report: P.E.M. Monograph

35 Waltham Holy Cross, Abbey Church (TL 3814 0065)
P.J. Huggins, W.A.H.S.
The church built by Harold (Church 3) and dedicated *c.* 1060 had an aisled nave and a continuous transept without a central tower.
A small trench was excavated to check the possibility that this church had a small eastern apse. The excavation located the foundation trench of a tiny apse, just large enough for the chair of the dean of the secular college. This apse is an addition to previous illustrations of the plan of this church.

Previous Summaries: Gilman ed. 1991, 159.
Finds: W.A.H.S.
Final Report: Archaeol. J.

36 Waltham Holy Cross, 1-5 Sun Street
(TL 3819 0055)
N. Brown, E.C.C.

A trench was excavated to the rear of 3 and 5 Sun Street, across the postulated line of an early enclosure (Huggins 1988, 198). Post-medieval deposits were removed to a depth of 1 m by machine, and a further 1.5 m of mainly medieval deposits were excavated by hand. Part of the butt end of a substantial U-profiled ditch, possibly of the 11th or 12th century, was revealed 2 m below the present ground surface. It seems likely that this ditch formed part of the supposed early enclosure. The natural clay at the base of the ditch preserved a number of spade impressions. The feature had been cut through a deep soil, subsequently buried, which contained Roman pottery and a bronze brooch. After about 0.6 m of silt had accumulated in the ditch it was levelled off with a layer of rubble and mortar which contained large fragments of Roman brick and tile.

Clay layers were then deposited across the site and cut through by a well and a large cesspit. Both these features were backfilled in the late 12th or early 13th century. A series of layers were then deposited across the site occasionally cut through by pits. This sequence culminated in the digging of a large pit which occupied most of the centre of the trench and was backfilled in the late 15th or early 16th century.

A substantial ceramic assemblage was recovered from this small trench. Other finds included a pair of bronze tweezers from a 13th-century context, a fragment of a stone mortar from the cesspit, and large pieces of worked stone, probably from the Abbey. The deposits produced large quantities of animal bone, as well as large fish vertebrae. It is likely that the processing of soil samples will yield quantities of smaller fish bones and carbonised grain.

Finds: E.C.C.; to go to E.F.D.M.
Final Report: Essex Archaeol. Hist.

37 Waltham Holy Cross, Upper Cob Field
(TQ 383 990)
P.J. Huggins, W.A.H.S.

Twenty-one narrow trenches were excavated where ten Roman coins and 105 sherds of Romano-British pottery had been found in the 1970s (Huggins, R.M. 1978, 186-7). No archaeological features were found in the trenches. The field was probably formed in the 18th century and has been ploughed and sub-soiled recently. Twenty-four Romano-British sherds were found, mostly of Late Roman date, similar to that found at Sewardstone Hamlet. The nature of the site, therefore, remains a mystery.

Finds: W.A.H.S. collection

38 Waltham Holy Cross, Highbridge Street, Almshouses (TQ 3777 0057)
P.J. Huggins, W.A.H.S.

A single trench was excavated north-south across the 17th-century almshouses because of planned demolition of the 1946 almshouses and redevelopment of the site. The 1626 almshouses were found to be the first building on the site. Underneath was a great depth of mud from annual flooding over many centuries. Pottery of the 13th-16th centuries in the mud must have been dumped when the site was dry preparatory to building. Ballast containing Abbey stone was laid with a layer of sealing clay above.

Finds: W.A.H.S. collection

39 West Ham, Stratford Market Place
(TQ 3890 8350)
D. Wilkinson, O.A.U.

Archaeological evaluation in advance of redevelopment on a site north of Abbey Road, and east of the Channelsea River, found a stone wall in the south-east corner of the area. It survived to a height of at least 1.2 m and was partly faced in green sandstone. This must form part of Stratford Langthorne Abbey, which is known to have occupied this area, but the exact identity of the building cannot yet be established. Related stratification apparently dates to the Dissolution or later. Further trenches *c.* 100 m to the north-west contained a mortar floor covered by tile rubble and, nearby two burials, oriented east-west.

In the northern half of the area, outside the Abbey precinct, a previously/possibly unknown Iron Age (?middle to late) and Roman site was discovered, of which the most prominent features were a horse burial in close proximity to a crouched human inhumation (see *The Times* 28/11/91), suggesting a possible ritual or religious element. Pits, post-holes and ditches have also been excavated. Evaluation was to continue to establish the extent of the archaeological remains.

Finds: O.A.U.; to go to P.E.M.

40 West Tilbury, Tilbury Fort (TQ 651 754)
P. Moore, P.E.M.

Excavations and a watching brief were conducted during underpinning and consolidation works on the inner face of the west curtain wall. The northern end of the wall had been destroyed by a bomb in World War II and the bank disturbed by consolidation and rebuilding works in the 1950s. The southern part of the wall and bank contained undisturbed deposits dating from the late 17th century to late 19th century, including chalk, shell, or gravel.

These layers represent the continual build-up of this defensive wall and bank. Only two cuts were seen in the bank, one was for the 19th-century construction of the wall's inner face, the second was an early 19th-century cutting-back of the bank edge to allow more

room for a hospital and associated outbuildings.

Of particular importance was a late 17th-century ash midden layer lying directly on the clay build-up layer which was deposited during the reconstruction of the fort during the period 1670-83 A.D. The main bulk of the layer measured *c.* 6m north-south x 3m east-west at the southern end of the excavation and was up to 0.5m deep. The layer consisted of ash mixed with quantities of charcoal, coal, slag loam, clay, chalk, bricks, tiles and a large quantity of well-preserved domestic rubbish including clay pipes, pottery, animal bones, glass, metal and small finds.

The midden was excavated as one layer even though matrix concentrations could be seen, as no edges could be distinguished. It looked as if the material had been turned, thus blurring any distinct activities. It is likely that this material was dumped in one operation from a domestic rubbish and hearth material midden which had accumulated during the fort's reconstruction and early occupation.

Test trenches were excavated in advance of safety works in East Bastion revealed 19th-century dumped layers relating to the construction of a blockhouse. Included within this material were several residual sherds of Roman pottery.

Previous Summaries: Gilman (ed.) 1989, 169; 1990, 138; 1991, 160.
Finds: P.E.M.
Final Report: Post-medieval Archaeol.

41 Woodford Green (London Borough of Redbridge), Harts Hospital (TQ 40 33)
F.M. Meddens, P.E.M.
Archaeological investigations were carried out at the Harts Hospital site at Woodford Green. Ground penetrating radar, magnetometer and resistivity surveys were carried out as well as excavation. Archival research identified three medieval tenements at the site and from the 16th century until the end of the 19th century the site was the country estate of well-to-do merchants mainly from the City of London. During the 18th century, part of the estate was owned by a succession of captains of the East India Company. Excavations on the south side of the site, near the postulated position of a medieval tenement known as Marshalls, recovered significant amounts of mid 17th-century pottery (including a number of pieces of metropolitan slipware). Metalwork and demolition debris were also found, in a backfilled drainage ditch.

Excavations near the main house yielded remains dating from the 13th through to the end of the 19th century. Wall footings and a pitched-tile hearth of 14th-century date, probably associated with the Hert household, were among the earliest remains. A cellar and the foundations of the north-facing gable of the house built by Sir Humphrey Handford in 1617 were identified. With this structure a series of brick-built drains and culverts showing evidence of many rebuilds were found.

More culverts and drainage ditches which were part of a property known as the Brewhouse were found. These produced large quantities of 17th- and 18th-century materials, including a gilded spur, belt buckles, mountings and pins. Features associated with both a walled kitchen garden and ornamental gardening activities were uncovered.

Finds: P.E.M.

42 Writtle, Agricultural College (TL 6758 0678)
J. Ecclestone and K. Reidy, E.C.C.
The moated site 'King John's Hunting Lodge' was excavated in advance of clearing of the moat for landscaping purposes by the College. Two phases of brick structures were investigated on the western edge of the moated enclosure. These related to buildings exposed by excavations from 1955-7 (Rahtz 1969). They were not discovered then because erosion of the edge of the moat had caused the building to subside down the present side of the moat. The brick structures comprised the western end of a building and an antechamber which had two phases of construction. They were dated to the late 14th/early 15th century by pottery found in construction cuts. This is consistent with Rahtz's dating of the third phase of building on the site.

Finds: Ch.E.M.
Final Report: Essex Archaeol. Hist.

Watching briefs

43 Barking, Abbey Road (TQ 4398 8384)
K. MacGowan, P.E.M.
A chalk wall footing relating to the medieval phase of Barking Abbey was recorded during a watching brief on the remaking of Abbey Road. The footing was *c.* 0.6 m and 8 m long and 0.3 m deep, aligned east-west. The wall footing was cut in several places by services such as drains, water supply and a gas main. There were no finds.

44 Barking, East Street (TQ 4427 8410)
K. MacGowan, P.E.M.
A watching brief was kept on seven trenches dug for gas pipe replacement along the length of East Street. The most archaeologically important trench was at the junction of East Street and the Broadway. This revealed chalk footings, possibly of Barking Abbey Hospital.

Finds: P.E.M.

45 Barking, St Margaret's Church (TQ 4415 8385)
K. MacGowan, P.E.M.
A watching brief was maintained on drain construction between the main drain and the new St Margaret's centre. The northern 10 m of the trench cut medieval

pits, whilst the southern part cut 19th-century cellars.

Finds: P.E.M.

46 Billericay, 40 Chapel Street (TQ 675 945)
S.P.G. Weller, B.A.H.S.
Ground clearance prior to the extension of the District Council car parking facilities was observed. No features were noted but the ground level was only lowered by *c.* 0.2 m. Finds included a few potsherds: Romano-British, medieval, and post-medieval. The finding of Romano-British pottery adds weight to other evidence for early occupation on the line of Chapel Street.

Finds: B.A.H.S.

47 Brentwood, Halfway House to Herongate Reservoir Pipeline (TL 6311 8933-TL 6328 9153)
H. Brooks, E.C.C.
See this volume, p. 92.

Finds: E.C.C.; to go to Ch.E.M.

48 Fobbing, Fobbing Marsh (TQ 724 836)
J.P.J. Catton, T.M.
A recently recut drainage ditch on the Fobbing Marsh revealed a possible Red Hill site. Roman imported and local ceramics were found, as well as briquetage. The limited access to clear stratigraphy in the ditch sides seemed to indicate the presence of much red earth and charcoal-rich zones, as well as pits and ?ditches.

Finds: T.M.

49 Great Horkesley, Near Slough Grove
(TL 9658 3123)
S. Wallis, E.C.C.
See this volume, p. 92.

Finds: C.M.

50 Maldon, Edwards Walk (TL 848 069)
S. Bryant, E.C.C.
A watch was kept on building work to the rear of 32 High Street and White Horse Lane. Few features were observed suggesting that this had been an open area, used for rubbish pits, gardens and drainage features. The (probable) medieval ground surface was at least 1 m down and the tendency has been for the surface to be levelled up. This indicates that preservation of remains to the rear of the High Street should be very good.

Finds: E.C.C.; to go to C.M.
Final Report: Essex Archaeol. Hist.

51 Manningtree, 47 High Street (TM 107 319)
S. Wallis, E.C.C.
A watching brief on a trial pit dug in advance of house construction revealed what appeared to be a linear ditch, aligned east-west, perhaps part of a property boundary next to Quay Street. The ditch contained a large amount of human bone, mostly long bones, but also pelvic bones, and parts of at least two skulls. Pieces of wood and fragments of peg tile were also found. The finds indicate the reburial or dumping of burials and coffins from another site. This may have been when the present house was built in the 17th century. It is anticipated that further archaeological work will be done on this site when the foundations are dug for the new house.

Finds: C.M.

52 North Shoebury, Middle Pastures (TQ 930 867)
K.L. Crowe, S.M.
A watching brief was maintained during the excavation of house foundations, sewer pipe laying etc. on one of the last 'islands' of brickearth in this part of North Shoebury. The geology consists of *c.* 0.8 m brickearth over a sandy ballast or, in some areas, a possibly silty clay which may be river fill/stream bed. In two areas the brickearth had been disturbed by features: very few finds were recovered, but on the basis of the few sherds of pottery the following summary can be made:

(i) One house foundation cut through part of an archaeological feature, recognised initially by a darker and loose stone-free fill. Possibly Saxon, but only one diagnostic sherd was recovered.

(ii) A less distinct feature, with no definite limits in the section, containing some very tiny fragments of probably prehistoric pottery.

This inconclusive evidence at least helps to indicate the extent of prehistoric and later settlement to the north of the 1981 excavated area in North Shoebury.

Finds: S.M.

53 Ongar Sewerage Scheme
(TQ 546 998-TL 551 031)
M. Medlycott and S. Wallis, E.C.C.
See this volume, pp. 131-7.

Finds: E.F.D.M.

54 Thorrington (TM 1033 1997 & TM 1053 1964)
S. Wallis, E.C.C.
See this volume, p. 92.

Find: E.C.C.; to go to C.M.

55 Woodford Green (London Borough of Redbridge), Broomhill Road (TQ 4670 8738)
F.M. Meddens, P.E.M.
Beam slot foundation trenches and a post-hole and pit of late medieval or early post-medieval date were observed during watching brief work. No buildings are shown at this location on late 18th- and early 19th-century maps, suggesting that the structures associated

with the beam slots were no longer in existence by then.

Finds: P.E.M.
Final Report: P.E.M. Archive Report

Fieldwalking

56 Foulness, Foulness Island (TQ 980 904)
R.W. Crump, A.W.R.E.
Evidence of a possible Red Hill which had been disturbed by construction of the sea wall, and subsequent excavation of the Delph Ditch. Fieldwalking along the seawall track (Shelford Creek) located an area of reddish soil on the path and in the sea wall. Fragments of Romano-British coarse pottery were found in the immediate area and, in the bank of the Delph Ditch, numerous oyster shells were seen in what appeared to be a basket formation. This discovery is adjacent to the Little Shelford site where evidence of Romano-British settlement had been found previously.
Previous Summaries: Gilman (ed.) 1990, 131; 1991, 153.
Finds: A.W.R.E.

57 **Great Wakering**, Oxenham Farm (TQ 960 880)
R.W. Crump, A.W.R.E.
A large deposit of red earth was discovered during fieldwalking and contained fragments of Roman pottery and probably the largest deposit of briquetage found in comparison with the other sites in the area. This particular site is further away from a tidal inlet than any others found on Havengore, New England and Foulness. However, extensive farming has taken place over the last hundred years and the layout of the area has changed significantly. Aerial photography may identify the location of a water inlet.

Previous Summaries: Gilman (ed.) 1990, 131; 1991, 153.
Finds: A.W.R.E.

Aerial reconnaissance

58 North-West Essex
C. Ingle (and A. Bennett), E.C.C.
See this volume, pp. 95-6.

59 North-East Essex
P. Adkins
A total of twelve hours flying was undertaken, producing a number of possible new sites, as well as additional information on known sites.

Building surveys

60 Canewdon, Gardners Farm (TQ 906 942)
R.W. Crump, A.W.R.E.
A structural survey was carried out of this building which lies to the south-east of Canewdon village, in a remote area abutting the farms of Scotts Hall and West Hall. The building is timber-framed and weatherboarded, and consists of a ground floor and first floor level. In general, the building is late 17th-century and then comprised two or possibly three cottages. There is strong evidence to suggest that this may have been a single hall house originally, in the form of many reused timbers, i.e. window sill with sockets for diamond mullions (used as a stud). Studs with sockets and grooves for wattle and daub, a ground-sill scarf *in situ* all suggests an earlier date *c.* 1500. The central chimney stack has a crease mark in it, suggesting that the roof apex was much lower at one time and the first floor was inserted. The current roof structure is quite acceptable for the second half of the 17th century. In 1818 Gardners became a charity and evidence of this can be seen in Canewdon church. The farm appears as Gardners on Chapman and André map. But as yet the origin of the name Gardners is not clear. It is possible that this at one time formed part of the Lambourne Hall estate. Currently all evidence is being collated and a final report will follow.

Final Report: Essex Archaeol. Hist.

61 Tilty, Tilty Abbey (TL 599 267)
D. Andrews, E.C.C.
See this volume, pp.152-7.

Metal-detecting finds

62 Elsenham (TL 54 25)
R. Havis and M. Medlycott, E.C.C.
A Roman grave group was discovered and recorded. The finds included: three samian pots; a Romano-British lead-glazed pottery cup; a glass bottle; an iron lamp; a set of glass and bone gaming-counters; an unusual pedestalled bronze cup; a wooden box with bronze studs, lockplate and key; three silver coins which give a *terminus post quem* of 145-48 A.D. for the burial; and a tiny bronze box or *pyxis c.* 4.6 cm high. The latter is an extremely rare find and is of great importance. It is made up of six bronze panels, with hexagonal top and base plates. The side panels and top are decorated with *millefiori* enamel of outstanding quality. The box may have been made in Gaul and could have been intended to contain a valuable substance such as perfume, but its exact function is unknown. Although the box was sold at auction, it was later refused an export licence, and was eventually acquired by the British Museum, along with the rest of the group.

Finds: B.M.
Final Report: Britannia

63 Woodham Walter, Oak Farm (TL 8080 0558)
N. Brown, E.C.C.

A trench was excavated to investigate the findspot of three pieces of Bronze Age gold torc, accompanied by further metal-detector survey. No further items of metalwork were recovered, nor was any archaeological feature encountered. The only finds were three pieces of fire-cracked flint, a small fragment of Roman pot, and a few pieces of worked flint, possibly Bronze Age in date.

Abbreviations

A.W.R.E.	A.W.R.E. (Foulness) Archaeological Society
B.A.H.S.	Billericay Archaeological and Historical Society
B.M.	British Museum
C.A.G.	Colchester Archaeological Group
C.A.T.	Colchester Archaeological Trust
C.M.	Colchester Museum (formerly Colchester and Essex Museum)
Ch.E.M.	Chelmsford and Essex Museum
E.C.C.	Essex County Council
E.F.D.M.	Epping Forest District Museum
G.C.A.G.	Great Chesterford Archaeological Group
H.M.	Harlow Museum
M.A.G.	Maldon Archaeological Group
O.A.	Oxford Archaeotechnics
O.A.U.	Oxford Archaeological Unit
P.E.M.	Passmore Edwards Museum
S.M.	Southend Museum
S.W.M.	Saffron Walden Museum
W.A.H.S.	Waltham Abbey Historical Society

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Essex Archaeological and History 23 (1992) 114-65

Shorter Notes

Shafthole implements from Paglesham and Rivenhall

Hazell Martingell and Simon Brice

The four shafthole implements described here are surface finds from farmland. No.1 is from Paglesham, the others from various localities in the Rivenhall area (Figs 1 and 2).

No.1 is a sandstone macehead of oval type A (Roe 1968). The shafthole is biconical, or hourglass-shaped, and slightly askew. Two-thirds of the artefact survives.

No.2 is a complete sandstone macehead with a centrally placed, biconical shafthole. There is a smoothed, flat area on one side which accounts for the slightly triangular appearance.

No.3 is half a basalt adze, smooth in finish, and with one of the two larger surfaces quite flat. The shafthole is cylindrical and also smooth.

No.4 is half a probable sandstone axe hammer. The four sides of this artefact are straighter and flatter than those of the other three implements. The corners are rounded. The shafthole is biconical and there is an area of brown discolouration, probably from brickearth.

Discussion

These objects belong to a large group of stone artefacts, generally called 'shafthole implements' (Roe 1979). There are five types of tool within this category: battle axes, axe hammers, maceheads, shafthole adzes and pebble maces/hammers. Remarkably few artefacts of these types have been identified in Essex; only about 55 are known from the Essex Sites and Monuments Record. Fifteen shafthole implements from Essex have been petrologically identified (Clough and Green 1972). Ten of these were not made of local stone and were therefore to some extent special. Of the others, where there is a comment on material, this is usually described as sandstone or quartzite.

Uses

One of the authors (S.B.), drawing on his experience as a farmer, suggests the following practical uses for these tools. Axe hammers would be very suitable implements for breaking up hard soils, whereas shafthole adzes are well designed for moving and clearing broken soil. Maceheads on the other hand are very suitably shaped for knocking in fence posts. These practical applications are put forward as a

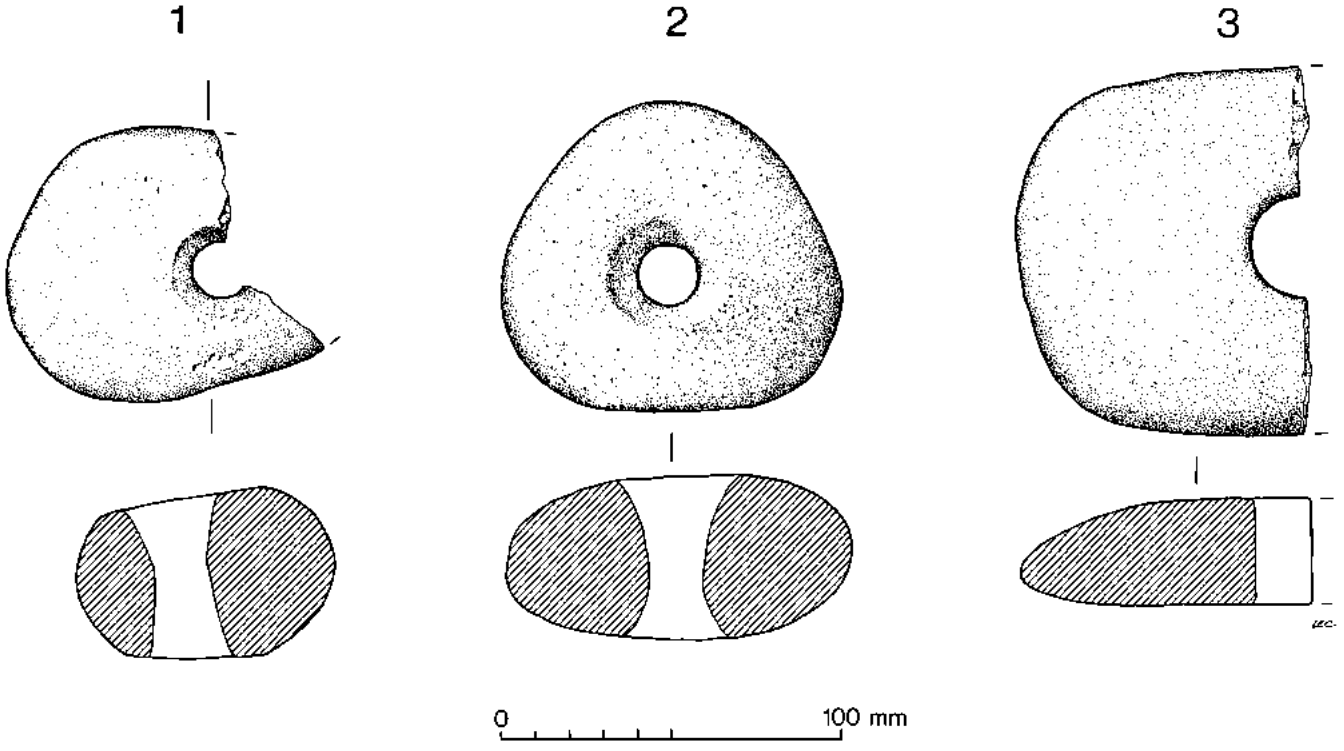

Fig. 1 Shafthole implements from Paglesham and Rivenhall.

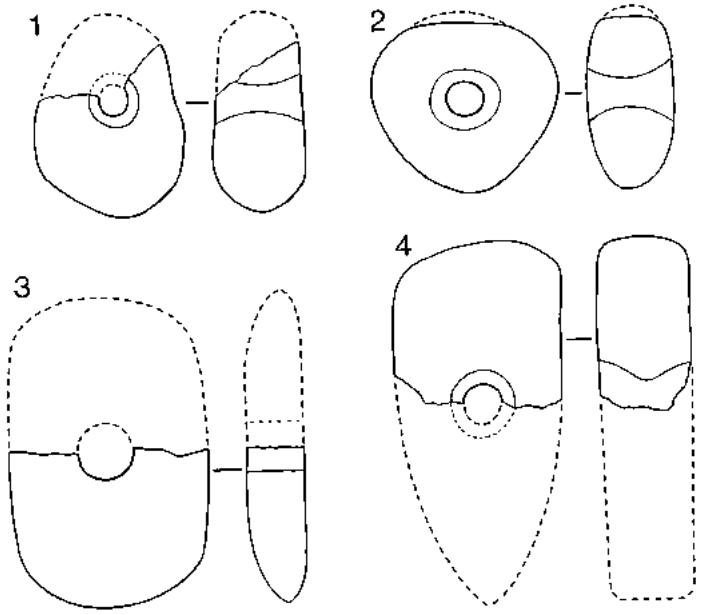

Fig. 2 Reconstruction of shafthole implements.

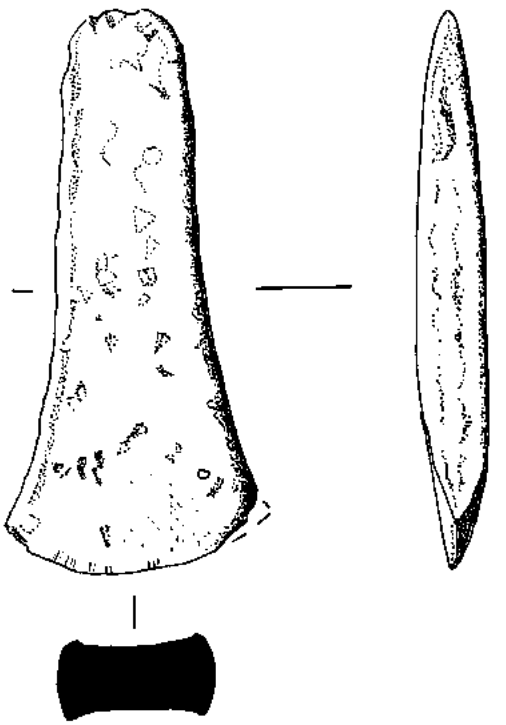

Fig. 3 Early Bronze Age axe from North Shoebury (1:1).

contrast to the ritual or religious interpretations of these artefacts.

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An Early Bronze Age axe from North Shoebury

K.L. Crowe

Southend Museum maintained a watching brief on road construction and drainage works to the north of North Shoebury church. No archaeological features were observed. However, an Early Bronze Age axehead was found on a spoilheap by a metal-detector user. This is a low flanged axe, 74 mm long, minimum width 10.5 mm, and width at the crescentic cutting edge 30.4 mm (Fig. 3). One corner of the blade edge has been lost in antiquity. The butt has also been damaged and may have been of arched form. The blade is slightly dished, rising to low flanges and on one side there are scratches on the blade edge bevel continuing on to the face of the blade. This is the first example of early Bronze Age metalwork from south-east Essex.

A tanged chisel/leatherworking knife from Sheering: and prehistoric finds from the valley of the Pincey Brook

N. Brown and R. Bartlett

A copper-alloy object found at Sheering, was taken to Harlow Museum for identification and passed to Essex County Council Archaeology Section for recording.

The object (Fig. 4) weighs 17g; its length is 65mm. One face and the sides have a fairly even dark green patina, which has flaked off in places revealing a paler green colour below. The patina of the other face is more extensively damaged. The tang tapers gently from the blade to a flattened point, both faces of the tang are slightly concave, the edges being raised into low ridges. The blade expands rapidly to a wide, damaged cutting edge. The better preserved face of the blade has a number of irregular scratches and a compact group of fine sloping striations at the junction with the tang, possibly a result of hafting.

The object is a small tanged chisel or leatherworking knife. Traditionally described as chisels, they are perhaps better regarded as leatherworking knives (Roth 1974; O'Connor 1980, 137). Tanged chisels are

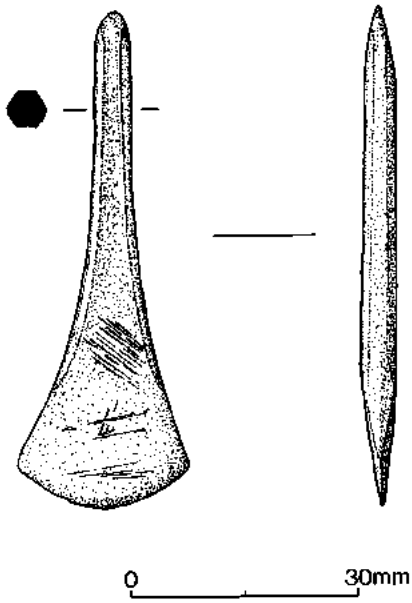

Fig. 4 A tanged chisel/leatherworking knife from Sheering.

common in Late Bronze Age hoards (Burgess *et al.* 1972, 217; O'Connor 1980, 137 and 175). The Sheering example has a tang clearly distinct from the blade, but lacks any kind of stop to prevent the blade being driven back into the haft. Late Bronze Age examples have some form of stop (Burgess *et al.* 1972, 217). A Middle Bronze Age date might therefore be suggested for the Sheering example.

This object is an addition to the growing body of prehistoric finds from the slopes overlooking the Pincey Brook (Fig. 5 and gazetteer). The brook appears to have provided an important route along which prehistoric settlement could penetrate the boulder clay plateau. Wherever small streams provided localised variations in the topography, and relatively easy access to the boulder clay areas, prehistoric, particularly Late Bronze Age, settlement appears to have developed, as at Broads Green (Brown 1988) and Rivenhall (Rodwell and Rodwell 1986). Survey work at Stansted (Brooks and Bedwin 1989) demonstrates that permanent settlements were not established in the centre of the boulder clay plateau until the Late Iron Age.

Amongst the sites in the lower valley of the Pincey Brook, of particular interest is the concentration of Late Bronze Age settlement evidence south of the village of Sheering (Robertson 1975, 13.10; Andrews

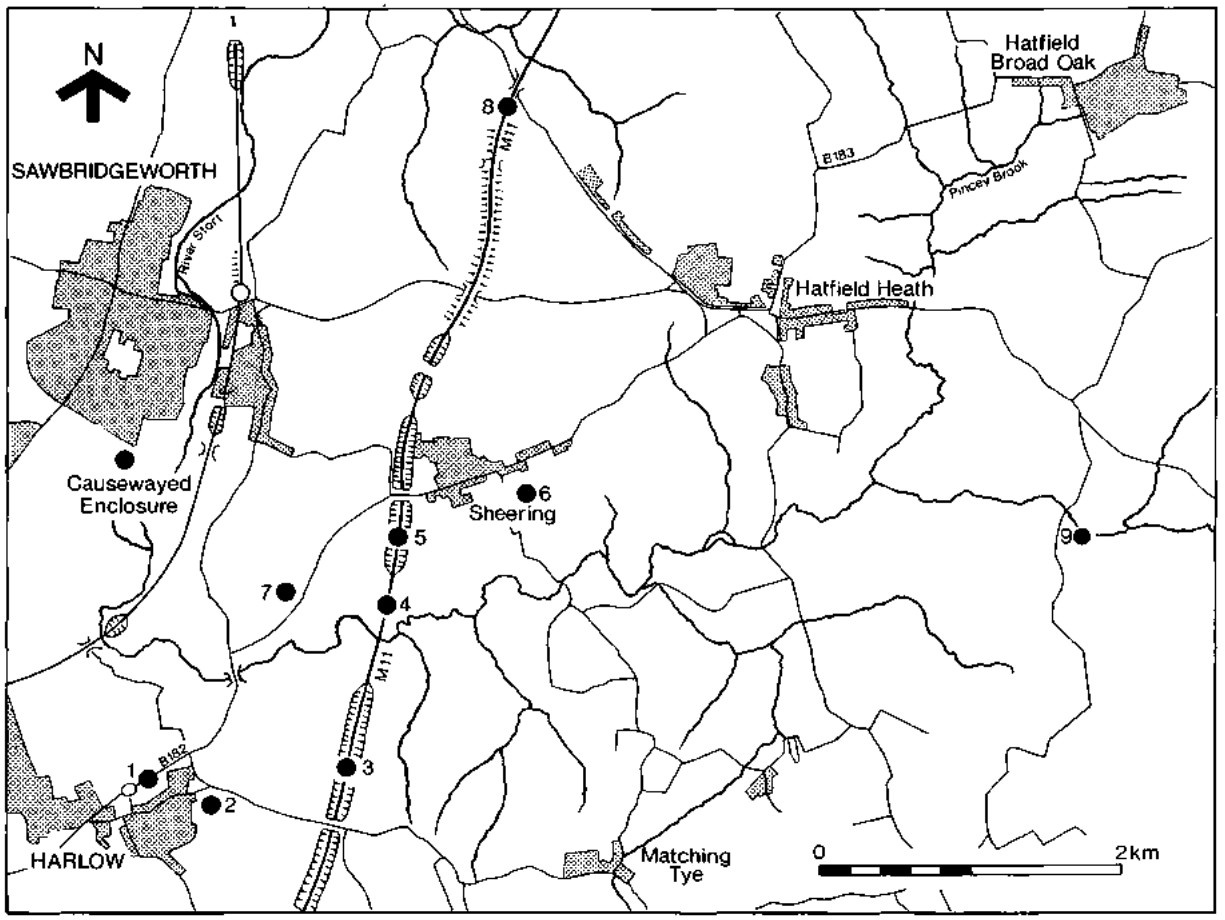

Fig. 5 Distribution of prehistoric finds from the valley of the Pincey Brook.

and Priddy 1990), and the Moor Hall gravel pit site (Robertson 1975, 3.08). Moor Hall produced extensive Late Bronze Age settlement, yielding a large ceramic assemblage, together with indications of Neolithic activity including sherds of Peterborough Ware. Publication of this important site is clearly crucial to an understanding of prehistoric settlement in the valley.

Gazetteer of prehistoric finds in the lower valley of the Pincey Brook

1. Tip of socketed axe, and part of sword blade ? part of dispersed hoard. Brown and Bartlett 1990. Essex SMR 9127.
2. Moor Hall Farm, gravel pit. Late Bronze age settlement, pits, ditches and cremations covering 0.8 Ha. Robertson 1975, 3.08. Essex SMR 3638.
3. Flint-gritted pottery and flint work including a neolithic asymmetric hollow based arrowhead. Robertson 1975, 3.09. Essex SMR 3622, 3623.
4. Two Mesolithic flint blades and a core. Robertson 1974, 7.10. Essex SMR 4511.
5. Canny Hills, Sheering, Late Bronze Age pits producing ceramics, spindle whorl and loomweight. Robertson 1975, 3.11. Essex SMR 4481.
6. Sheering Church, pits producing Late Bronze Age/Early Iron Age pottery. Andrews and Priddy 1990. Essex SMR 9128.
7. Tanged chisel/leatherworking knife, this article. Essex SMR 9129.
8. Little Hallingbury, Mid Field, Late Bronze Age rectilinear enclosure 60m x 40m marked by palisade trench, with cremations. Robertson 1975, 3.15. Essex SMR 9130.
9. Hatfield Broad Oak Hoard, large Late Bronze Age hoard found eroding from the side of a tributary of the Pincey Brook. Davies 1979. Essex SMR 4355.

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Later Bronze Age loomweights from Essex

P.M. Barford and H.J. Major

The purpose of this note is to publish examples of two well-known artefact types found in Essex, Late Bronze Age cylindrical and pyramidal loomweights. This follows the compilation of a similar list for triangular weights (Major 1982). The cylindrical and pyramidal weights are variable in size and fabric; they were often made of poorly fired local clays, and although weights of up to 3kg (estimated) have been noted, the average weight was probably around 1kg. Most finds, however, are fragmentary. The date range covered by these objects is difficult to determine, but in Essex the two types may have had a currency from the tenth to the sixth or fifth centuries B.C.

