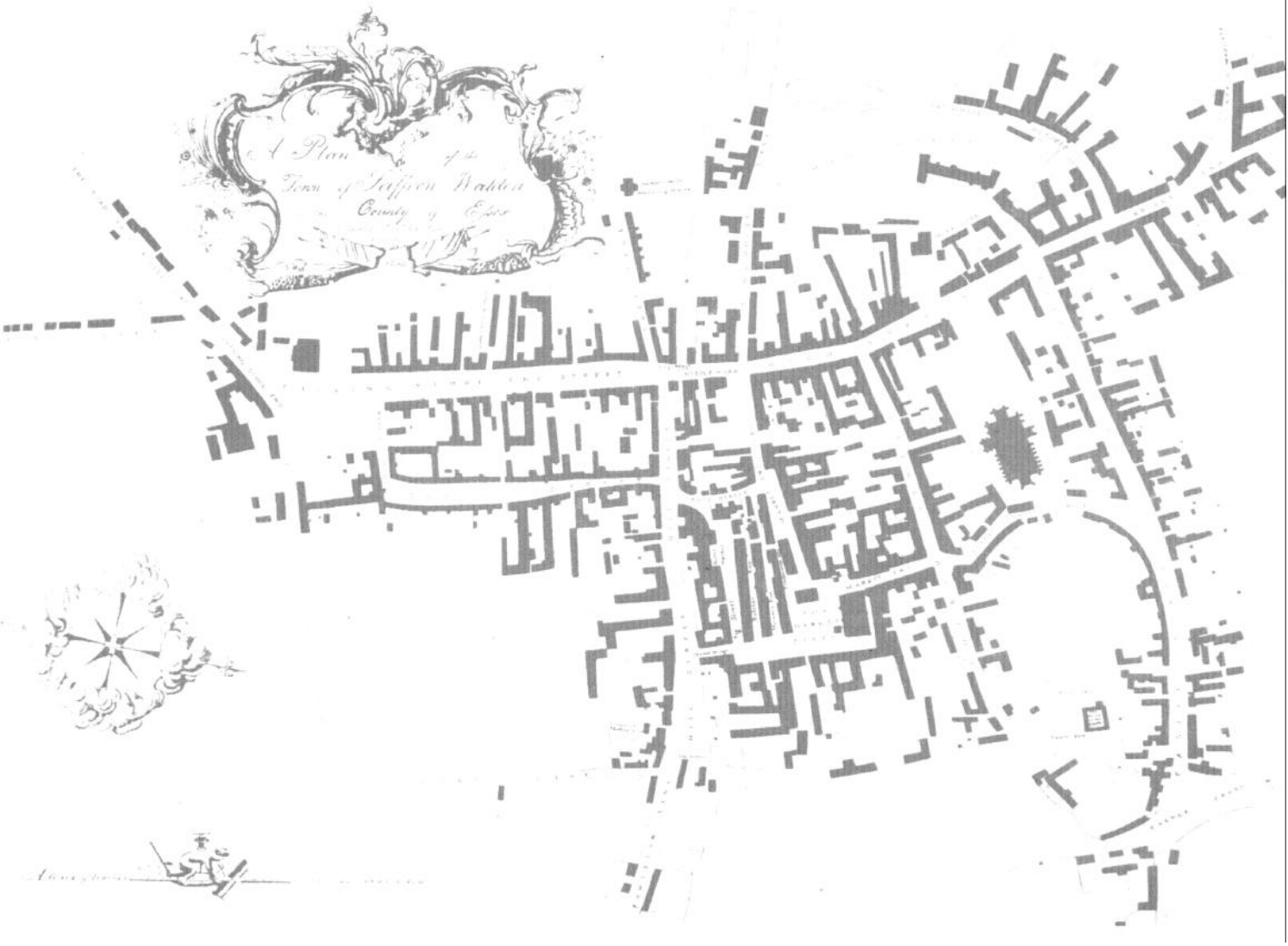
Chelmsford Archaeological Trust

Report 2

CBA Research Report 45

Saffron Walden: excavations and research 1972-80

By S R Bassett



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‘In the pursuit of ancient remains, as in every event of life, one thing leads on almost imperceptibly to another.’
R C Neville, *Sepulchra Exposita,* 1848, 8

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by S R Bassett

with contributions by P Arthur, J Bayley, L Biek, C Cartwright, A Clydesdale, C M Cunningham, P J Drury, M R Eddy, E Healey, S Limbrey, R M Luff, M R Petchey, M C Wadhams, J S F Walker, and S Welch

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Abbreviations

Add	Additional
ang	angular
AOD	Above Ordnance Datum
bk	brickearth
br	brown
Camb U L	Cambridge University Library
ch	chapter
CBA	Council for British Archaeology
comp	compiled by
Cott	Cotton
DBii	*Little Domesday Book* (see bibliography of primary sources)
dk	dark
DMV	deserted medieval village
DNB	*Dictionary of National Biography*
EBA	early Bronze Age
EPRIA	early pre-Roman Iron Age
ERO	Essex Record Office
f	form
F	Feature
fo(s)	folio(s)
frags	fragments
Harl	Harleian
IMP	*Inquisiriones post mortem*
l	large
lt	light
M, *m*	membrane
med	medium
Min Acct	Ministers' Accounts
Mist	Miscellaneous
MS(S)	manuscript(s)
n	note
n ser	new series
OE	Old English
OS	Ordnance Survey
p	part
Pat	Patent Roll
PRO	Public Record Office
RCHM	Royal Commission on Historical Monuments
rd	round
Reg	*Regesta* (see bibliography of primary sources)
Rot	Rotulus
s	small
S A F W M	Saffron Walden Museum (accessions)
ser	series
Sq	square
s w a r c	Saffron Walden Archaeological Research Committee
SWM	Saffron Walden Museum
TRE	in Edward the Confessor's time
TRW	in William I's time
V	very
VCH	*Victoria History of the Counties of England*

Summary

The origins and early development of Saffron Walden are considered in the light of recent archaeological and historical research.

Evidence for earlier prehistoric occupation in the area is largely confined to flintwork from the excavated sites. A minor Romano-British rural settlement at the centre of a rectilinear field system lasted long enough into the post-Roman period to be given an English placename indicative of its inhabitants' native origins. A small Germanic group may have established itself close by at some time in the 5th to 7th centuries. The settlement and its cemetery (the latter in use by the earlier 3rd century) were both probably in continuous use throughout the Anglo-Saxon period, and perhaps until the earlier 13th century. The nearer areas of the (probably late Iron Age) field system also survived, to form the basis of the developed medieval and later system.

This settlement was eventually eclipsed by seigneurial foundations close by in the 12th and 13th centuries. To the west a Benedictine priory, founded *c* 1140, became an abbey in 1190 and was granted a market a century later. A substantial settlement, *Brookwalden,* grew up around it. A castle on Bury Hill, to the north-east, consisted by the 1140s of a masonry keep enclosed by two roughly concentric earthwork defences. A marketplace and tenements were laid out within the outer circuit, and a new road was created to divert Cam valley traffic to the market. In the earlier 13th century this pre-urban nucleus was greatly enlarged by the foundation of a new marketplace, within a precisely planned grid of streets to the south of Bury Hill, and by the construction of an earthwork (the *magnum fossatum)* around the whole area. By then the parish church of St Mary had been transferred to the new town. A seigneurial charter of 1236 first marks Walden as a fully urban place.

The later development of Walden abbey, its conversion to a country house *c* 1537-34 by Sir Thomas Audeley, and the influence of those structures on the layout of the Jacobean 'prodidgy house' built *c* 1603-16 by Thomas Howard, 1st earl of Suffolk, are also considered.

The report also contains detailed descriptions and discussion of the associated finds of flint, ceramics, metal, glass, and bone. a consideration of industrial activity (iron. silver, and glass working), and of the periglacial features on the Elm Grove site. There is a petrological analysis of some of the Anglo-Saxon pottery, and specialist reports on the animal bone.

Section 1 The origins and early growth of Saffron Walden and its district

1.1 Introduction (Figs 1, 2, 10)

The small market-town of Saffron Walden (TL 5438) is situated in the hundred of Uttlesford in the extreme north-west of Essex. Its large parish (c 3038 ha) lies on part of the low, drift-covered escarpment which marks an extension of the Chiltern Hills into East Anglia, and is contained within the drainage basin of the upper course of the River Cam. Its tributaries in the Walden area have cut deeply to expose the chalk which elsewhere underlies thick deposits of glacial drift. Thus the soils of the parish are derived from three materials: chalk, in the tributary valleys; glacial drift, chiefly to the north and east; and some limited alluvial deposits in the extreme west. Its present sporadic woodland is probably a remnant of post-medieval plantations rather than primary forest. Springs issuing from the chalk at around 200 feet (61 m) OD have fed a constant supply of water to the lower, well drained fields. On the drift, however, successful agriculture has usually depended on the digging of numerous ponds. Many surviving examples in the present landscape emphasize the documentary record, in showing that the eastern half of the parish was much more densely settled towards the end of the medieval period than at any subsequent time (cf Cromarty 1966). At Domesday, Walden was evidently 'a great and valuable manor' *(VCH* 1, 512, n4). Its subsequent growth as a prosperous market centre reflects the agricultural wealth which it shared in common with those other parishes of north-west Essex in which chalk beds are exposed.

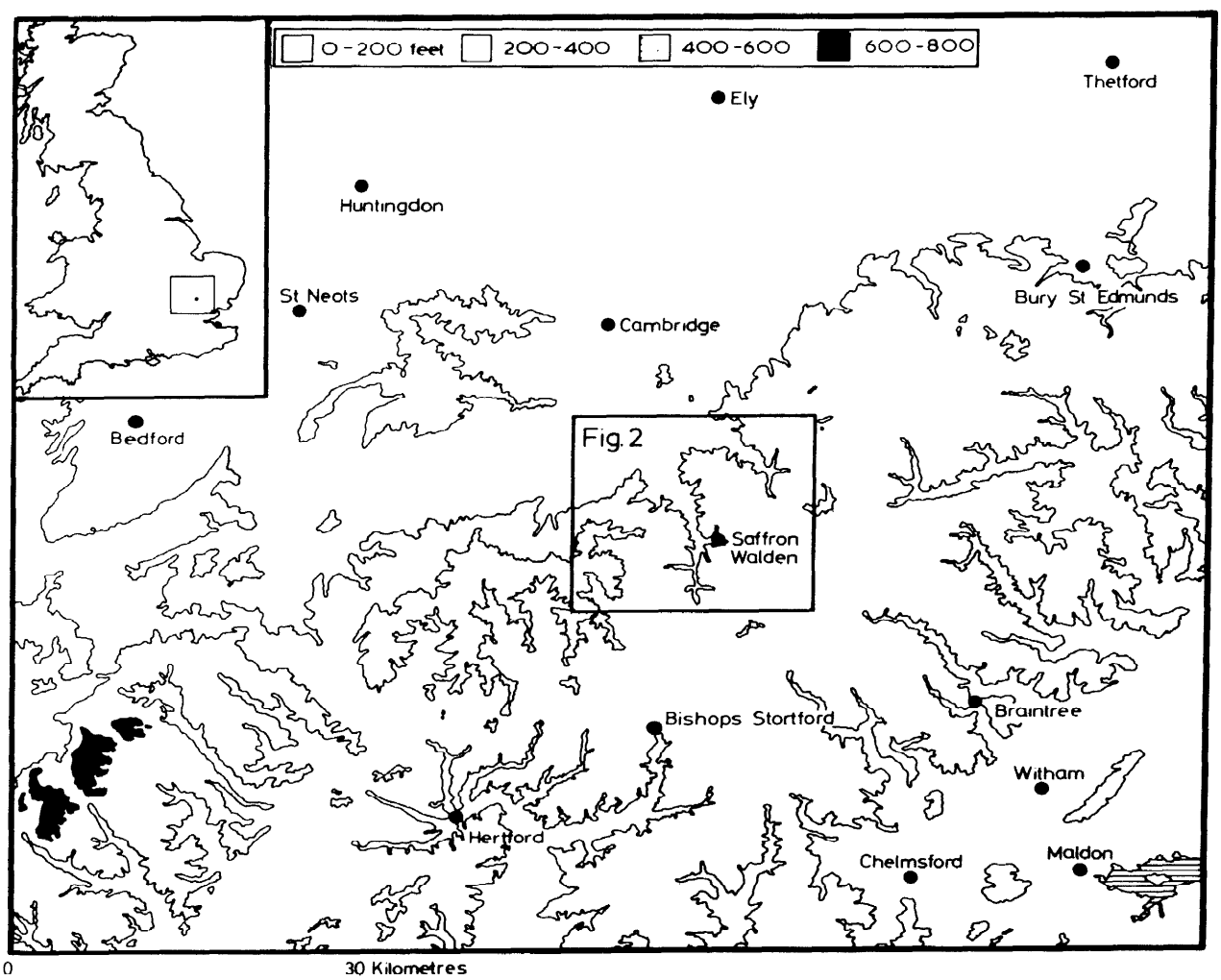


Fig 1 Saffron Walden in relation to the principal medieval towns of us region

The later medieval nucleus of Saffron Walden' (Fig 10) lies at the confluence of two recently rejuvenated but now seasonal streams, the King's and Madgate Slades. Bury Hill,[2] on which the parish church and castle stand, is a promontory between these streams, commanding the valley westwards towards the River Cam about one mile distant. Figure 10, with sketch contours given at 3 m intervals, shows the principal medieval features of Walden superimposed on local relief. These features are preserved in the present town to an extent which is unparalleled in others in Essex of any comparable size.

Although a number of sites within the historic core have been redeveloped in recent years, these have usually been of small extent. The only notable exception—the Gibson Estate-involved the loss of an area of outstanding archaeological importance (below, p 9). The imminence of more extensive redevelopment led to the formation in 1971 of the Saffron Walden Archaeological Research Committee, following the preparation of an implications report by P J Drury. Between 1972 and 1974 five 'threatened sites were excavated, for which work the Committee was financed by grants from the Department of the Environment, Essex County Council, and the then Borough of Saffron Walden, and by public subscription. The borough council provided additional finance for a limited research excavation on a sixth site, Walden castle.

In 1975-7, three other threatened areas were examined by Essex County Council's Archaeological Unit, financed by grants from the Department of the Environment [Site K) and Essex County Council (Sites D, E). The work on the Barnard's Yard site (D) was conducted by Mr M R Petchey (for the County Archaeological Unit), and then by the writer. A watching brief has also been kept since 1972 on other contractors' works, and aspects of the parish landscape have been studied by selective fieldwork.'

In recent years there has been much useful detailed research into the history of Walden and its parish from *c* 1400, though regrettably little is available in print. All the court rolls of the lay manor were destroyed in 1381, although a moderately complete series survives thereafter (ERO D/DBy M1-4), as do the ordinances of a Gild of Our Lady founded c 1400 (Steer 1958). There are no medieval records for the market court. The small amount of material for the lay manor before 1381 is contained in a number of isolated documents which give only scanty, and mainly localized, detail. Records of Walden abbey and its lands are more plentiful and these -as has been admirably shown (Cromarty 1967)-can also throw much indirect light on the later history of the lay manor. In essence, however, no adequate account of the town's origins can be expected from written sources alone; and only detailed work on both documentary and archaeological material will give a coherent picture of its late medieval development. It is beyond the scope of the present report to discuss that later growth in any detail.

So whatever is to be learnt about the history of Walden before c 1400 will only come from using all the available sources, and from attempting to compare and assimilate the different sorts of information they contain. This chiefly involves the study of archaeological, documentary, toponymic,[4] and topographical material. The sources of archaeological evidence, other than from SWARC excavations, can be briefly summarized as follows:

1. Two previously excavated sites: Smith 1884, 311-34 (with other discussion by Smith, ibid, 284-87, and Gould 1906) and Ravetz & Spencer 1961; in conjunction with a detailed re-examination of the pottery by Mrs C M Cunningham (below, pp 80-3).
2. A collection of unpublished manuscript notes and sketches in Saffron Walden Museum from fieldwork and observation of contractors' works by past curators; by far the most important of these was by the late Guy Maynard during the resewering of the town in 1911-13.
3. Provenanced finds, mainly in Saffron Walden Museum.
4. Some secondary printed sources, of which the most important are Braybrooke 1836 and Fox 1923.
5. Fieldwork by Mr P J Drury and the writer.

The recent excavations produced little fresh evidence of post-Roman settlement and land use on the site of the present town before perhaps the later 11 th century. So it will be useful, firstly, to consider all the evidence relating to the area called *Waledana* in 1086 *(DBii,* fo 62/62b). Without *doubt the most pressing* question concerns the location of settlement within the Domesday manor. Knowing this will allow a great deal of potential historical information, which is available but not yet understood, to be realized to its full value. For a reappraisal of earlier evidence in the light of the recent excavations makes it quite clear that settlement in Domesday *Waledana* did not coincide to any significant extent with the later medieval nucleus of the present town.

1.2 The prehistoric and Romano-British background

by S R Bassett and P J Drury

(a) Pre-Roman occupation in the Walden area (Fig 2)

The upper Cam valley has produced evidence of' settlement from the Neolithic period onwards. Worked flints, probably of Neolithic or Bronze Age date, have been found on the well drained gravel terraces at Newport, Wenden, Littlebury, and Great Chesterford (Morris 1921-3). The clayey soils of the various upper valley slopes may not have seemed so attractive to prehistoric settlement—or else the sites are still undiscovered—but the area of the present town of Walden forms a marked exception.[5] In his account of a trackway north through Stansted (Essex, TL 5125) towards Trumpington (Cambs, TL 4455),[6]

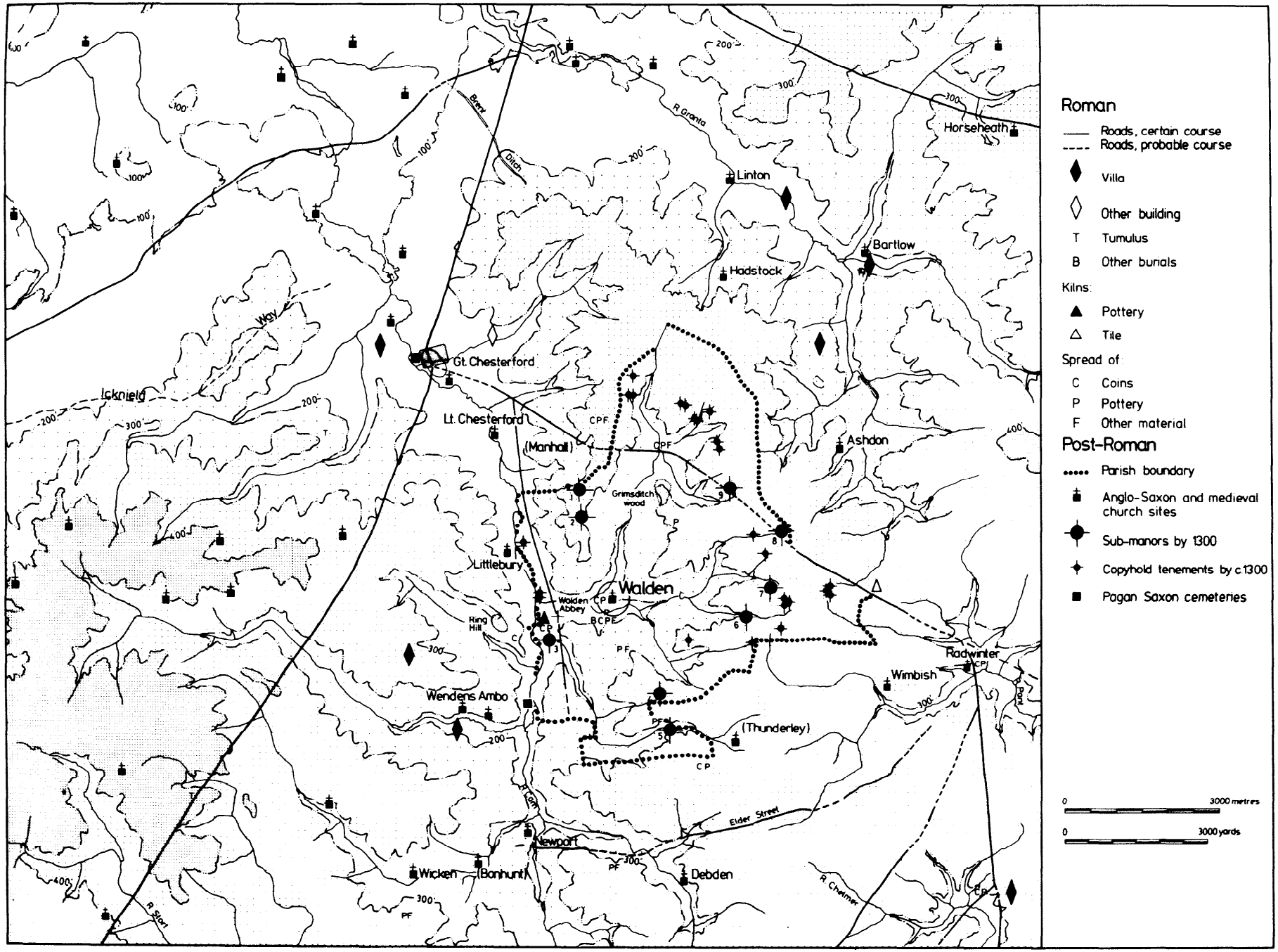


Fig 2 Saffron Walden in relation to the medical settlements in its area, Showing the physical setting, evidence of local Romano-British acivity, and the distribution of late medieval sites in its parish. Submanors: 1, Bowlsgrove; 2, Westley; 3, Brookwalden; 4, Herberts; 5, The Roos; 6, Pounces; 7, Mattens; 8, St Aylotts; 9, Butlers