Most of the sites from which the loomweights have been recorded (Fig. 6) have been excavated recently, and the reports are still in preparation. More details about previous finds are emerging. Mr N. Brown has drawn our attention to an omission from his contribution on the Rook Hall loomweights (Adkins *et al.* 1985), where part of the text was missed out. It should have been pointed out that one loomweight (no.6) has stabbed impressions of the teeth of a five-toothed comb of wood or bone. The only artefacts known to us of this form are the Iron Age bone objects conventionally termed 'weaving combs' (e.g. Cunliffe 1974, 265, fig. 14:1, 1-4), but whose association with weaving is unproven. At Shearplace Hill, Dorset (Rahtz and Apsimon 1962) an example of one of these objects was found (on the same site as cylindrical loomweights) in a Middle Bronze Age context. While the Rook Hall comb impressions do not by any means prove the function of these objects, they are perhaps suggestive of some kind of association.

Discussion

There seems no reason to doubt the generally accepted interpretation of these objects as loomweights (although this problem will be discussed further in Barford forthcoming) and their use in textile production is accepted here.

The country-wide distribution will also be discussed in Barford (forthcoming), which will show that while both cylindrical and pyramidal weights are found

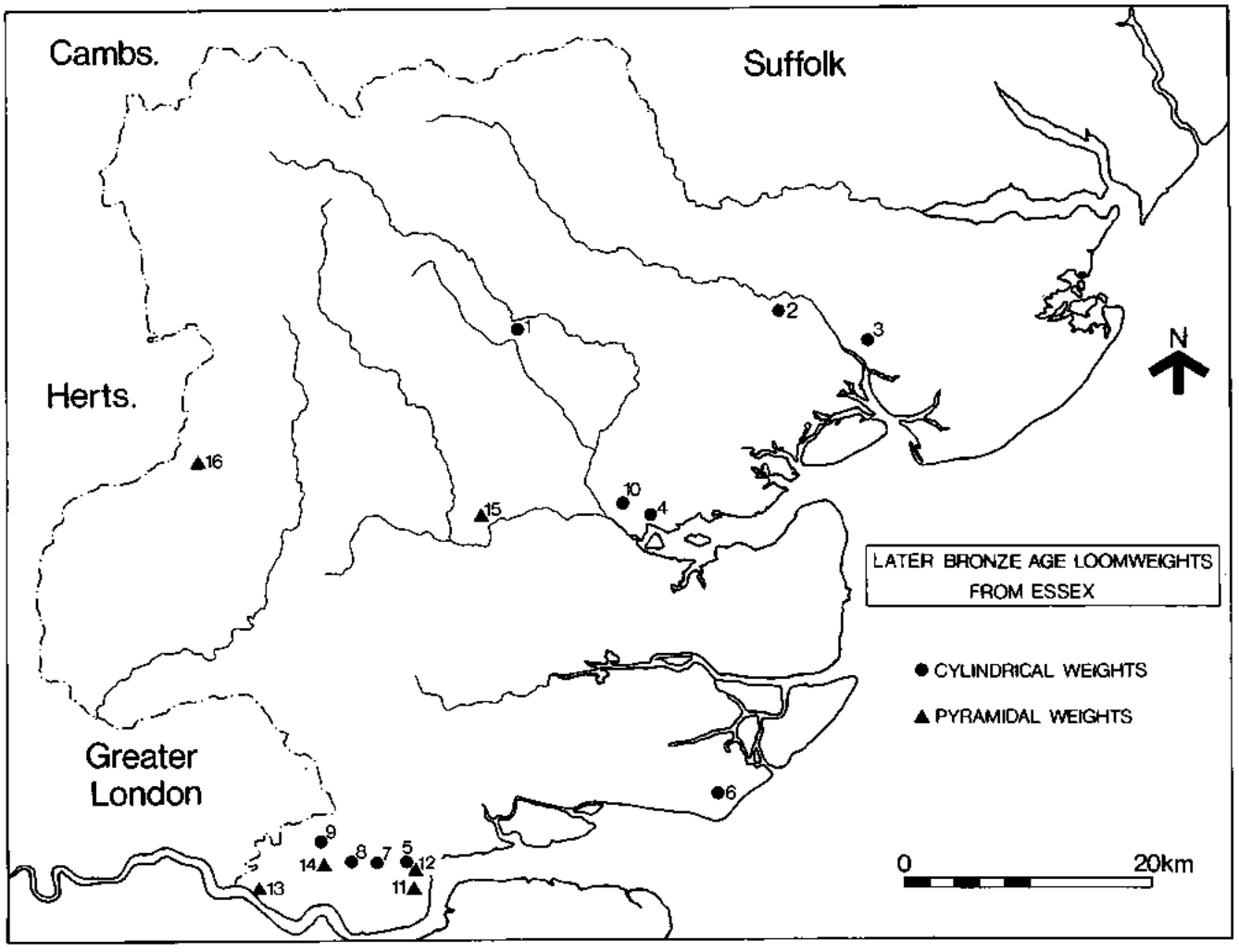

Fig. 6 Distribution of Later Bronze Age loomweights from Essex.

throughout the country, the former tend to occur mostly on chalk sites in central southern England, whereas pyramidal weights are more evenly distributed.

Within Essex, the distribution of these artefacts is uneven. Most of the finds of both types of weight come from Thurrock and the rest are predominantly from the south-eastern part of the county. The same pattern is seen in the distribution of triangular weights (Major 1982, fig. 7), and the reason for this needs consideration. If one accepts their use in textile production, then the distribution may highlight areas of Essex with predominantly pastoral economies in the Later Bronze Age. In fact, most of the loomweights come from sites on light soils, which are usually thought of as more suitable for arable farming than grazing. Many of these sites are, however, reasonably close to marshland, which may have been used for seasonal grazing.

Alternatively, it may be that the distribution does not reflect the true pattern of use in Essex. Most of the finds are recent ones, mainly from rescue excavations in advance of gravel, chalk or brickearth quarrying concentrated in certain areas of Essex, and further work in other parts of the county will help to define the overall pattern more clearly.

The Thurrock-biased distribution of pyramidal loomweights is particularly striking. Most of them were originally interpreted as 'square cylindrical weights', but all have been examined by PMB and there is little doubt of their true typology. Only the Linford and Mucking examples were securely stratified. At Mucking they were thought to post-date the cylindrical form (Jones, pers. comm.), but this has yet to be confirmed by the pottery dating. In the Middle Thames Valley the same sequence is proposed, and the changeover seems to take place in the 9th to 8th centuries B.C. (Bradley *et al.* 1980).

The cylindrical loomweights from Braintree, Rook Hall, North Shoebury and, probably, Mucking were associated with MBA pottery of Deverel-Rimbury type, but pottery associated with pyramidal loomweights from other features at Mucking and other sites

A Preliminary List of Later Bronze Age Cylindrical Weights from Essex

Abbreviations used:-
BM British Museum
COLEM Colchester and Essex Museum
SMR Essex County Council Sites and Monuments Record

Site/NGR	SMR no.	Details and date found	References
1. Braintree TL 769 238	TL 72/75	Fragments of 5 weights in pit with MBA pottery (1977)	Couchman (ed.) 1977, 71-4, fig. 9.5
2. Colchester Sheepen Bypass TL 987 259	TL 92/15	Fragments found in 1931 excavations, loosely associated with prehist. pot.	Wheeler and Ward-Perkins 1938, 38 (COLEM 1312.31)
3. Wivenhoe TM 049 228	TM 02/43	Complete example found in gravel pit in 1936	Wheeler and Ward-Perkins 1938, 38 (COLEM 1053.36)
4. Maldon, Rook Hall TL 878 088	TL 80/56 & TL 80/63	Parts of at least 2 weights, one with comb-stabbing, found in well with Deverel-Rimbury pot in 1984	Adkins *et al.* 1985, 94 & fig 15.5-6 (see below)
5. Mucking TQ 676 806	TQ 68/15	Fragments of many weights associated with LBA pot, excavated 1965-80	Barford forthcoming (B.M.)
6. North Shoebury TQ 932 863	TQ 98/24	Several pieces with MBA and LBA pot, excavated 1980-82	Barford in Wymer and Brown forthcoming. (Southend Museum)
7. Orsett 'Cock' TQ 653 806	TQ 68/3	Dubious fragments excavated 1968-70	Rodwell 1974, 32, fig. 9.1 (Thurrock Museum)
8. Orsett, Baker Street TQ 632 810	TQ 68/80	1 complete, 1 fragment. LBA pot from site, excavated 1979	Major 1988, 94 & fig. 81
9. South Ockendon TQ 610 827?	TQ 68/28	Group of 13, complete or near complete, found together in 1966	Doyle 1967, 18-19 (Thurrock Museum)
10. Great Totham, Howell's Farm TL 855 095	TL 80/91	Complete, excavated by S. Wallis, 1990. No associated pottery	Report in prep. (E.C.C.)

A Preliminary List of Later Bronze Age Pyramidal Weights from Essex

11. Linford TQ 670 795	TQ 67/76	Two fragments (1955)	Barton 1962, 81, fig. 2.14 & 83 fig. 3.12 (Thurrock Museum)
12. Mucking TQ 676 806	TQ 68/15	Parts of many weights associated with LBA pot 1965-80	Barford forthcoming (British Museum)
13. Purfleet Botany TQ 556 788	TQ 57/2	Fragment with prehistoric sherds (1956)	*Panorama* **2**, 12-14, fig. 3. (Thurrock Museum)
14. Stifford, Primrose Island TQ 619 808	TQ 68/38	Fragments found with prehistoric and later sherds (1960-62)	*Panorama* **8**, 38-40 (Thurrock Museum)
15. Springfield Lyons TL 736 082	TL 70/164	Fragments found with LBA pot on settlement site (1981-7)	Major, in prep. (E.C.C.)
16. Sheering, Canny Hills TL 501 134	TL 51/112	Found in 'working hollow' with LBA/EIA pot and shale spindle whorl during work on M11	Huggins (ed.) 1974, 10

in the area is definitely 'post-Deverel-Rimbury' in style. The pyramidal type is thus probably later in date.

In some areas of Britain, pyramidal loomweights continued in use during the Iron Age, but in the south-east they were replaced by the triangular type. The date at which this took place is uncertain, but some of the earliest triangular loomweight fragments are from Iron Age contexts at Orsett causewayed enclosure which may be 5th century B.C. (Hedges and Buckley 1978, 292), and a more complete example from Burnham was associated with LBA/EIA pot (Couchman 1977, 75).

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A pre-Boudican bath-building at Colchester

E.W. Black

In 1848 William Wire recorded 'three hypocaust arched fireplaces' at a depth of seven feet (2.13 metres) from the surface on the east side of Long Wyre Street in Colchester (Journal 23.8.1848). He noted that these were composed of 8 inch (20 cm) square tiles, and his sketch plan marks them in a line between the junctions of Long Wyre Street with Culver Street and with Albion Court. The spacing of the three 'fireplaces' is regular and approximately the same intervals separate the most northerly and most southerly from the nearby street junctions. This smacks of conventional representation rather than of careful measurement. In the writer's opinion it is most likely that what Wire saw was the sub-floor division between two rooms heated by hypocausts pierced by three connecting flues. It is less likely that the 'arched fireplaces' were three stoke-holes since such a provision would be expected only in a very large bath-building, and the one such occurrence in Britain actually known to the writer is in the second-century public baths at Leicester (Kenyon 1948, plate XXVII). If the 'fireplaces' were connecting flues between two hypocausts they are unlikely to have been as far apart as shown on Wire's plan. It is possible that they lay close to a room with a stack of *pila* tiles against one wall found under the east gutter of Wyre Street in 1929 (Hull 1958, 214; P. Crummy in Dunnett 1971, 108-9 fig. 42 no.13), and this may well have been part of the same building. If so, this must have lain on the east side of Long Wyre Street opposite the site excavated on the west side of the street in 1979 by the Colchester Archaeological Trust. It is marked by the letter Z on Fig. 1 of the report by Benfield and Garrod in this volume (p. 25).

Close to the 'fireplaces' Wire states that two complete box flue-tiles were found, and three other tiles which from his description can be identified as 'half-box tiles', all of them standing on end (quoted in Hull 1958, 204). A drawing in the Colchester and Essex Museum (reproduced here as Fig. 7) shows one of the flue-tiles and two of the half-box tiles referred to by Wire and the tiles themselves are in the Museum collection and have been examined by the writer through the kind offices of Mark Davies.

(a) Box Flue-Tile. Complete except for an area missing from the end of one face. The faces are scored with a point or blade to form a lattice pattern as keying for plaster. The height is 342/3 mm and the width 138/140 mm. The sides are unkeyed and are 81-85 mm deep. At 146/7 mm from the ends of the tile and 25-31 mm from the junctions of each side with the faces there is a rectangular cutaway measuring 31 by 50 mm. The thickness of the tile walls is 8-13 mm. They are thinnest at the ends.

(b) Half-Box Tile. One corner with the whole of one flange was missing when the tile was seen. The face is 290 by 423 mm and is scored with a point or blade producing a grid of lines parallel to the ends and sides of the face with additional lines joining the opposing corners of the grid. The face is 35 mm thick. The three surviving flanges are between 135 and 138 mm in length.There is a cutaway of 148 mm between the flanges on the complete side and on the broken side the cutaway was at least 150 mm long. The exterior depth of the flanges is 94 mm and they are 28 mm thick.

(c) Half-Box Tile. The specimen is complete. The

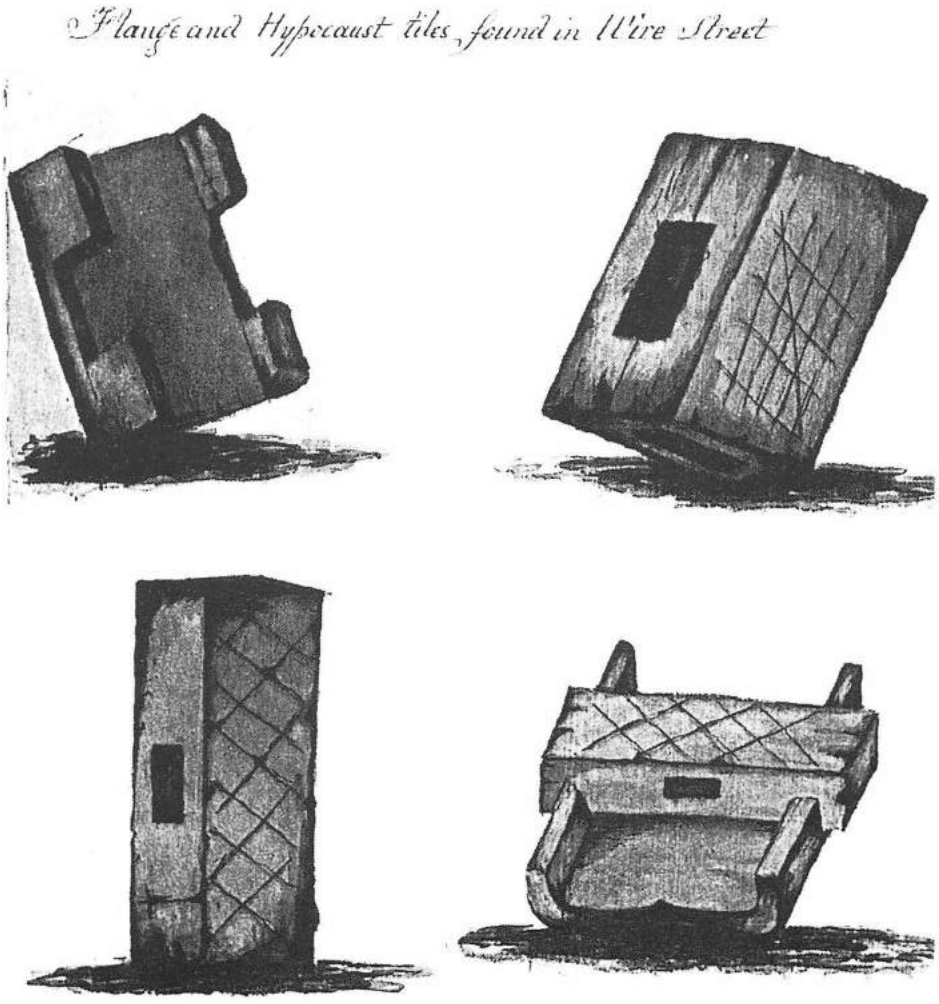

Fig. 7 Wire's drawing of tiles found in Long Wyre Street in 1848.

face is 302/309 by 430/435 mm and the keying is similar to that of (b) except that one of the diagonal lines is cut not from the opposing corners of the complete grid but from opposing corners of the central block of squares in it. The face is 24-32 mm thick. The flanges are 134 and 137 mm long on one side and 141and 144 mm long on the other side. The cutaways are 156 and 147mm long. The flanges are 25/27 and 33/35 mm thick on one side and 27 and 28/30 mm thick on the other. The exterior depth of the flanges is 86-92 mm.

The corresponding depths of the box flue-tile and the half-box tiles show that they were intended for use together, though not as Wire portrayed them in Fig. 7. Box flue-tiles like (a) can be termed 'thin-walled box tiles' and were probably used to form vertical flues connected to the chimneys and delaying the evacuation of heated air in a jacketing of half-box tiles or of keyed flat tiles with iron hold-fasts and ceramic spacers.

Half-box tiles are represented at the legionary baths at Exeter dated *c.* 60/65 (Bidwell 1979, 24 and 149) and at Caerleon *c.* 70/75 (Zienkiewicz 1986, 74 and 327-29, fig. 108 No.1), and in the bath-house dated *c.* 80 at Red House near Corbridge (Daniels 1959, 170: type 6a). They are essentially a variant of the *tegulae mammatae* or 'nippled tiles' used in the hypocausts of baths at Pompeii and elsewhere in Italy before *c.* A.D. 50 and known in Britain from Usk and a few other sites (Manning and Webster 1978). The earliest use of keyed flat tiles and ceramic spacers known to the writer was in the period 1C 'proto-palace' at Fishbourne which should perhaps be dated *c.* 75/80 rather than earlier (Black 1987, 84-6). The advantage these had over the half-box tiles and *tegulae mammatae* was perhaps the decreased risk of breakage in transport since the ceramic spacer was now a separate element and not an attachment manufactured as part of the tile. Keyed flat tiles and ceramic spacers were in turn quickly superseded by complete jacketings of box flue-tiles stacked vertically, and had probably become obsolete before the mid second century. On present evidence the tiles from Long Wyre Street should be dated to the first century A.D. and very

probably before *c.* 80.

The discovery of the two types of tile together at Long Wyre Street is significant since they were designed for use together in a hypocaust system. The complete and virtually complete state of the tiles is also significant since it shows that they had not been broken or modified for re-use. If they were re-used it can only have been together as part of a wall-jacketing in a hypocaust. It seems inescapable to the writer that the tiles came from a context in or very close to the building in which they were originally used. The hypocaust flue arches recorded by Wire are likely to have been part of this building. If so, the tiles provide it with a *terminus ante quem* of *c.* 80. Hypocausts in domestic rooms in the first century were extremely rare and were installed in small rooms lying adjacent to other rooms which were thus heated indirectly (Black 1985, 77-80). If the hypocaust arches seen by Wire were flues connecting two heated rooms as suggested above, it is probable that they formed part of a bath-building or bath-suite.

The renewal of wall-jacketings in hypocausts in baths was probably a relatively frequent occurrence. The discovery of the five complete tiles in Long Wyre Street raises the possibility that baths in which they were fitted became disused, and were perhaps demolished, before the need to install a new jacketing of tiles arose. According to Wire all the tiles were found standing on their ends and were at a level a foot (0.31 m) above the flue-arches. Such a description would suit circumstances where the tiles had been deposited as part of a dump of material over the site of a demolished bath-building in preparing it for some new construction.

The hypocaust flues were found near the west side of insula 38A. Excavations at the intersection of the streets between insulae 29, 30, 37 and 38A in 1979 showed that the southern rampart and ditch of the fortress annexe (Period 1) were succeeded in Period 2 by a large timber drain running north-south with a water-main running parallel to it and *c.* 8.5 m to the east. Period 2 was pre-Boudican in date and the north-south street dividing insula 37 from insula 38A was not constructed until after A.D. 60/61. The drain and water-main are features that might have been associated with an early bath-building which had its unheated rooms towards the west and extended across or close to the line later taken by the north-south street. In the neighbouring insula to the north, insula 30, there was a layer of burnt daub up to three feet (0.91m) thick which is thought to represent the spread remains of buildings destroyed in the Boudican Revolt (Dunnett 1971, 98). This would also be a suitable context for the deposition of the tiles as described by Wire and the demolition of the baths inferred above from this. The inference that the baths were pre-Boudican in date is thus a combination of circumstantial evidence: the first-century date of the tiles; the pre-Boudican date of the drain and water-main on the site excavated by the Colchester Archaeological Trust; the possibility that the baths were demolished at an early period; and the known destruction and demolition in this part of the colony at the time of the Boudican Revolt. It remains to consider briefly what role this early bath-building might have had.

The annexe defences of Period 1 on the 1979 site were of course associated with the legionary fortress which was evacuated in A.D. 49. It does not, however, follow that the annexe defences were maintained

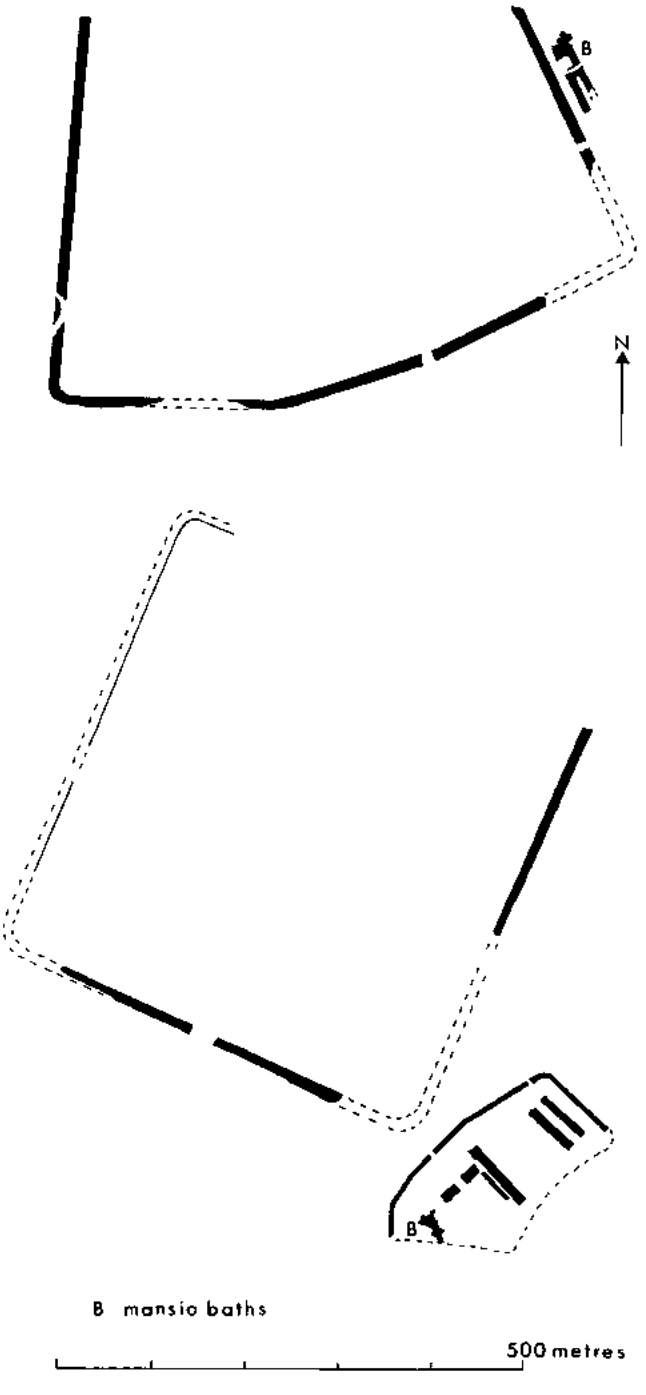

Fig. 8 The location of *mansiones* at the legionary fortresses of Vindonissa (above) and Inchtuthil (below).

throughout the period when the legionary fortress was occupied. Period 2 on the 1979 site may have begun while the legion was still in garrison. A defended compound enclosing a bath-building and other buildings lay outside the legionary fortress at Inchtuthil (Fig. 8), and this complex can be identified as a *mansio* or accommodation for officials and soldiers to use while travelling about the province on government business (Black in preparation). The defences of this were levelled and an additional block of accommodation was built over the line of the rampart even before construction work on the neighbouring fortress was completed (Pitts and St. Joseph 1985, 218). A similar complex, lacking defences but including accommodation and baths, lay outside the fortress at Vindonissa in Switzerland and has been interpreted in this way (Fig. 8). It can be suggested that the early bath-building discovered in Long Wyre Street also belonged to a *mansio*. The location of a defended annexe succeeded by a *mansio* on the east side of the fortress at Colchester makes sense since the development of London as a trading centre and port did not begin until *c.* A.D. 50 (Merrifield 1983, 32-40), and before this traffic to Colchester probably came mainly by sea to a port on the Colne estuary at Fingringhoe *c.* 7.75 km to the south-east (Hull 1963, 131-2). If the pre-Boudican date of the bath-building proposed above is correct, it may have belonged to a *mansio*, built first in the military period and retained in the early colony. The location of its post-Boudican successor is unknown.

Acknowledgements
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A Roman-period lamp from Thaxted, and its context

by Colin Wallace, Howard Brooks and Hilary Major

Introduction

The pottery lamp described below, while seeming to be genuinely ancient, is not likely to have been an ancient loss. This contrast, together with the occurrence of two other Romano-Egyptian lamps in Essex, does make it worth a note, however.

The lamp was found by Mr David Bartram, on the southern edge of the town, in an area of arable land north of the windmill (NGR 6099 3087: Marked as 'X' on Fig. 9). The owner of the land, Mr Simon Latham, reports the discovery of Roman coins, a Roman copper alloy brooch, various late medieval/early post-medieval coins and other finds from the same field. Among these, the Roman copper alloy brooch and a medieval spindle whorl are described in this report by Hilary Major. The lamp (Fig. 10) and the other finds remain in private possession at the time of writing.

A short programme of fieldwalking by Howard Brooks, intended to test the existence of other Roman material in the immediate area, is described at the end of this report.

Description of lamp, and other finds from Thaxted (Fig. 10).

This is a picture-lamp, with a circular body and a short, rounded nozzle (cf. Loeschke type VIII). Part of the nozzle is broken off and the whole lamp is blackened and smelling of oil (the fabric may originally have been pale buff). On the discus, very worn, is a bust of Zeus-Serapis, surrounded by a wreath, with an eagle in front and symbols of the sun and moon (left and right respectively).

The Thaxted find can be matched with a fourth-century Romano-Egyptian lamp in the British

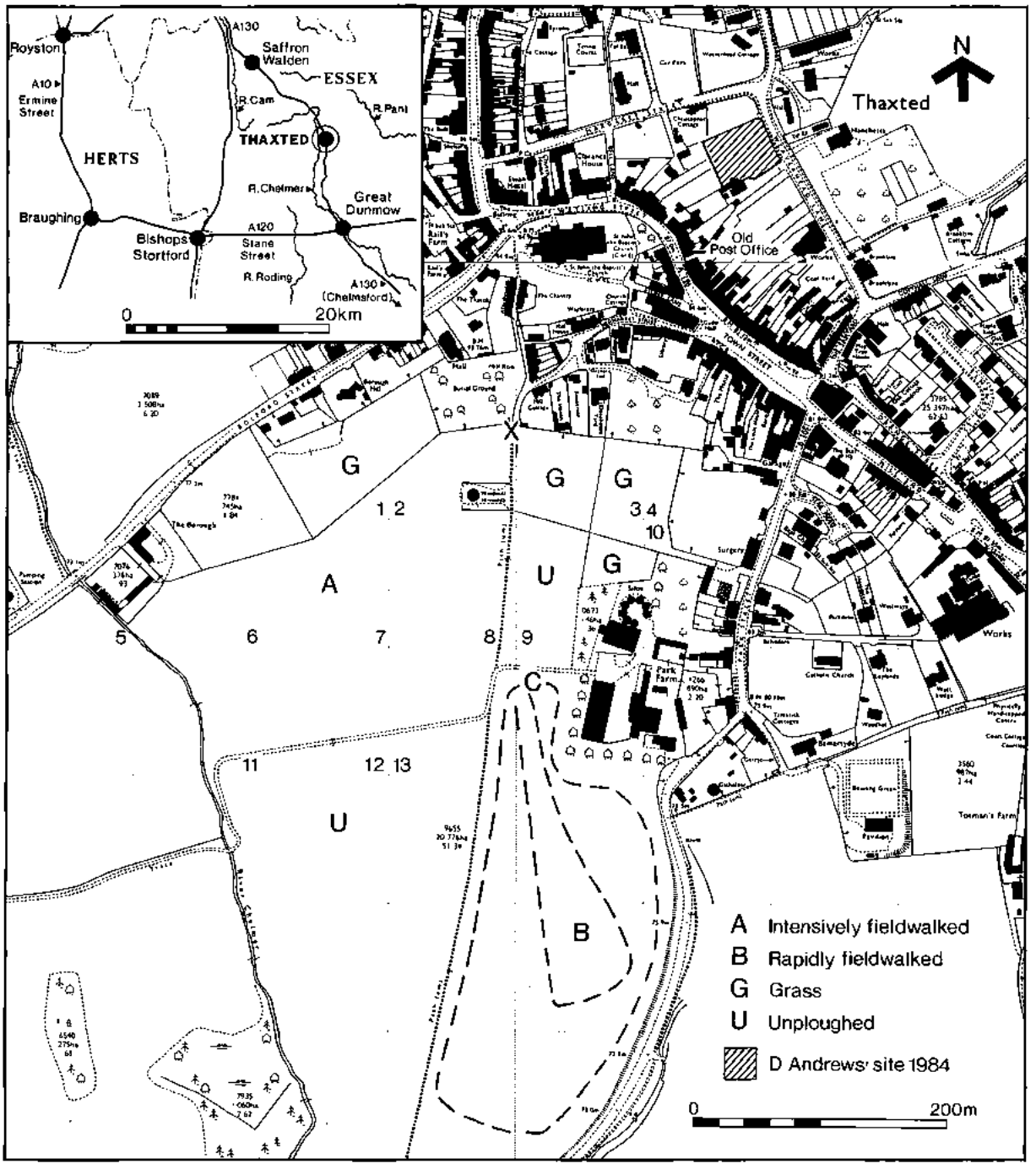

Fig. 9 Location plan for the Roman-period lamp from Thaxted. The lamp's findspot is shown as 'X'. Fieldwalking hectares are numbered.

Museum (Bailey 1988, 251: Q2064/fig 28 and plate 44), except that the handle of the Thaxted example is pierced rather than solid.

While the medieval market town does lie on the line of the Roman road running south from Radwinter to Great Dunmow, part of Margary's Road 300 from Great Chesterford to Chelmsford, the only known Roman site is some two kilometres to the **north** at a possible road-junction (Hull 1963, 187). The problematic site at Claypits Farm (to the south-east of the town) is at least as likely to have been a medieval tile kiln as to have been of Roman date.

From the town itself, the only reported Roman finds have been a *coin* of Carausius (A.D. 290-293) found in the wall of the Post Office on Watling Street (Benton 1951), an amphora *bodysherd*, residual in a modern context; from the 1984 excavations on Weaverhead Lane (Andrews 1989, 113) and a piece of Roman *metalwork* (a nude bust of a youthful Bacchus, perhaps from one of the legs of a tripod: Hutchinson 1986, 235-36 and plate VII.a) acquired by the British Museum in 1865 when recently found at Thaxted.

Slightly earlier in date (first half of the first century A.D.) is a cremation burial from the graveyard of the

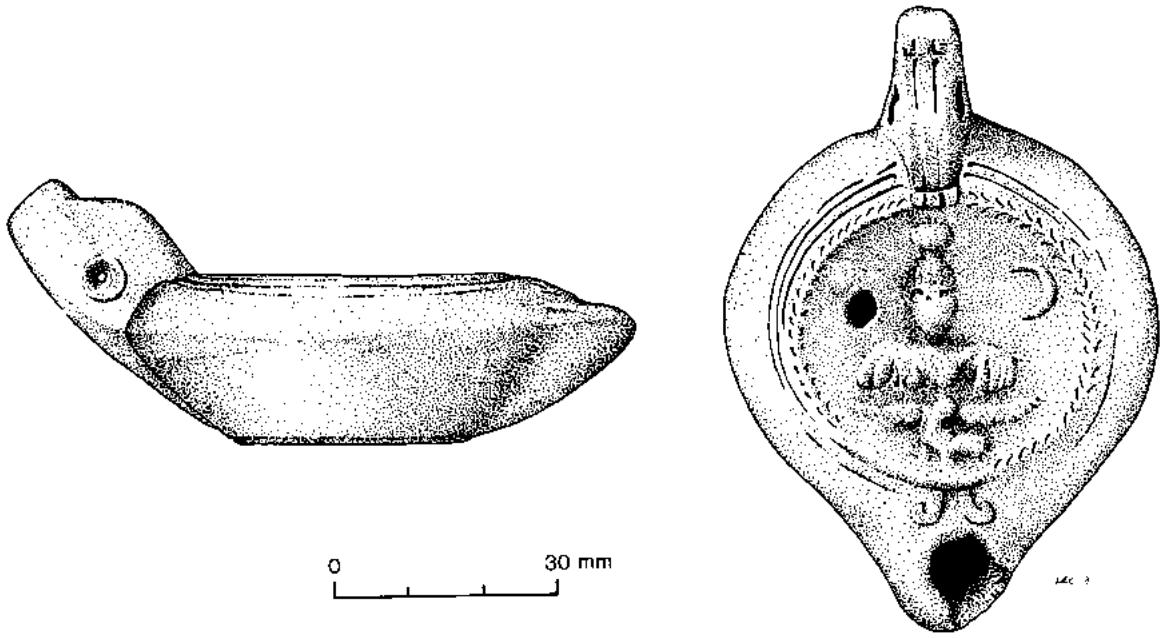

Fig. 10 The Romano-Egyptian lamp.

church of St John the Baptist, the finds from which are now in Saffron Walden Museum. They comprise a Colchester brooch (minus pin and catch-plate) and a carinated cup (cf. Thompson 1982, form E1-1) in grog-tempered ware.

The pebble head from Thaxted published by Ross (1967, 72 and plate 16d) in fact came from a farm between Little Bardfield and Thaxted (i.e. east of the town, pers. inf. C.M. Johns, British Museum), when it was being used as a wartime Q site (a mock airfield, represented by lights at night, used to distract enemy aircraft). It is a natural pebble, probably of serpentine, head-shaped and with the features cut into it.

Another stray Romano-Egyptian pottery lamp has been found in north-west Essex, an example of Bailey's Type 1 amongst his grouping of Aswan Relief Ware lamps, dating to *c.* A.D. 500-650 (Bailey 1988, 230-31 especially nos Q2210 and Q2211 on plate 52). Now in Saffron Walden Museum, it came from Shortgroves at Sewards End (*c.* 9 kilometres north-west of Thaxted), probably originally from the now-demolished house itself (pers. inf. Sheila Jordain). Bailey has suggested that a lamp supposedly found in Chelmsford (May 1930, 182, plate LXXI.14) may also be Romano-Egyptian (this time of late first/early second-century A.D. date: Bailey 1988, 220).

The copper-alloy Roman brooch and medieval spindle whorl
by Hilary Major.

This brooch (Fig. 11) is a variant on the Colchester 'B' brooch (Hull's type 92: N. Crummy 1981, 12), and dates from about A.D. 50-80. It has most of the typical features of type 92 — a moulded spring cover, a pierced catch plate and knurling along the ridge of the bow — but the profile of the bow is unusual. One side has the usual moulded line, but on the other side the line is very short. There are angled marks on this side which may have been caused by filing the side of the brooch to rectify a mis-moulding (this could, however, be modern damage). In any event, this side of the brooch has a different profile from the other, not entirely due to any modern damage. The spring has a copper-alloy axis bar which passes through a central lug of unusual design. It is relatively wide, and bears moulded lines mimicking the coils of the spring.

Stone spindle whorl (Fig. 11)

Ceramic whorls are usually prehistoric or Roman. This stone example is probably medieval.

The Fieldwalking
by Howard Brooks.

A short programme of fieldwalking was undertaken in July 1991. The aim was to search for and collect ceramic (and other) evidence from the area which had yielded the lamp and various pieces of metalwork (all described above).

The two fields were examined (OS number 7781, A; and 9655, B on Fig. 9) were examined. Other fields which had only recently been harvested (U on Fig. 9) or which had been recently fenced off and laid to grass (G on Fig. 9) were not available for study. Field A was walked on 20-metre transects, collecting a 10% surface sample. After the extremely low level of Roman material collected from field A, field B was walked less intensively, along the lines shown in Figure 9. The following is a summary of results, more details may be seen in the archive report.

Results

On field A, there was a very heavy spread of post-medieval tile concentrated on the east side of the field. Post-medieval pottery was also widespread. By contrast, medieval pottery was only thinly scattered. Only a very small quantity of Roman material was recovered: a single tiny sherd of samian ware, and three fragments of brick. This quantity of pottery is not statistically significant. There were two single fragments of burnt flint.

Field B, rapidly surveyed, yielded a single sherd of early Roman pottery (C on Fig. 9).

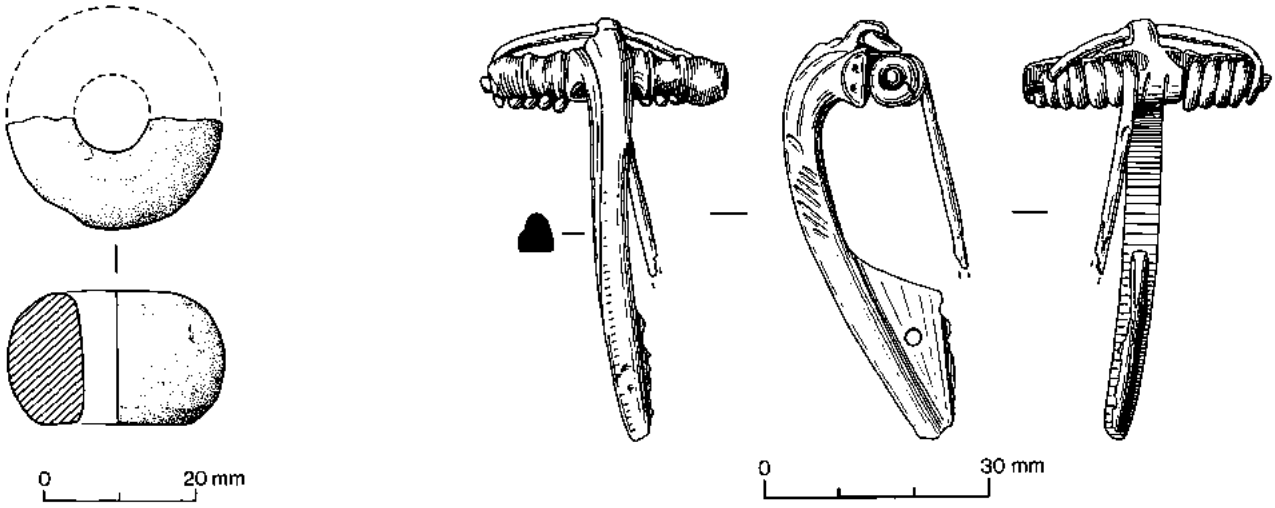

Fig. 11 The medieval spindle whorl and the Roman brooch.

Conclusions

It is hard to accept the lamp described here as further evidence of Roman occupation in Thaxted. It must be considered as a modern loss. As for the fieldwalking evidence, the very small quantity of Roman material recovered cannot be taken as an indication of settlement in the Roman period. Such low concentrations of material can be explained as 'manure scatters'.

It is difficult to reconcile the discovery of metalwork in this area with the conclusions about the lamp, and the fieldwalking results. If the footpath which presently runs past the windmill has a long history, then the coins at least may be casual losses. Perhaps the fact that the lamp seems to be a modern loss might also explain why other, apparently anomalous material has been found here. On balance, the evidence outlined here gives no reason to assume that there was a Romano-British settlement in the fields around Thaxted windmill.

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Illustrations are by Lesley Collett and Alison McGhie.

Anglo-Saxon metalwork from Little Braxted

Susan Tyler

Gravel extraction in 1974 partially destroyed a site (TL 834 149) from which Roman, Saxon and medieval artefacts were recovered by a machine driver. The Saxon artefacts comprised five iron spearheads, three iron swords, one bronze spear ferrule, one iron shield boss, fragments of iron shield binding, four small sherds of hand-made pottery and one epiphysis of a human long bone. It was thought that these finds might well represent the site of a pagan Saxon cemetery (Eddy in Couchman 1977, 84). The bronze ferrule, pottery and human long bone cannot now be located; however, the other material is catalogued below.

Catalogue of the metalwork (Figs 12-14)

Note: The abbreviation 'replaced' is used to indicate 'organic material replaced by iron oxides'.

1. Iron *spearhead* with copper-alloy rivet. In two pieces. Socket has part of a copper-alloy rivet in position, passing through substantial mineralised fragments of

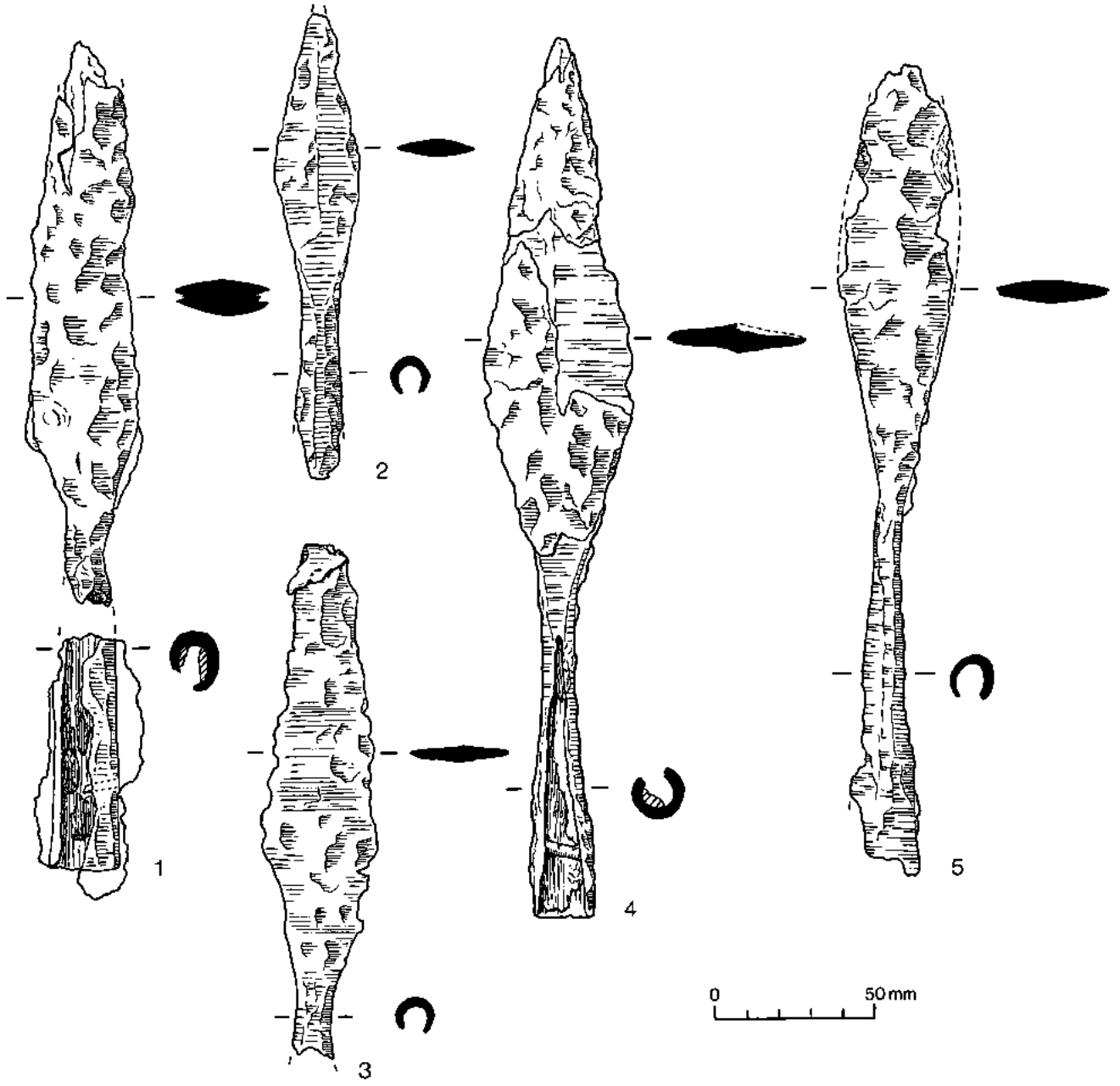

Fig. 12 Anglo-Saxon metalwork from Little Braxted.

wooden shaft. Wood identified as *Fraxinus excelsior* (ash). Angular blade; Swanton's series H; probably Type H2, although exact length is impossible to determine due to fragmentary condition. The spearhead is in very poor condition with all surfaces cracked and flaking. Length: 255mm (incomplete); max. width of blade: 38mm; max. diam. of socket: 25mm; max. thickness of blade: 13mm.

2. Iron *spearhead.* Small leaf-shaped blade; Swanton's type C1. In poor condition; all surfaces pitted and flaking. Diffuse porous traces of wood in socket, possibly oak. Tip of blade and part of socket missing. Length: 144mm; max. width of blade: 28mm; max. thickness of blade: 7mm; max. diam. of socket: 15mm.

3. Iron *spearhead.* Angular blade; short solid shank; Swanton's series H. Incomplete and in poor condition; most of socket missing; surfaces pitted and flaking. The tip is bent back over onto the body of the blade. Slight traces of mineralised wood in socket. Length (incomplete): approx. 175mm; max. width of blade: 38mm; max. thickness of blade: 7mm; max. diam. of socket: 15mm.

4. Iron *spearhead.* Angular blade, short solid shank, long cleft socket; Swanton's type E2. Complete but in very poor condition; surfaces cracked and badly flaking. Edges of socket damaged. Single flat-headed iron rivet in position passing through mineralised wood in socket. Length: 270mm; max. diam. of blade: 50mm; max. thickness of blade: 10mm; max. diam. of socket: 19mm.

5. Iron *spearhead.* In a very fragmentary condition; approximately 75 per cent survives, in 7 pieces. A slender leaf-shaped blade with short solid shank and long cleft socket; Swanton's type D2. Most of the socket survives but the tip of the blade is misssing. Length (incomplete) 250mm; max. width of blade: 37mm; max. diam. of socket: 26mm.

6. Iron *shield boss and hand-grip.* Boss in many fragments; surfaces flaking badly. Low slightly convex domed boss with large flat circular terminal. Sides and flange of the boss are very fragmentary but the flange is fairly wide. Part of three iron rivets are visible and the X-radiographs show the presence of at least two others. The shape of the rivet heads is unclear, but appear to be disc rather than knob-headed. Some areas of mineralised wood occur on the underside of the flange fragments especially around the rivets. Diameter of dome (approximate as dome is fragmentary): 130mm; approx. diameter at flange: 180mm; max. width of flange: 45mm; max. diameter of terminal: 45mm; height (approximate): 80mm.

7. Iron *shield hand-grip.* Incomplete and in two pieces. Flat grip. One obviously central fragment has an iron rivet which the X-radiograph shows to be disc-headed. Substantial mineralised wood on its undersurface runs longitudinally except around one rivet where it runs transversely. The other fragment has a tapering end indicating that the grip may have been of the extended type. Max. width of grip: 38mm; length: not possible to determine, but at least 190mm from the combined lengths of the pieces (although they do not fit together). Max. thickness: 10mm.

8. Iron *sword.* Double-edged sword. Edges parallel for approximately 75% of its length. Complete and in one piece, although in very poor condition. Edges badly damaged; tip of blade missing. Sword is bent (at an angle of 20 degrees to the horizontal) approximately halfway along its length. The tang is twisted and bent to the side. Traces of mineralised organics along the edges and on the tang may be wood or leather. X-radiograph shows no evidence of pattern-welding. Length: 823mm (of blade: 748mm); max. width of blade: 52mm; max. thickness of blade: 8mm. max. thickness of tang: 7mm.

9. Iron *sword.* Double-edged. In two pieces which do not join. In very poor condition; edges damaged, surfaces flaking. Tip of blade missing. X-radiograph shows no evidence of pattern-welding. The tang has a roughly triangular shaped terminal with one point extended. The sword is bent halfway along its length (at an angle of 10 degrees to the horizontal). Length (incomplete): 774mm (blade 580mm); max. width of blade: 49mm; max. thickness of blade: 5mm; max. thickness of tang 5mm.

10. Iron *sword.* Single-edged. In two pieces which do not join. Cutting edge and back are parallel for approximately two-thirds of the length of the blade and then the cutting edge upcurves to the point. X-radiographs show the blade to be pattern-welded. A chevron pattern is visible on the X-radiographs formed by two bars of iron twisted in opposite directions for most of the length of the blade. This would have formed a central core to which the edges were attached. The tang is rectangular in cross-section and has a single rivet-hole. Substantial areas of replaced wood are visible on the tang and traces on the blade. Length (approximate): 650mm; max. width of blade: 45mm; max. width of tang: 20mm; max. thickness of blade: 7mm; max. thickness of tang: 6mm.

11. Iron *horseshoe.* Edges damaged. Two circular and one rectangular nail holes. Max. width 30mm, narrowing towards ends; max. thickness: 7mm.

Discussion

Spearheads

The five spearheads fall within the following types defined in Swanton's classification for spearheads (Swanton 1973 and 1974): Type H2; H1 or 2; C1; E2 and D2. These represent variations on two main forms: those with angular blades (Types H and E) and those with leaf-shaped blades (Types C and D). The date range for this assemblage of spearheads is *c.* 450-700; within this period Types E2 and D2 have a more limited range occurring only from the sixth century onwards (Swanton 1973, 67-71; Welch 1983, 126-35). Given the association of the spearheads with a low-cone shield boss a sixth-century date for the assemblage is most likely.

Shield boss and hand-grip

The shield boss is in extremely poor condition; despite this its form can be reconstructed. It was a fairly low-coned boss with a large flat disc-terminal, a fairly wide flange and flat disc-headed rivets. Its associated grip is flat and fairly wide although it may have had terminal extensions. It has been noted (Evison 1987, 31) that shield boss forms developed from low, wide shapes with wide flange and disc-headed rivets to taller narrower shapes with knob-headed rivets; the Little Braxted shield boss is therefore one of the earlier types, most probably (especially given the associated spearheads) belonging to the middle of the sixth century.

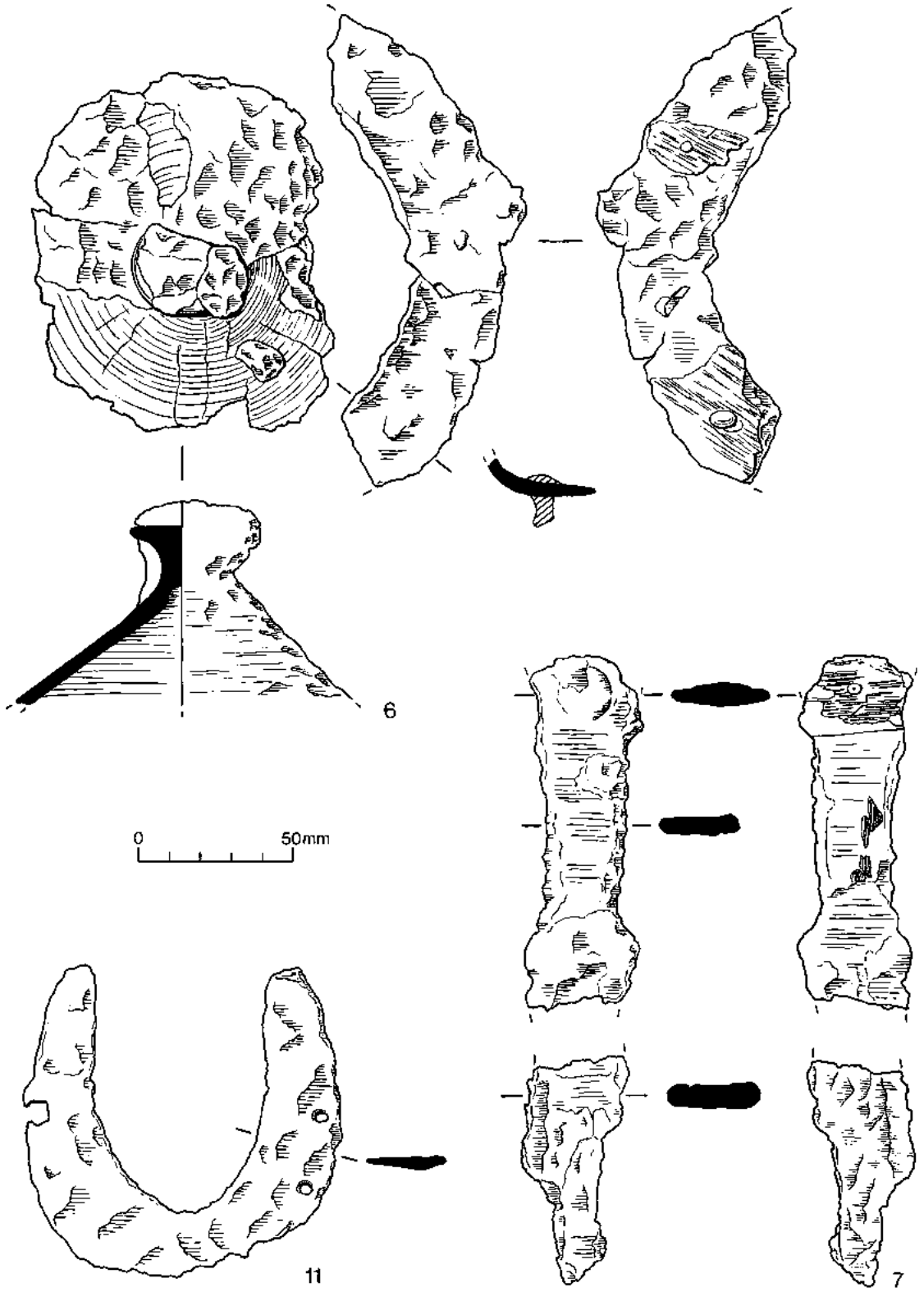

Fig. 13 Anglo-Saxon metalwork from Little Braxted.

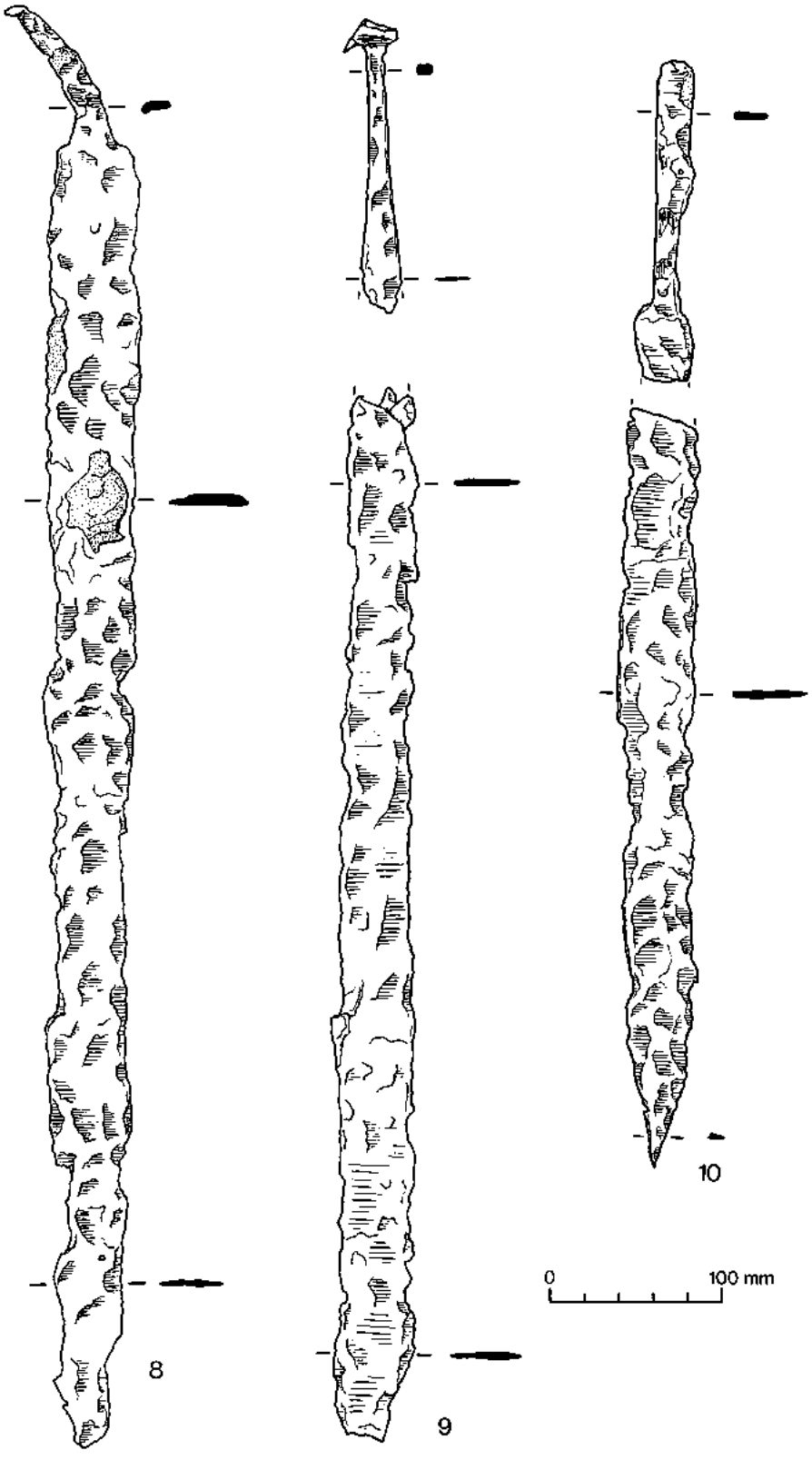

Fig. 14 Anglo-Saxon metalwork from Little Braxted.

Swords

The two double-edged swords (Nos 8 and 9) are in extremely poor condition and have no associated fittings, although slight traces of mineralised organics indicates the presence of scabbards for both swords. The X-radiographs show no signs of pattern-welded construction. Both sword blades are bent but not to such a degree as to suggest deliberate bending prior to deposition in the ground.

The single-edged sword (No.10) is, unlike the other two swords, pattern-welded. The technique used is of a fairly simple kind whereby two bars of iron are twisted in opposite directions to give a chevron effect for most of the length of the blade. This technique would have made the blade both strong and flexible and have given it an attractive appearance.

Saxon swords are a rare find in Essex although two sites have produced a relatively high number. Two Saxon cemeteries have produced six swords: Mucking, cemetery two (Jones and Jones 1975, 179-80) and Prittlewell (Tyler 1988, 91-116). At Prittlewell five of the swords were pattern-welded whereas none of the Mucking swords showed any evidence of pattern-welding.

Acknowledgements
The illustrations are by Lesley Collett.

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The archaeology of the Ongar sewerage scheme

Steven Wallis

Phase 1 (June 1991)

Introduction

The replacement of a 1930s Thames Water sewer pipe running between the Two Brewers, Ongar, and Stanford Rivers Sewage Works (Figs 15-17), following the line of the Cripsey Brook and River Roding, was carried out for Thames Water PLC by Epping Forest District Council, with J. Breheny, Contractors Ltd, as a sub-contractor.

The work required the stripping of a 10m width of topsoil over a length of 4km. Within the stripped area, damage to the archaeological record was threatened by the excavation of the 0.8m wide pipe trench, and the driving of heavy machinery over the remaining ground surface.

To limit initial damage to the archaeological record, and enable finds and features to be recognised, the topsoil stripping was carried out by mechanical excavator, rather than box scraper. As soon as possible after stripping, the trench was examined by the archaeological team. The positions of isolated finds were measured, whilst sites (identified from the presence of features and/or a number of finds) were investigated in as much detail as was practicable. 'Sites', consisting of features and/or spreads of artefacts, were listed alphabetically, A-D. Individual findspots were listed numerically, 1-19. Wherever possible, the areas selected for detailed investigation were cordoned off to prevent machinery driving over them, and were not extended across more than half the width of the trench so as not to block the contractors' access to other parts of the pipeline.

Subsoil

Due to the riverine location, this was extremely variable. The most common types were orangy and greyish-brown sandy silts, though proportions of clay existed in places. Inclusions were mostly flints.

The sites

Site A (Fig. 18) The site was initially located by the presence of flints and pottery on the surface of an area poorly-cleared of topsoil. After trowelling showed the presence of a feature, an area 5m (NE-SW) by 4.7m was cleared by machine at TL 5447 0028.

Two features were identified, and fully excavated, of which one was of recent origin. The other, F1, was part of a gully greater than 5m long. It was oriented SW-NE, *c.* 0.45m wide and *c.* 0.1m deep, with sides of varying slope. Its bottom was flattish, but a very gradual slope towards the north-west and the nearby River Roding indicate this was a drainage gully.

The fill of F1, context 2, was a medium greyish-brown silty clay with occasional clay patches, charcoal flecks and small and medium stones, including burnt flint. It contained 34 pieces of flint (see flint report below), two bone fragments, and a sherd of medieval pottery.

F1 is interpreted as dating from the Mesolithic or Neolithic on the evidence of the flint (it is suggested that the potsherd is intrusive). The quantity of flint, and the presence of bone (more of which may have decayed completely), indicate this gully was used as a rubbish dump after it was no longer required for drainage. An area of contemporary settlement, therefore, probably existed close by.

Site B (Fig. 18) This site was discovered as a feature and a spread of finds centred at TL 5494 0081. An area 11.7m (SW-NE) by 4.1m around this feature, F1, was cleared and trowelled, but no more features were found. However, a second feature, F4, was seen 13m E of F1, outside the trowelled area. Both features were fully excavated.

F1 was *c.* 0.9m in diameter and up to 0.25m deep, with steep sides and concave bottom. Its fill, context 2, was a medium greyish-brown sandy silt with occasional charcoally patches and other burnt material, and rare small and medium stones.

F4 was sub-oval, 1.10m (N-S) by 0.78m, and 0.13m deep. It had a roughly concave profile. Its fill, context 3, was a medium greyish-brown clayey silt with

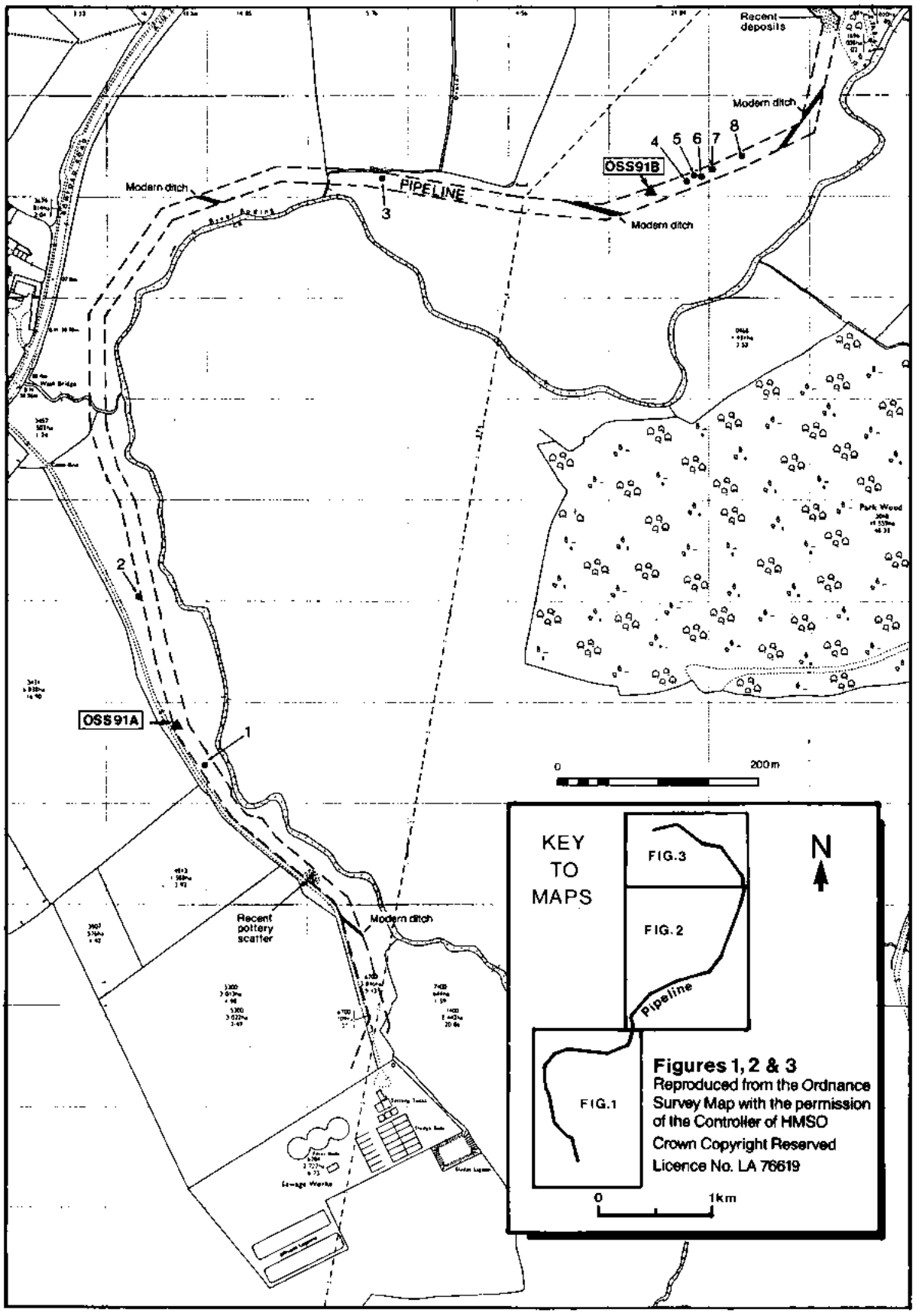

Fig. 15 Ongar sewerage scheme pipeline; Stanford Rivers to Littlebury Mill.

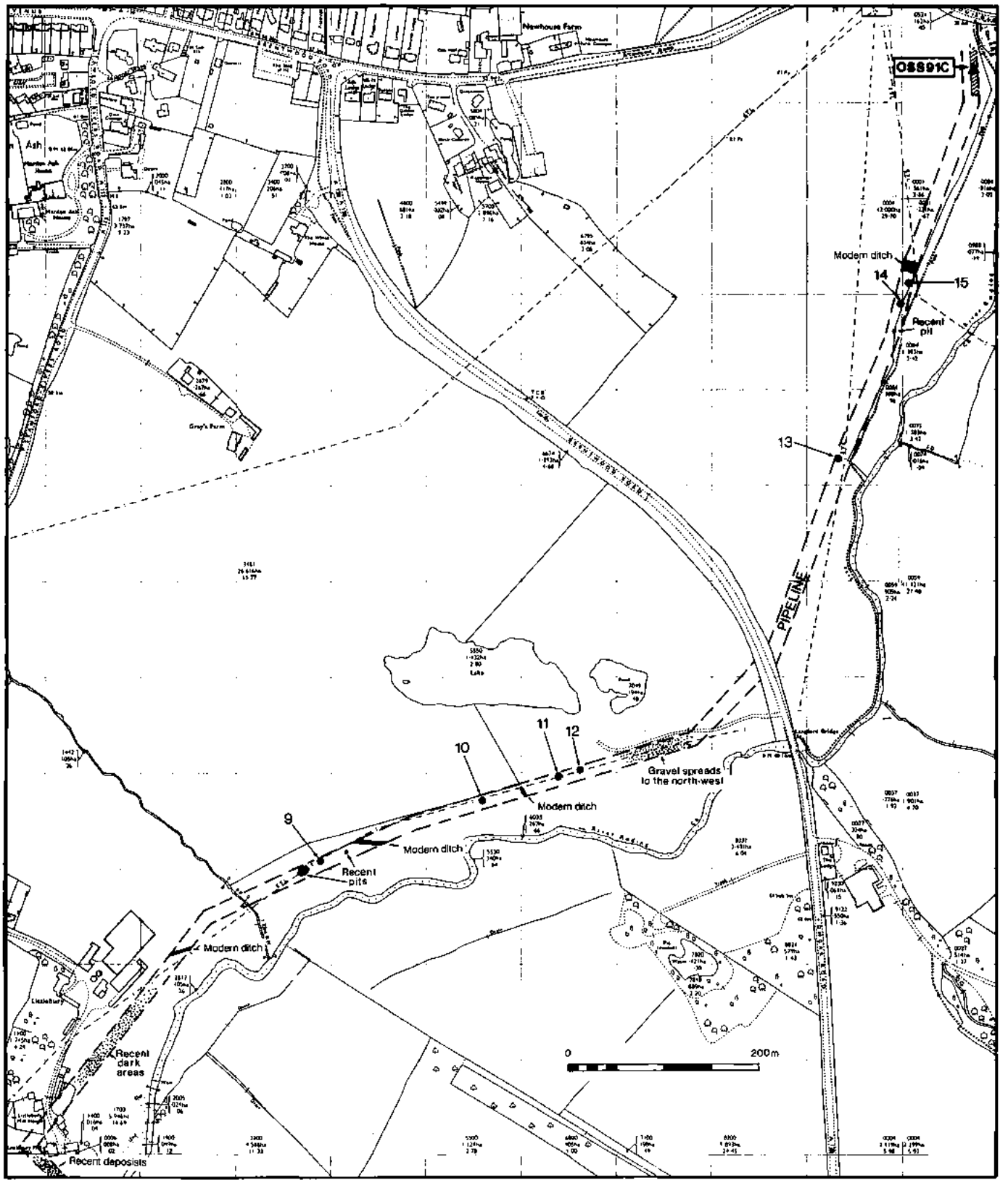

Fig. 16 Ongar sewerage scheme pipeline; Littlebury Mill to Hallsford Bridge.