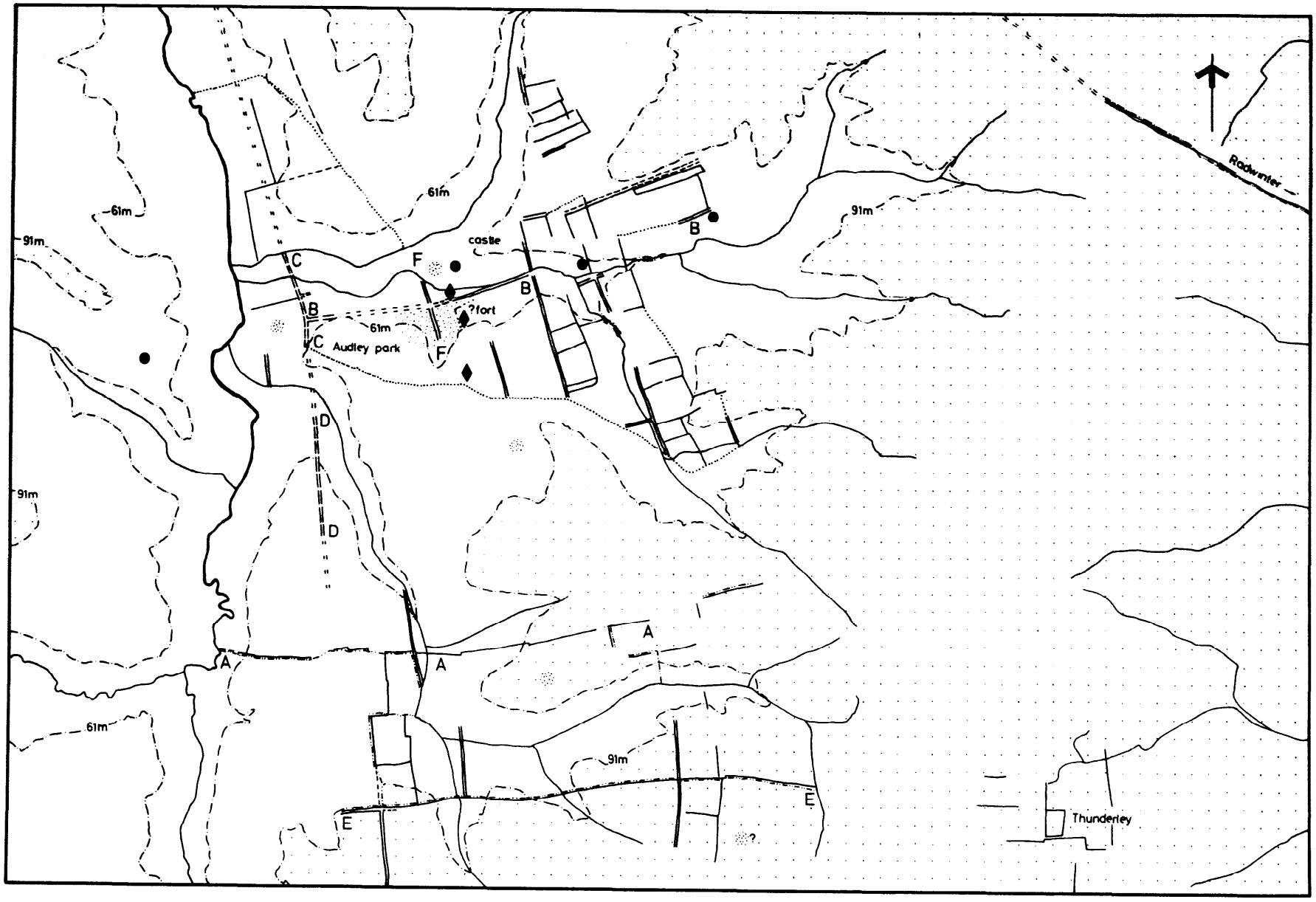


Fig 3 Pre-medieval landscape elements surviving into the 18th and 19th centuries in the vicinity of Saffron Walden

Fox suggested (1923, 152-3) that extensive marshlands around the confluence of the Madgate and King's Slades with the River Cam[7] made necessary a wide detour over the higher ground to the east, crossing the tributaries at fords a little west of Bury Hill.

Excavation on the Elm Grove site (Fig 10, J) has shown the presence of Iron Age and earlier settlement in the vicinity of these presumed fords. Moreover, several features of probably prehistoric date were found during late 19th and early 20th century development of the southern upper slopes of the Slade valley, some 400 m to the south of the Elm Grove site.[8] A series of pits," six to eight feet (c 1.8 to 2.4 m) in depth, contained very decayed red deer antlers at their bottoms; and a 'well-defined and deep trench', apparently discontinuous, was noted for over 200 m along the slope.[10] At the eastern end of what was uncovered of the latter, two or three skeletons were found 'evidently thrown into the trench in haste on top of one another'.[11] Another trench was located a short distance away. [12] It is possible that the trenches formed part of a Neolithic causewayed enclosure, particularly in view of the presence and nature of the burials (Drewett 1977, 225-6).

No certain Iron Age sites are known in the parish other than the one excavated on Elm Grove, although at Grimsditch Wood (TL 547407) there is an irregular enclosure which may be of later Iron Age date (Rodwell 1976, 331). It consists of a single rampart and ditch, while a very slight transverse rampart across its northern corner enclosed 'a large cigar-shaped mound', possibly a barrow (Maynard, SWM; Fox 1923, 136). In Littlebury parish, an oval single-ramparted contour fort of c 6.7 ha (16.5 ac), Ring Hill Camp (TL 515382), is set prominently on a narrow chalk spur between two east-flowing tributaries of the River Cam, immediatelv opposite its confluence with the Madgate and King's Slades (RCHM 1916, 191, 193). In Walden itself (Fig 8), observation of sewer trenches in 191l-l3 located three apparently parallel adjacent ditches under the southern arm of Myddylton Place, [13] and a further three ditches some 55 m to the south.[14] Since these features, and most of those noted in Common Hill, underlie the street pattern of the town and seem inappropriate in a Romano-British context (because of their size), some at least may be associated with a prehistoric, possibly Iron Age, occupation of the Bury Hill promontory. If-so, a relationship, not necessarily complementary, with Ring Hill Camp to the west might be considered. The name Bury Hill (above, n2) could itself suggest a once substantial earthwork still visible in the post-Roman period, but is more likely to reflect much later land use.

(b) Walden in the Roman period

(Fig 2, 3, 4, 6, Pls 2, 4, 18)

A summary of Romano-British material from Saffron Walden parish (to 1956) has been published *(VCH 3,* 1963, 195-6).[15]

It seems very likely that there was an early military site in or close to the present town. Three 1st century finds from Gibson's 1876 cemetery excavations, a Claudian brooch of Hod Hill type (Smith 1884, pl VIII.6), a strap end *(ibid,* pl VIII.5), and a catapult bolt (ibid, pl X.6), have clear military connotations (Rodwell 1980, 65).[16] In fact a fort may have lain partly within Gibson's site. The more detailed of the two published plans of the 1876 cemetery excavations, (Smith 1884, pl I, reproduced here as Fig 6) shows three extensive linear features in the area south of the main excavation. One of these consists of two lengths approximately at right-angles with a rounded north-west corner. The north arm lay partly within the area of excavation; and Smith's pl III (1884) illustrates it, though not well enough for it to be seen in detail. But on a contemporary photograph (on which that plate is based) the feature shows clearly as a V shaped ditch with a spade-cut flat bottom (Pl 2). It could well be an early Roman military ditch. If so, the other two linear features, one marked *Trench* on Smith's plan, would presumably be 1876 excavation trenches or else of entirely different date. The northern arm of this putative fort ditch ends some 83 m east of the north-west angle, having first been deflected southwards. There was clearly an entrance here, and its unusual form, with slightly inturned ditch butts, finds a parallel in the small fort at Oakwood, Selkirkshire, built *c* AD 80 (Steer & Feacham 1952, fig 3).

The district was probably not in military hands between the later 40s AD and the suppression of the Boudican revolt in 61; the half-legionary fortress at Great Chesterford may have been connected with the latter campaign (Rodwell 1972; also *VCH 3, 5).* If so, the site at Saffron Walden might on present evidence be ascribed to the conquest period.

What may be Romano-British cremation burials have been found within the area of the present town, one certain instance to the north (Braybrooke 1836, 149), and possibly several to the south of the western section of Abbey Lane- the latter during the 1876 cemetery excavation, though not recognized as such at the time (Smith 1884, 317).[17] Moreover, many of what were apparently the earliest inhumation burials on that site,[18] arranged haphazardly but in general on a roughly north-south alignment, should belong to the same period. At least six of them are known to have contained Romano-British pottery (Smith 1884, 332 and pl VI.2, 3; below, Section 2.4) while, in another, 22 bronze bracelets were found, of which the 15 illustrated examples *(ibid,* pl IX) are well established late 4th century or later types. From an examination of Smith's report (1884) and of the material from the site in Saffron Walden Museum, it appears that the cemetery was probably in use by the earlier 3rd century, and that a substantial number of the excavated burials could be Romano-British (Section 2.4). Other skeletons were discovered in 1905 some 350 m to the south of this cemetery, possibly in association with a coin of Claudius II.[19]

Elsewhere in the vicinity of the medieval town, a number of Romano-British agricultural features, including part of a 2nd-3rd century chalk quarry on the Elm Grove site, have been found. One or more of the