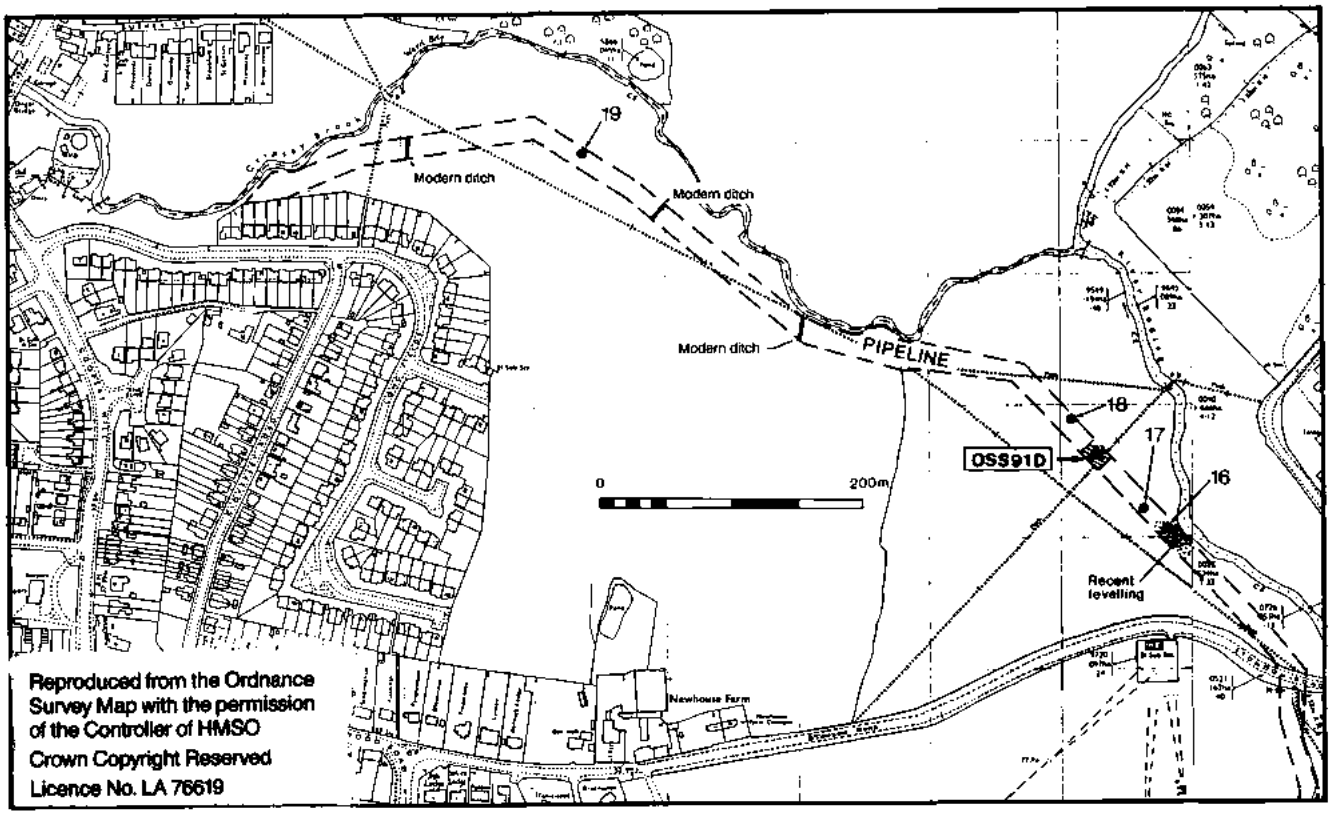

Fig. 17 Ongar sewerage scheme pipeline; Hallsford Bridge to the 'Two Brewers'.

occasional burnt clay fragments and fragments and smears of charcoal, and rare small stones.

Both fills contained quantities of metalworking debris, also flints and Early Saxon pottery. Context 3 also had residual Roman pot.

A concentration of unstratified finds extended for up to 20m from F1, though several finds classed as 'isolated' perhaps belonged to the same spread. This concentration included an assemblage of flint, thought to be of Neolithic date and prehistoric, Roman and Saxon pottery. The prehistoric pottery was not closely datable, but was thought to be earlier than the Middle Iron Age.

The two excavated features, well-dated to the Early Saxon period, contained enough metalworking debris to indicate that metalworking was the site's main function in that period. It is suggested that this location was chosen because of the proximity of a reliable source of water, the River Roding.

Whilst the site produced both prehistoric and Roman finds, no contemporary features were identified. Perhaps they were missed, but it is also possible that these finds were moved by hillwash from sites on the higher, less flood-prone land to the north.

Site C A spread of finds was discovered over a 50m length of trench between TL 5608 0210 and TL 5608 0215. No features were visible despite several areas being trowelled over. The finds consisted of 8 sherds of medieval pottery (date range 11th-mid 14th century) and 2 post-medieval sherds.

It is noteworthy that this site is adjacent to an area where, according to the Essex County Council Sites and Monuments Record (PRN 4242-5), Mesolithic and Neolithic flints, Iron Age pottery, and a 'pit dwelling', pottery and worked flint of undetermined date, have been recorded (see also Atkinson, this volume, p. 101).

Site D A spread of finds was recovered from a 20m length of the trench, centred at TL 5593 0236. No features were visible. Conditions prevented the cleaning of an area to test for the presence of features.

The recovered finds consisted of:-
6 flint blades and 6 flint flakes
1 fragment of possibly Roman tile
8 sherds of medieval pottery (date range 11th to 14th century)
6 small lava fragments from an undatable quern.

Additionally, nearby isolated finds of 5 flints and part of a 15th/16th-century jug or cistern could belong with these groups.

The Isolated Finds

These were recovered from 19 findspots. As suggested above, some were probably outliers of sites B and D. The others were mainly flints and medieval pot, though a late Iron Age or early Roman sherd and a crossbow bolthead were also found. The bolthead (described below) was found at TL55540260 near a sherd of late Medieval ?proto-stoneware and 2 fragments of burnt clay.

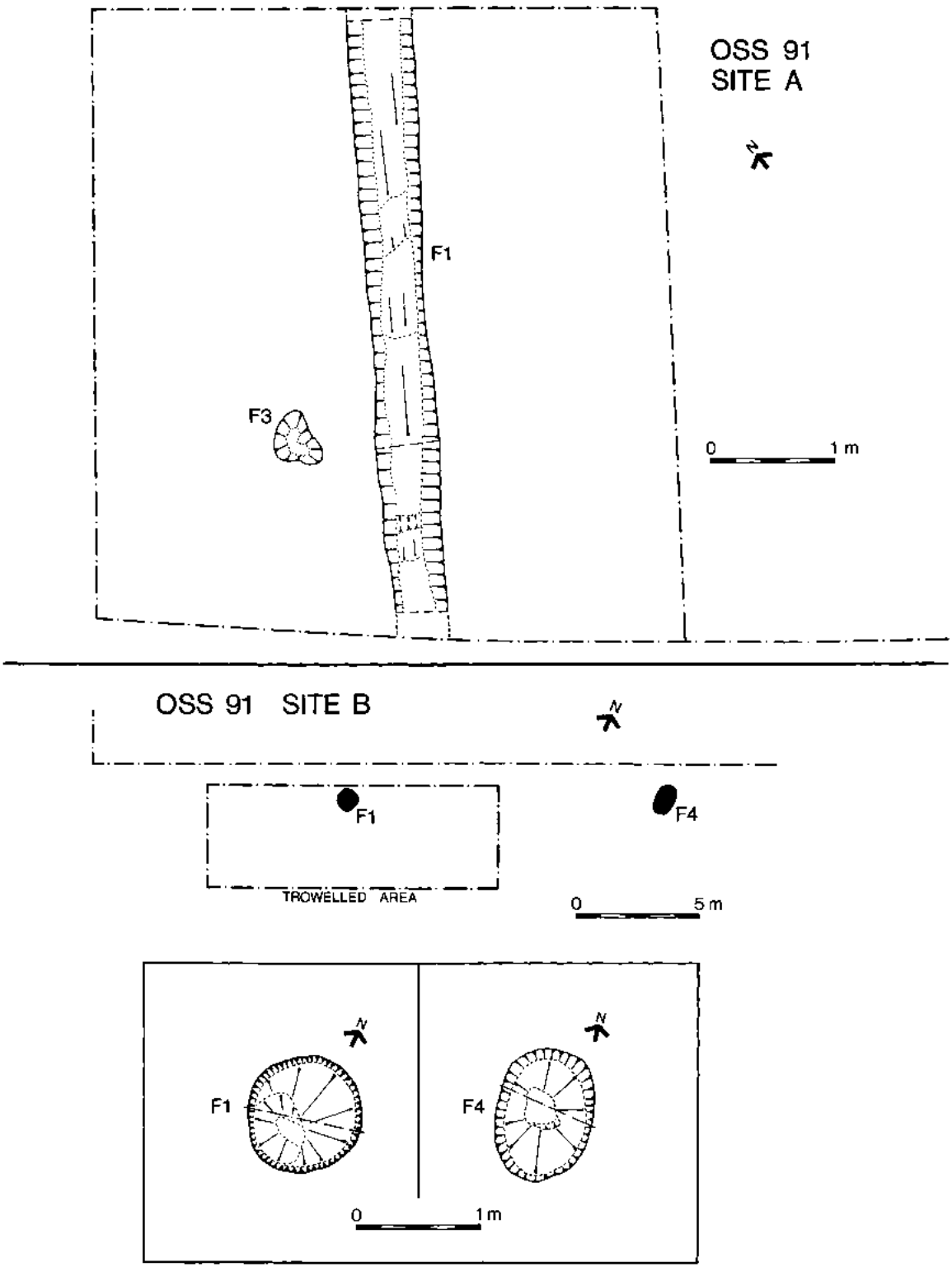

Fig. 18 Ongar sewerage scheme pipeline; sites A and B.

Finds Reports

Flintwork

O Bedwin

Humanly-struck flint came from sites A, B and D and also from findspots 2-5, 7, 8, 13-15, 17 and 18; in other words, evenly spread along the pipeline route. Most of the assemblage was good quality, grey, glossy flint, with a small proportion on brown or mottled brown-grey flint of rather poorer quality. The latter would certainly have been locally available.

In total, there were 116 pieces, 101 from the three sites and 15 spot-finds. Although there were 3 cores, the remainder of the assemblage consisted of unretouched flakes or implements produced on flakes (of which there were 2 scrapers). Nearly 40% of the unretouched pieces were blades, of which 5 were patinated (these were the only patinated pieces).

Dating of this assemblage is problematical; the cores consisted of one blade core and 2 battered discoidal cores; the scrapers were a roughly made notched scraper and a side-scraper. It is likely that the assemblage consists of a mixture of Mesolithic and Neolithic material. What is more significant is the presence of considerable flintwork *in situ* in gully F1 at site A, and a large unstratified assemblage at site B. These finds clearly point to a Mesolithic/Neolithic presence in the Roding Valley, an area where sites of this date are currently little known, apart from the Mesolithic and Neolithic material noted above (site C).

Saxon Pottery from Site B

S Tyler

A small assemblage of Early Saxon pottery belonging to the period A.D. 450-650 was recovered from the two features of, and as a surface scatter on, site B.

The sherds are mostly small and abraded, although simple everted, rounded rims and angular, flattened rims can be identified. These rim forms were common throughout the Early Saxon period and cannot be closely dated. The fabrics comprise sand and organic tempered clays including a small amount of mica. Shell and grog tempered fabrics are absent.

The Ironworking Evidence

Dr G McDonnell

Approximately 5kg of metalworking debris was recovered from Site B, from the two Early Saxon pits and as unstratified material. The debris is considered together, as forming a single assemblage.

Material	Weight (in g)	Notes
Smithing slag	*c.* 3,200	Mostly smaller fragments
Smelting slag	1,362	Two large fragments from pit F1
Cinder	282	
Hearth lining	11	

In addition, there was 290g of an iron concretion of natural origin.

The whole fill of F1 was tested with a magnet. 855g of small fragments of magnetic material was recovered by this method. Most was of natural origin, but fragments of hammerscale were identifiable.

It is noteworthy that no hearth bottoms were present.

Considering that most of the debris came from two rather small features, the site produced a substantial amount of metalworking debris. Though the pits were just used as rubbish dumps, there is sufficient evidence to suggest ironworking was taking place close by, probably within 100m.

The smelting slag is non-tapped, which is typical of Saxon metalworking. Since only two fragments were recovered, it is less likely that the smelting site was nearby.

Iron Object

H Major

A conical, socketed iron crossbow bolthead with side fins (Fig. 19) was an isolated find from close to the Cripsey Brook, east of the Two Brewers, Ongar. The type is of 15th- or 16th-century date.

Animal Bone

O Bedwin

A few small, worn fragments of animal bone were recovered from site A. These remains were too fragmentary to be identified.

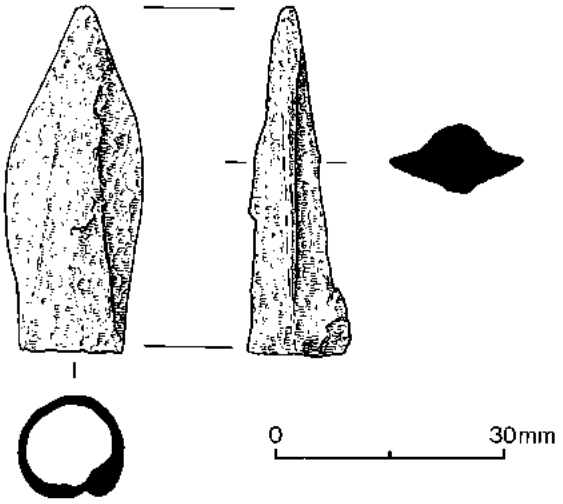

Fig. 19 Ongar sewerage scheme pipeline; crossbow bolthead.

Conclusions

Four sites, three previously unknown, were investigated and a number of isolated finds were made. Two sites were finds scatters only, but site A had good evidence of Mesolithic or Neolithic occupation, and site B produced Early Saxon metalworking debris.

Phase 2 (Autumn 1991)

The pipeline continued from the Two Brewer's to Banson's Lane. It ran through the back gardens of post-medieval houses on the western frontage of Chipping Ongar High Street.

A watching brief on this phase was maintained by M. Medlycott.

Recent disturbance was extensive, and the only discoveries were four post-medieval boundary ditches.

Acknowledgements

Thames Water, Epping Forest District Council and J Breheny Contractors Ltd are thanked for their co-operation, Messrs H Bird and M Mace of EFDC and Mr B Barnes of J Breheny being particularly helpful. The archaeological investigation was funded by Thames Water.

P Gilman and P Clarke of the Essex County Council Archaeology Section were involved in setting up the project. The author was assisted in the on-site work by C Forrest and D Smith. Finds were

processed under the supervision of P McMichael. In addition to the above specialist reports, the following carried out spot-dating and identification of finds: O Bedwin (bone), N Brown (prehistoric pot), H Major (burnt clay, iron and stone), J Shepherd (glass), H Walker (Medieval pot) and C Wallace (Roman pot).

The archaeology of two water-main replacement pipelines in north Essex

Steven Wallis

Introduction

This article summarises the results of watching briefs and limited excavations carried out on two of Anglian Water's mains replacement schemes — the 'Gosfield, Colne Engaine and Bardfield Saling' and the 'Halstead Area' — between October 1990 and March 1991. Figures 20-26 show the areas investigated.

Though many of the new water pipes were laid beneath roads and tracks, over half were laid in fields, usually alongside roads. Though the pipe trench itself was only about 0.5m wide, ploughsoil was stripped over a width of about 6m. This enabled the subsoil from the pipe trench to be graded into the ploughsoil, and gave a working area for the trenching crews.

The watching briefs concentrated on the fields, since the road trenches only exposed lengths of a few metres at a time. Areas were inspected as soon as several fields had been stripped, giving a worthwhile amount to view for each visit, and a gap of usually about two weeks before trenching began, in which any excavation could be carried out.

Rarely was all the ploughsoil removed from an area. Usually subsoil exposure was patchy, and in some fields a thin layer of ploughsoil remained. Thus, lack of recorded features or finds cannot be taken as negative archaeological evidence.

The results

Detailed descriptions of the excavated sites, finds taken away for examination, modern features and variations of subsoil are in the archive report. The text below considers definite and probable sites only.

The Excavated Sites

(i) Near Field Cottage, Colne Engaine (TL 853 309)
Three features were identified. A length of ditch, probably a boundary, backfilled with rubbish including 13th-century pottery; a pit including 13th- to 14th-century pottery and a post-medieval key (Fig. 27); and a large post-medieval pit, perhaps a quarry pit for brick- or tile-making.

(ii) Along Church Street, Belchamp St Paul (TL 796 427)
Three patches of redeposited natural, resting on a buried soil layer, appeared to be damaged floor surfaces. Though not closely-datable, they were probably all medieval. Two other cut features were present.
Paul's Hall and St Andrew's Church (the original village centre?) are about 1km north of the present village of Belchamp St Paul. There are several houses alongside Church Street, which connects them. The excavated evidence indicates there was more of this ribbon development in the medieval period.

(iii) Near Hopkins Farm, Belchamp Walter (TL 799 394)
Three or four pits of various sizes were identified, also a slot or gully and perhaps part of a floor surface. Pottery from the features had a late 12th- to mid 13th-century date range.

(iv) Near Great Henny Church
Two Roman features, one a rubbish pit, were present, and Roman finds, including tile, came from other contexts.
Two definitely medieval features were a pit (spot-dated to *c.* 1200) and what was perhaps a ditch terminal (12th to 13th century). A beam slot and adjacent floor surface were probably also medieval.
Several other features, including a probable flint-lined hearth, were undated.
This hilltop site commanded good views of the Stour Valley, and was safe from flooding. The church fabric has quantities of Roman tile, which together with the excavated evidence might indicate a substantial Roman building somewhere on this hilltop. On the opposite, Suffolk, side of the valley, evidence of tile-making has been recorded at Little Cornard (Moore, Plouviez and West 1988, 65).

The finds

Identifications of all finds are included in the archive report. The following only are worth wider publication.

Trade Tokens

Two trade tokens were found on the surface of an otherwise undated feature on the Belchamp St Paul site. They were perhaps part of a larger group, the remainder of which had been removed by ploughing or machine-stripping. A metal-detector search of the stripped ploughsoil nearby proved fruitless. The two tokens are:-

(a) Obv:- IOHN MERRILLS = The sun

Rev:- IN CAVENDISH 1664 This is number 86 of the 17th-century tokens in Charles Golding's *The Coinage of Suffolk* (London, 1868). Cavendish is some three kilometres north of the site, just across the Suffolk border.

(b) Obv:- WILLIAM MOORE. BAYS = W and (a merchant's mark, conjoined)

Rev:- MAKER IN COLCHESTER = W.M.M.

This is number 135 of Williamson's Essex tokens. The reverse is almost illegible. This token is approximately contemporary with the other. Moore was Mayor of Colchester in 1663-4 and in 1670, during which times he made a name for himself as a persecutor of Quakers.

Damage to the Archaeological Record

Besides the obvious damage caused by the digging of the pipe trench, further disturbance occurred because of the stripping of ploughsoil from a 6m width. The weight of heavy machinery on the stripped areas produced ruts and, as was found at the Great Henny site, pottery still within features was shattered. Three factors affected this disturbance:-

(i) thoroughness of ploughsoil stripping — unremoved ploughsoil 'cushioned' the impact of machinery, and prevented direct rutting of archaeological features;

(ii) weather/ground conditions — the wetter the ground, the deeper the ruts;

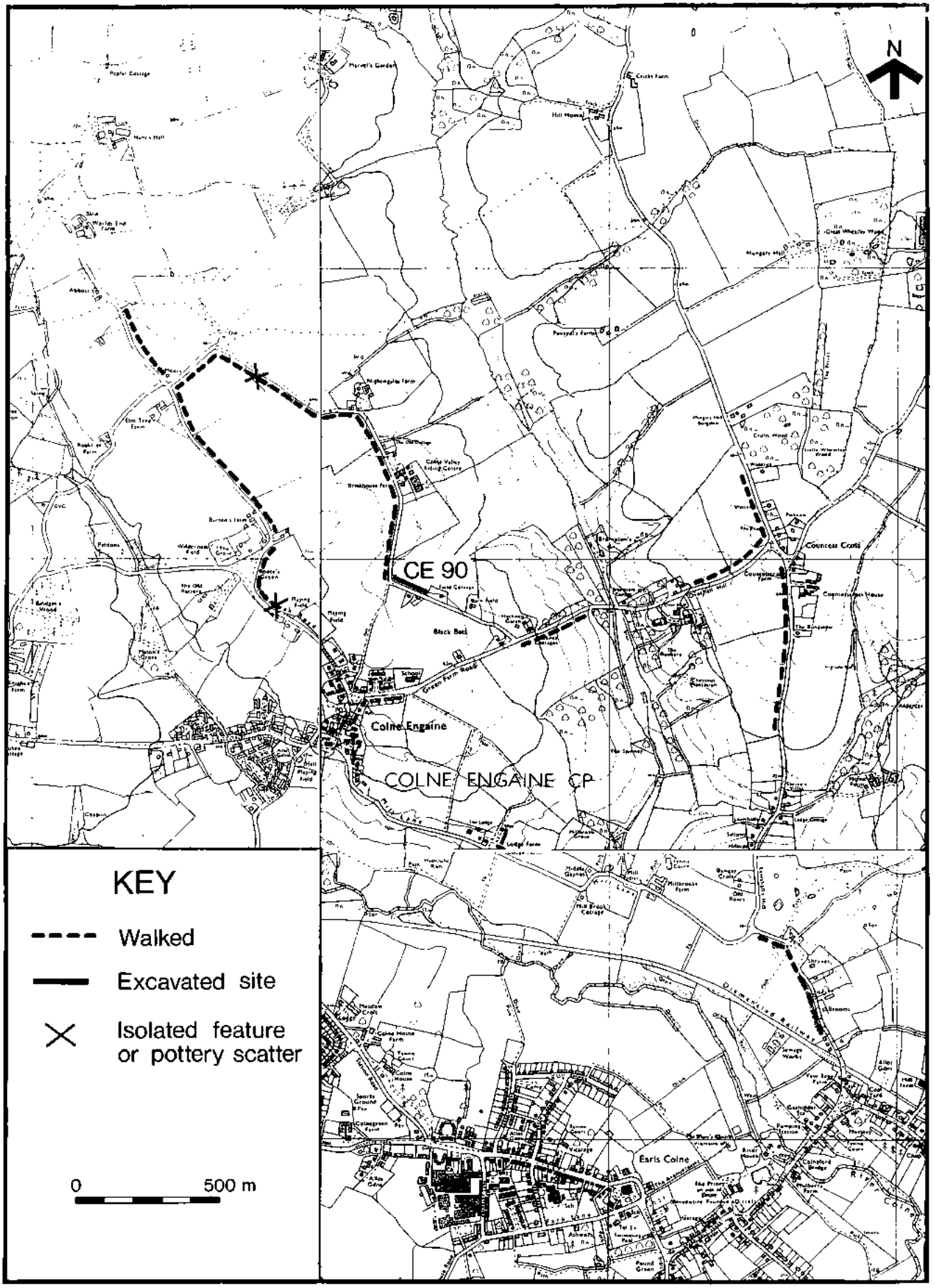

Fig. 20 Colne Engaine pipeline route.

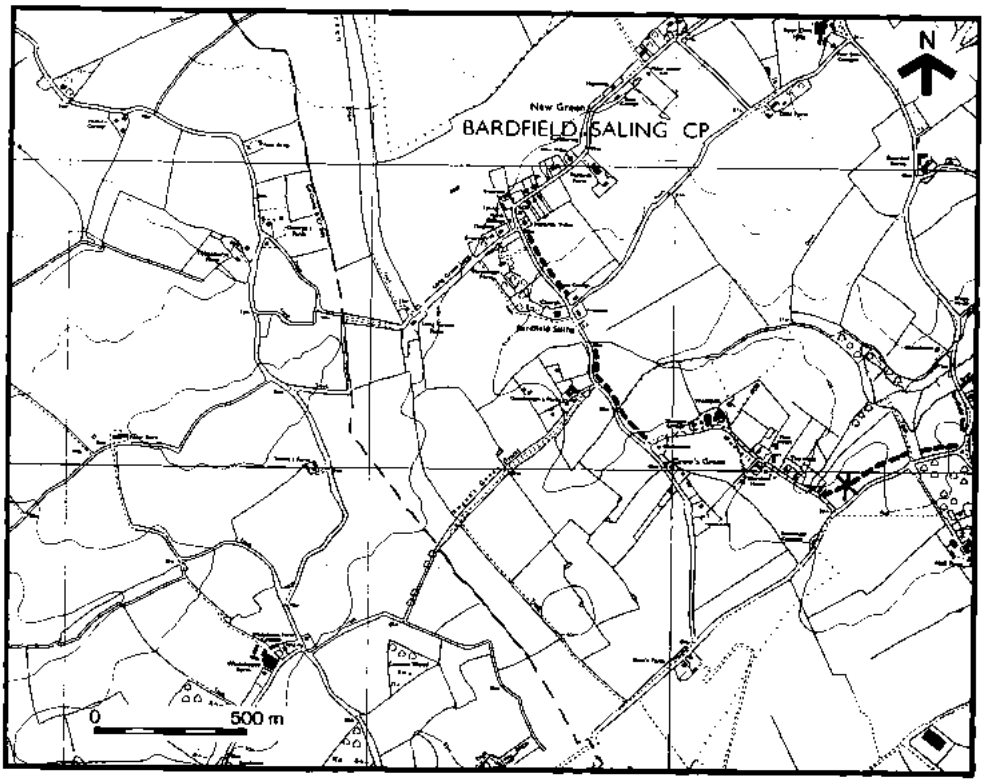

Fig. 21 Bardfield Saling pipeline route; key as Fig. 20.

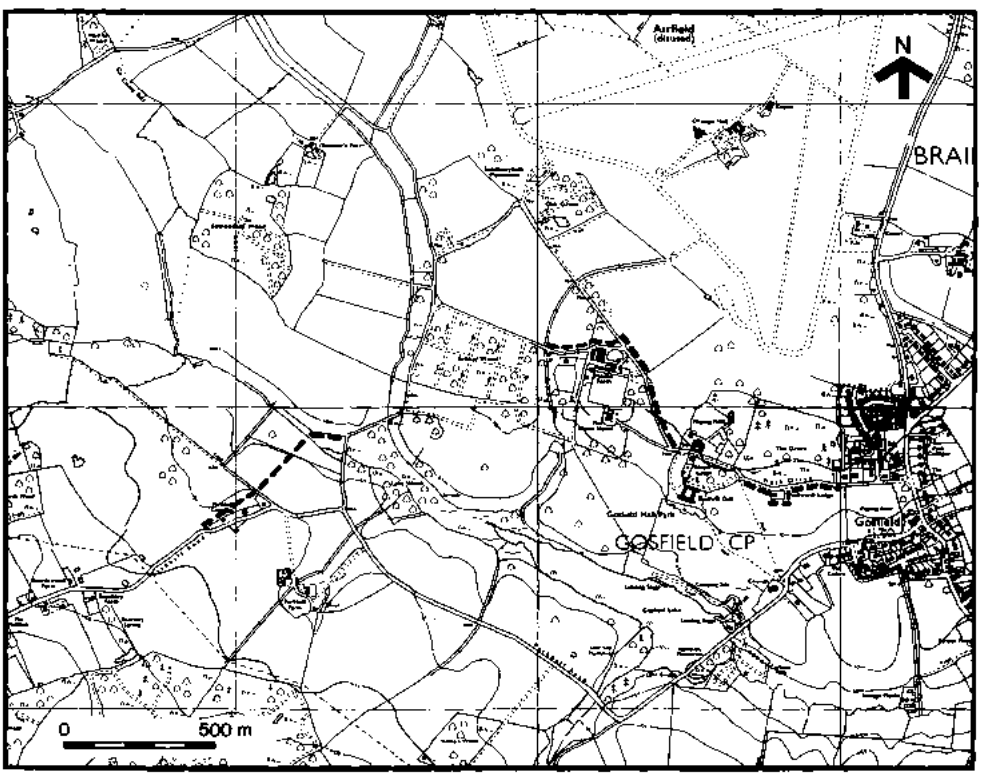

Fig. 22 Gosfield pipeline route; key as Fig. 20.

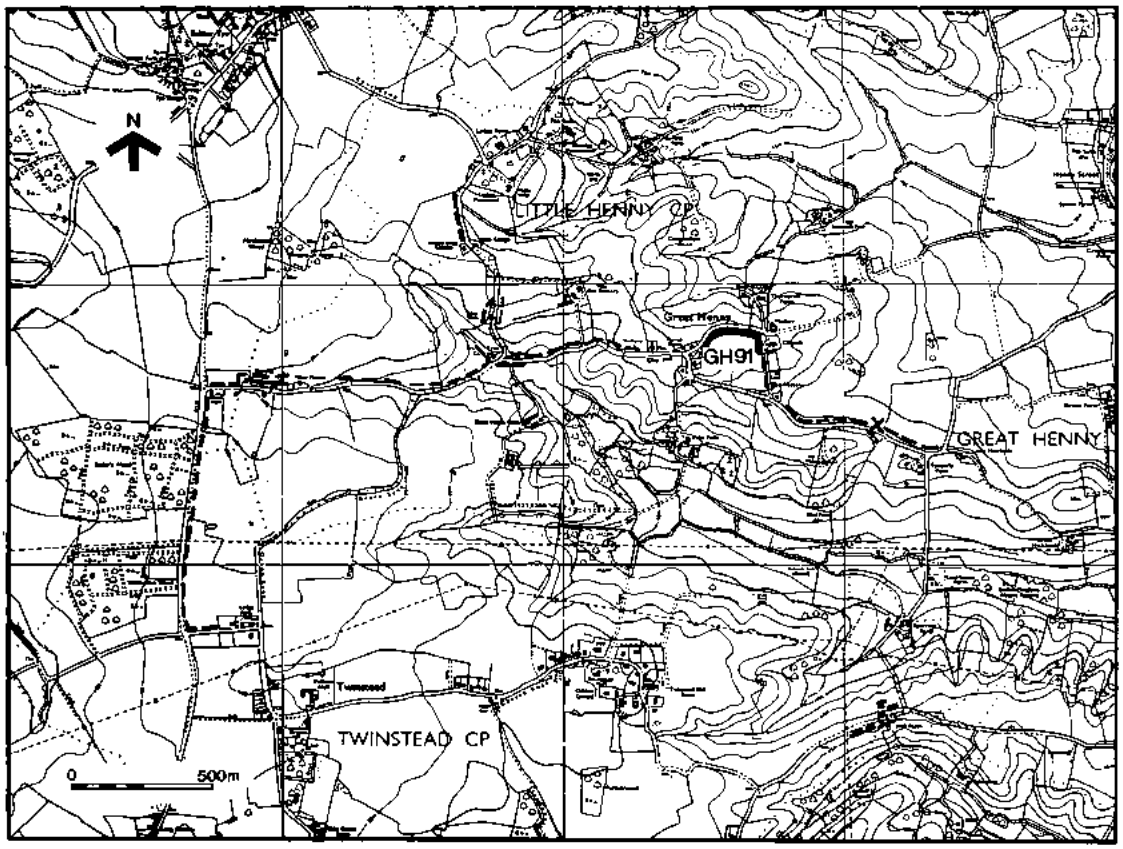

Fig. 23 Little Henny and Great Henny pipeline route; key as Fig. 20.

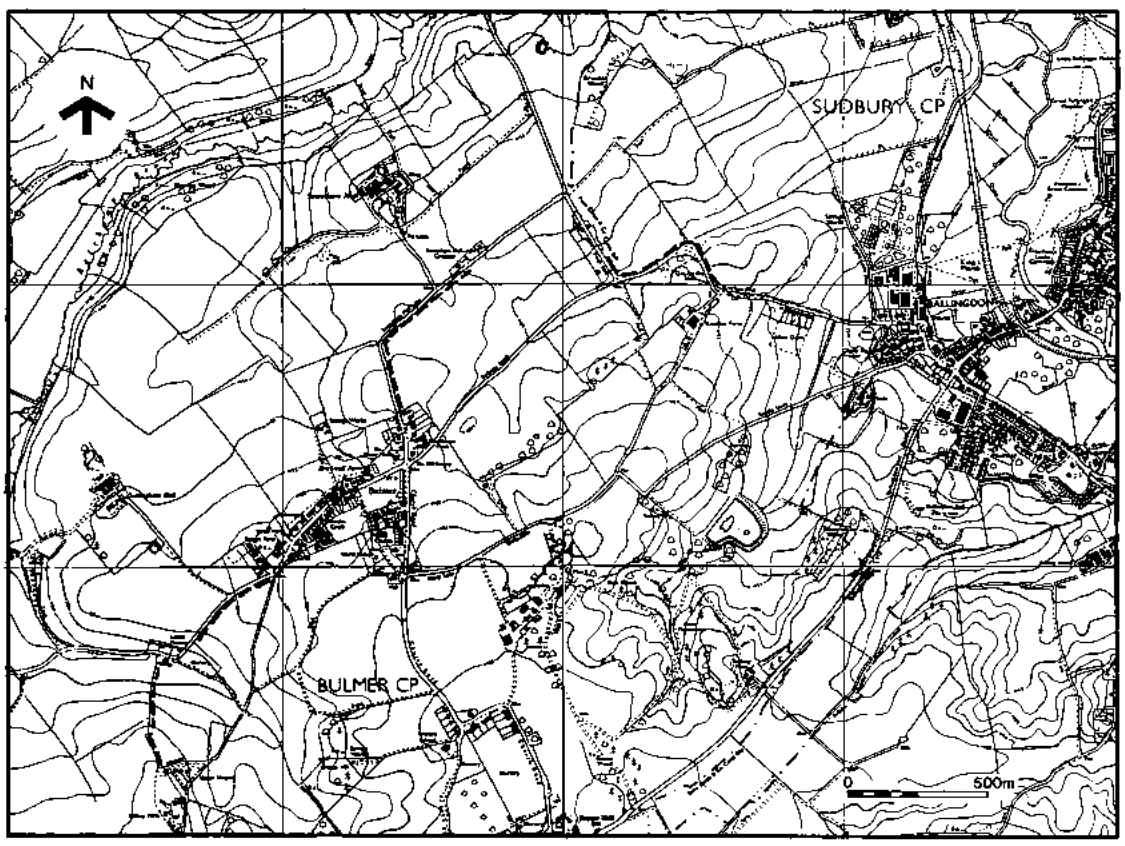

Fig. 24 Bulmer pipeline route; key as Fig. 20.

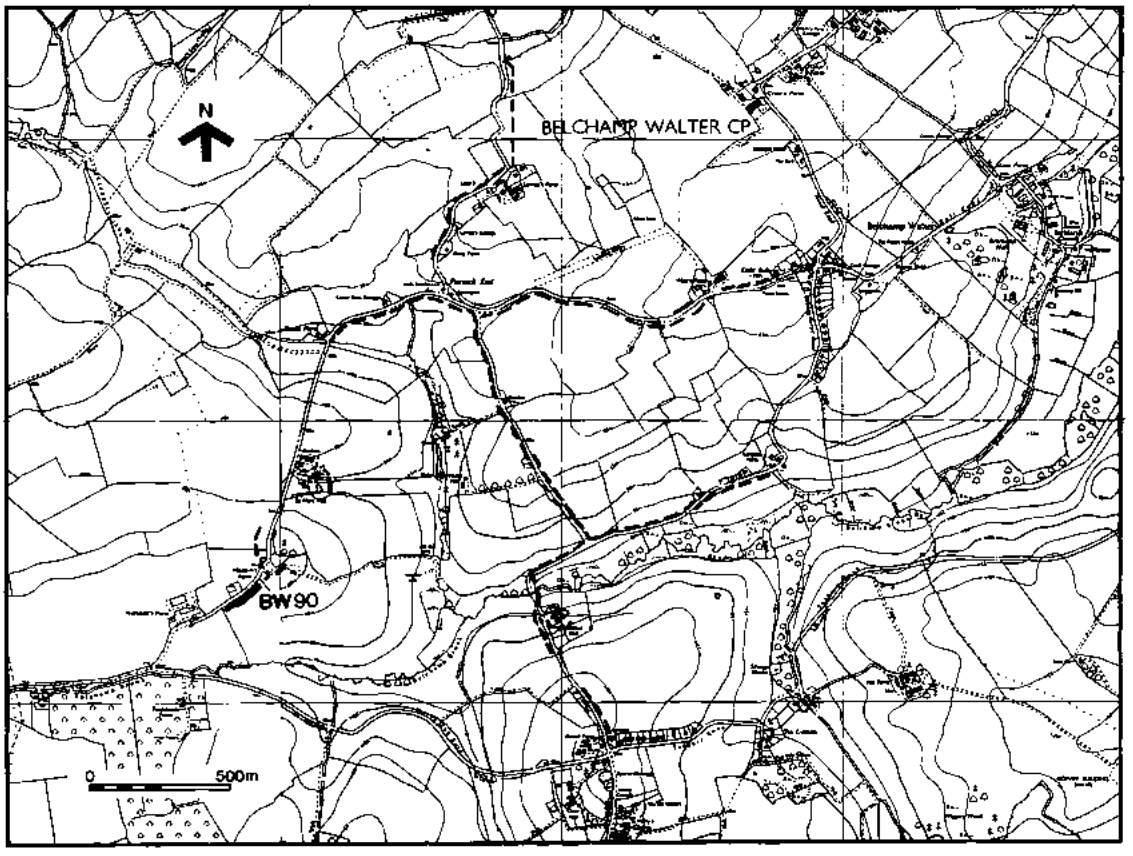

Fig. 25 Belchamp Walter pipeline route; key as Fig. 20.

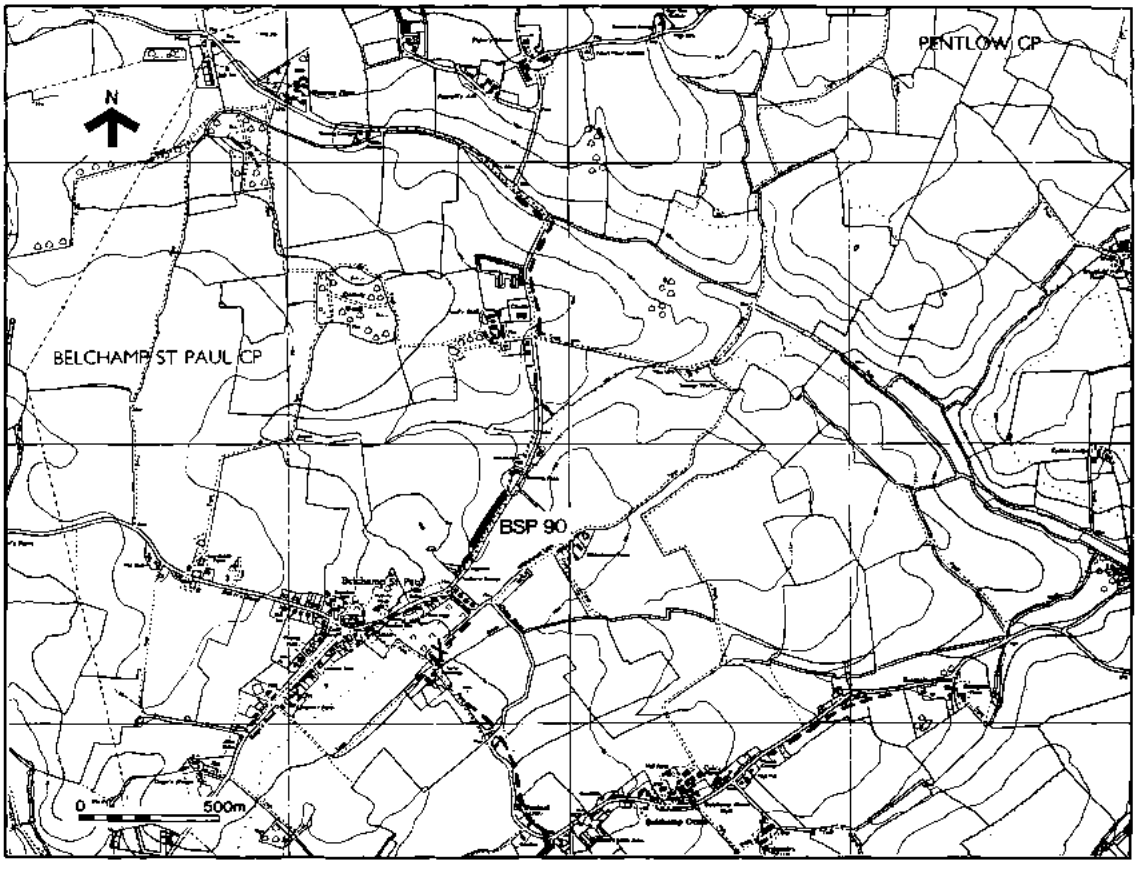

Fig. 26 Belchamp St. Paul pipeline route; key as Fig. 20.

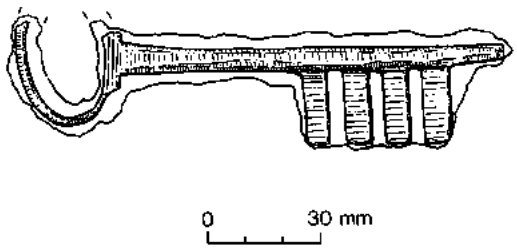

Fig. 27 Post-medieval iron key from Colne Engaine.

(iii) subsoil — deeper ruts form in, for instance, a sandy subsoil than in a clay subsoil.

From an archaeological standpoint, the least damaging pipe-laying occurs in dry weather, and when not all the ploughsoil has been stripped. This latter factor may mean less can be recorded during watching briefs, but what is missed is more likely to survive intact.

Conclusions

The following points can be made:

Prehistoric. No sites were found and prehistoric pottery was recovered only from residual contexts on the Colne Engaine and Great Henny excavations. The fragility of most prehistoric pottery makes it less likely than later pot to survive in ploughsoil, which together with its usually dark colours, probably explains why none was recovered from the watching briefs. The finds of flint artefacts show there was Neolithic and Bronze Age occupation at least.

Roman. Though Roman pottery should be as easy to detect as medieval, there was far less of the former, and only one site. This can probably be taken as evidence of less settlement in the Roman period than in the Middle Ages.

Saxon. Nothing datable to this period was found. The comments above concerning prehistoric pottery apply equally to that of the Saxon period.

Medieval. The majority of datable sites and finds belong to this period. They probably provide a good indication of the survival of rural medieval archaeology in north-central Essex.

As is to be expected, much corresponds with more recent settlement. Of the four main sites, those at Belchamp St Paul and Great Henny were within the present villages, whilst the presence of early post-medieval buildings close to the Colne Engaine and Belchamp Walter sites could show continuity of occupation.

Acknowledgements

The work was funded by Anglian Water Services Limited, whose staff, Messrs R Price, P Woodcock and A Comminski, were particularly helpful. Mr T Chase the site engineer, provided regular information on the progress of topsoil stripping, essential for the success of the work.

For the Essex County Council Archaeology Section, P Gilman set up and continued liaison with Anglian Water. The author was assisted in the excavations by, at various times, C Forrest, P Kiberd, D Smith and A Wade. Illustrations are by L Collett.

Finds were identified and spot-dated by O Bedwin (flint and bone), H Major (metal, burnt clay and stone), H Walker (Medieval pottery) and C Wallace (Roman pottery) — all of the E.C.C. Archaeology Section. M Winter of the Colchester and Essex Museum provided assistance in the identification of the trade tokens.

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Medieval deposits on the banks of the Cornmill stream, Waltham Abbey

Steven Wallis

Cornmill stream footbridge (site code WA2)

Construction of a footbridge across the Cornmill Stream in the grounds of Waltham Abbey by the Lee Valley Regional Park Authority involved ground disturbance within the Scheduled Area of the Abbey grounds. In September-October 1990, the Essex County Council Archaeology Section, by arrangement with English Heritage, undertook advance excavation in the areas to be disturbed by the bridge's footings.

Three trenches were excavated. On the south side of the Stream, a modern drain could not be disturbed, so two trenches, A and B, were dug, on either side of the drain. These were 1.5m (N-S) by 1m. The third trench, C, on the north side of the Stream, was 1.5m (E-W) by 1m (Figs 28 and 29).

Subsoil

This was a variable silty clay. In trench A, at O.D. 18.12m, it was medium grey, with occasional medium-sized flints. In trench B, at O.D. 19.16m, it was medium greyish-brown, with rare chalk flecks and small fragments.

Trench A

Contexts in all trenches are described in chronological order

24	Layer	Medium-to-dark brownish-grey silty clay with occasional, mostly large stones. Only present in NW quarter of trench.
23	Layer	Redeposited natural.

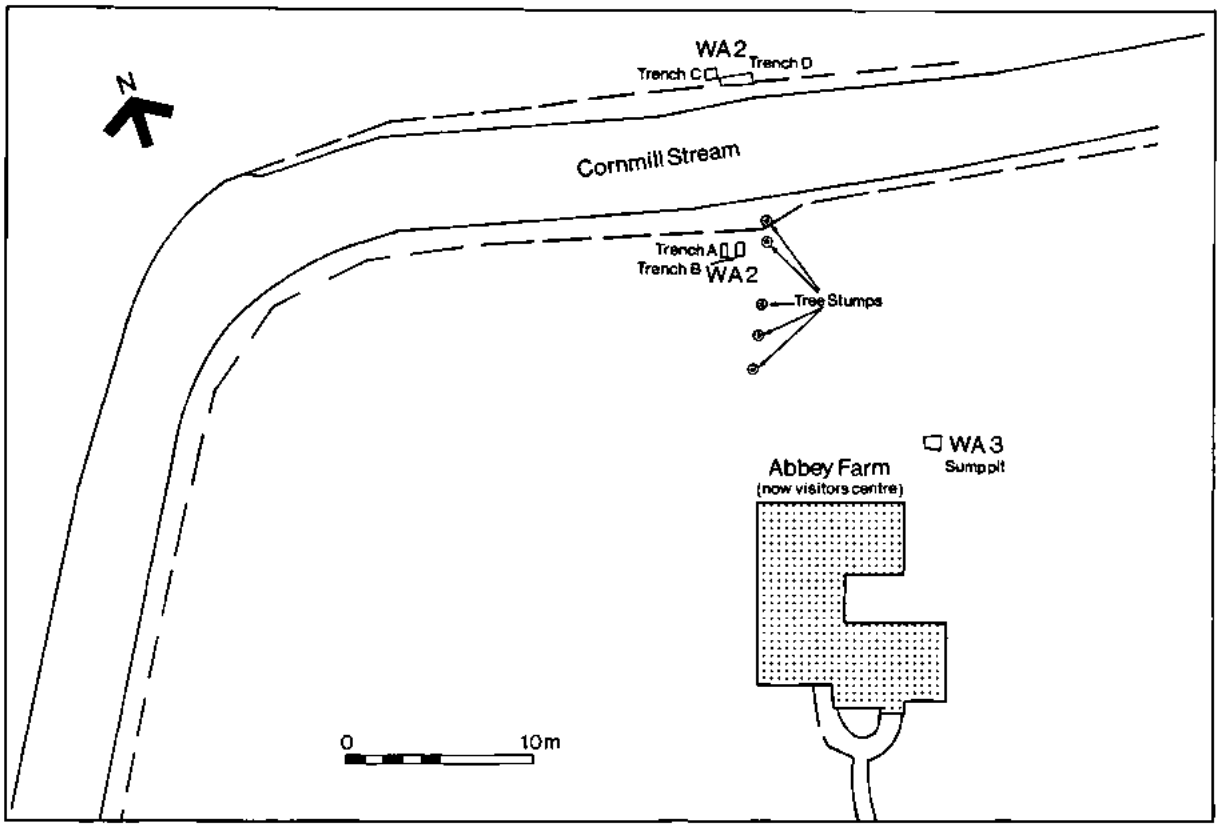

Fig. 28 Waltham Abbey, Cornmill stream; site location.

21	?Surface	Large tile fragments on a matrix of re-deposited natural.
20	Layer or fill	As matrix of '21', but with frequent flecks to large fragments of chalk and partly-decayed light buff mortar. Cut by 10, 14 and 17. (20 could be the fill of a cut feature.)
10	Post-hole	0.2m in diameter (max.), *c.* 1.5m deep. Formed when post 12 was driven into the ground.
12	Post	1.2m long (as surviving), up to 1.4m in diameter. A trunk tapered at one end, then driven into the ground. The upper parts had rotted away, having been above the water table and/or the earlier ground surface.
11	Fill of 10	Material from later contexts that had collapsed into the upper part of the feature as the post rotted.
14	Post-hole	0.48m (N-S) by >0.2m.
16	Post	In '14'. Could not be removed.
15	Fill of 14	As '11'.
17	Post-hole	Up to 0.24m in diameter, >1.5m deep.
19	Post	In '17'. >1.5m long and *c.* 0.2m in diameter. Only the upper part could be removed.
18	Fill of 17	As '11'.
8, 6, 3, 2	Layers	Dumps of material to raise the Stream banks.
1	Layer	Topsoil.

Dating
Pottery indicated that contexts 24 to 20 were Medieval, whilst the brick in context 21 indicated it dated from the 15th century or later. Context 6 was post-Medieval, and contexts 2 and 1 were recent.

Trench B

28	Fill	Not bottomed. This context must be the fill of a feature, the edges of which were outside the trench.
27,26, 25,22		These were perhaps layers, but some or all could have been fills of the same feature as '28'. Contexts 27 and 25 were redeposited natural.
13	Layer	Foundation for gravel surface,'9'.
9	Surface	Spread of medium-sized stones. Probably worn. This was perhaps a trackway leading to a ford in the Stream at this point.
7,4	Layers	Material dumped to raise the Stream's banks.
1	Layer	Topsoil.

Dating
Pottery showed context 28 was of early Medieval (perhaps 11th-century) date. Brick in context 26 dated it to the late 12th century or later, and tile in context 25 dated it to the second half of the 13th century or later. Pottery from 13 was later Medieval. Context 4 was post-Medieval.

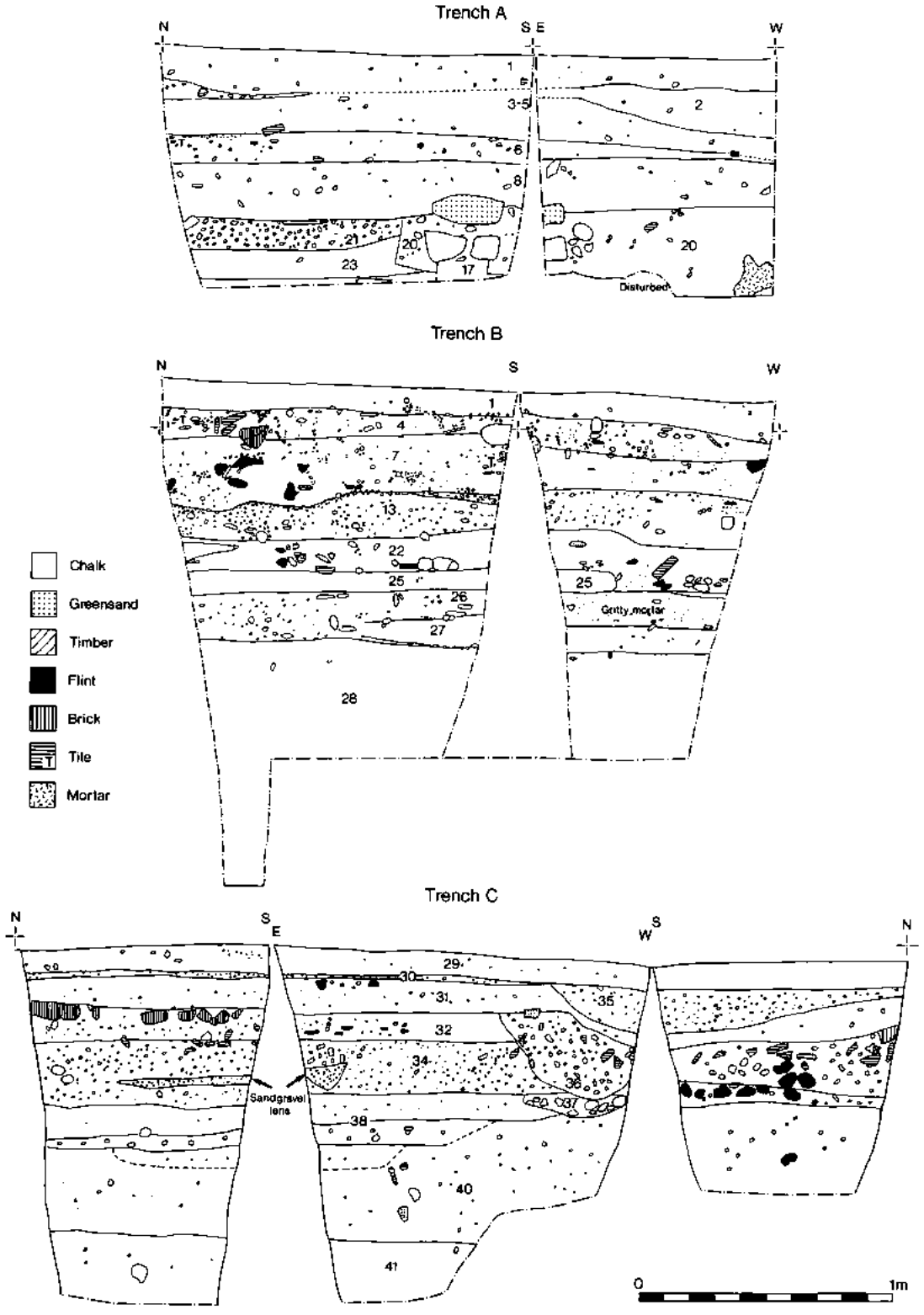

Fig. 29 Waltham Abbey, Cornmill stream; sections.

Trench C

41,40,39	Layers	Probably flood deposits.
38	Layer	
37	Wall	Flint nodules and rarer tile fragments in light greyish-brown sandy mortar. Ran N-S. Truncated by robbing. A rectangular parchmark was recorded by the Waltham Abbey Historical Society, on this side of the Stream, and interpreted as the Abbey hospital. This wall corresponds with the southern end of the hospital's west wall.
34	Layer	Dump?
32	Surface	Had large brick and tile fragments at the top.
35	Robber trench	To rob wall '37'.
36	Fill of 35	
31	Layer	
30/33	Layer	Levelling, compensating for subsidence into '35'.
29	Layer	Topsoil.

Dating

Evidence was limited. Context 40 was dated to the late 12th century or later by the brick it contained, and to the 13th or 14th centuries by its pottery. Brick showed context 32 dated from the 15th century or later. Pottery dated context 31 to the 19th or 20th centuries.

Watching brief on bridge construction

Two visits were made to the site during construction of the bridge in May 1991.

South side of the Stream At the end of the archaeological work, the L.V.R.P.A. backfilled the trenches. When construction started, initially only the backfill of trenches A and B, together with the baulk between them, were removed. However, between the first and second visits the footing trench was extended to the west, resulting in two timbers from the row found in trench A being removed. One of these was undoubtedly post 16, which could not be extracted during our excavation. Both timbers were salvaged and recorded.

North side of the Stream The trench excavated for the bridge foundation did not coincide with trench C, so is referred to as trench D. Again, this was excavated between the first and second visits. It was 3.4m (NW-SE) by up to 1m, and *c.* 3m deep. The trench was photographed only, it being unsafe to enter.

The photographs show that the medieval silts recorded in trench C were at least 1.5m thick. Pieces of wood (apparently worked) near the east and south corners of the trench at a depth of *c.* 2m indicate a wooden structure was damaged by the digging of this trench. A layer of tiles or bricks was visible at a depth of *c.* 1.25m in the north-west side of the trench.

The finds

A medieval pipkin handle

H. Walker

A Mill Green fine ware pipkin handle was excavated from WA2 context 13 and is illustrated (Fig. 30). A pipkin is a cooking pot-shaped vessel with one handle, a pouring lip, and sometimes tripod feet. They were used in food preparation. This vessel has light brown surfaces and a thick grey core, and shows patches of pale green glaze on the surface. There is no additional sand-tempering as is sometimes the case with Mill Green ware handles. The end of the handle has been turned over and luted on to the underside. The underside is sooted, indicating the vessel was placed over a wood fire. Overlying the sooting in places was a deposit of limescale, but as the limescale covers the breaks, deposition must have taken place after the vessel was broken. This vessel could have been produced any time within the lifespan of the Mill Green industry which lasted from the later 13th to mid 14th centuries (Pearce *et al.* 1982, 266-98).

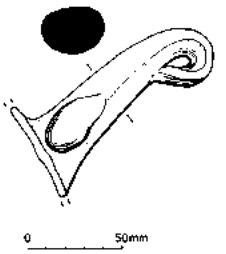

Fig. 30 Waltham Abbey, Cornmill stream; pipkin handle.

Brick and tile

P. Ryan

Brick

Only one complete brick and six part bricks complete in two dimensions were included in the finds from WA2. Much of the material was very fragmentary but four types of brick fabric were identified — BF/A, B, C and D.

BF/A has a very fine matrix very similar to Roman bricks and tiles and to the Great bricks in the Gateway at Waltham Abbey dated *c.* 1369. Fragments with BF/A fabric are included in contexts 6, 7, 8, 11, 20, 21, 26 and 38. Underfired fragments, which had been 'worked' on a surface dusted with powdered chalk, all possibly part of the same brick were found in contexts 6,8,11 and 20. All the fragments were too small to identify whether they were from Roman or medieval Great bricks.

BF/B is a sandy fabric with pebble and angular flint inclusions, the type of fabric found in Flemish or statute bricks i.e. those with proportions of *c.* 4:2:1 and capable of being held in one hand.

Fragments of brick with this type of fabric were found in contexts 4,7,11,12,21 and 32. All are irregular and have the pitted bases and creased faces typical of bricks dating from the 15th to early 17th century. Huggins (1972, 114) has found that Flemish or statute bricks were used from the last quarter of the 15th century at Waltham Abbey.

BF/C is a granular fabric similar to that of the late 12th/early 13th-century Coggeshall bricks. Fragments of bricks with this type of fabric were found in contexts 4,8,26 and 40. Most have the reduced cores which are a relatively common feature of early medieval bricks.

Two part bricks with this fabric in context 8 both have triangular impressions in the upper surface to assist the adhesion of mortar or plaster and holes pierced through the base to help prevent distortion during firing.

A number of similar bricks were found in Building I at Waltham Abbey but all were in 15th-century contexts and were reused (Huggins 1972, 111-13).

A brick with stabbed holes was found during the Chelmsford Priory reredorter excavation and several examples were found amongst kiln furniture at the Danbury tile factory (Drury 1974, 74; Drury and Pratt 1975,123). Special bricks with triangular keying impressions were found at Writtle in 14th- to early 16th-century contexts and at Pleshey in reused contexts but these were much

more precisely made than the Waltham Abbey examples (Rahtz 1969, 22 and 111; Williams 1977, 86).

BF/D is a cream coloured, sandy fabric. Bricks with a similar fabric were common in the 18th and 19th centuries. However, small quantities have been found in a number of early 14th-century contexts. Several are incorporated in the *c.* 1369 Gateway at Waltham Abbey and the fragments found in context 8 may be of this date.

Tile

It has been possible to identify four types amongst the roof tile fragments from WA2.

Type T1 — Nibbed tiles, flat, knife-trimmed. The fabric of this type of tile contains some quartzite grains which have left distinctive drag marks on the surface of the tile where it has been trimmed and where the tile has been slipped out of the mould. Patches of sand on the under surface (i.e. under surface when the tile was being moulded but upper surface when the tile was hung on the roof) suggest they were laid on a sanded surface to dry prior to firing. Some sections of the edges of these tiles were not trimmed.

Nibbed tiles were superseded by peg tiles during the second half of the 13th century.

Type T1 tiles were identified in contexts 5,9,13 and 25.

Type T2 — Peg tiles with circular pegholes, flat, knife-trimmed. The fabric of this group of tiles was the same as the fabric of Type T1 with the characteristic sand grain drag marks. These tiles may have been made in the last years of, or immediately after, the production of nibbed tiles.

Type T2 tiles were identified in contexts 5 and 25.

Type T3 — Peg tiles with circular pegholes, flat, not knife-trimmed. The fabric of this group of tiles is distinctive. The particles are particularly fine and it contains very few larger grains. Whilst Types T1 and T2 generally have reduced cores, the majority of this type of tile is oxidised throughout. A large quantity of this type of tile has been found during recent excavations to the rear of 3-5 Sun Street, Waltham Abbey (N. Brown, pers. comm.). It came from that site's context 90, the fill of a well dated to the late 15th/early 16th century. Allowing for a minimum life of 100 years this tile could be dated to the late 14th/early 16th centuries. Type T3 tiles have been identified in contexts 2,8 and 21.

Type T4 — Peg tiles with circular pegholes, cambered, not knife-trimmed, sanded mould. Cambered tiles are considered to be later in date than the flat forms. Type T4 tiles were identified in context 4.

Flintwork

O. Bedwin

A total of 15 pieces of humanly-struck flint were found, of which 14 were flakes (many with some cortex left) and one was a battered thumbnail scraper. The latter is of a general Neolithic or Bronze Age date; the remainder of the assemblage is undiagnostic.

Animal bone

O. Bedwin

A total of 31 fragments of bone and teeth were identified; a further 40 fragments remained unidentified. The 31 fragments derived from 14 contexts of medieval and later date. Species represented were: *Bos* (12 fragments); *Ovis* (12 fragments); *Equus* (4 fragments); *Sus* (3 fragments). The assemblage is too small to permit any conclusions about diet or economy.

Miscellaneous finds

H. Major

Other finds from the site included stone and mortar (much of it undoubtedly from the Abbey buildings), iron nails, oyster and other shells — see archive for full report.

Of interest were shells of the duck mussel (*Anodonta anatina*), one from a medieval context. McMillan (1968, 9) notes that *Anodonta* are edible, and that they were deliberately introduced into medieval fishponds. These finds may therefore indicate consumption of this shellfish at the Abbey.

Dendrochronology

C. Groves

The four samples submitted from this site were all oak. None contained enough growth rings for dating purposes.

Discussion

For a general description of the archaeology of Waltham Abbey, see Huggins (1972, 30-35 and 88-95) and Eddy and Petchey (1983, 88-91).

The radically-differing stratigraphies of the adjacent trenches A and B illustrate the unreliability of such small trenches when used to interpret deeply-stratified sites. However, the excavation and watching brief have shown the presence of medieval and post-medieval sequences on both sides of the Cornmill Stream. They have also shown timber survival, and indicate structures exist.

Abbey Gardens improvement scheme (site code WA3)

This scheme was intended to improve visitor access to the Abbey grounds, and provide improved facilities for the Visitors' Centre. A watching brief was maintained on this work by the author.

Though much ground disturbance was caused, this was largely to the topsoil only. There were two major exceptions:-

(i) An entrance shaft to the Abbey sewer system was exposed during the laying of a telephone cable. This was rectangular, 0.75m (NW-SE) by 0.5m, and 1.95m deep. Its walls were stone, notably greensand, in a concrete matrix. Bricks were also present, mostly as repairs. Since no damage was to be caused to this shaft, only photographic records were made.

(ii) Whilst the remainder of this scheme had Scheduled Monument Consent, a sump pit dug by the construction workers to the north-east of the Visitors' Centre, did not. The E.C.C. Archaeology Section recorded the layers exposed in this pit, which was *c.* 2m (NW-SE) by *c.* 1.5m, and up to 1.4m deep. Beneath topsoil, five layers (the earliest deeper than the sump pit) and a gully or slot with a charcoally fill, were present. No dating evidence was recovered.

(Full details of this work are in the site archive.)

Acknowledgements

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Medieval finds from the Post Office, High Street, Maldon

M.R. Eddy, H.J. Major and H. Walker

A group of late 13th-century pottery, metalwork and organic material was recovered from a barrel-lined well or cess-pit during minor building works inside the present Post Office in Maldon High Street. The finds are dated on the basis of the pottery.

Introduction

Refurbishment of 43-47 High Street, Maldon (Fig. 31) for the town's new main Post Office entailed the excavation of a single stanchion pit in the centre of what is now the public concourse. Members of Maldon Archaeological Group (MAG) maintained a watching brief on the works, principally for evidence of above-ground building history, and in mid-March 1980, Brian Chinnery informed MAG and Essex County Council's Archaeology Section of the discovery of pottery and organic material in the 'stinking spoil' removed from the excavation in the interior of the building.

During the last fortnight of March 1980, MAG members recovered a collection of pottery, metal objects and wood from the stanchion pit, which by chance had been driven straight down a barrel-lined shaft, and from the builder's spoil.

The barrel itself and some of the finds were excavated *in situ* by Brian Chinnery. However, the provenanced and unprovenanced material were not kept separate, though the restricted nature of the excavated area and the general homogeneity of the finds suggested at the time that all the material came from essentially the same context. Later examination of the finds supports the view that the material is contemporary.

All the metalwork was retrieved from the builder's spoil.

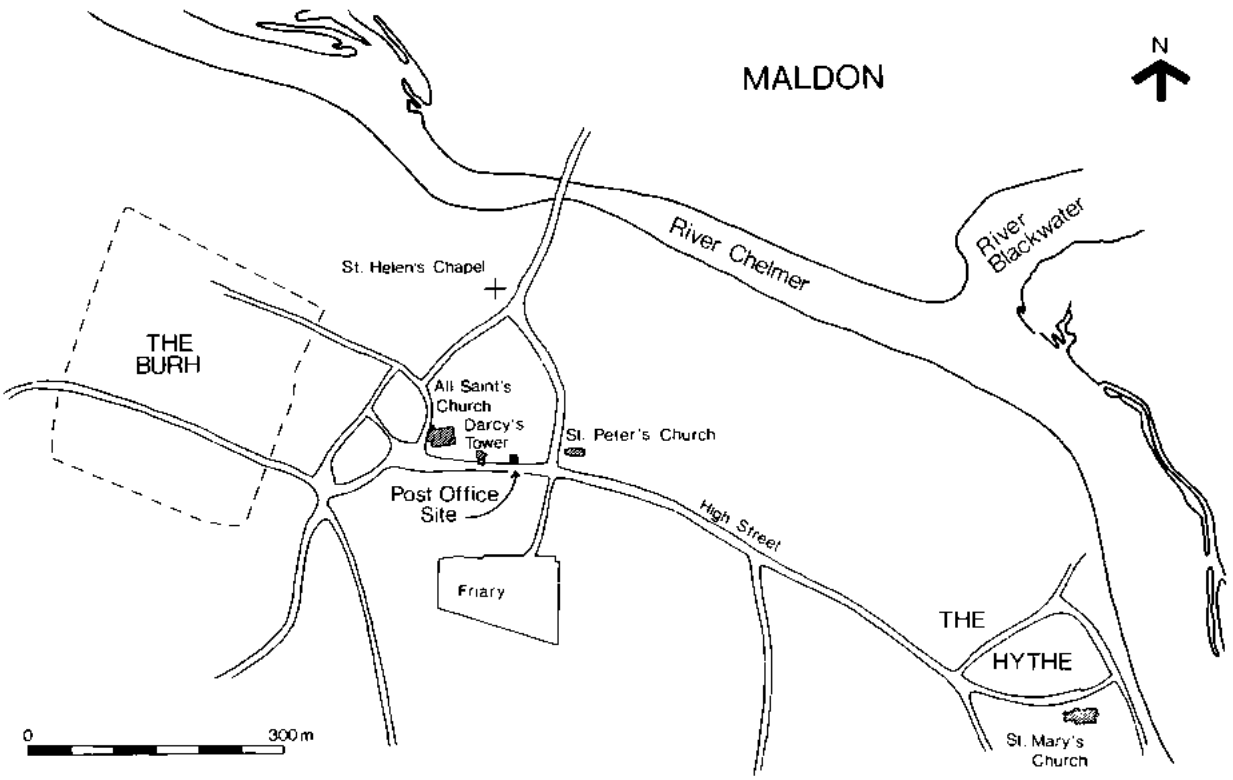

Fig. 31 Maldon Post Office. Location of the Post Office in relation to the main medieval landscape features of Maldon.

Medieval Coarse Ware Pottery
by Helen Walker
Introduction
The remains of two small, flat-based cooking pots; two medium sized cooking pots with flanged rims; and two large cooking pots with squared rims were discovered in the pit, along with part of a large squat jug and the rim of a much smaller jug. All are illustrated (Fig. 32). Also found was a slashed handle and part of the shoulder from another large squat jug, and some body sherds that may or may not belong to the illustrated vessels. The pottery is very similar and must be from the same source.

The Fabric
Colour is typically grey with darker grey surfaces, although some examples have red-brown or grey-brown margins. It is hard, well fired with pimply surfaces and is micaceous. Under the microscope, moderate inclusions of mainly white and colourless, sub-angular quartz sand can be seen.

Coarse wares from the different industries are difficult to distinguish, but these vessels may be products of the Mile End potteries situated just north of Colchester and about 27 km north east of Maldon. The fabric corresponds to Mile End fabric C, period II (Cracknell 1975, 36-7). The pottery could have been transported by road or by river.

Methods of manufacture
Recent studies have shown that coil-building vessels on a turntable can produce well-made vessels of even thickness that are difficult to tell apart from wheel-thrown types (Moorhouse and Pearson, pers. comm.). However, coil-built vessels often show internal ripple marks and horizontal breaks (along lines of weakness where the coils were joined), whereas wheel-thrown vessels can be distinguished by internal spiralling marks and curved breaks.

When the Maldon vessels were examined, it was found that the two small cooking pots (Nos 1 and 2) were wheel-thrown and the top halves of the other two vessels also appear to have been

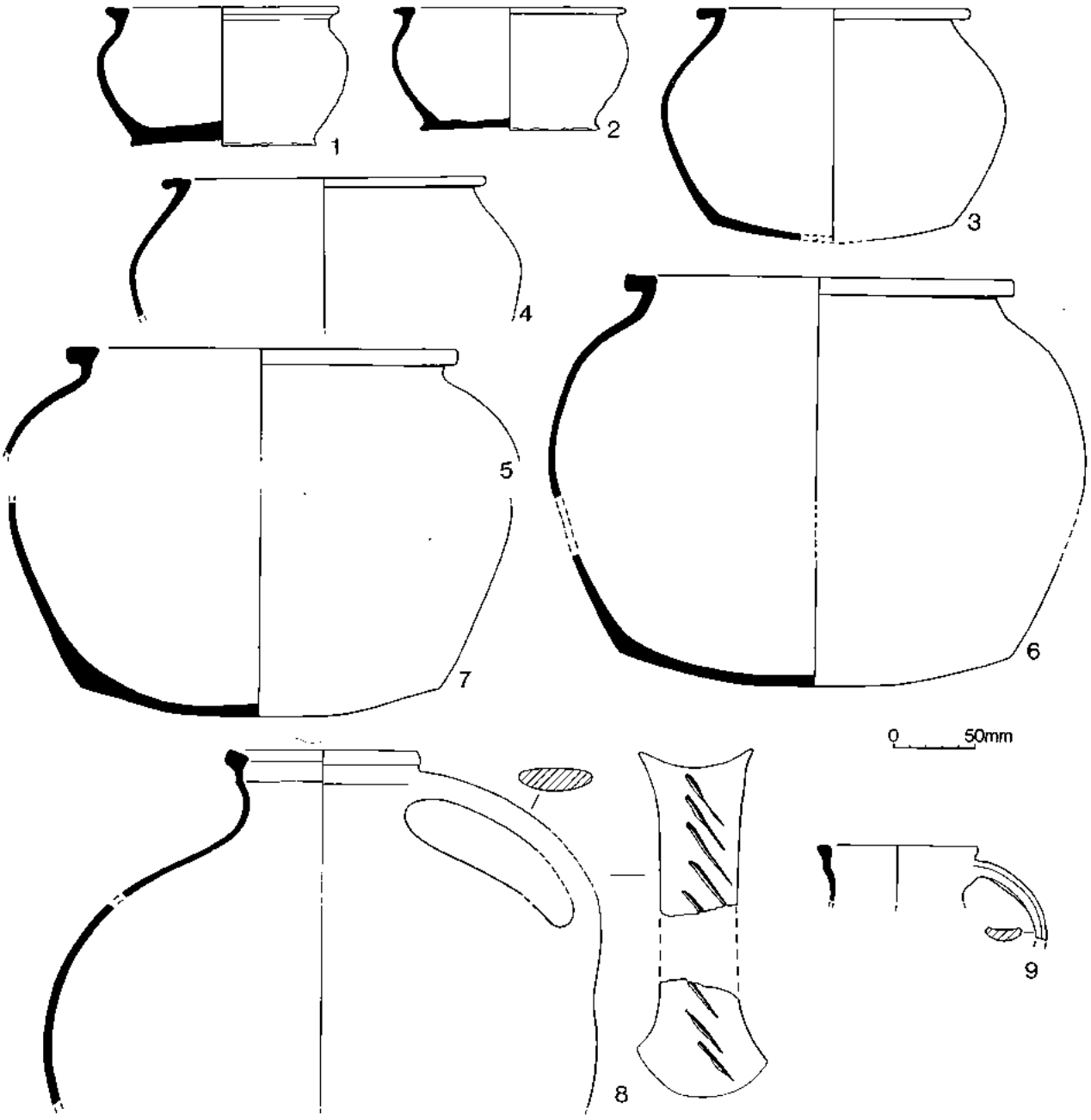

Fig. 32 Maldon Post Office. The pottery.

wheel-thrown. Of the bases, Nos 3 and 6 are indeterminate; No.3 because the inside surface is missing and No.6 because it is too incomplete, but large base No.7 appears to be coil-built. This coiled base is no bigger than cooking pot No.6 which has a wheel-thrown rim; it is possible that for larger vessels the top is wheel-thrown, the bottom is coiled and the two halves are joined in the middle. The method of manufacture has already been observed on Essex coarse wares (John Cotter pers. comm.). The probable reason for this is that it takes a lot of physical strength for a potter to throw a large pot.