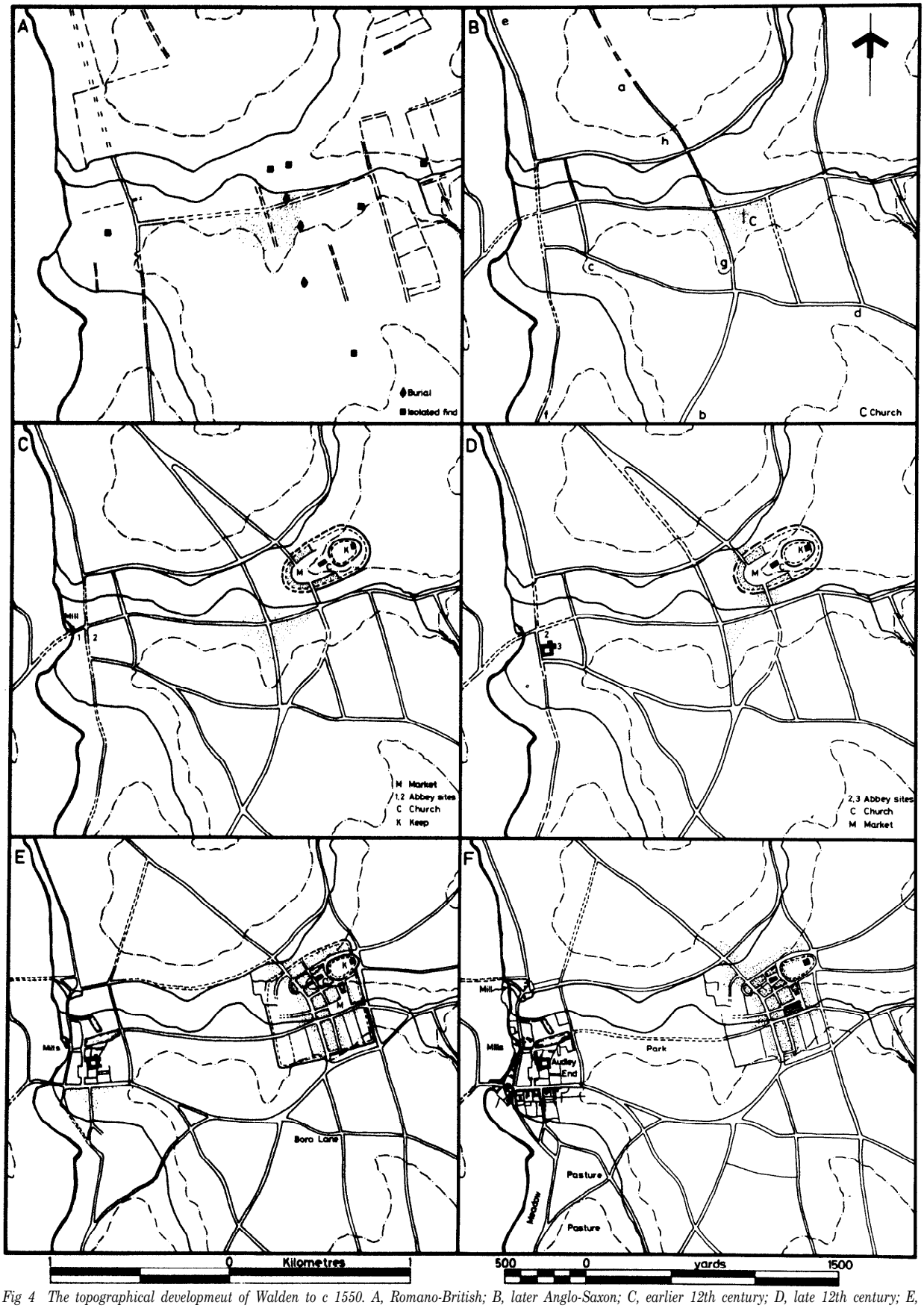


Fig 4 The topographical developmeut of Walden to c 1550. A, Romano-British; B, later Anglo-Saxon; C, earlier 12th century; D, late 12th century; E, c 1300; F, c 1550. Areas of concentrated occupation (certain or probable) are stippled

features seen by Maynard under Common Hill may belong to this category. In general, however, the amount of Romano-British material from the town is small, implying that the settlement with which the burials and other features were associated lay a little distance away, very probably in and just east of Audley Park, to the west of the later medieval nucleus of Walden.[20] Consideration of its nature will best follow discussion of wider aspects of the Romano-British landscape in the Walden area (see p 9 below).

Recent studies (summarized in Rodwell 1978; Drury 1980a) have shown that in several areas of central and southern Essex, agricultural usage of land within a rectilinear system of allotment-in some cases within individual fields-may have been undertaken continuously since the late Iron Age and Roman periods. In such areas there is no evidence for extensive medieval open fields cultivated in strips; and while it is possible that in some cases the fields were used in common, there is no clear evidence for such a practice except in the case of water meadows (eg at Chelmsford in 1591; ERO D/DM P2). By contrast, over much of north-west Essex an open field system seems to have been the norm in the medieval period; and studies wholly or partly concerned with the open fields around the two principal settlements in that part of the county, Thaxted and Saffron Walden, have been published (Newton 1960; Cromarty 1967).

The extant areas of the rectilinear systems are likely to reflect the minimum area of land which has survived in more or less continuous cultivation during the period following their establishment. The areas concerned range from virtually the whole of the non-marshland area of the Dengie Peninsula (Romano-British: Drury & Rodwell 1978, 148-9). through extensive areas of the Chelmer valley at Little Waltham (late Iron Age: Drury 1978b. fig 74), to a modest area around the early medieval nucleus of the manor of Moulsham, also in the Chelmer valley (late Iron Age and perhaps earlier: Drury 1980a. fig 23). In most cases post-Roman additions to the surviving areas of these systems do not seem to have been laid out in conformity with the pre-existing pattern.

At Walden the Romano-British minor rural settlement and its post-Roman successor (below, p 14) both seem to have lain in the same area, with their main axis formed by an east-west road along the lower Slade valley. This is one of several previously unknown roads, in use in the Walden area during the Roman period, which form basic elements of a rectilinear field system of probable pre-medieval origin.

On Fig 3 an attempt has been made to plot these potentially pre-medieval features in the landscape around Walden, east of the River Cam. They have been taken largely from surveys of parts of the Audley End estate in *c* 1758 (ERO TIM 123 *et al),* supplemented by the Tithe maps of the parishes concerned and the 1st Edition Six Inch OS map. In each case the earliest source has been preferred. Additional evidence is available for the Audley End area from a copy of a late 16th century estate map (P1 18; below, p 94) and another of 1666 (ERO T/M 172). From these sources it is clear that most of Walden and the adjacent parishes was cultivated in strips during the 18th century; although some assarts, apparently of medieval origin, consisted of small enclosed fields (cf Taylor 1975, ch 5). In such an area the substantial survival of pre-medieval elements in the recent landscape might seem only a slight possibility. But it is clear that they do survive here, even if the pattern of survival is very different from that observed in enclosed field areas.

The most important of the early roads ran along the Cam valley. An aerial photograph (Pl 4) provides evidence of a substantial road flanked by ditches (D on Fig 3) which ran north-south along the Cam valley, east of the river. In some lengths it seems, from the photograph, to have become a hollow-way in antiquity. Extended northwards its line meets another section of road, C, which is visible from the air north of Audley Park. This section also appears on an estate map which shows Audley End I (ie pre- 1603), and traces of it still survived in 1666 in the park created around Audley End II. The fact that this section of road seems to have survived in isolation through much of the medieval period may account for its apparent slight drift from the 'ideal' line (Fig 3)--the point of maximum deflection marks its junction with a lesser road along the lower Slade valley (below). But there can be little doubt that in general terms it represents the extension of the road known further to the south. If' the essential line is projected northwards (Fig 2), it meets a length of the present Al30 which joins the Roman road from Colchester to Gt Chesterford. east of the latter (see also Rodwell 1972, fig 1).

Other landscape features are related to this rather sinuous river valley route. In a large, if irregular, area centred on Walden, all the medieval strips, many of the furlong boundaries, and many sections of road or track follow a consistent alignment, parallel or at right-angles to the river valley route-and in particular to section C which falls within this area (Fig 3), and to the roads which meet it. The only lacunae in which such a pattern is totally obscured are Audley Park and the bailey of Walden castle.

Further south, other landscape elements clearly follow the same alignment. One is the line E which, to judge from the configuration of Walden's parish boundary, may once have been the boundary between two distinct estates. The other significant feature is the line A, which in part is also followed by parish boundaries. Between and around these two major features, a few minor ones follow the same alignment. So do a number further east in the vicinity of Thunderley, a settlement which on placename evidence was probably established in the Pagan Saxon period, if not until late within it (Reaney 1935, xxi, 547: Gelling 1978, 106, 110).

Comparison of this pattern with that observed in the Chelmer valley at Little Waltham (Drury 1978b, fig 74), for which a late Iron Age origin has been postulated, is instructive. Both are based on a river-valley route whose line bends to follow that of the river, and in both cases major subdivisions of the

system tend to occur at 300-400 m intervals in one direction, parallel to the river. Such subdivisions were probably marked by access lanes; and in the Walden area these have generally survived as such, since it would no doubt have been the intermediate held boundaries which were removed in the transition from Romano-British fields to medieval furlongs, the strips being laid out largely between the access lanes.

The apparent existence of a framework within the overall pattern at Walden has indeed highlighted its existence at Little Waltham. There, the continuing process of amalgamation and subdivision of fields to suit contemporary needs has resulted in substantial sections of the framework disappearing, where they have not survived as modern roads. The presence of major subdivisions is best demonstrated in the southern part of the mapped area, west of the River Chelmer (Drury 1978b, fig 74). However, the fact that many lengths clearly persist provides some indication of the extent to which individual boundaries, as opposed to the alignment of the system, do in fact survive-a point about which doubt was expressed in the Little Waltham report *(ibid, 135).*

It is clear therefore that what is emerging as a virtually standard late Iron Age rectilinear pattern of land allotment in Essex could be readily adapted, not only to continued cultivation in enclosed fields, but also to the 'normal' medieval pattern of the cultivation of strips in large open furlongs. Romano-British patterns of land division detected in the county generally differ from late Iron Age ones only in the scale and accuracy of the framework (cf Drury & Rodwell 1978; Drury 1980a), and both would have been equally adaptable. Indeed, instances of the apparent transition of Romano-British fields into medieval furlongs are being detected elsewhere in England at an increasing rate (Taylor & Fowler 1978).

Yet there is one great difference between areas where there may have been continuity in the cultivation of enclosed fields and areas of open field cultivation. It lies in the extent of the area over which early systems provide the framework for medieval fields. Little Waltham, Braintree, the Dengie Peninsula, and the Thurrock region (Rodwell 1978; Drury 1980a) are instances of survival over many square miles, whereas the area at Walden is much more modest, and preliminary study of Hadstock (by W J Rodwell) indicates a similar pattern. If one of the basic conclusions drawn from our studies on this theme is correct, that for survival to occur the land is likely to have remained in almost continuous agricultural usage, the implication at this stage seems to be that in those parts of Essex where open field systems developed-in the northwest, and to a lesser extent on the north and west boundaries-there may have been a proportionally larger reduction in population (or, conceivably, in demand for agricultural produce) at some time during the post-Roman period. When the population (or the demand) built up again, the land which supported it was laid out on an open field system and the relatively insignificant area which had survived in continuous cultivation was adapted to this new system of management. As in areas where enclosed fields continued, for example Little Waltham and Braintree, survival is confined to the favourable lower valley slopes--except for the small area at Thunderley, which may even be fortuitous-but the scale is vastly different.

Whether the system ever extended further onto the boulder clay uplands is uncertain-the only clue is the pattern around Thunderley-but it does seem that a massive retreat from once cultivated land may have taken place. The postulated minimum area of post-Roman cultivation clearly seems to be centred on a settlement adjacent to the partially excavated cemetery, and this evidence complements the archaeological evidence from the latter area for continuity of occupation from earlier prehistoric periods. The population had certainly recovered by the time of the Domesday Survey *(VCH* 1, 512, n4).

So far, excavations in the Walden area have produced little evidence relevant to dating the origins of the system discussed here. The sole pre-medieval field boundary to be located, on the Elm Grove sire (p 30), seems to have gone out of use in the late Iron Age, probably by the end of the 1st century BC. It may be significant that this followed an alignment totally at variance with that of the once extensive system shown in Fig 3. A wholesale replanning of the agricultural layout in the later Iron Age would accord well with current theories concerning the substantial growth of population during the Iron Age-a growth initially facilitated by improved agriculture and later stimulated by the development of overseas trade and a market economy (Cunliffe 1978, 21-i; Drury 1978a, 76). The Waltham system probably originated in the early 1st century AD (Drury 1978b, 134-5). although an earlier origin for the system in the Chelmsford area is possible (Drury 1980a. 62).

Examination of the Walden system suggests several other roads in use during the Roman period. Two of these ran eastwards from the major Cam valley road (above, p 7) and more or less at right-angles to it for some distance. Both comply with the alignment of the proposed relict held system, and appear to represent major lines of subdivision within it. One of them, to the south of the area mapped in detail in Fig 3, runs through Debden and Wimbish parishes (and for a short distance is followed by their common boundary); it is called *Elder Street* in the latter (Fig 2). Further east it seems to aim for a junction with the known Radwintcr-Thaxted road *(VCH 3,* 1963, 28; another branch is noted in *Britannia,* 9, 1978, 452) in the vicinity of Wimbish Green *(c* TI, 608355). To the west it should be followed by the present road into Newport, west of Ringers farm (TL 533337), or by a footpath which runs directly from Ringers to the Cam. Some 400 m east of the farm a scatter of Romano-British pottery and building material (at *c* TL 538336) probably derives from a settlement beside the road."

The other road complying to the alignment of the proposed relict field system clearly represents a major line of subdivision within it (Fig 3, B). It is still easily visible through Audley Park as a cropmark (Pl 4) and also as a slight hollow-way just beyond the southern edge of the Slades' narrow flood-plain. Beyond the

Park, Abbey Lane and George Street-Hill Street mark its course, and, further east, part of the B1053 towards Sewards End. The position of the present gateway into Audley Park, rather south of the road's probable course, has caused a noticeable deflection of Abbey Lane, immediately west of the *magnum fossatum* (Fig 10). It is not clear when, or exactly why, this deflection occurred; but it was not necessarily before the construction of the earthwork (in the earlier 13th century), since its western entrance lies satisfactorily near to the road's 'ideal' course.

The road was apparently not found on Mr Petchey's site on the north side of Abbey Lane (Site K, Section 5), though it seems that it ought to have been encountered in Trench D (Fig 47). Since the road only survives as a shallow hollow-way just to the west in Audley Park, it may well not have penetrated to the machine cleared level on the site, which was reached by the removal of up to 0.6 m of 'hill wash' and presumably a recent topsoil (below, p 88). In any case it would hardly have been discernible within this material in a cut as narrow as Trench D. It is interesting, however, that Mr Petchey's 'boundary ditch' F1, apparently the earliest linear feature on the site (below, p 90), lies more or less at right-angles to the road's probable course through the area, whereas the later linear features in Trench A are all parallel to the *magnum fossatum* and may be contemporary with it.

The growing density of Roman finds westwards from the present town and the presence of what may be a sizeable cemetery suggest that the principal Romano-British settlement in the area probably lay on this east-west road in the lower Slade valley. It is not clear how far it extended to the west: Roman material has been found in the gardens of Audley End House *(VCH* 3, 1963, 196), but this presumably derives from a separate site near the Cam valley road junction. To the east the settlement probably extended up to, but not far beyond, the junction of its axial road with another road. This latter (Fig 3, F) lay along the narrow strip of land now fossilized between the east boundary of Audley Park (formerly demesne land of Walden abbey) and the west arm of the *magnum fossutum.* To the north of the Slades, between *c* TL 528392 and *c* TL 534374, its whole course is clearly mirrored in field boundaries shown, for instance, on the 1848 Tithe map. Beyond these points the line of the road is preserved northwards in field boundaries or as a cropmark (P1 4), but is almost immediately lost to the south. So far as the natural topography allows, this road also conforms to the alignment of the rectilinear field system, and indeed seems to form one of the major subdivisions of it; though to the north of the Slade valley it is increasingly attracted to a course parallel to that of the major Cam valley route to Great Chesterford.

The settlement seems to be too large to be a farm, and there is no hint in the finds of masonry buildings suggestive of a villa. The principal cemetery lay on its southern fringe, in a position analogous to those of cemeteries associated with the 'small towns' at Braintree and Great Dunmow (Drury 1976, 126). A substantial 'small town' at Walden is precluded by its distance from a major nodal point on the road system, and by its proximity to Great Chesterford; but the settlement at Little Waltham, similarly placed in relation to Chelmsford, may provide a valid parallel-' village' may be the best term to describe them (Drury 1978b, 134). Presumably the majority of the site lies just within the east end of Audley Park, much of which has apparently not been ploughed since the dissolution of the abbey in 1538 (particularly in the vicinity of the east-west road). No surface finds are known from the area.

One other road in use during the Roman period is the one followed for *c* 1.6 km on the north-east by Walden's parish boundary (Fig 2). Running on a north-west to south-east alignment between Great Chesterford and Radwinter, it should cross the Madgate Slade by a probable small Romano-British settlement at Little Walden *(VCH* 3, 1943, 195). Traces of this road have been seen east of' the Slade *(ibid,* 27), but its course was unknown to the west except in the immediate vicinity of Great Chesterford. Over 1000 m of the road, however, may be visible as a cropmark in the intervening area.[22] This new length lies immediately south and west of Emanuel Wood, in which Roman pottery and building material have been found (note in *Medieval Archaeol,* 12, 1968, 188; also below, p 106).

The road's alignment is clearly at variance with the rectilinear field system in Walden, though not with that of some other roads and boundaries on the boulder clay uplands. Unlike the Little Waltham-Braintree area, where a mid 1st century road cuts across a similarly planned landscape (Drury 1976, 121), this road now has no point of contact with surviving elements of the nearby rectilinear field system. Nevertheless it too is likely to form an element of the superimposed pattern of early military roads which is discernible in the region. It is interesting to note that lanes and boundaries in the area east and south-east of Walden (eg in Wimbish, Debden) are predominantly aligned on, or at right-angles to, the same north-west to south-east line as this and other probable Roman roads in the vicinity. It is not clear, however, whether they belong to a surviving Romano-British pattern of land use, or to a later one which used surviving metalled roads as baselines for a new system of land allotment (Drury 1976, fig 49, 122-3).

1.3 Walden in the sub-Roman/ Migration period (Figs 4-7)

The majority of the 200 or so burials" discovered by the Gibsons in 1830 and 1876 were east-west aligned and should almost certainly be dated to the 7th century and later.[24] At least 50 of the non-orientated burials, however, might be Romano-British or sub-Roman (below, Section 2.4). Although there is no wholly conclusive evidence for continuing use of the

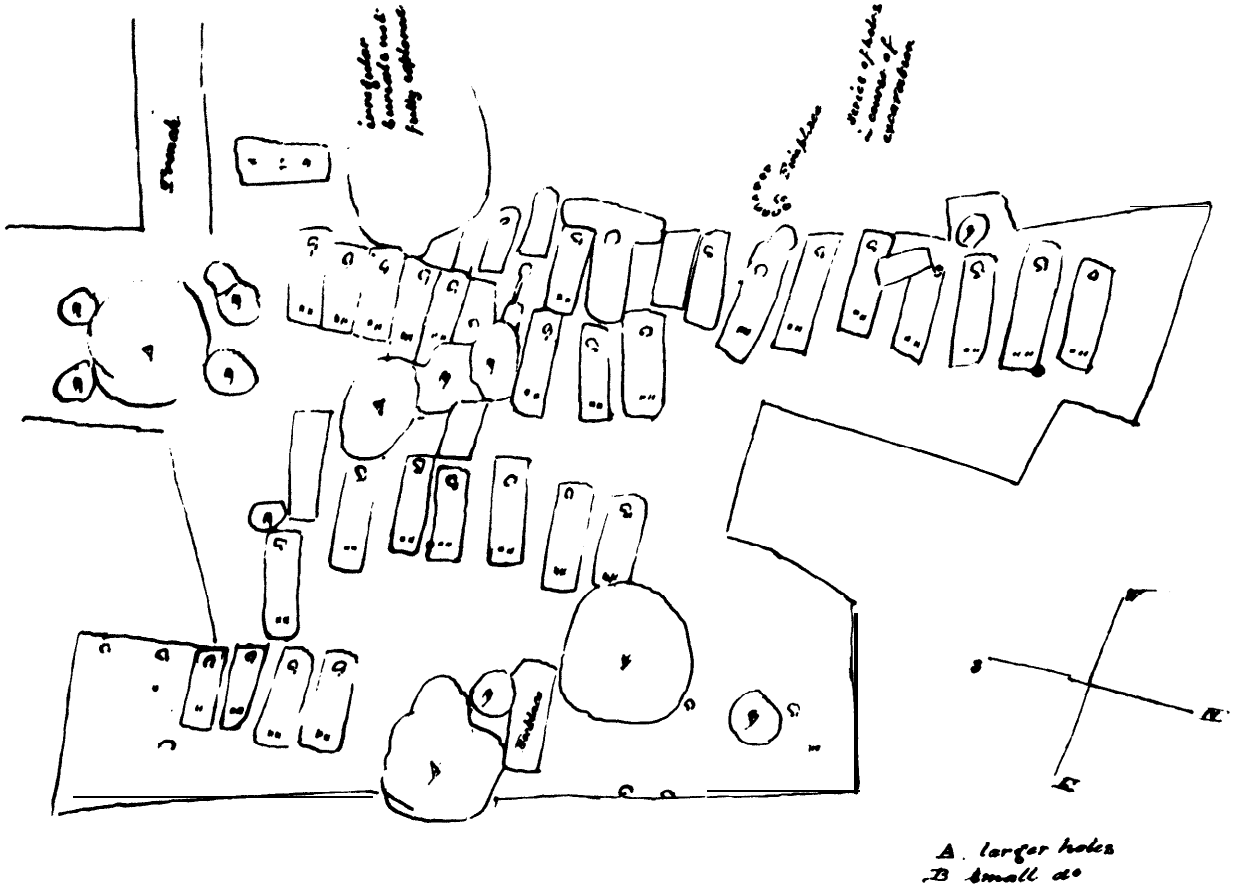


Fig 5 Contemporary plan of the 1876 cemetery excavation, recently discovered at the Ashmolean Museum, Oxford, and reproduced by courtesy of the Trustees

cemetery through into the period of Christian burial, this seems a strong possibility-especially as the adjacent settlement may also have survived into the mid Saxon period without any lengthy break in its use.