Dating

Drury and Petchey dated the Mile End period II pottery on typological grounds to the 'early mid 13th century, probably before *c.* 1275' (Drury and Petchey 1975, 58). However, cooking pots Nos 3 and 4 have later flanged horizontal rims as found at Danbury tile factory, there dated late 13th to early 14th century (Drury and Pratt 1975, fig. 57.A3). So perhaps a late 13th-century date for this group is most likely.

The Catalogue

1. Small cooking pot with flat base: grey with paler grey surfaces; estimated 80% complete; entirely wheel-thrown; rim applied separately and has broken away in places; untrimmed base; faint concentric arcs on the underside of the base indicate that wire was used to remove the pot from the wheel.
2. As No. 1 but about 90% complete.
3. Cooking pot: grey with darker surfaces; estimated 60% complete; possibly wheel-thrown. Much of inside surface has spalled away; there is a cream-coloured internal deposit which does not react with dilute hydrochloric acid, overlain by a rust-coloured deposit; in two places small lumps of rusted iron have adhered to the surface of the pot along with rust coloured patches. The heavy spalling indicates that the pot has been heated, but there are no signs of fire-blackening or sooting. The iron deposits do not necessarily indicate the pot was used for iron working, as they could have been produced by metal artefacts coming into contact with the vessel. The white deposit cannot be limescale as it does not react with acid; urine often leaves a whitish residue.
4. Cooking pot rim: grey with darker grey surfaces, wheel-thrown; fire-blackened on shoulder.
5. Cooking pot rim: red-brown core, grey margins and dark grey surfaces; wheel-thrown; internal iron staining and spall patch; comparable (in form) to vessel from Mile End phase II (Drury and Petchey 1975, fig. 10.53).
6. Cooking pot: grey core, brown-grey margins, grey surfaces with some paler patches; highly fired giving a 'metallic' finish; the top half at least is wheel-thrown; comparable (in form) to a vessel from Mile End phase II (Drury and Petchey 1975, fig. 10.55).
7. Base and sides of cooking pot or squat jug: grey core, red-brown margins and pale grey surfaces; horizontal ripple marks on the inside surface and horizontal break lines indicate coil-building. It can be seen from the illustrations that this base could fit jug No. 8 or cooking pot No. 6, suggesting vessel sizes were standardised.
8. Part of a squat jug: grey core, red-brown to grey-brown margins and dark grey surfaces; estimated 20% complete; probably wheel-thrown; knife-slashed handle; rim form comparable to vessel from Mile End phase 1 (Drury and Petchey 1975, fig. 4.4).
9. Rim of small jug: buff-coloured fabric but appears to be a Mile End product; splashes of glaze on the underside of the handle where it meets the neck.

Metalwork (Fig. 33)

by Hilary Major

The metalwork and leather could not be located in Colchester Museum, and the following comments are based on the pre-conservation drawings.

All the metalwork was unstratified, and only one object (the sword chape, Fig. 33.3) was independently datable. The other two objects may be of similar date. The suggested date for the chape, late 14th century or later, is somewhat later than that proposed for the pottery. It is, however, incomplete and may be earlier. Alternatively, it may have derived from a later context than the pottery.

Fig. 33.1 Gilt copper-alloy stud on a leather belt or strap. Such studs are sometimes seen as functional belt stiffeners, but on this strap they appear to be purely decorative. The leather is also decorated by slashes which perforate the leather, implying that strength was not important and that this was not primarily a utilitarian object.

Fig. 33.2 Bifurcated terminal of ?strap hinge, of iron. The drawing suggests that there were two rivets down the centre of the strap and that it may have broken across a perforation. The bifurcated terminals end in decorative scrolls which, unusually, are perforated, presumably for rivets. This style of strap hinge terminal is long-lived and undatable within the medieval and post-medieval periods. A range of scrolled hinge terminals is illustrated by Biddle (1990, 345-6), with dates ranging from the 11th to the 17th century.

Fig. 33.3 Sword chape, copper-alloy gilding over iron. The upper end is broken, and there are no visible details on the lower end nor any decoration. This was probably a simple tube with a rounded end, formed from sheet metal and soldered down the back. The top edge may have been cut into a decorative shape. This type of plain, tubular sheath terminal was current from the late 14th century, supplanting the U-shaped chapes common in the earlier medieval period (Ward Perkins, 1940, 281).

The wood (Figs 34 and 35)

M.R. Eddy; wood identifications by A.-M. Bojko

Fig. 34.1 Part of a straight plank of unidentified wood, 2.5 cm thick by *c.* 17.5 cm wide (1 inch by 7).

Fig. 34.2 and 3 Fragments of barrel lids.

Fig. 34.4. 4a, b, c Oak barrel staves, showing the internal groove which supported the barrel bottom and peg holes. The barrel was reconstructed as shown in Fig. 4.4f.

Fig. 34.4d and e Pieces of withy presumably used to hold the staves together.

Fig. 35.1 ?part of an oak shovel blade. Only one curved edge survives, and the piece is slightly concave in section along its length. The cross-section shows some degree of curvature just above a possible straight-edged hafting hole. The concave break at the top end may be a damaged peghole. If such a reconstruction is acceptable, the form is most closely paralleled by a slightly smaller oak shovel blade from a mid 12th-century context at Perth (Morris 1980, 208), though shovels of this general type have been found in contexts ranging from the 12th to the 14th century (*ibid.*, 210). Alternatively it may be part of a paddle blade or some other type of artefact.

Fig. 35.2 to 35.6 Five distinct rim forms, all too small to determine their diameters. Fig. 35.2 is apparently a straight-walled vessel with an inturned rim, but it may have been subject to post-burial distortion. The other rims are of bowls.

Other organic material

Adhering to the iron strap hinge fragment, Fig. 33.2, were five large seeds, thought at the time of excavation to be cherry stones.

Conclusions

The excavated remains represent a barrel-lined pit used, at least in its final phase, as a cess pit. Such structures are common on late Saxon and medieval sites, but are rarely recovered archaeologically in Essex small towns because of the nature of the subsoil and

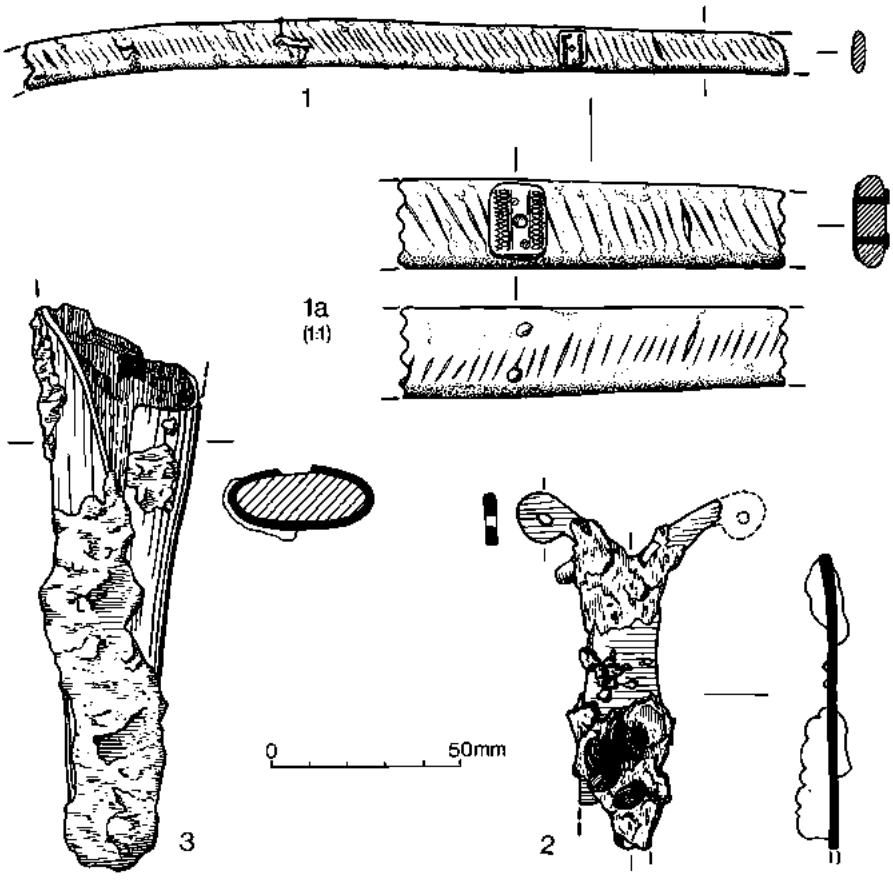

Fig. 33 Maldon Post Office. Metal finds.

the shallowness of the deposits.

On the basis of the pottery a late 13th-century date is proposed for the whole context. Of the non-ceramic finds, only the sword chape and the possible shovel fragment are datable. The possible wooden shovel, if that is indeed what it is, would tend to support the pottery dating. The sword chape, however, is almost certainly later on the basis of its own design features and on the basis of changes in the shape of sword blades. As both the pottery and the sword chape are dated according to well-developed typologies it is most likely that the chape is intrusive. The artefacts were recovered during building work and stratigraphic evidence may well have been missed. Equally the soft fill of the barrel pit could easily have permitted a relatively heavy object like the chape to sink into the pit fill. The same may be true of the strap hinge. The pottery, which is all very homogeneous in fabric and style, and the wood and leather are less likely to be intrusive, being lighter and with a greater surface area.

Acknowledgements

The authors are grateful to Brian Chinnery of Maldon for his unenviable task of excavating the barrel and for his quickness to realise the archaeological value of the black sludge being dug out by the builders, Evers and Co. of Tiptree, Essex. The builders, Mr Blick of David Walden (Architects) and Mr Seabrook of the Post Office are thanked for their co-operation, as are the officers of Maldon District Council's Planning Department. Anne-Marie Bojko of Colchester Museum kindly provided identifications of the wood species. Thanks are also owed to Paul Brown, who since 1978 has done so much for Maldon's past, and to those other members of MAG who helped in the work at the Post Office site.

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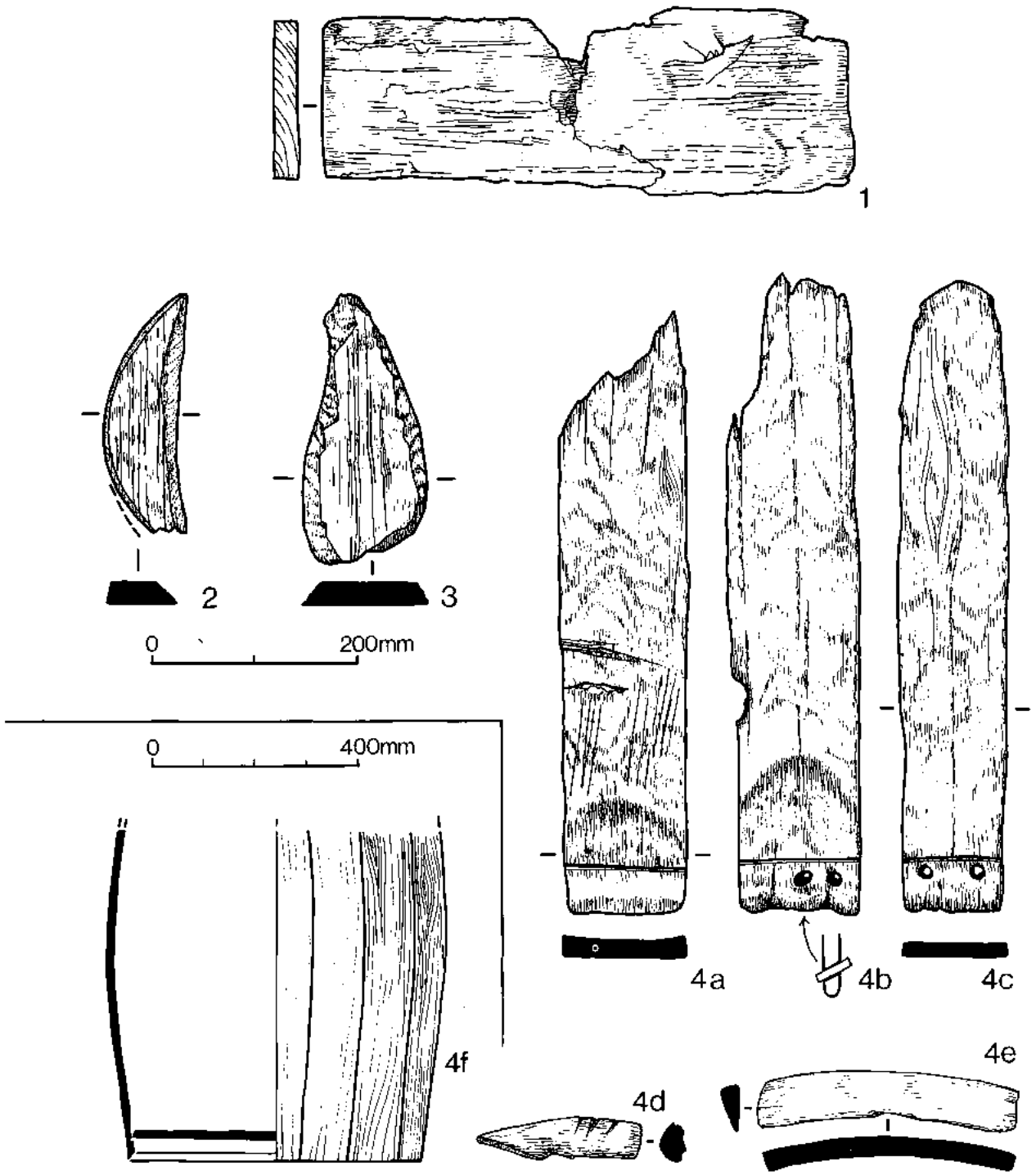

Fig. 34 Maldon Post Office. The wooden barrel and planks.

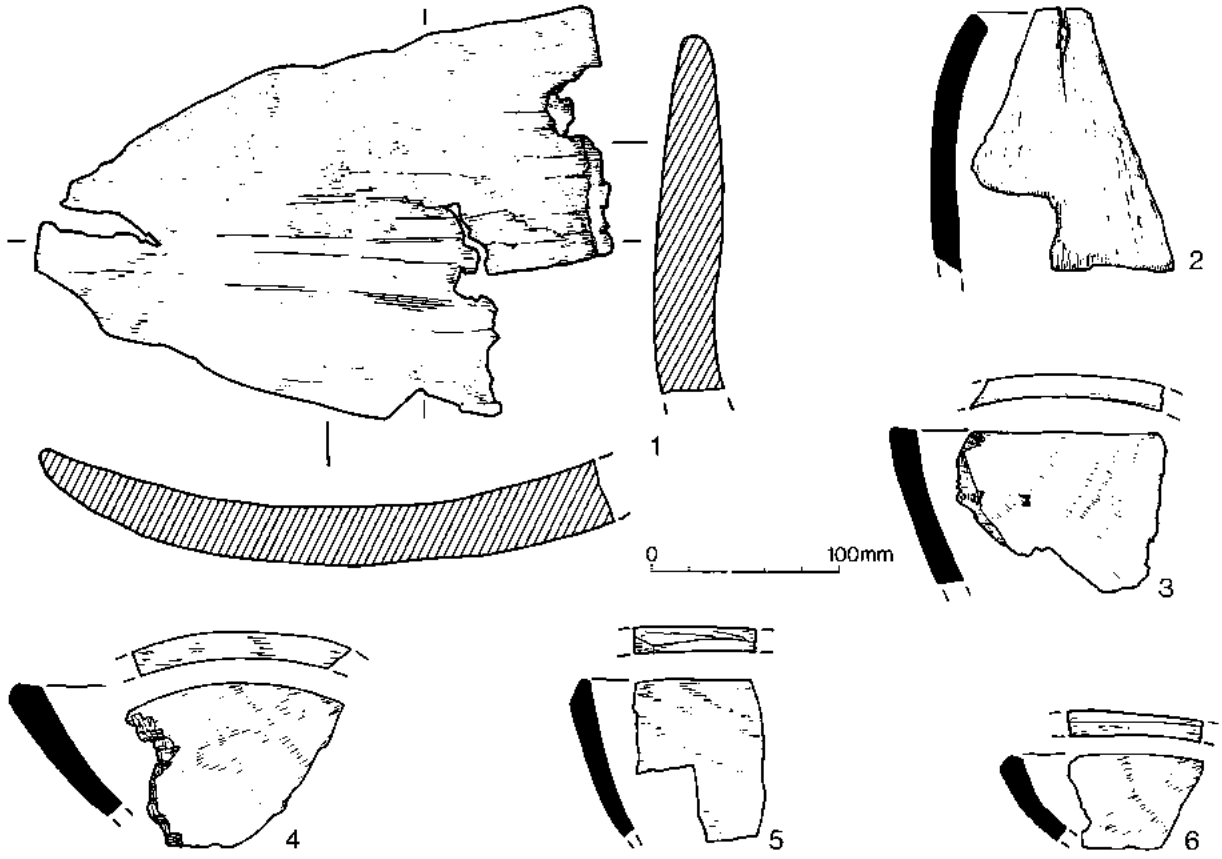

Fig. 35 Maldon Post Office. Other wooden artefacts.

Tilty Abbey: a note on the surviving remains

David Andrews and Paul Gilman

The site of Tilty Abbey is now a gently sloping and very uneven pasture beside the river Chelmer. By the entrance to the field is the parish church, formerly the *cappella extra portas*, which comprises an early 13th-century nave and a notable 14th-century chancel. The only visible remains of the abbey comprise no more than earth-works and two weathered fragments of a single north-south wall. Earthworks and wall are scheduled under the 1979 Ancient Monuments Act. Recording of the surviving elevations was undertaken in 1990 at the request of English Heritage as part of the future management strategy of the monument.

Tilty is one of only three Cistercian houses that existed in Essex. It was founded about the middle of the 12th century by Maurice FitzGeoffrey and his overlord Robert de Ferrers. The church is said to have begun building in 1188, and it was dedicated in *c.* 1220. The abbey seems to have achieved a reasonable degree of prosperity, but by the Reformation, like so many other houses, it was experiencing difficulties. It was dissolved in 1536. The property was acquired by Sir Thomas Audley, but fairly soon passed to the Maynard family (V.C.H.).

The site was excavated by Galpin in 1901, and by Steer in 1942. The lay-out of the abbey was already apparent to Galpin (1928), who published a plan of it. Steer (1949) was able to add but little to this, the only notable addition being the infirmary to the east of the church (Fig. 36). In the dry summers of 1989 and 1990, the abbey has been an outstanding parchmark visible in air photographs.

What survives today are two separate lengths of the east wall of the west cloister range (Fig. 37). It was originally 3'4"-3'6" thick, though today is very eroded in places, and would have stood well in excess of its present height of about 10-11 feet. It is built of coursed flints, with an occasional tendency to be set herring-bone-wise, which are of somewhat irregular size but on average measure about 4-6". Other materials which also occur, albeit rarely, are Roman tegulae, rounded 'fieldstones', a large purplish stone which looks like a glacial erratic, and small pieces of indurated conglomerate, greensand, and a very shelly limestone. Near the top of the west side of the southern length of wall, there is a large ashlar projecting

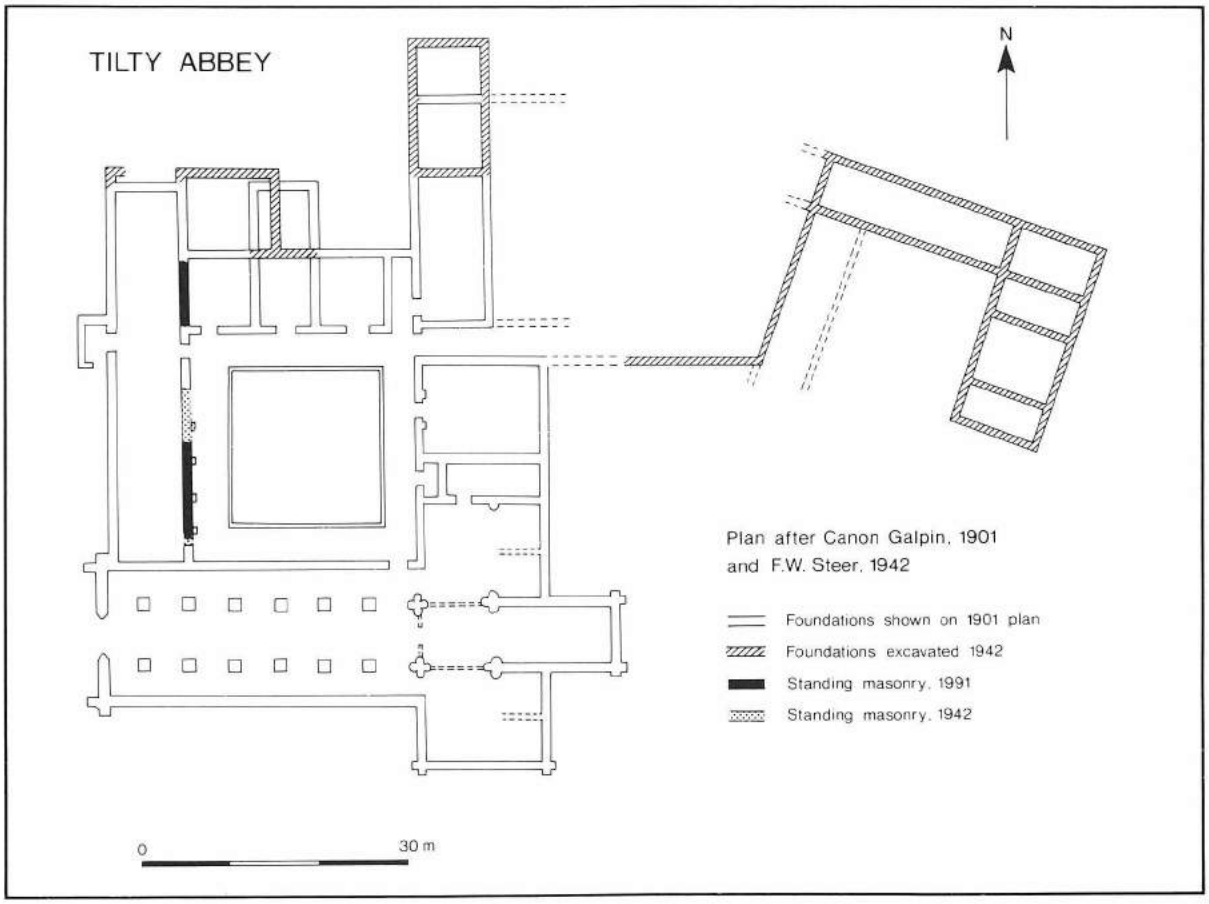

Fig. 36 Tilty Abbey; plan of buildings after Galpin (1928) and Steer (1949).

Plate I Aerial photograph of Tilty Abbey (1990), showing parchmarks.

(?oolitic limestone) on the underside of which there is some crude decoration which looks like interlace. The flintwork is bonded with a hard yellow-brownish mortar which contains abundant coarse gritty sand, as well as small lumps of unburnt lime.

Of the two lengths of wall, the southern one is the better preserved and the more interesting inasmuch as it preserves reconstructable architectural features (Fig. 38). In its western face are the very clear outlines of three vaults, the webbing of which was made with greensand ashlar. These vaults sprang from pilasters or buttresses, and would have been cross-vaults, either groined or ribbed. The eastern face of the wall preserves the scars of three buttresses three feet wide which were designed to balance the thrust of the vaults. The dressings for these buttresses were also made of greensand ashlars which have left negative impressions in the mortar of the wall. It is evident that on this side the wall was fully rendered so that none of the flint-work was visible. In areas, this render retains a thin surface finish which contains much lime and is whitish in colour. On the inside face, beneath the vaults, there are the remains of a distinctive mortar which contains the same coarse aggregate as the underlying mortar but is whitish in colour. It must represent either a deep repointing, or a coloured render.

There are three rows of putlog holes in this wall, many now very damaged but unquestionably original. The top and bottom rows penetrate the full thickness of the wall, and correspond to lifts which are clearly evident in the masonry, coinciding with the springing and top of the vaults. The middle row of holes, which do not go through the wall thickness, served for the formwork for the vaults. It is less clear that there was a lift at this level, but in the wall core at the south end of the wall, there are flat voids left by pieces of wood that must have had a levelling function. In the east side, at the same level, there are two further pieces of wood, and it can be seen that there is in fact a lift corresponding to the top of the putlogs on the inside face. These lifts were about 2'6". As to the pieces of wood, it can be determined that they measured about 4½" by 13", which suggests they can be nothing other than shingles.

The northern stretch of wall retains no original features apart from three putlogs (Fig. 39). The facing on its eastern side has completely vanished. The lines which appear in the facing on the west side are probably either accidental or related to some secondary use to which the building has been put. There is no evidence to indicate that this wall was vaulted, and it is probable that it was not as it is difficult to match the vaulting lay-out of the wall to the south with the surviving patches of flint facing.

These lengths of wall were presumably contemporary with, or slightly later than, the church, and may be dated to the first half of the 13th century. On Steer's plan, the range is identified as having served at the ground floor as a cellar with a lay-brothers' room to

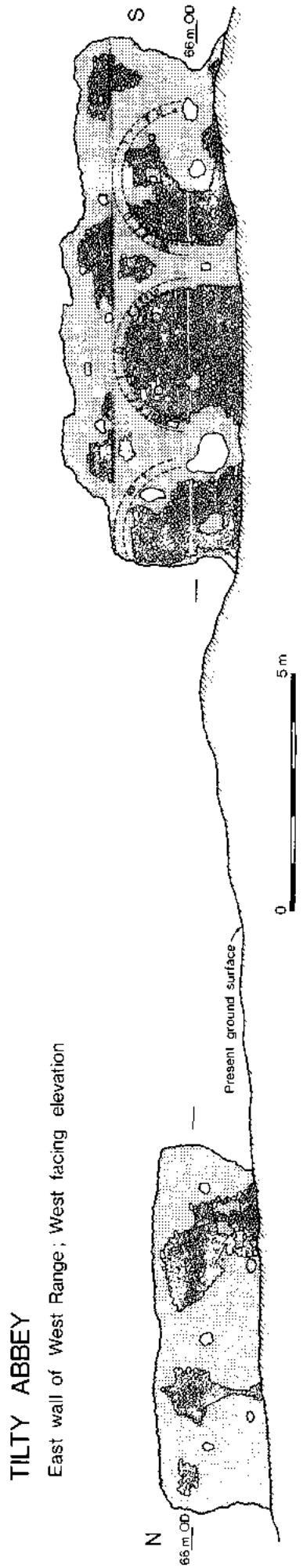

Fig. 37 Tilty Abbey. General elevation of the east wall of the west range; north and south sections.

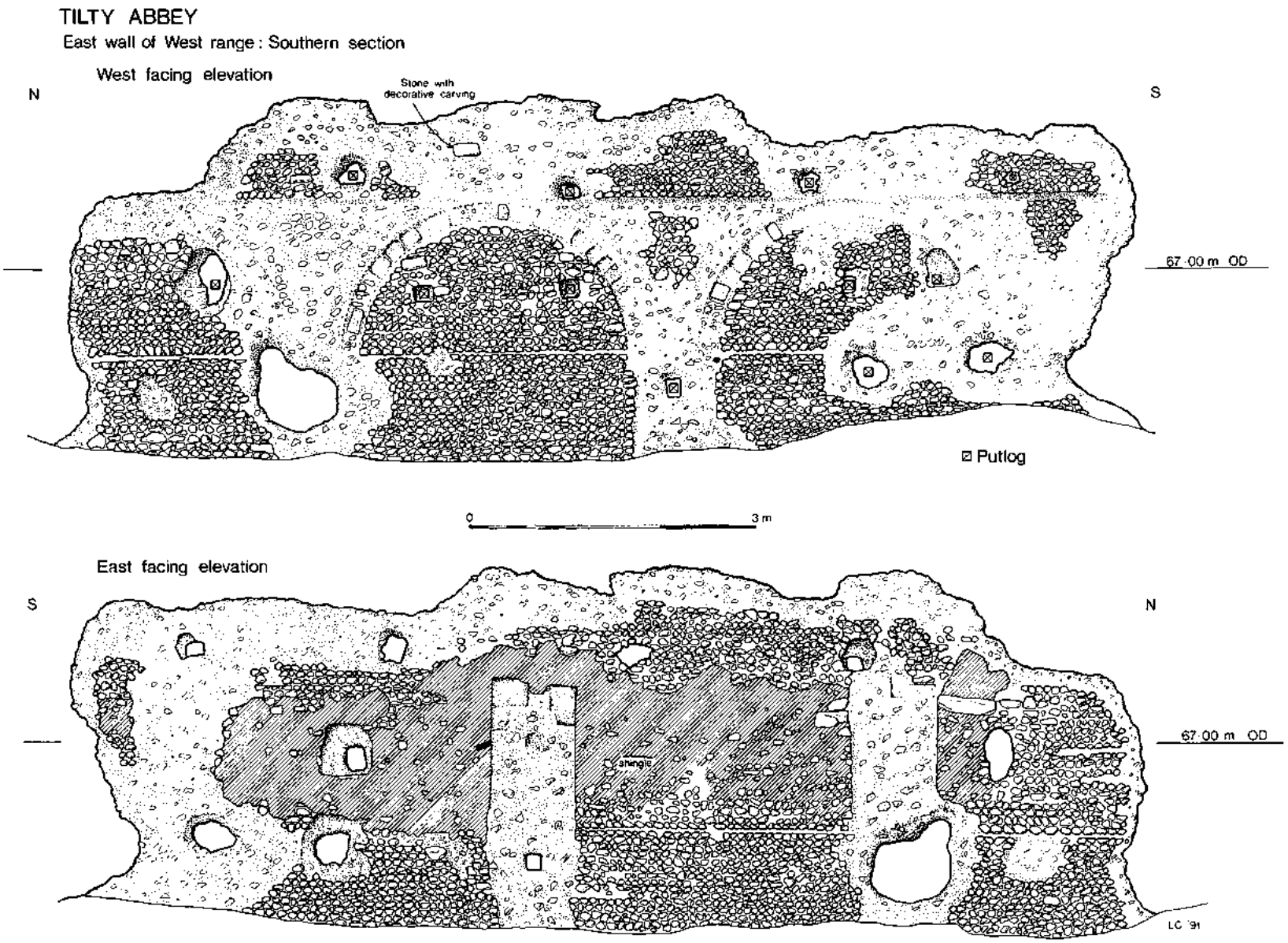

Fig. 38 Tilty Abbey. East wall of west range; detailed elevation of the southern section.

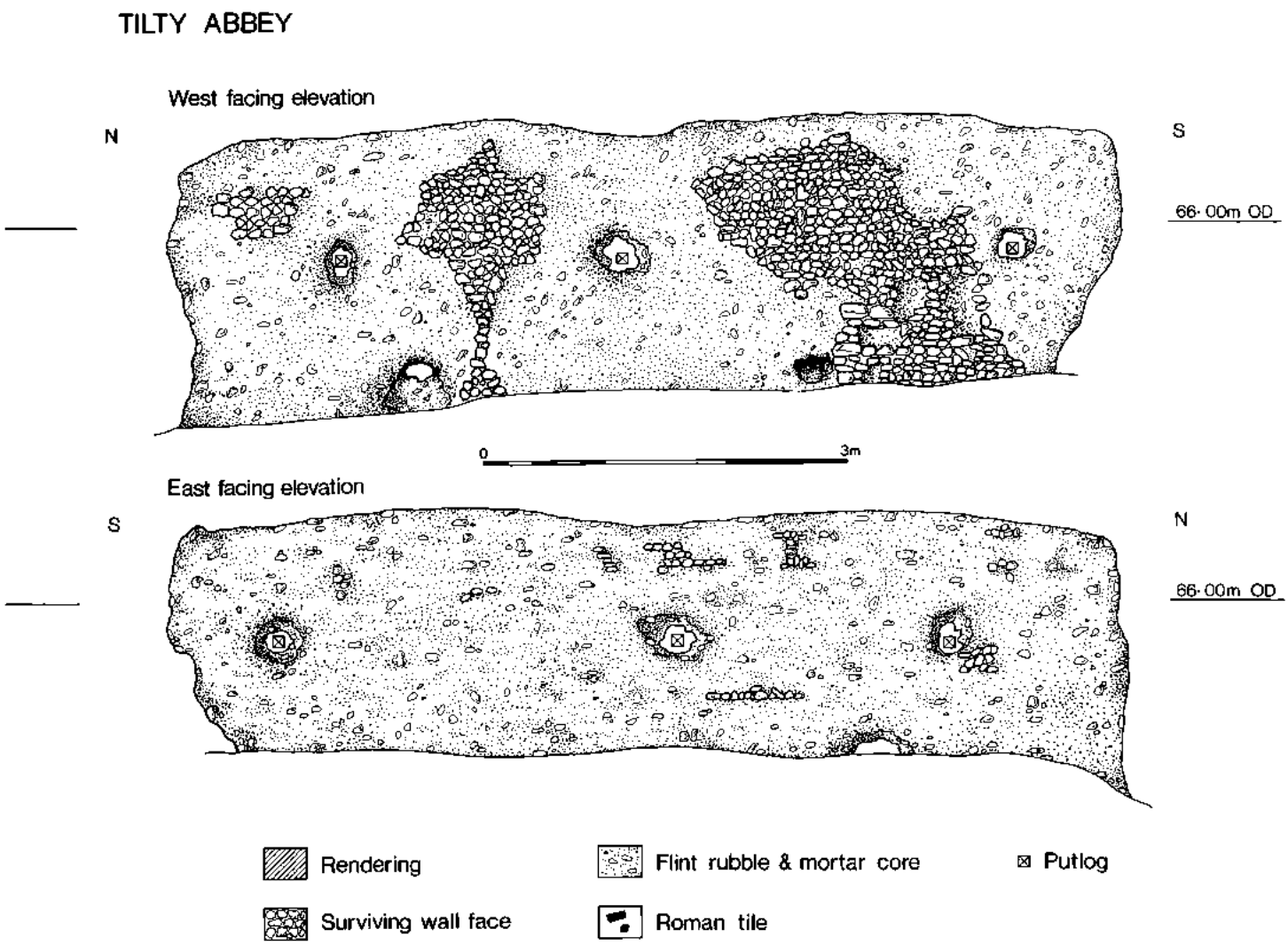

Fig. 39 Tilty Abbey. East wall of west range; detailed elevation of northern section.

the north, the different functions explaining why one part was vaulted and one apparently not. No covered walk is shown round the cloister garth. Although there is no obvious evidence of a lean-to roof to the east of the walls, the well preserved render on the east side of the southern one suggests that this was once protected on this aspect.