If only judging by the amount of late Roman material found in the cemetery and generally in the area of the present town, the Romano-British village is likely to have persisted well into the 5th century. Moreover, the nearer areas of its field system probably survived in more or less continuous cultivation from the Romano-British to the Anglo-Saxon and later medieval periods (above, pp 5-9). Of course this need not mean continuing occupation of the Romano-British settlement; but the place-name *Walden* (OE *Weala-denu,* 'valley of the Britons or of the serfs') does suggest that it may have lasted long enough into the post-Roman period to be given an English name indicative of its inhabitants' race.[25]

J N L Myres has argued that Germanic settlers were grouping around Cambridge by the beginning of the 5th century (Myres 1969, 76-7; Myres & Green 1973, 261-2 and map 3), and that other settlements, possibly still peaceful, had been established at Barrington (TL 372496 and TL 387497; Myres 1969, 88, 127 n5) and Haslinglield (TL 413520; ibid, 88, 107) by c 450. Although Myres's dates for the earlier phases of Germanic settlement in England may well need considerable revision-the earliest perhaps by as much as 30-50 years (eg Morris 1974)—his scheme provides an excellent framework for its relative chronology and geographical distribution. His suggestion that settlement around Cambridge and elsewhere may be related directly to an extant Roman administrative pattern (Myres 1969, 77) could also be applicable to the Great Chesterford area by the later part of the 5th century. There is good reason to suggest that this lately walled town was surrounded by a well defined territory, with a diameter of some 9-10 km, which clearly persisted physically, if not functionally, throughout the Migration period. If it was Romano-British or sub-Roman in origin (as seems probable), it may have been taken over, by Germanic federates or the slightly later Anglo-Saxon settlers in the area, as a viable administrative unit.[26]

In the second half of the 5th century, Myres's 'phase of invasion and destruction', Germanic penetration of northern Wessex and the Thames valley from the area of Middle Anglia made extensive use of the Icknield Way. The distinctive and elaborate Saxon

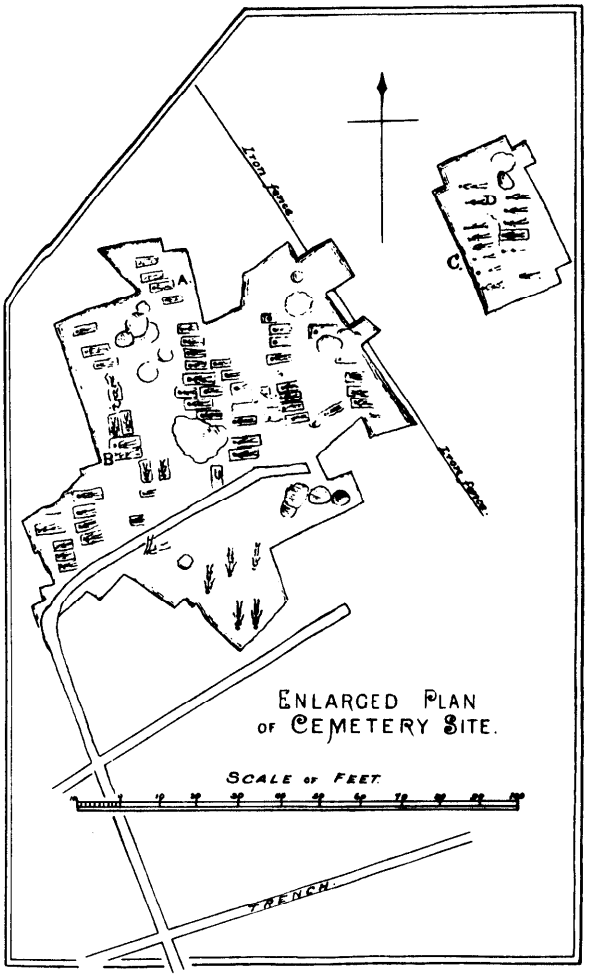


Fig 6 Plan of the 1876 cemetery excavation published in Smith's report (1884, pl 1)

Buckelurnen began to appear in quantity on the earlier sites of the Cambridge region and at Great Chesterford, and also at Linton in the Granta valley. It would seem therefore that Germanic penetration of the Cam valley, as of the whole south Cambridgeshire plain, was both early and extensive.

Two important Anglo-Saxon cemeteries of 5th and 6th century date are known (one already excavated[27]) at Great Chesterford. Another almost certainly awaits discovery at Mutlow in Wendens Ambo (TL 517364), where in 1847 labourers found a number of iron objects, including an umbo and at least four spear-heads, and sherds of several handmade decorated pots, all apparently of Pagan Saxon date (Neville 1848, 7-11, 49-50; Meaney 1964, 89). At Walden, however, there is a conspicuous absence of any characteristic Anglo-Saxon material of 5th or 6th century date. Smith makes it clear (1884, 333) that he was well acquainted with the decorated pottery of the period, and that none at all was found during the 1876 excavations.

At present, early placenames may be a more reliable guide to the extent of the Germanic penetration of the Cam valley than are archaeological finds. J Alexander excavated a sunken featured building containing 5th century pins and brooches at Grantchester, just south of Cambridge (Alexander 1972); but above Great Chesterford no certain Pagan Saxon settlement sites are known in the area easily accessible from the Cam. There is, however, a noticeable concentration of place-names in *-hám* and topographical names around the headwaters of the Cam and the Stort (Reaney 1935; Gover *et al* 1938; Dodgson 1973, figs 2 and 3), perhaps reflecting an early colonizing movement from the north.

Relations between the first immigrant Anglo-Saxons and the indigenous population of the Cam valley area were probably similar to those suggested by excavations elsewhere on the fringes of Essex (Rodwell 1975, 95). The evidence points to a long period of peaceful coexistence, although changes in relative status and a blurring of the two groups' separate identities would doubtless have occurred in the first two centuries of Anglo-Saxon settlement.

Walden's placename may suggest a particularly independent sub-Roman enclave in one of the main tributary valleys of the Cam. Nonetheless there seems to be a little evidence for some early Anglo-Saxon settlement there. An examination of the finds from the 1876 cemetry excavation (in Saffron Walden Museum) has produced a number of handmade grass-tempered sherds of 5th-7th century date (below, Section 4.1).[28] The fortunate rediscovery of an original sketch plan of much of the 1876 site[29] raises the suggestion that at least one of 'a number of pits or circular hollows' discovered 'beneath the graves' was a sunken featured building (Smith 1884, 317). The plan illustrates perhaps one half of a subrectangular feature, c 3 m wide (Figs 5, 7). One of its two shorter sides is shown, in the centre of which is a distinctive outward bulge suggestive of a sizeable post-removal pit. It is possible that this feature can be identified with what the excavation report describes as 'one large rectangular pit or cist which contained the remains of several bodies, which seem to have been hastily or carelessly deposited' (Smith 1884, 314);[30] if the present interpretation is correct these were probably in graves dug into the filling of the building.

Certainly a scatter of grass-tempered sherds and a sunken featured building at the edge of a continuing minor rural settlement would be quite consistent with the contemporary situation elsewhere in Essex (Rodwell 1975, 95). On the whole, the pottery is at least as likely to be 7th century as earlier. The sherds are from rather shapeless vessels, which are typical of 7th (but not 5th and 6th) century forms. Moreover, the Essex sites with clear evidence of coexistence have all produced decorated Anglo-Saxon sherds—usually in the order of 5-10% of the pottery found-in their occupation levels.[31] Yet Smith was certain that none had been found at Walden (1884, 333). The possible sunken featured building, of course, could easily be 7th century or later still. So it is quite probable that, if only in terms of its material culture, the settlement at Walden stayed relatively unaffected by the Germanic penetration of the Cam valley until sometime in the 7th century at least.

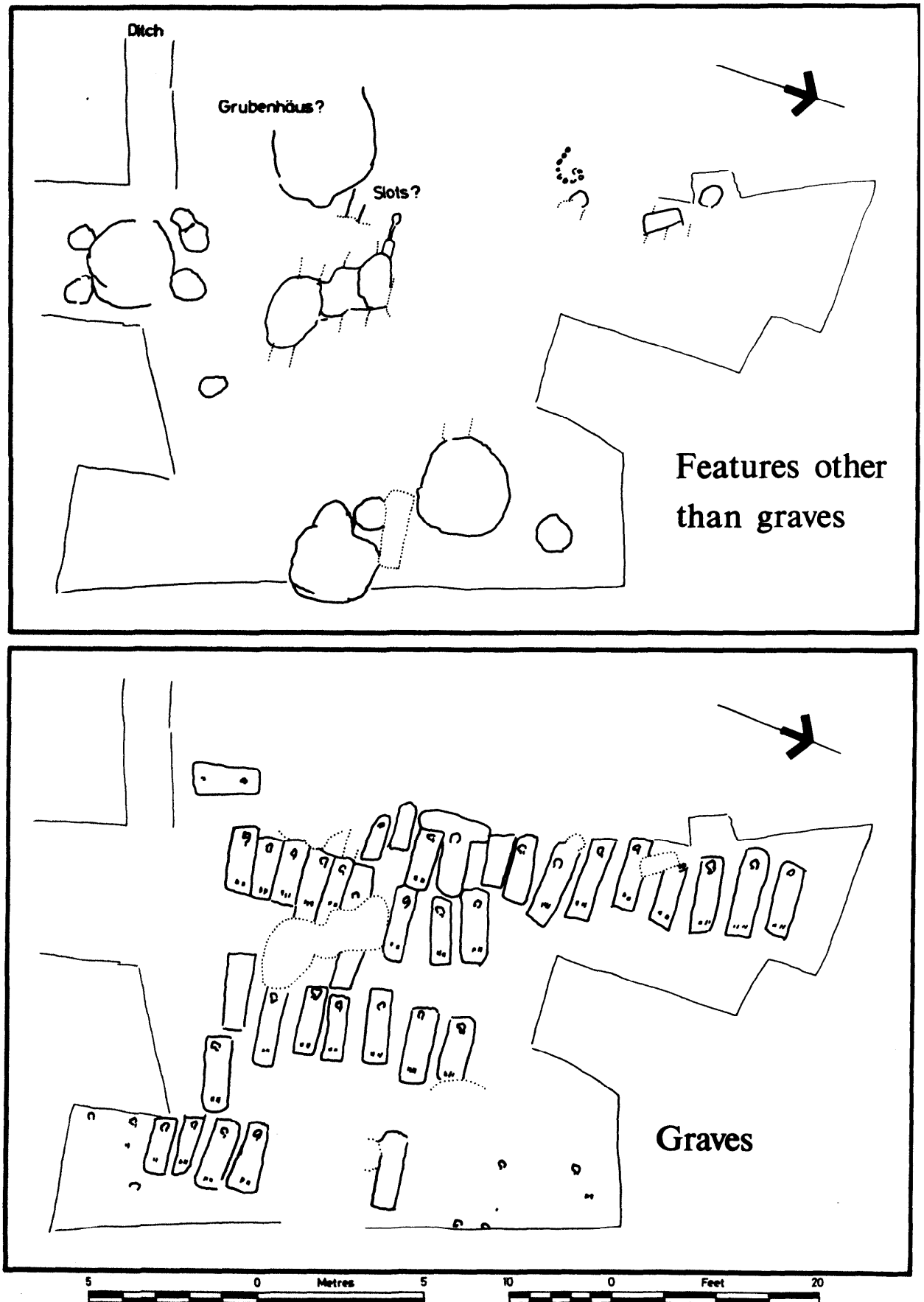


Fig 7 Analysis of Fig 5, distinguishing between graves and other features

1.4 Walden in the later Anglo-Saxon period (Figs 2, 4-7, Pls 2,3)

Not surprisingly the published report of Gibson's excavations (Smith 1884) focuses attention on the later, deliberately orientated graves in the Walden cemetery (which continued in use until the 9th century at the very least). These later burials probably formed a lair majority of' the 150 or so which are said to have been uncovered (Smith 1884, 313);[32] a further 50 or 60 had been excavated in 1830, when the site was discovered by workmen digging a sunken fence and planting trees (Braybrooke 1836, 143). It seems that all the later burials, which were notable for 'the general paucity of personal ornaments or instruments' (Smith 1884, 317), were west-east aligned and arranged in more or less regular rows. The published plan (Fig 6) shows at least nine such rows, while the unpublished sketch plan (Fig 5) demonstrates the orderliness of their arrangement in one part of the excavated area. Smith remarks that under some of' the skeletons' heads—it is not clear how many of them this applies to—'the chalk projected to form a rest or pillow' (1884, 3l4). Pillows, usually of stones or tiles, have been found in several other cemeteries, eg St Bride's London (unpublished, but see Grimes 1968, 182—97), Bordesley abbey (Rahtz & Hirst 1976, 114). Rivenhall (note in *Medieval Archaeol,* **18,** 1974, 174), and St Nicholas-in-the-Shambles. London (Thompson 1979).