The parchmarks

Parchmarks have been observed on several occasions, notably in 1949 (Cambridge University refs CR-11, CR-15, EP-107, CR-13). They also appeared, much more clearly, during the dry summers of 1989 and 1990 (E.C.C. refs 319/1-5). The most complete set of marks was visible in 1990 (Plate 1), and these have been plotted (Fig. 40) using the AERIAL rectification programme developed by John Haigh of Bradford University. Because the plot is derived from oblique photographs, there is a measure of error to be allowed for. For this plot, the programme indicated errors at the control points of *c.* 1-2 metres. On the whole, the plot corresponds very well to the plan obtained by excavation. The marks showed the outline of most of the church, including many pillars of the nave.

Both the cloisters to the north of the church, and the infirmary to the east are also present. However, there are differences: for example the plot shows structures to the west of the church, in areas which were apparently not excavated. There also variations in the detailed lay-out of the cloister and the infirmary. Some of these may be due to the potential error in the plot referred to above. However, the parchmarks also seem to show more walls than the excavated plan. These discrepancies may be explained in two ways. Firstly, the excavated plan may not entirely reflect the real complexity of the plan of the abbey. Alternatively, some of the marks may derive from natural (geological) features.

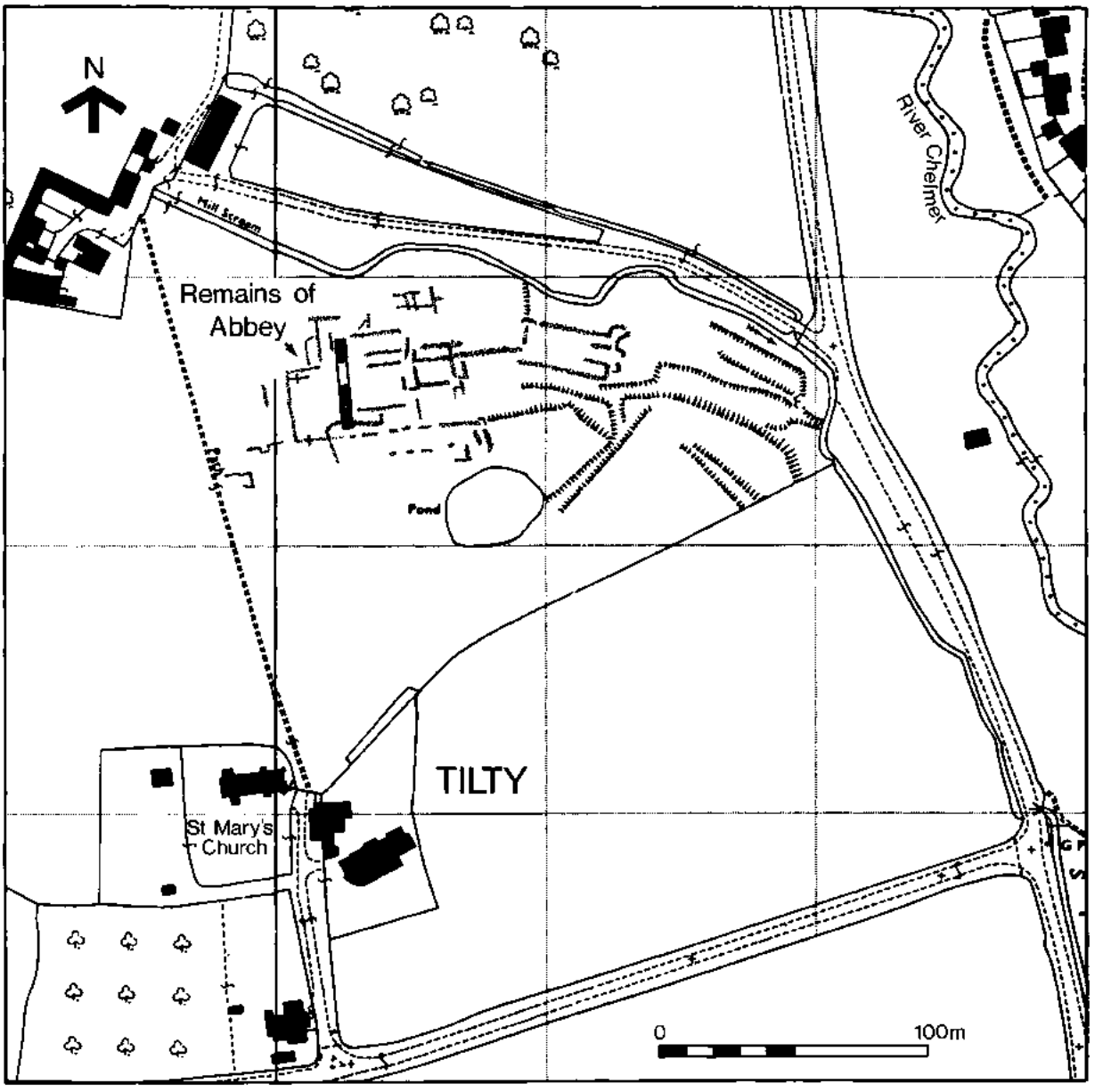

Fig. 40 Tilty Abbey. Plan of parchmarks.

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A late medieval barn at Bocking Hall, Bocking

David Andrews

In 1988-9, the former farmyard buildings at Bocking Hall were converted to dwellings. The site is adjacent to the deanery church of St Mary's, Bocking, granted by Aethelric to Canterbury in *c.* 995. A perfunctory inspection of the groundworks revealed only natural sandy clay overlying gravelly sand, with no traces of archaeological features or ancient occupation.

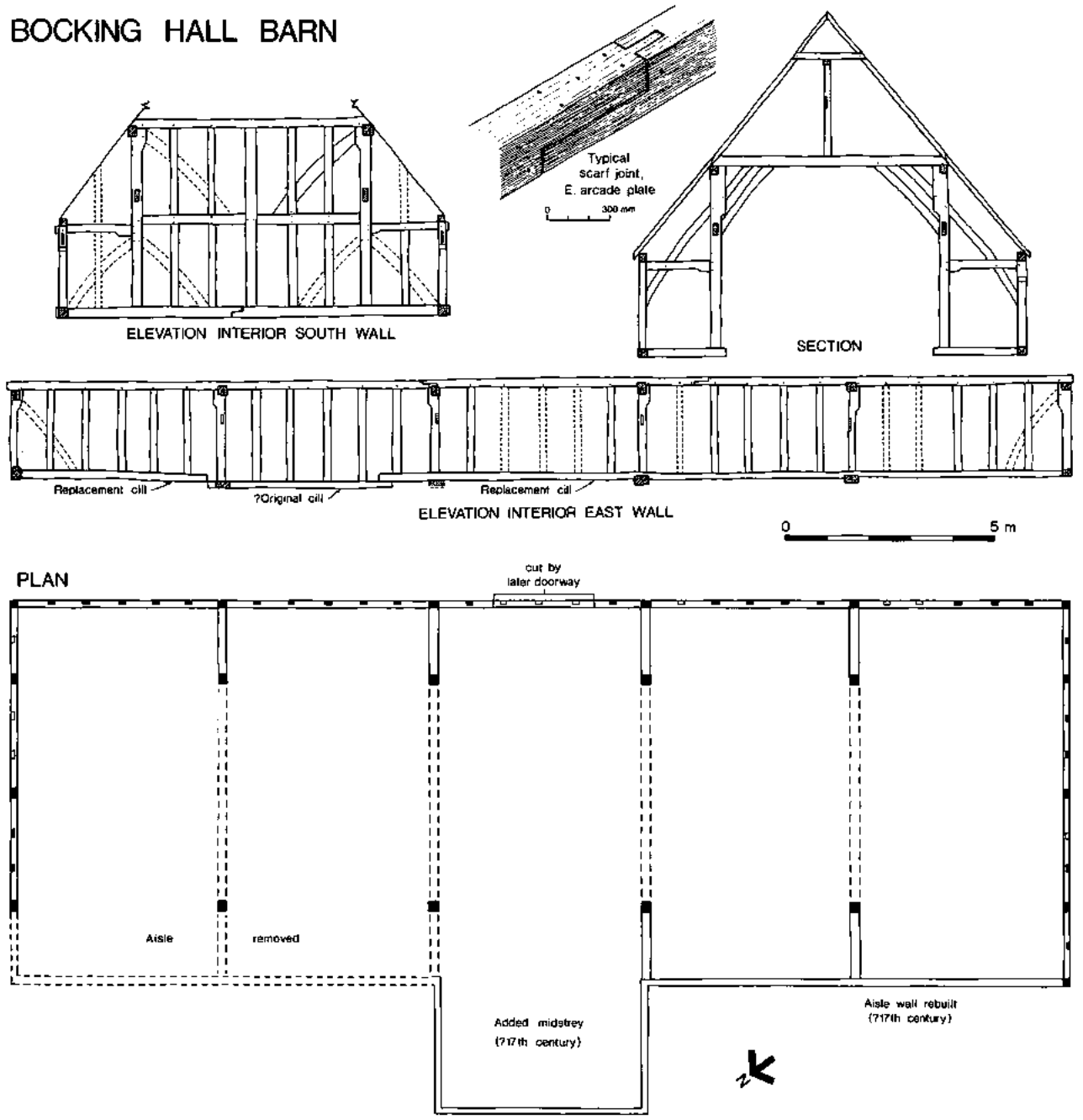

Fig. 41 Bocking Hall barn; plan and elevation.

Of the farm buildings, the oldest (Fig. 41) was a large (about 9x25m) medieval aisled barn of five bays aligned approximately north-south, set a little back from the Church Street frontage.[1] This was substantially intact, apart from the addition of a midstrey on its west side and the removal of the west aisle to the north of the midstrey. The assembly at the aisles is reversed (i.e. the wall plates are jointed over the aisle ties). The aisle posts have side jowls, and the aisle ties have swept jowls on their soffits. The aisle ties, arcade posts and tie beams are connected by passing braces. These braces, and those between the arcade posts and the tie beams and arcade plates, are slightly curved. The crown post roof has thick curved braces to the collar purlin. The rafters are in two pieces, joined with splayed scarfs at the arcade plate.

The wall studs are widely spaced (600-800mm), and are generally wider than they are deep (e.g. 180x120mm). In the end walls, and at the corners, the posts were reinforced with external bracing. Wattling grooves in the plates of the side walls show that originally the walls were infilled and not weatherboarded as they are today. These wall plates and the arcade plates have edge-halved scarf joints.

In the east wall, the original plate survives and there is no trace of a doorway. The entrance must originally have been on the west, where however to the south of the midstrey the plate has been replaced. This has a face-halved and bladed scarf, and the studs, although tenoned, are not all pegged into it. This repair may date from the 17th century, as may the midstrey itself. The latter is made of re-used timbers, including a plate with holes for two sets of seven diamond mullions between studs, presumably derived from a hall. The corner posts of the midstrey are crudely jowled, the studs are tenoned but not pegged, and the walls are made with primary bracing.

Recent work to the barn has consisted largely of stiffening up the frame through the insertion of studs between the originals, and reinforcing the end walls by adding extra bracing. There seems to have been some movement in these end walls, as the mortices for the braces have burst, though this may be partly because insufficient wood was left on the exterior of the joints.

The curved bracing, the thick braces to the crown posts, the edge-halved scarf joints, and the jowls on soffits of the aisle ties point to a construction date of *c.* 1400 for the barn.[2] The quality of the carpentry is good, and doubtless reflects the means of the monks of Christ Church, Canterbury. Notable are the passing braces which are rather unusual combined with a crown post roof.

Notes

1. The buildings were formerly in the possession of J. Tabor Esq. and have been converted by M. Brand Ltd. The barn is now divided into two units known as Arundel and Chillenden. I am grateful to Dave Stenning for advice on this barn.
2. The oldest example of an edge-halved scarf joint dated by dendrochronology is *c.* 1375 (Hewett 1980, 267). Parallels for the use of jowls on the soffit of aisle ties can be found at Prior's Hall Barn, Widdington; a barn adjacent to Little Dunmow church; a barn at The Hall, Bradwell-iuxta-Coggeshall; a barn at Picott's Farm, Great Saling; and the Monks' Barn, Netteswellbury (Hewett 1969, 71, 77, 83, 96, 101, 107), all of which are assigned to the 14th century apart from Monks Barn which is 15th-century.

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Observations at West Street, Coggeshall

Steve Godbold and David Andrews

Introduction

If the origins of the town of Coggeshall cannot be traced directly back to Roman times, at least there was a significant Roman settlement there (Clarke 1988). The origins of the existing town seem to stem from the grant of a market charter to the Cistercian abbey at Little Coggeshall in 1256. This seems to have caused a shift of settlement away from the church which is located on the Roman site, to the present marketplace in Stoneham Street, which is approximately central to the medieval town. This analysis of the town's topography is sufficiently hypothetical for it to be necessary to take any opportunity that arises to recover more information on the evolution of the settlement. The proposal in 1988 to redevelop the premises of the seedsmen John King and Son presented itself as just such an opportunity, occupying a 5-acre site to the west of Stoneham and north of West Street (Fig. 42). This report covers observations on the offsite enabling works comprising improvements to West Street and the renewal of the culvert of the Robins Brook. At the time of writing, the development has yet to proceed, in the absence of a favourable economic climate.

The 1989 excavations in West Street

During the course of enabling works to the culvert of Robins Brook in West Street, Coggeshall, a series of timber structures were uncovered in the roadway outside No.20 and the entrance to John King & Son, seed merchants.

The structures were in two main parts. The more substantial of the two was a cluster of over 100 vertical oak stakes covering an area of approximately 3.00m x 1.50m. About 2.00m to the east was a platform type of structure comprising horizontal logs set between upright oak stakes. This area had been badly damaged by the machine. The area between the two structures also seemed to have been disturbed when the timbers were first uncovered and here only two small groups of stakes plus an oak pile and a few isolated examples were apparent.

The main concentration of stakes consisted of rough dressed timbers the pointed ends of which had been sharpened four ways. They ranged in length from 50-75cm and varied in thickness from 4-30cm. The tops of most of the timbers displayed damage and would appear to have been hammered into the ground. They had been driven through three or four layers of gravelling.

Although it was damaged, the platform structure seemed to have been made up of short lengths of small logs 40-80cm long and 13-14cm in diameter laid horizontally and held in place by rough dressed timber stakes pointed on four sides 45-65cm long with their tops standing slightly proud of the surface of the logs. These too appeared to have been driven into the ground through at least two layers of gravelling. This structure was about 1.80m long x 1.20m wide but full investigation to the south and east was prevented by the limits of the enabling works. Immediately to the west of the platform and at a lower level was a smaller wooden structure comprising a roughly dressed horizontal member about 75cm long and a 10 x 15cm

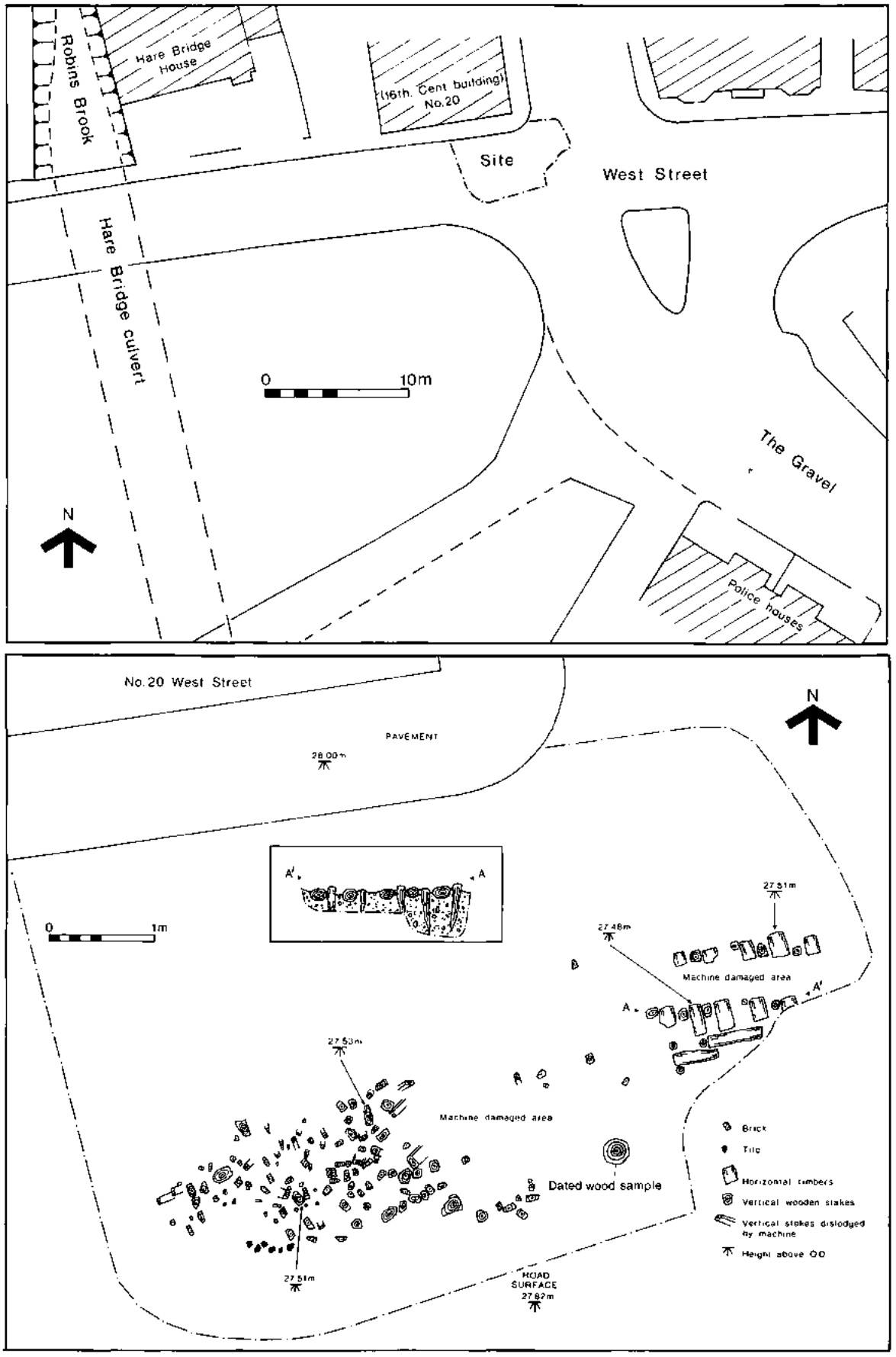

Fig. 42 West Street, Coggeshall: site location (above) and plan of timber piles (below), with timber used for the dendrochronology date shown.

roughly squared stake. This was at a level 25cm below the platform and may represent an earlier phase. All the structures were generally aligned east-west, on the same alignment as West Street.

Finds were restricted to a few pieces of brick, tile and mortar which appeared to be of a post-medieval date.

The oak pile found between the two structures was analysed by Ian Tyers of the Museum of London Environmental Archaeology Section and dated to the middle of the 18th century. This timber also was pointed and measured 25cm in diameter and 70cm in length.

Conclusions

As mentioned earlier the beginnings of Coggeshall can be detected on the higher ground well to the east of Robins Brook and it was not until the 16th century that settlement was forced to expand westward onto the lower marshy ground in the vicinity of the brook itself. This would have necessitated the raising and consolidation of the ground in the region of the floodplain. It would appear that the gravel layers found in West Street represented dumping to raise the ground level and the timber structures (found outside No.20, a Tudor timber-framed house bearing a date stamp of 1560, but early 17th-century according to the DOE list description) were inserted as a reinforcement to stabilise the ground.

The Robin's Brook Culvert.

The Robin's Brook below and to south of West Street was channelled through a brick culvert which, although of several builds, looked to be mainly of 18th- to 19th-century date. The culvert was said to be built on a sort of timber foundation. A number of timber piles were discovered close to the stream in various places. They made no obvious sense, and seemed to represent occasional reinforcement of the former stream bank. One was possibly associated with a fragment of post-medieval red earthenware of probable 16th- to 17th-century date. The position of the piles could be taken to indicate that the stream ran to the west of its present course. This conclusion was to some extent supported by the fact that the grey silts laid down by the stream extended somewhat further on its west side than on its east side. These silts extended for a width of about 15m. Clearly the brook had quite a wide floodplain, and before it was channelled was a major topographical feature. The silts had been consolidated with about 1m of gravelly material, overlain by hardcore and brick rubble.

West of the culvert, and close to the south side of the road, a brick built subterranean feature was discovered. It looked 18th- to 19th-century in date, about 2-3m wide and only 1m or so deep. Its function was uncertain. Below it, and separated by a layer of pebbles and grey silt over yellowish silt, was a timber structure of which the most conspicuous feature was a massive roughly squared horizontal timber, at one end of which was a mortice for a post. To the west of this timber, there was a small post, and then another horizontal timber at a slightly higher level. These remains seemed unconnected with and earlier than the brick structure. In this area, two brick wells were also said to have been found.

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Barling Windmill

J.P.F. Byford, P.E. Giles and J.R. Jackson

Barling Windmill stood south of Church Road, about 200 yards north west of the Church (TQ 9306 8979). The proposed development in the garden of Mill House at Barling provided the owner with the opportunity to investigate the site of the windmill. Three phases, from the earliest post mill to the later smock mill were identified, but only the latter can be exactly dated.

Historical evidence

The first record of a mill on this site is a symbol on the map of Warburton Bland and Smyth (*c.* 1724), and the first reference to a windmill is an advertisement in the Ipswich Journal dated April 1763, which offered the let or sale of a new Smock Windmill built about 3 years.[1]

In October 1920, Dr. Turner, a windmill enthusiast visited the Barling Mill and subsequently wrote in his notebook:

'Barling. A weather-sided Smock. When I visited it today, a man living nearby told me it had not been working for upwards of twenty years. This smock mill was dismantled of its sails some ten years ago. The body of the mill remains. It stands a little N.W. of the church and in 1899 H. Manning was the miller. No miller is given in my neat (?) dictionary 1908. This mill or an older is figured by Bowen on a similar site in 1749 on his map. It is figured on Chapman and Andrés map (1777) as a smock mill.'

Records survive of the leasing of the windmill for the years 1784, 1789, 1799, and 1839.[2]

The last miller was Herbert Manning who took over the mill in 1881. A photograph taken in 1892 shows him with his wife and family standing in the gateway, (still existing) with the mill in the background.

Mr. Manning died in 1901 and the mill was worked by his eldest son, Fred, until 1903. The sails were sawn off the mill in 1905.

The mill was demolished in 1946 and although the timber frame was in a dilapidated condition, it took more than one tractor to pull it down.

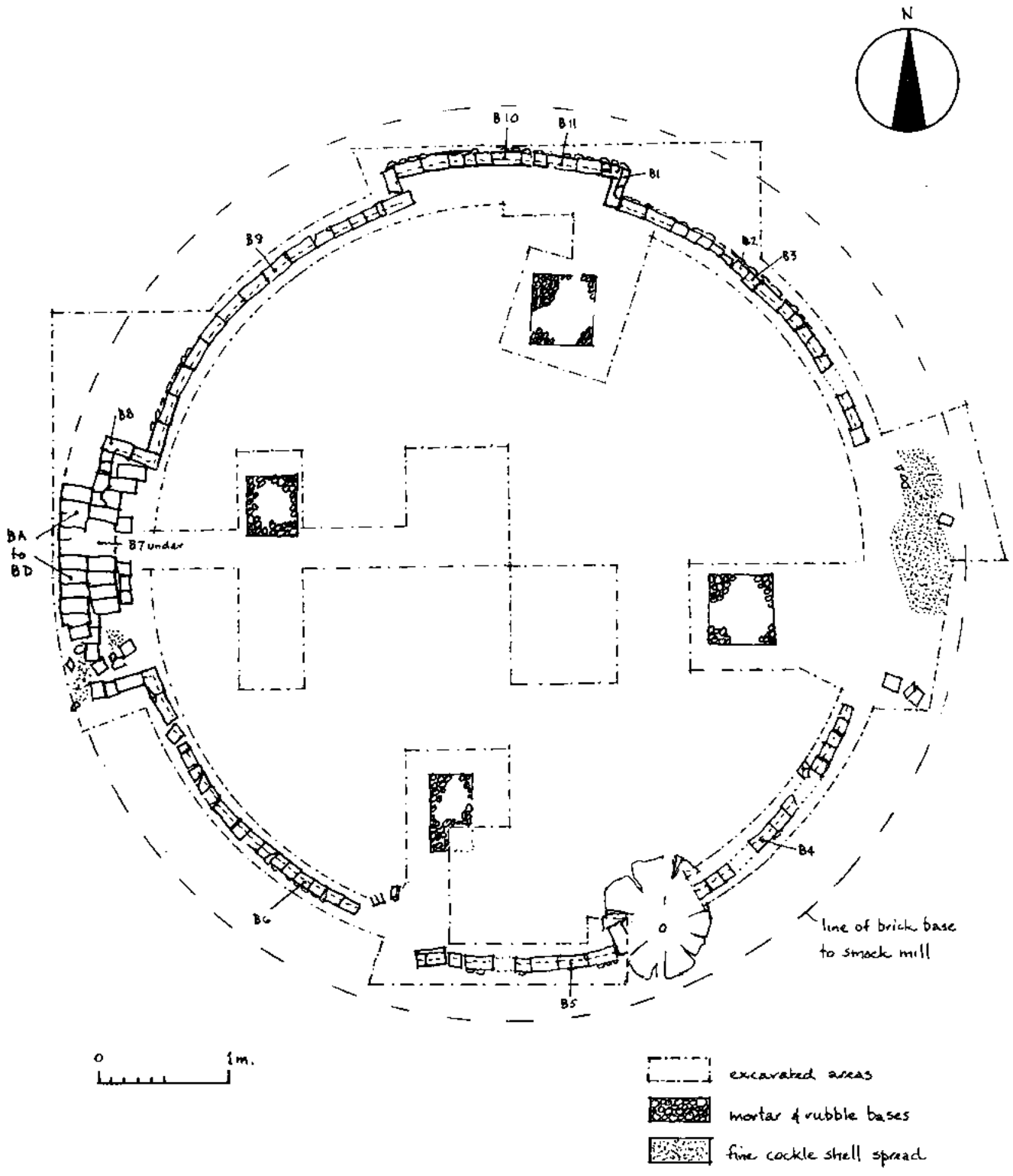

Fig. 43 Barling windmill; plan.

The brick base remained until about 1960 when it was taken down, some of the bricks being re-used locally, and the site ploughed.

A detailed description of Barling Windmill is given by Mr. John Salmon, B.A., in the Transactions of the Southend on Sea Antiquarian and Historical Society, Vol 3, No. 3.l, (1937).

Excavation

The owner, Mr. Peter Byford, whilst designing the garden, came across a single line of bricks and assumed this to be the foundation of the Smock Mill.

Excavation commenced in July 1991, and exposed an almost complete circle of a single course of bricks approx. 250mm below turf level (Fig. 43). Some bricks were whole and others cut to suit the circle of 5900mm dia., and were laid on a thin mortar bed on the clay subsoil. The circle is interrupted by four equally spaced bays, the angles radiating from the centre, projecting about 300mm, each bay being about 2m wide. On the east corner of the north bay two bricks were found, being a second course bedded on edge (Brick B1 in Fig. 44). This construction must have continued around the entire perimeter as evidenced by the mortar bed shadow showing on all the first course of bricks. A 16mm thickness of puddled clay was noted around the outside of the foundation course, particularly noticeable on the northern half. The single brick foundation

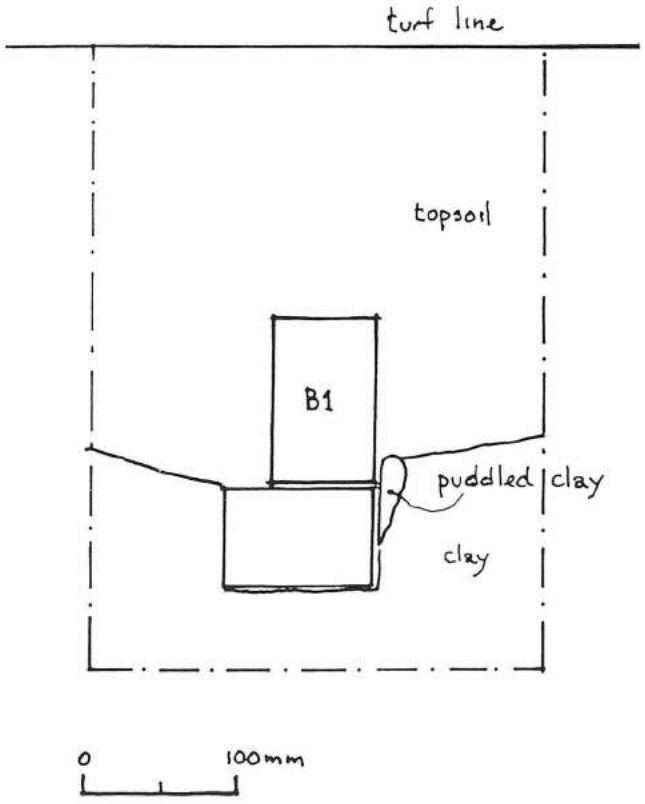

Fig. 44 Barling windmill; typical section of single brick surround.

Plate II Barling windmill *c.* 1910.

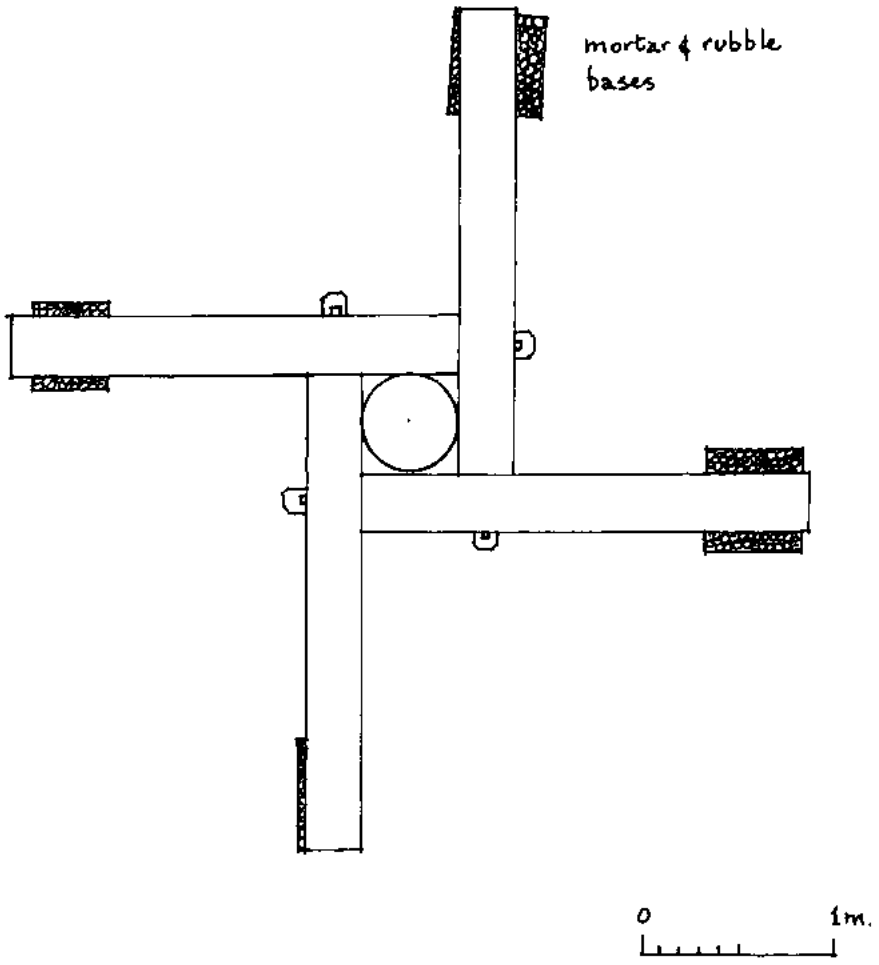

Fig. 45 Barling windmill; sketch showing possible position of timbers in conjunction with isolated bases.

to the east had been almost ploughed out.

A further course of brickwork overlaying the single brick bay to the west was found, being a base course of a wall 2½ bricks (570mm) thick. This base course followed the line of the single brick foundation, but with an overall diameter of 22'9" (Bricks BA-BD).

Within the circle, four isolated bases were located approximately equidistant from the centre point, but set at right angles to each other (Fig. 43). Each base about 500mm square and with only a thickness of 100mm remaining was formed with large (75mm max. gauge) round flints, and some broken red brick as aggregate, all bedded in strong mortar.

The only other feature within the circle was an irregular depression in the centre about 1400mm diameter and 200mm deep below plough line, filled with demolition debris.

Finds

Brick A sample of 15 bricks were taken from positions marked on the plan. All bricks are rectangular, average size 9" x 4 1/8" x 2 5/8" (230 x 105 x 68mm), no frog, and appear to have been made by the mould method, most showing frame marks. They range in colour from light to dark orange-red, some being overfired and sand glazed. All bricks had an even texture but in some cases included large stones (over 5mm).

Bricks B2 to B11, taken from the single brick surround were marked with the mortar shadow already referred to.

A sample from the isolated foundation bases included mainly flint with some broken brick and roof tile, and one small piece of quernstone.

Other finds are from the topsoil and, therefore, not necessarily associated with the windmill.

Pottery Sherds of 17th/18th-century post-medieval black ware and salt glazed ware. 18th- and 19th-century stoneware, and 19th-century slip ware and polychrome and transfer printed earthenware.

Fragments of window and bottled glass, clay pipe stems, and various small items of iron, copper alloy and lead.

Discussion and Conclusion

The latest brickwork on the site corresponds to the description on the Smock Mill (Plate II) built in 1760, which was finally demolished in 1960.

The only remaining portion of 2½ brick (570mm) thick wall follows the diameter of 22'9" mentioned in the sale notice of 1765.[3] This brick wall has only survived in one area and presumably the rest of the foundation was cleared when the mill base was demolished.

The presence of the single brick surround beneath

the one course of 2½ brick wall confirms that this is the foundation of a round house on the previous mill, i.e. Post Mill, '1759 pull down mill and build new'.[4] The two bricks found laid on edge, together with the mortar shadow on the single brick surround points to a possibility that the round house of the Post Mill was built entirely of brick on edge. This form of construction, being very unstable, would explain the formation of the 4 bays, which would have added strength. It may be that these bays were built to enclose the bearers at each end of the cross trees. The puddled clay around the outside of the single brick foundation could have been formed by vibration, alternatively, it could be an infill between the brick and the foundation trench.

The function of the four isolated bases is uncertain but it could be that they are associated with the position of the cross trees of an earlier Post Mill, date unknown. There seems to be no precedent for these bases being in the position shown, but it is possible that the cross trees of the earlier Post Mill were shorter lengths jointed around the post (see Figure 45).

There was no evidence of any floor construction *in situ*; but some smooth finished broken concrete pieces were found in the centre pit which could have been the floor of the Smock Mill.