The 50 or so skeletons found in 1830 were lying in two rows, apparently set in a trench at least 120 feet *(c* 37 m) long. Braybrooke took this to mean mass-burial after a battle, and adds the most interesting observation that 'in one place, near the south end of the trench. the remains of a man and horse. embedded in the chalk, were discovered' (1836, 143). All the bodies 'in' the trench were said to be only 20 inches (0.5 1 m) 'below the surface of the ground' *(ibid),* but in the context of the remark this may well mean below the general level of the natural chalk. It is possible that the trench did not exist: the burials in two rows may have been so regularly spaced and relatively close set to one another that individual grave cuts had become obscured. A similar 'trench' was excavated at Cannington, Somerset (Whistler 1908), which was probably no more than a series of individual, but intersecting, graves information from Professor PA Rahtz). It is just as likely, however, that the trench was a separate, earlier feature whose fill was still consolidating, or which at any rate was still a visible depression, when these bodies were interred. One of two photographs taken during the 1876 excavation (in the possession of Saffron Walden Museum) may well illustrate this feature, viewed from the north (Pl 3). If so, the photograph shows that it predates the cessation of' north-south burial, since a skeleton on that alignment is clearly shown projecting from beneath two orientated burials, within the feature's apparent limits. Of course the photograph may merely illustrate the excavators' extremely haphazard methods, and the 'trench' may be no more than an area of deeper delving. On the whole, however, the surviving records give the impression of a moderately orderly and carefully conducted excavation—for instance, in the uncovering of the skeletons (Pls 2, 3) and preparation of Gibson's sketch plan (Fig 5).

So Pl 3 may well show part of a very substantial linear feature, while seeming to do relatively little to clarify its function or even its location within the whole area examined. These problems, however, can be largely sorted out. The photograph suggests that the feature is a quite shallow ditch, recut many times (the eastern sides and bottoms of two recuts may be visible in the centre front). It is probably a field or property boundary and, since it is north-south aligned (confirmed by Smith 1884, 312-13), may well form an element of the proposed rectilinear field system. The exact location of the ditch cannot be fixed from the available evidence; but Braybrooke's account of its discovery (1836, 149) suggests that it was located during the digging of a sunken fence. This feature is shown, it seems, on Smith's 'Ground Plan' (1884, pl 1). just south of the two excavation areas. So the north-south ditch which the sunken fence encountered may well have passed between those two areas; and the photograph (Pl 3) may show a re-excavation of what was less systematically exposed in 1830. Generally speaking, however, it is hard to avoid the conclusion that the various surviving records, though showing the 1876 excavations in a not too unfavourable light. scarcely hint at the full extent of the work or the complexities of what it uncovered.

Although Gibson's sketch plan seems to show chronological relationships between individual features, this impression is almost certainly wrong. In one of his letters to Rolleston, Gibson makes it clear that many, if not most, of the orientated burials were later than the other features on the site. So where he has shown one feature appearing to cut another. he may well have meant only to indicate their relative depths. So it seems that most of the features on his plan which are not graves may represent earlier occupation on the site—certainly earlier than the majority of the orientated burials which the plan shows; there ought to have been no hiatus in the development of such orderly rows. But occupation intervening between the earlier non-orientated graves and the later Christian ones shown in the excavated areas, or between the latter and those yet later ones which the records hint were found at higher levels, need not mean that the cemetery as a whole had two or more quite separate periods of use. Clearly it was considerably larger than the areas shown on the published plan (Fig 6), and burials would doubtless have been concentrated in different parts of it at different times.

There is no reason why the cemetery should not have been in more or less continuous use until the 9th century at the very least, and probably until the 12th. The earliest possible *terminus post quem* for its abandonment is provided by the fine Scandinavian necklace" from one of the orientated graves. This may be of 9th century date (Wilson 1976, 402), though other dates have been suggested (notably by Evison 1969a);

and of course the piece may have been buried as an heirloom. In fact the cemetery would almost certainly have continued in use until construction of' the first church on Bury Hill (the site of the present St Mary's), and perhaps for a while afterwards. There is no reason to believe that the new site was adopted until after the Conquest.

There must have been a church in or very close to the cemetery, though not obviously within the area of' Gibson's excavations. There are, however, areas shown on the two plans onto which the rows of graves do not impinge, which are sufficiently large to have contained a small timber church of one or two cells. A masonry structure, even an entirely robbed one, would hardly have been missed; but if the church had been entirely timber built, its presence on the site might well have escaped the excavator's notice. The recent discovery of two possible churches at Nazeingbury, Essex, in another anciently discontinued cemetery (Huggins 1978) underlines again the evidence from eg Potterne (Davey 1964) and Wharram Percy (Hurst 1976a) of how slight the remains of such buildings can be.

There remains the question of where the settlement which accompanied this cemetery was located. Sherds of mid Saxon Maxey-type ware of probably no later than 9th century date were found amongst the material from the 1876 excavations in Saffron Walden Museum,[34] together with clearly later pottery, some of which could nonetheless be earlier than the 10th century. The mid Saxon pottery, in fact, accounts for only a very small proportion of the material found in 1876, but this is entirely in accord with the general pattern elsewhere in Essex. Indeed, the relatively few mid Saxon sherds identified on sites there have usually come from some distance away; this is well shown, for instance, at Rivenhall (Rodwell & Rodwell forthcoming). On many other Essex sites, however, mid Saxon pottery is almost absent, eg Asheldham (Drury & Rodwell 1978, 137, 145-9). The rest of the collection from the 1876 excavations consists of much Saxon-Norman and later material, in an apparently unbroken series which ends abruptly in the earlier 13th century (below, Section 4.1). All this, together with large quantities of wattle-impressed daub, iron slag, and other debris—including evidence of silver working, and perhaps also of glass working (below, pp 85-6), which suggest more than a simple agricultural economy—must be derived from occupation in or immediately adjacent to the areas of burial.

Certainly no post-Roman material earlier than the later 11th century is known from the area of the late medieval town, on and around Bury Hill, and hardly any from other sites beyond the immediate vicinity of the 1876 excavations. So presumably the contemporary settlement, Anglo-Saxon and later *Waledana,*[35] covered much the same ground as its Romano-British predecessor. It may have encroached on parts of the cemetery not currently or recently in use, especially while the latter's boundaries were not yet firmly fixed. Settlement and burial may both have moved around within quite an extensive area for some while, as seems to have happened at Rivenhall, Essex, where 8th-9th century burials overlay earlier Saxon occupation and were themselves overlain by the first rectory in the 12th century *(Medieval Archaeol,* **18,** 1974, 174, 193; Rodwell & Rodwell forthcoming).

It was presumably during this period that the main north-south Roman (and possibly earlier) road along the east side of the River Cam (Fig 3, C, D) fell out of' use, to be replaced by a new route (Fig 4B, a-b) which swept in a wide curve eastwards around the confluence of the Slades and the Cam, passing adjacent to the west side of the Saxon cemetery. Its course across the Slade valley uses that of' a pre-existing road (Fig 3, F; Fig 4B, g-h). Elsewhere, however. it cuts a broad swathe through the landscape. suggesting that there was little to obstruct it. Furthermore. north of the Madgate Slade it forms the eastern boundary of the surviving area of the relict pattern. This suggests its emergence when the settlement at Walden was still at its minimum post-Roman extent. Two reasons might be postulated for its appearance; firstly, that the earlier route along the east side of the Cam had become impassable due to neglect of drainage in the low-lying valley bottom; and, secondly, that the Walden settlement was about to become sufficiently, important to justify the diversion of the main road through it. In fact a combination of these factors may have been responsible. It probably served as the main north-south route across the Slade valley until a second eastward diversion was made to form the present High Street, in the earlier 12th century (below, p 25). The road c-d (Fig 4B), which bounds the surviving area of relict landscape on the south, should have emerged at about the same time. The earliest known medieval route along the cast side of the Cam valley (Fig 4B, e-f) may date from a period when the dramage of the valley was re-established.

Nothing is known of' Walden's ecclesiastical history before the Conquest; nor does Domesday Book record a priest or church there. But it seems very probable, despite this absence of' evidence. that there would have been a church in Walden from an early date. Certainly its large area (*c* 3038 ha today; has been both tenurially and parochially independent throughout its documented history.[36] Moreover, the presence of a settlement and cemetery in Walden with, as it seems, their origins in the Roman period would clearly have favoured the location there of a church during the mid Saxon period. This would then have been a focus for the cemetery, but need not at first have imposed any rigid limit on its area or on the encroachment of settlement over forgotten burials. With only wooden markers, graves would doubtless have passed from view and memory after a relatively short time, no matter how orderly their disposition had been.

Little more can be said about the location and plan of *Waledana. No* structures have been found, and nothing more is known about the layout than about its Romano-British predecessor's in the same area.[37] It is clear that Mr Petchey's site (below, Section 5) on the north side of Abbey Lane, about 100 m to the north-west of the 1876 site, lay very close to the settlement. His ditch Fl may well mark a toft boundary—but presumably its eastern side, since the