A slight spread of crushed cockleshell was noted outside the single brick surround to the east at a level below the plough line. Unfortunately the internal floor and original external ground level have been lost to the plough.

Notes

1. Kenneth G. Farries. *Essex Windmills, Millers and Millwrights* Vol. 3, 31.
2. E.R.O.
3. Kenneth G. Farries. *Essex Windmills, Millers and Millwrights* Vol. 3, 31.
4. *Ibid.*

Book reviews

A Rural Society after the Black Death: Essex 1350-1525, by L.R. Poos, Cambridge University Press, 1991. ISBN 0 521 38260 2. £35.

Historians of early-modern England often look upon the middle ages as a period characterised by internally coherent, corporate rural communities, which displayed relatively little social or cultural differentiation. This stability is considered to have been shattered by the pressures of demographic growth, religious upheaval, and the growing impact of state power and incipient capitalism in the 'long sixteenth century'. L.R. Poos, in this important new book, argues that such a view of developments is no longer tenable, at least as regards one part of England. In northern and central Essex, Poos believes, most of the demographic, social and economic features supposed to characterise early modern England were already in place in the century and-a-half following the Black Death, and may indeed have even earlier roots.

The author has tackled an impressive variety of themes in this study of Uttlesford, Freshwell, Hinckford, Dunmow and Chelmsford hundreds in the period 1350-1525. At the core of the book is Poos' pioneering work on demographic trends of the later middle ages, and the structures of social and economic life which underpinned them. In exploring these latter, however, he considers matters as diverse as house-types, land values, rural industry, literacy, Lollardy and social revolt.

Tithing-list evidence indicates that the population of rural Essex had begun to decline well before the Black Death, and once the shock of the mid fourteenth -century pestilences had been absorbed there followed a protracted period of stability or stagnation. A further slight decline seems to have occurred at the end of the fifteenth century, and no real upturn is discernible until the 1530s. This long period of demographic stagnation cannot be solely attributed to high mortality levels, Poos argues, but was in fact promoted by the existence of a nuptiality and fertility regime essentially similar to that of the early modern period; a 'north-west European' pattern of high age at first marriage, and a significant proportion of the population never marrying.

Marriage patterns varied between social groups however, with 'agriculturalists' being more likely to marry than either 'craftsmen/retailers' or 'labourers'. The high proportion of day-labourers and living-in servants in the population, and the changing balance between the two groups, is seen as one of the keys to the region's character. Both groups were highly mobile, but while servants were mostly adolescents and young adults, and were almost exclusively unmarried, labourers commonly established their own households. Contrary to the views held by some other medievalists, Poos believes that servants probably increased in numbers relative to labourers after the Black Death, at least in Essex; this would clearly have been an important aspect of a late-marriage regime.

The later middle ages in Essex, on Poos' interpretation, appear to have been a less than golden age for the labourer. Despite the probable halving of the population, land was apparently as unevenly divided as ever. Moreover, higher wages did not necessarily translate into significantly higher earnings; the exceptionally detailed farmer's account from Porters Hall in Stebbing for the year 1483-4 emphasises how strongly seasonal was the demand for agricultural labour, and how few days most labourers actually worked for what must have been the largest employer in the locality. Increased levels of money wages, together with depressed grain prices after the mid-1370s, probably encouraged employers to retain full-time servants, paid partly in bed and board, rather than hire day-labourers.

The emergence of a textile industry in northern Essex has long been viewed as one of the most important economic developments of the later middle ages. Eileen Power seems to have been regarded the industry as a more or less continuous success story from the later fourteenth century until the ascendancy of the Paycockes and their like in the reign of Henry VIII. Poos, however, questions its importance as an employer of labour, noting that only 5.5% of those 'households' given occupational designations in the surviving 1381 poll-tax returns for Hinckford hundred were associated with textile crafts. The enigma of rural industry in the fourteenth and fifteenth centuries lies, it can be argued, not in its failure to expand beyond a certain level, but rather in why it took root at all at a time of stagnant or falling population. Conditions such as these, allied to falling cereal prices, should favour the growth of urban rather than rural industry, and to some extent the aulnage accounts of the 1390s and 1480s reflect this. The complex and unequal social structure which Poos shows to have characterised northern Essex did, however, promote the emergence of an underemployed workforce, and thus provided at least a toe-hold for industry in the countryside.

This is a closely written book, and it suffers from being perhaps too ambitious in scope. The chapters on authority and rebellion, literacy, and religious non-conformity are interesting, but can only touch on these major issues. The author's purpose is to illustrate more aspects of the complex and differentiated society that existed in later medieval Essex, but the effect is partly to obscure the clarity of the main arguments. Again, while Poos has with great skill developed a picture of a

late medieval society very different from traditional models, we are perhaps left without a clear understanding of where its dynamics lie; all the pieces of the jigsaw fit together — but where did they come from?

A minor irritation is the author's use of the terms 'the 1300s', 'the 1400s' etc. to denote centuries rather than decades. This is unnecessarily confusing, particularly when, for example, 'the 1400s' indicating the hundred years beginning in 1400, is juxtaposed with 'the 1520s' indicating a period of ten years, as on page 90.

In conclusion, this is a major work which will be of considerable interest both to historians of Essex and to students of economic and social change in general. It raises many questions, and will stimulate much debate. Not least, it will oblige historians to re-appraise the meanings they attach to the terms 'medieval' and 'modern' in the realms of social structure.

James A. Galloway

Jack Cade's Rebellion of 1450, by I.M.W. Harvey. Pp.xiv + 220. Oxford University Press, 1991. £30.00. ISBN 019 820160 5.

As Dr Harvey points out in the preface to his welcome monograph, Cade's Rebellion was one of the major events of the fifteenth century. Occurring at the dead centre of the century in June 1450, it marks a watershed between the period of Lancastrian ascendancy begun by the battle of Agincourt and the French conquests of Henry V, and the onset of the Wars of the Roses. Following Cade's Rebellion, and the loss of Lancastrian Normandy which immediately preceded it, Henry VI's government never again really recovered the political initiative. Indeed within weeks of the rebellion the duke of York had returned to England from political exile in Ireland, so beginning the series of confrontations with the court clique of royal favourites which led directly to the first battle of St Albans.

In view of its importance it is all the more surprising that no full-length study has been made of Cade's rebellion for a hundred years. Thus Dr Harvey's work is long overdue and fills an important gap. However there has been some significant recent work on the rebellion, most notably Professor R.A. Griffiths' long chapter on the rebellion in his authoritative *The Reign of King Henry VI: The Exercise of Royal Authority*, to which Dr Harvey acknowledges a heavy debt. Griffiths is in many ways a hard act to follow: what, then, is new and distinctive about Dr Harvey's treatment of the rebellion?

Principally, he has the advantage of space. Although the book is not a long one (and what a hair-raising price!), Dr Harvey is able to place the rebellion at the centre of his story in a way that is not possible in a book on a larger subject. Thus it is possible to see Cade's rebellion in a much broader context than hitherto, both chronologically and geographically. Dr Harvey sets the rebellion against the background of fifteenth-century popular unrest in general, and points to an interesting connection between religious (more specifically, Lollard) dissent and political unrest in south-east England. He also makes some intriguing, but tantalisingly brief, comparisons between Cade's Rebellion and the Peasants' Revolt of 1381, stressing the obvious similarities while noting the absence of serfdom as a grievance in 1450. The core of the book, however, is the discussion of the rebellion itself and its aftermath. As far back as Kent in 1450 is concerned, Dr Harvey is very much following in Griffiths' footsteps, but he is able to provide a detailed chronology from careful analysis of the numerous chronicle sources. This is immensely valuable, and helps reveal the extent to which the rebellion began as a series of popular demonstrations of discontent with the government's corruption and incompetence, which only gradually coalesced into a larger rising under Jack Cade as 'captain of Kent'.

The book is at its most original in revealing how widespread discontent was in southern England in 1450, and also in showing how unrest continued to erupt sporadically for several years after the rebellion. Wiltshire, Surrey, Suffolk, Sussex, Hampshire and of course Essex all experienced popular uprising in 1450. John Gibbes, a gentleman of Kent, was sent to Colchester to campaign for Cade's cause, and as in 1381 the men of Essex made common cause with the men of Kent and gathered on the outskirts of London at Mile End. Unfortunately Dr Harvey has very little to say about the rebels in Essex, despite the existence of a set of Essex indictments from 1453. It does appear, however, that Essex continued to see disturbances for several months after June 1450, though not on the scale of Kent, where, following the savage suppression of the rebellion risings occurred virtually every year until 1456. It was small wonder that Kent welcomed the Yorkist lords with open arms when they landed at Sandwich in 1460.

Dr Harvey's book is as thorough and scholarly a survey of Cade's rebellion as we could wish for. Read in conjunction with Professor Griffiths' study of the revolt it is likely to provide the standard treatment of this important subject for many years.

Edward Powell

A Community Transformed. The Manor and Liberty of Havering, 1500-1620, by M.K. McIntosh, Cambridge Studies in Population, Economy and Society in Past Time 16, Cambridge University Press, 1991, xviii and 488 pp. £50.00, ISBN 0 521 38142 8.

This book is the sequel Professor McIntosh's earlier work on Havering, *Autonomy and Community. The Royal Manor of Havering, 1200-1500*, published by

Cambridge in 1986. Many of the subjects dealt with in the earlier volume are investigated here, such as population, the economy, social structure, local government and relations with the Crown, but the abundance of records for the sixteenth and seventeenth centuries enables her to make a much more detailed analysis of what was going on. It is possible to see how far Havering was a typical Tudor and Stuart community, and, because of the size of the manor and Liberty stretching from the Thames to a boundary north of the village of Havering-atte-Bower, to make comparative assessments of the constituent parts — Romford with its market and urban activities, Hornchurch where the parish church was situated, and the village of Havering itself. The sixteenth century in England as a whole was an era of major transformation, with the rise in population, the Reformation, and the centralisation of government, and all these changes had an impact on the manor and Liberty.

Professor McIntosh starts her study with the demography of Havering, looking at population levels and the cycle of life and death. The household constituted the basic unit of the social structure and provided an element of stability in people's lives. Population doubled between 1500 and 1620, but the mortality rate was high, and the rise in the number of inhabitants was due to high levels of migration into the area. Agriculture remained the basis of the economy, but the emphasis was very much on commercial agriculture to supply the London food market, and the market at Romford, situated on the main road to the capital, was frequented by London traders. Religion in the early sixteenth century was a unifying force in the community and laymen exercised considerable power in the church. However, with the Reformation the situation became more complex; Puritan groups emerged in Hornchurch and Romford, while the chapel at Havering remained more conservative in its religious approach. Religious matters overlapped with the moral and social control of the community, the churchwardens being concerned with individual behaviour as well as with church and parish business and assistance to the poor.

In addition to the religious transformation, Havering saw major changes in its local government and social structure. It had enjoyed considerable autonomy in the later Middle Ages, but the role of the manor court and the Justices of the Peace of the Liberty diminished after 1500, as men took their litigation to the central courts of the realm, and crime was dealt with by the Justices of the Peace of the county and the justices of assize. The residue of local power was concentrated in the hands of the leading families. It is the emergence of these families which marks the biggest social change in Havering. There was a growing number large estates, and their holders gained influence over religion and local government. In place of the group of over one hundred middling families who had exercised power in the later Middle Ages, the gentry families came to take control and their local ambitions are mirrored in the conflict among them in the early seventeenth century. Moreover, under James I, the Crown mounted investigations into land titles, in contrast to the undemanding lordship long exercised in Havering. By 1620, the united medieval community no longer existed, and the Liberty had ceased to be a distinctive entity.

Professor McIntosh has opened up a significant new area in Essex history. Her work is important not only for those interested in Havering or even in Essex; it will be essential reading for Tudor and early Stuart historians who will be able to base their ideas on a far better knowledge of what was happening at grass-roots level. In view of the importance of the book it is a pity that the price will prevent even some libraries from obtaining a copy.

Jennifer C. Ward

Elizabethan Life: Home, Work & Land by F.G. Emmison, Chelmsford: Essex County Council, 1976 (reprinted 1991). £9.50.

For some now unfathomable reason, this third part of Dr Emmison's lively survey missed out on reviews locally when it first appeared. The welcome reissue of the complete work, now in progress, affords a welcome opportunity to correct any misapprehensions that may have arisen from the apparent inability of certain academic reviewers (who need not be identified, except for one in *Archives* who is firmly put in her place by Emmison himself — Introduction, p.viii) to discern any underlying purpose in it. This, it seems to me, is to take an unduly restrictive view of its highly original structure and methodology. Emmison's credentials as the authority on Essex in the sixteenth century are too well known to call for any special remark here. Highlighting the sources enhances the vitality and immediacy of history for the non-specialist reader, but the way is beset with pitfalls which Emmison negotiates confidently, steering a well-judged course between the extremes of, on the one hand, reproducing documents *in extenso*, which makes the interpretation of them dependent on specific training, and on the other, keeping the reader at a distance by simply giving reference numbers in foot-notes of the ones that support the writer's argument. Here the narrative itself is woven from excerpts of the documents (interspersed with paraphrase, and linked, as necessary, by commentary in similar vein) as opposed to restricting direct quotation to illustration.

As promised by the title, the volume divides naturally into three parts, each based on the records of one type of court, embracing a broad range of subsidiary aspects, supplemented by William Harrison's *Description of England*, 1577 (which incorporates the local

observations of an Elizabethan rector of Radwinter) and John Norden's unique topographical *Description of Essex*, 1594. Part 1, the fruit of the author's comprehensive knowledge Essex wills, proceeds logically from the plan of the dwelling house, via furniture and fittings, and personal effects, to family and household, with digressions into agriculture, fisheries and shipping, and crafts and trades, to remind us that the home served also as workplace, farmhouse and outbuildings forming a single complex in the midst of the fields, and handicrafts being carried out inside the cottage itself. A glance at local trading (chapter 5) casts useful light on humble folk as borrowers and lenders. Within the family, testators' priority was provision for their wives, although a Great Oakley man directed his eldest son to assist his mother in bringing up the younger children, and a younger son at Margaretting was to be apprenticed to his eldest brother. Education and the availability of books are also briefly touched upon, musical instruments being dealt with as furnishings. Reference to arms and armour (chapter 8) reminds us that militia-men furnished their own gear — cf. the second amendment to the constitution of the United States.

As matters that have not hitherto been investigated in depth, examination of problems connected with terminal sickness and the execution of wills forms an especially illuminating conclusion to this section.

In part 2, work — its nature having already been discussed — is considered simply as employment as regulated, under the Statute of Artificers, by Quarter and Petty Sessions, leading on to the control of food and other prices by the same agencies, as well as all the 'stacks of statutes' loaded on to local courts by Elizabethan social legislation.

If one (very muted) complaint arises, it must be that by the basing of part 3 entirely on manorial records 'Land' is narrowed down to copyhold, since, as a source of negligible profit, free-hold property held only a minimal interest for the lord of the manor, though the author may well feel that his own study of estate formation by royal officials and other 'new men' (*Tudor Secretary*, 1961) leaves little more to be said on the subject. Nevertheless, the lucid exposition of court procedure and the clarification of the presentments made under it (pp. 220-22) are welcome. A vivid account of social regulation demonstrates how, even as an institution in decline, the manor continued to exercise a major influence on daily life. Transcripts of representative custumals and surveys neatly round off the section, and indeed the volume as a whole.

Refreshingly, scrupulous adherence to the evidence saves this affectionate survey of the minutiae of everyday existence in a farming county from lapsing into a superfluous rehash of the tiresomely overworked agrarian problems of 'Tawney's Century'. If this may disappoint the conventionally minded, it is as well to be reminded that not every corner of Elizabethan England was necessarily racked by crisis and the disintegration of peasant society in the days of the first Elizabeth. By the same token, Emmison's care to avoid straying across the boundaries of Essex safeguards him against the temptations of speculative generalisation. With the appetite so whetted, we look forward to the early reissue of the other four volumes.

Julian Cornwall

John Johnson 1732-1814: Georgian Architect and County Surveyor of Essex by Nancy Briggs. Foreword by Howard Colvin. Pp. ix-204, 3 colour and 84 illustrations. Essex Record Office Publication no. 112. Chelmsford 1991. ISBN 0-900360-82. Paperback £14.95.

Honour where honour is due; here is a model of archival integrity, long-awaited but not published till every known source had been pursued. Meanwhile the author, in her capacity as archivist, helped many another researcher from the learned professor to the enthusiast rootling about for ancestors, beside all the expert work of cataloguing and accessioning for which Record Offices are now so respected. So her own authorship took time.

The eighteenth century produced many houses so conveniently conceived that they still serve. The richer the client, the greater the problem that they may now present. Given the chance Robert Adam would design everything from carpets to keyholes in houses only opened up for display and social parade. But there were many architects more useful than that. When, *c.* 1759, John Strutt of Terling was recommended to employ John Johnson, it was that "he is exceedingly honest, cheap and ingenious — what more can you want?" Many agreed and many fine country houses resulted, very different in design as suited his clients. Only the internal decorative finish tends to the same. His beautiful stone "geometric staircases" with honeysuckle scrolls alternating with stick balusters are almost a signature. His stucco-ists produced delightful designs of ropes and bas reliefs similarly. He worked with a team of trusted artificers. And for sculpture he took it ready-made from Mrs Coade.

How this came about is very interestingly explored.

Just as Dr Samuel Johnson and David Garrick left Lichfield to seek their fortunes in London, so John Johnson left Leicester, and found his feet as architect to William Berners, who was making a lucrative development of land north of Oxford Street, in his family since 1654. This soon included premises for Johnson, and also his excellent plaisterer, John Utterton. Berners did so well that by 21 August 1773 the *Ipswich Journal* could report his purchase of the Woolverstone Hall estate in Suffolk, for £11,440, with magnificent views over the Orwell estuary, where in 1776 Johnson built the full-blown Palladian mansion that still survives, relatively intact.

Survival is a subject in itself. Thus Carlton Hall in Northants., though the best documented of Johnson's houses, was completely rebuilt in 1870. Killerton in Devon was a stop-gap while the Aclands intended that Wyatt should produce a grand mansion near-by. A fatal duel came to the rescue. Berners' chief financial backer was Sir Herbert Mackworth, whose riches were based on copper-smelting in Neath, Glamorgan. Johnson designed Gnoll castle there, much altered before final demolititon in *c.* 1956. Ivy Tower, with Gothic copper glazing bars, survives as a shell, once a garden ornament. Clasmont, for another copper magnate, was so polluted by fumes from the works that he abandoned it.

But Essex was becoming Johnson's centre of activity. When in 1780 John Brograve was wishing to alter Springfield Place, he had endless complaints against Johnson, who absent in Hampshire begged him to accept the arbitration of "your particular friends and Neighbours" Strutt and Berney Bramston. These were but two of the country gentry who in those times really ran the county. Johnson's appointment as County Surveyor was settled in 1782-3. In that capacity his forty years' work is fully documented. Gaols, bridges etc. gave him plenty to do. And who else could be trusted to rebuild Chelmsford church after its collapse in 1800? There is no better proof of his versatility than the "Gothic tracery ceiling" of the nave.

The Shire hall is however the most familiar and admired of his achievements, a building of which one might venture to think Gabriel who worked for Marie Antoinette, might have approved for its dignified simplicity. William Hillyer, Johnson's predecessor, had proposed porticos that would have looked excellent in Vicenza. But for county meetings and assemblies, as well as law-courts, Johnson gave Chelmsford something better, and well deserved the 100-guinea piece of plate with which he was complimented on its completion. Only the corn-dealers complained of poor lighting in the colonnade beneath.

With so much to do, he could still do more. Bradwell Lodge and Hatfield Place, that delightful villa in Hatfield Peverel, exhibit all his virtues, and those of his foremen and decorators. But he had also become active in his native Leicester, building County Rooms as fine as in Chelmsford, and a Gothick "Consanguinitarium", or almshouses for impoverished relatives, surely a most remarkable concept.

So thoroughly documented a book can only be outlined. There can be little more to be discovered about John Johnson. Only one reflection may not be out of place. The most revealing documents are the artefacts, the surviving buildings themselves, and yet more illustrations of details would show this. As a piece of book-production, it has many merits; Baskerville a very appropriate typeface. But that great man used many decorative rules, resembling for example the ropes in the plasterwork at Hatfield Place. The title-page, and other headings should have been enlivened thereby.

Above all, however, the inquisitive and speculative reader has a sure springboard for peripheral reflection. It occurred to this reviewer, wondering how they met, to look up Johnson's clients in Namier and Brooke's "The Commons 1754-90", and lo and behold Acland, Bampfylde, Sir Patrick Blake (in both town and country), Bramston, Dolben, Kemys Tynte, Mackworth, Sir John Palmer, and the admirable John Strutt, were all M.P.s, off and on, and mostly of the "Tory or country party" persuasion, who prided themselves on more than usual integrity. The waspish Bamber Gascoyne, with whom Johnson had often to contend in county affairs, was also an M.P., he and Strutt being "lifelong friends who at bottom disliked each other".

As for the enterprising William Berners, said to be related to Oliver Cromwell, he died in 1783, having lost his wife the year before on 1st January, the same day as Johann Christian Bach. And perhaps one may compare John Johnson with that admirable musician, so active in his time, and so well worth exploring in our own.

John Bensusan-Butt

Studies in Essex History. Published by the Essex Record Office in collaboration with the Local History Centre, University of Essex. Each card-bound, price £3.50, 1991.

No.1 Men of Bad Character. The Witham fires of the 1820s. By Janet Gyford. Pp.37. Map, one illus., diagram.

No.2. The Essex gentry and the county community in the 14th century. By Jennifer C.Ward. Pp. 28. Three tables.

No.3. Our time in God's hands. Religion and the middling sort in 18th-century Colchester. By Shani D'Cruze. Pp.32. Nine figures.

No.4. The origins and failure of New South-End. By J.R. Smith. Pp. 26. Five illus., 2 maps.

These studies — numbers 107 to 110 in the Essex Record Office's notable series — are printed by Essex County Supplies, in matching format, with coloured and illustrated covers. All are designed by Keith Mirams, whose work has enhanced several of the E.R.O.'s recent publications. Anyone with a serious interest in Essex history, and many beyond the county, will wish to collect these booklets and those that will follow them. They are the products of original research, carefully documented. They are inexpensive, easy to shelve, and should stand up to hard wear. The first four numbers range widely in subject, time and place. The text is set in type of good size, but the footnotes are not easy to read without a magnifying-glass: that is a nuisance particularly in numbers 1 and 3, in which there are many long notes.

Mrs Gyford is a member of the Essex Record Office staff, and also of our Society. **Men of Bad Character** is based on her M.A. dissertation at the University of Essex. In the 1820s Witham was a large rural parish containing a small market town. Between November 1828 and March 1829 there was a serious outbreak of incendiarism there. In the absence of a professional police force special constables were sworn-in, an 'Association for the Protection of Life and Property against Fire' was formed, and Charles Western, one of the two M.P.s for Essex, offered a reward of £200 for evidence leading to prosecution. Three men were eventually charged with arson, then a capital offence. The first was James Cook, a 16-year-old farm worker, who at various times had made three contradictory confessions. The jury found him guilty, but recommended mercy. In those days judges had discretion to commute the death sentence. In this case, however, the judge refused to do so, stating that a 'severe example was necessary'. There was then no Court of Appeal, and in spite of local attempts to obtain a reprieve, including a petition from the magistrate who had originally committed Cook for trial, the lad was hanged at Chelmsford gaol. Two other men were acquitted of arson, though one of them was convicted of a less serious offence and was transported to Australia.

After describing these Witham cases, Mrs Gyford devotes the rest of her essay to assessing them against the legal and social background of criminal prosecutions in the 1820s. Her diagram (pp. 12-15) outlining the contemporary procedures for dealing with crime is useful, but it is obtrusive in the middle of an essay, and would have been better as an appendix. Among social factors usually related to criminal prosecutions was the tendency to suspect men of bad character, and strangers rather than local persons. In these Witham cases, however, all three defendants were local, and the only man convicted of arson had previously been of good character. Mrs Gyford attributes this to the 'moral panic' provoked by the fires, which produced a 'new willingness' to pick on local suspects, and to rely on investigation rather than character alone to identify them. In discussing the failure of attempts to secure a reprieve for James Cook, she shows that the Home Office was inclined to be contemptuous of local opinion, and she comments that the Home Secretary, Robert Peel, in spite of his claims to be a penal reformer, 'was not really sympathetic to reformist views'. This estimate of Peel, which is in line with the authoritative verdict of Sir Leon Radzinowicz, in his *History of the English Common Law*, is reinforced by Mrs Gyford's own study of Peel's private letters about radical 'agitators' (her inverted commas). Perhaps these views need to be balanced by an empathetic appreciation of Peel's position in the 1820s. He was not a 20th-century criminologist or historian, but the man chiefly responsible for law and order in Britain at a period of unrest, when memories of the French Revolution were still uncomfortably recent. In the years 1821-27 reported crime was 86 per cent higher than it had been in 1811-17. Radical agitators like 'Orator' Hunt and Bronterre O'Brien certainly existed. Attacks on the houses of government ministers were not uncommon, and even moderate politicians feared the Mob — those who wanted 'not reform but revolution' in the words of Grey, the Whig Prime Minister who later passed the Reform Act of 1832. Peel's main achievement as Home Secretary was the formation of the Metropolitan Police, but he deserves credit also for reducing the number of capital offences at a time when crime figures were increasing.

Mrs Gyford goes on to suggest that Charles Western M.P. failed to persuade the Home Secretary to reprieve James Cook because he himself was 'remote from local feelings' about the case. But Western lived only three miles away, at Felix Hall, Kelvedon, and he had himself suffered an arson attack at Rivenhall during the Witham outbreak, so he must have been well aware of local feelings. Moreover he was a penal reformer of remarkably progressive views. This can be seen in his essay entitled *Remarks upon Prison Discipline addressed to the Lord Lieutenant and Magistrates of Essex* (1821), in which he recommended *inter alia* 'an administration of discipline, under imprisonment, as would supersede the necessity of inflicting the punishment of death in almost all cases'.

Mrs Gyford's essay draws upon an impressive variety of national and local sources, including Home Office papers, Assize, Quarter Sessions, and parish records, and newspaper reports. It will be welcomed by students of legal and social history, particularly those connected with Essex.

Dr Ward lectures in History at Goldsmith's College, London, and she is chairman of our Society's publications committee. Her **Essex gentry and the county community in the 14th century** analyses the functions of local justice and administration, and contends that by 1400 the gentry — knights and esquires — had come to play the dominant role that continued into early modern times. Such men served as sheriffs, escheators, coroners, as knights of the shire in the House of Commons, tax collectors, commissioners of array, special commissioners, and, not least, as justices of the peace. Dr Ward lists the gentry on the commissions of array 1377-92; those on the commissions of the peace 1377-97; and the knights and esquires summoned to the great council of 30 May 1324. 'Those most occupied with Essex affairs were men who chose to concentrate their interests in the county.'

The ties that the gentry had with the nobility often influenced their appointment to county office, as can be seen in the careers of Thomas Gobion, steward of Humphrey de Bohun, Earl of Essex, and John de

Wauton, who served Robert Fitzwalter, and later successively Elizabeth de Burgh, lady of Clare, and William de Bohun, Earl of Northampton. Many such men, besides serving their noble lords at home, followed them to the French wars. Others advanced their careers by serving the Crown at home or abroad, like Aubrey de Vere, who was a retainer of the Black Prince, and later of Richard II. In addition to their links with the Crown and the nobility, the gentry had strong ties with each other, through marriage, wardship, business or social contacts. During the 14th century some gentry families disappeared through failure of male heirs, but others, like the Suttons, Wautons, and Coggeshales, were prominent through several generations.

How well did these officials carry out their duties? Dr Ward quotes examples of corruption, sometimes aggravated by the rapacity of the central government. She mentions John FitzWalter's depredations in the 1340s, stating that two of his stewards, William Baltrip and Lionel de Bradenham, were involved in the disorder, and that both FitzWalter and Bradenham were subsequently pardoned. Readers of *Essex Archaeology and History* volume 22 will find a more detailed appraisal of Bradenham's career (pp. 67-75) which shows that Bradenham was not FitzWalter's steward in the 1340s, and that his pardon for later offences, was, in effect, the receipt for a heavy fine.

Dr Ward relies mainly on the *Calendar of Patent Rolls*, the *Calendar of Inquisitions post mortem* and other printed sources, including her own edition of the Essex lay subsidy of 1327 and two of our Society's occasional publications, *Feet of Fines for Essex* and *Essex Sessions of the Peace*. Manuscript sources include Exchequer Accounts in the Public Record Office. The essay is well arranged and clearly written, and will be most useful to 14th-century scholars, not only in Essex.

Dr D'Cruze, who is head of History at Crewe and Alsager College, was formerly a member of our Society's Council. **Our time in God's hands** is based on many years' research at Essex University for successive M.A. and Ph.D. degrees. After describing the religious groups at Colchester in the 18th century, she examines contemporary religious ideas as shown in sermons; the social effects of religious affiliations; and the connection between religion and politics.

The Church of England in 18th-century Colchester comprised 16 parishes, many poorly endowed, with dilapidated buildings. Dr D'Cruze mentions, among distinguished clergy, Nathaniel Forster of All Saints, and Thomas Twining of St Mary-at-the-Walls, but strangely ignores Morant, except for two passing references. A little more might also have been said about improvements to church buildings (e.g. St Leonard's in 1724), to clergy houses (e.g. St Mary-at-the-Walls, extended by Morant in 1739, and St Peter's, rebuilt by William Smythies after 1790); and to new endowments (at St Peter's in 1719 and Holy Trinity in 1739). But, as Dr D'Cruze says, if the Church was 'hardly in decline, equally it was not a period of expansion'.

The dissenters had two old-established congregations, Independent at Lion Walk and Baptist in Eld Lane, and from 1758 there was a Methodist society near the castle, founded by Wesley. Dissenters comprised between 10 and 20 per cent of the town's population. They formed 'a distinctive part of town society, and tended to operate within their own networks ... (they) posed no threat to town society, and ... became integrated into Colchester social, economic and political life'. Dr D'Cruze thinks that 'Things might have proved very different had Methodism, with its appeal to poorer people, become more popular'. This surely misjudges the social effect of Methodism, which, while it sometimes attracted the poor, tended to turn them fairly soon into the 'middling sort' by its emphasis on sobriety, thrift, and discipline. The same thing had happened to the early Quakers. The truth is that no Christian denomination in this country, in modern times, has appealed strongly to the poor. This can be seen, for example, from the detailed survey of hundreds of churches in metropolitan Essex in *V.C.H. Essex*, volume VI.

In a fascinating section headed 'The Religious Message' the essay analyses published sermons, including some that were frankly political, like that delivered by James Kilner on 5 November 1745, condemning Bonnie Prince Charlie. The section on 'Religious Connexions' takes a sample of 45 nonconformist surnames and 45 known not to be nonconformist, and matches them for contacts, outside religious affiliations, with other surnames. It appears that Anglicans were most likely to associate with Anglicans, and nonconformists with nonconformists. The same sample is used in the section on 'Religion and Local Politics', from which we learn that Anglicans tended to be Tories, while nonconformists were Whigs or Radicals. If these are predictable conclusions, is good to have them demonstrated so elegantly.

There is a short list of books for further reading, but no bibliography specific to the essay, so that the reader must often refer to the footnotes: that is not always straightforward, since many of the titles in the notes are abbreviated. The notes include a great variety of printed sources. For many of the manuscript sources, especially those upon which the samples of Anglicans and nonconformists are based, one is referred to the writer's Ph.D. thesis. She has also had the benefit of access to the extensive research of our Council member Mr John Bensusan-Butt. In distilling a short essay from so much material Dr D'Cruze has shown admirable judgement. She writes in a lively style that is only rarely disfigured by such a lapse into journalese as 'spearheaded' (p. 27). The essay is a valuable addition to the historiography of Colchester,

and of 18th-century provincial towns.

Mr Smith is Archivist in charge of the Southend-on-Sea branch of the Essex Record Office and a member of the Society. **The origins and failure of New South-End** deals with an ambitious scheme to extend the small seaside resort at Prittlewell, on the north bank of the Thames estuary. South-End was already attracting summer visitors by 1791, when a regular coach service was opened from London. In 1791 Daniel Scratton, Prittlewell's principal landowner, set out to build a new town on the low cliff west of old (or Lower) South-End. He granted 99-year building-leases of the main part of the site, comprising Grove Field (28 acres) to Pratt & Co., builders of Lambeth, and a similar lease of the remaining 8½ acres, called Grove Wood, to John Sanderson, architect, also of Lambeth. Pratt's leases were taken over in 1792 by Thomas Holland of Grays Inn, London, solicitor, builder, and brickmaker, who by 1794 had completed the Grand (later Royal) Hotel, the (Royal) Terrace, a library, and a few other buildings. The progress of the enterprise was celebrated in verse by Thomas Archer, vicar of the neighbouring parish of Southchurch, who predicted that the new town would soon rival Weymouth, Margate and Brighton. But in 1795 Holland went bankrupt, and work on his part of the estate was abruptly halted.

The development of the smaller part of New South-End was even less successful. John Sanderson died in 1792, and his lease was sold in the following year to Jeremiah Blakeman, of Limehouse and Chigwell, timber merchant. By the autumn of 1794 only one house (later called Grove House) had been built. Blakeman completed three more houses during the next eighteen months, but in 1796 he, too, went bankrupt, and there was hardly any more building in the area until the middle of the 19th century, when Cliff Town was developed.

Mr Smith attributes the failure of New South-End to the developers' lack of capital, the depression caused by the French war, the lack of good bathing facilities, poor transport, and the insalubrious reputation of the south Essex coast, given wide currency by Daniel Defoe's *Tour*. With these drawbacks it is not surprising that the new town did not attract many of those who could afford to be discriminating. Those of moderate means, on the other hand, tended to prefer Old Southend, which was cheaper and less pretentious, and which was growing steadily during the 1790s. A writer in 1794, not mentioned by Mr Smith, confirms these views.

> Old Southend emulates, in a less degree, the convenience of its new neighbours; the humble cottages of the fishermen, interspersed with a few houses newly-built and furnished as lodging-houses, have an agreeable effect upon the eye; whilst the inns afford viands and wines not at all inferior to those at the Grand Hotel, and, what may be equally acceptable to many of the visitors, on much more reasonable terms. (*Gent. Mag.* 1794 (2), p. 1162.)

Mr Smith ends his story in 1802. It might have been worth recalling that a couple of years later Princess Caroline of Wales spent a holiday at New South-End, occupying houses on the Terrace. She was an unattractive and controversial figure, but her visit passed into local legend, and helped to put Southend on the map as a resort.

This interesting essay is based mainly on documents in the E.R.O. (particularly deeds, parish records, and land-tax assessments), and newspapers. It is much more than a parochial study, for Southend is assessed in relation to seaside resorts elsewhere, and a 'Select Bibliography' enables the reader to follow up that subject. There is, however, no bibliography specific to New South-End, apart from the footnotes, and it would have been helpful to emphasise that additional information can be found in the books of Philip Benton and William Pollitt, and that Pevsner has a brief note on the buildings.

W.R. Powell

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Essex Bibliography

Bibliography of Journal literature on Essex archaeology and history at March 1992

Both monograph and periodical literature are included; articles published in journals which are devoted exclusively to Essex (e.g. Essex Journal) are not included. Items which have been overlooked in earlier bibliographies are added for completeness of coverage.

For new books on Essex history see the regular lists published in the Society's Newsletter.

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Cover illustration: joint excursion by the Essex Archaeological Society and the Royal Archaeological Institute to Colchester Castle, 26 July 1907. J.H. Round, the subject of one of the articles in this volume, is in the front row (standing), third from the right.