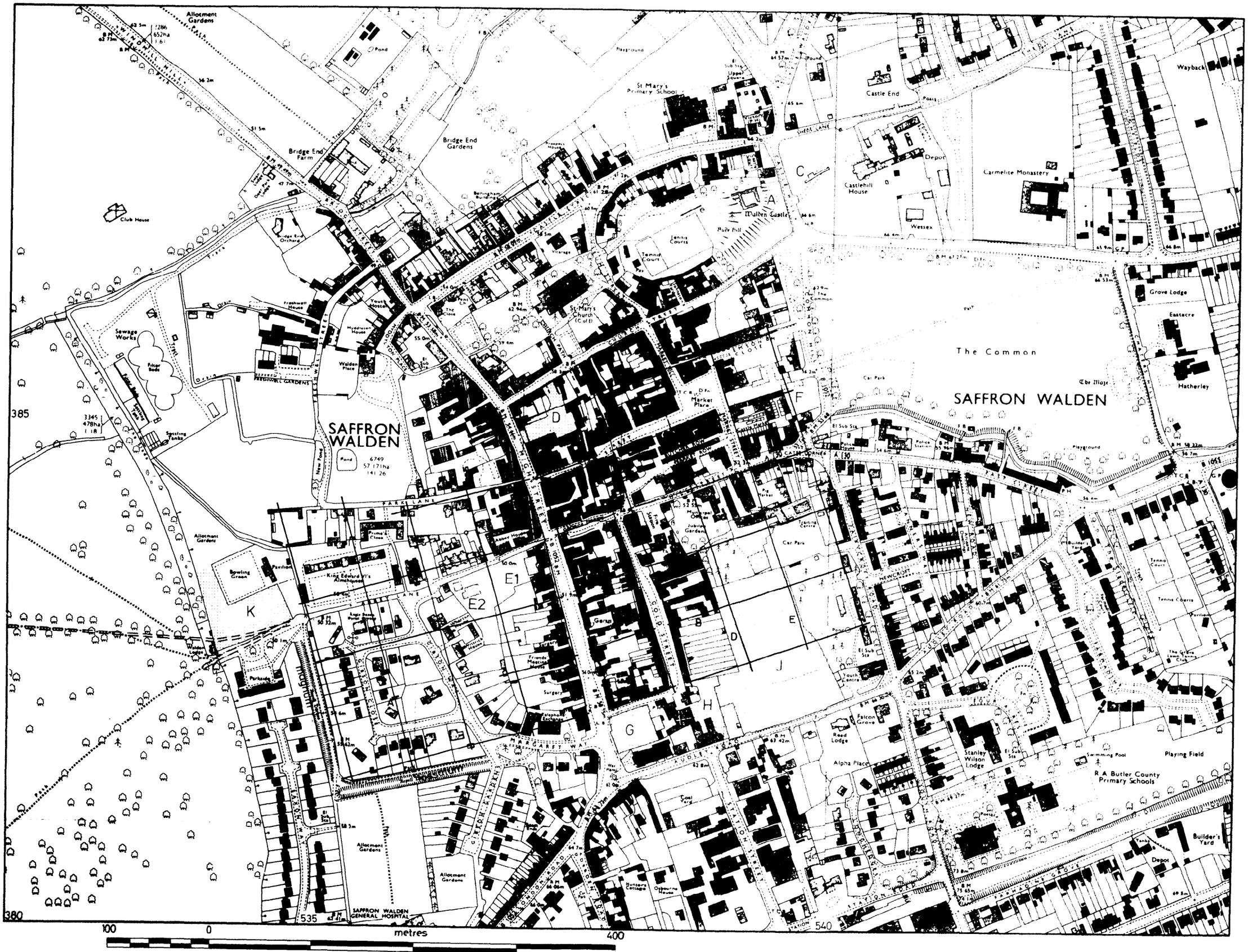


Fig 8 Elements of planning in the layout of medieval Walden: regularly spaced property boundaries on Bury Hill and the 12 perch framework of the 13th century planned extension. A, the parvum fossatum Roberti de Aschendum; *B, major property boundaries on the 1758 map; C, west edge of the marketplace; D, Elm Grove, F300, F301, F302 (Fig 13); E, Elm Grove, F315, F318.* Based on the Ordnance Survey Map with the content of the Controller of H M S O, Crown Copyright reserved

main north-south road across the valley should pass through the area to the east (Fig 4B)—or else may be a field boundary ditch. This feature contained the great majority of the Saxo-Norman pottery from the site, as well as lumps of what may be unfired daub or cob.

The Domesday entry for Walden *(DBii,* fos 62/62b; below, p 106) suggests that the Slade valley settlement was prosperous and quite sizeable;[38] but it is not clear what proportion of the manor's population inhabited it. Very little has been done so far towards a chronological account of the distribution of post-Roman settlement over the whole area of the manor. Almost all of the larger sites scattered over its drift-covered uplands appear in its earliest documentary sources, but most of them had names of no great antiquity which can often be related back to a known individual or family of the 12th century or later (Reaney 1935, 539-41). This is certainly true of the late medieval submanors (Fig 2), with the exception of Westley (OE *leah)* and possibly Bowlsgrove *(Bolisgrove* in 1400 survey: Camb U L MS Add 7090, ERO photocopy T/A 63).

The settlements themselves, however, may be much older. It is possible, for example, that The Roos was one of two knights' holdings in the manor in 1086 *(DBii,* fo 62b; Monteith 1958, 66); and in this respect it is significant that its submanorial rights extended into the parishes of Debden and Thunderley (Braybrooke 1836, 169). Several others lie on or beside routes of probable pre-medieval origin, and have field patterns which may indicate relatively early formation, eg Pounces, Butlers, and St Aylotts (Cromarty 1966, 11), despite the usual attribution of them to late medieval colonization (eg *ibid,* 11, 18-19).

On the whole it is likely that most of the boulder clay uplands of the manor which had probably gone out of cultivation in the sub-Roman/Migration period were reclaimed by the later Anglo-Saxon period (section 7.2). Walden's lesser placenames, as far as they are known and can usefully be commented on, suggest that relatively little assarting remained to be done in the late medieval period. So the larger upland sites first recorded in the 13th century, and probably many of the smaller ones, may be much older than their names suggest.

The Slade valley settlement seems to have been occupied until the earlier 13th century, ie until the time of the construction of the *magnum fossatum* (below, pp 23-4). So it seems that the Mandeville activities in the earlier 12th century—to the north-east on the Bury Hill promontory and to the west (the foundation of a monastery) at the Slades' confluence with the Cam-did not immediately cause any major dislocation of the existing settlement. Both new centres, however, would presumably have drawn people away from it over the next hundred years; and expansion of the abbey's park in the later 12th century (Liber I.xvi; and below, pp 21-2) must have impinged on the settlement's land quite considerably. But the laying out of the earlier 13th century 'new town', and the probable further definition of the monastic park's eastern boundary at the same time, must together have caused the Slade valley settlement's final abandonment.

1.5 Walden in the later 11th and 12th centuries

(a) The castle (Figs 4, 8-10)

The earliest reference to a castle in the manor of Walden is contained in the Empress Maud's first charter to Geoffrey (II) de Mandeville (Ashmole MS 843, fo 3; *Reg* III, 1968, 274), which is generally agreed to have been granted in Midsummer 1141 (Round 1892, 81-8; Davis 1964). Geoffrey was given permission to remove Newport's market into his castle at Walden *(in Castellum suum de Waldena);* and it seems reasonable to assume that by then the construction of the keep and its earthworks was well advanced, if not finished. Certainly they seem to have been substantially complete by 1143, when Geoffrey was forced to surrender the castle to Stephen *(Gesta Stephani,* 104; *Henry Hunt,* 276; *W Newburgh,* i, 45). It is not known, however, when the work had been begun. Excavation in Castle Meadows suggested that the keep was raised in one operation (below, pp 48-9), but there were no artefacts in any context directly associated with the work of construction. A single sherd of late 11th or probably early 12th century pottery was found in the lowest filling of the apparently unfinished ditch in the grounds of Castle Hill House. Neither of the sites produced any evidence of earlier fortification on Bury Hill. Rather, it appeared that the earthworks were constructed at the same time as the keep, and had not belonged to any earlier castle on the same site.

Nor is it known who built the keep. The records of Stephen's reign merely attest to Geoffrey's ownership of the castle between 1141 and 1143. Only the *Liber de fundatione Coenobii de Walden* (below, n59 and p 95) records that it was built by a Mandeville (I.vi),[39] but since the *Liber* was not written until after 1203 its statement is hardly reliable. Even if it were accepted, the matter would not be settled. C W Hollister has argued recently (1973, 27 and n43) that Geoffrey (II) did not recover the manor of Walden, which had been confiscated from his father in 1103-5 (probably 1103),[40] until 1141 'or perhaps shortly before'. He had (Hollister continues) received the greater part of his inheritance by 1130,[41] at which time Sawbridgeworth (Herts) was still in royal demesne. Hollister is mistaken, however, in thinking that the Empress Maud's first charter shows that Geoffrey (II) had only just recovered Walden. It is of no help at all in this respect; but evidence from other sources suggests that Walden may have been returned to him at any time after *c* 1130.

The three manors of Walden, Great Waltham (Essex), and Sawbridgeworth had escheated to the crown in 1120, on the death of Othuer fitz Earl, and may have been held in guardianship for his son William (Geoffrey (III) de Mandeville's half-brother) who was probably still a minor in 1130 (he does not

appear in the Pipe Roll or other records of Henry I's reign). Hollister says of this William that 'his inheritance probably remained uncertain' (1973, 25 n35). Indeed, it seems that Henry I was not concerned to preserve it intact for him, for by 1130 some of the lands had already been distributed (Hollister 1973, 25 n35). There is no evidence that William had received the remainder by the time of Henry I's death in 1135.

In 1130 Henry farmed only £65 1s from alienated Mandeville lands in Essex *(Pipe Roll* 31 Henry I, 53), although Walden had been valued at £50 in 1086 and Great Waltham at £60. So it is possible that at least one of the two manors, or portions of both, had been returned to Geoffrey (II)—if not to someone else—by, or a little after, the time of his majority. He would certainly seem to have regained royal favour by 1135, taking part in Henry's campaign against William Talvas in that year *(Orderic Vitalis,* V, 45-7) and attesting royal charters *(Reg* II, 1956, 1915-17). He was also present at Stephen's Easter court of 1136.

It seems significant that, while Geoffrey could present the churches of all three 'manors to the newly founded monastery of St James at Walden (BM Harl MS 3697), Stephen only saw fit to give *specific* mention to those of Sawbridgeworth and Great Waltham (and of Edmonton and Enfield) in a confirmation of that grant *(Reg* III, 1968, 913). This suggests that *totam terram quae fuit Eudonis Dapiferi in Anglia* (all Eudo Dapifer's land in England) promised by the Empress in her second charter to Geoffrey included those two manors but not Walden, which had been restored to him already by Henry I, or perhaps by Stephen at some earlier date. By specifically confirming them to Walden priory Stephen was thereby underlining his prior right to have been responsible for their return to Geoffrey. There might have been no need for any similarly specific confirmation of Walden if it had already been returned by the crown at some much earlier date and not first been given back by his rival.

Certainly Geoffrey would have needed Stephen, as his overlord, to consent to the donation of Walden church. The real point at issue is whether Stephen's phrase *et de omnibus ecclesiis suis de toto dominio suo* (and of all the churches in his entire lordship) would have been considered a sufficient confirmation by itself of all Geoffrey's other (unnamed) churches; or whether it merely signified a reconfirming of them in a document primarily intended to confirm the four named churches for the first time. If the latter is true, then Stephen would presumably have confirmed the church of Walden to the monks in an earlier charter which has not survived.[42]

In view of these difficulties it cannot be assumed that Walden castle was constructed by Geoffrey (II) de Mandeville or, if it was, only during the period c 1140-3, (although it is just possible that the entire works on and around Bury Hill could have been accomplished in that time).[43] It may have been built by him at any time after *c* 1130 or by any of the various owners or tenants of the manor after 1103-5.

Other considerations hardly clarify matters, though what is known of the castle's architectural form may allow its construction to be a little more closely dated. The keep consisted of a square tower of at least three storeys, with massive clasping buttresses at the three free angles and a flat pilaster buttress in the middle of the east, north, and south sides (Fig 24). Its walls were of flint rubble, without ashlar quoins or facing, and it had no plinth; but—as at Ascot Doilly, Oxon, (Jope & Threlfall 1959)—a mound was raised around it mainly *pari passu* with its construction. For this reason Walden can be added to M W Thompson's class 3 type of 'motte substructures' (Thompson 1961). It is interesting that two of the three keeps listed by him in that class were built in the second quarter of the 12th century: Farnham in 1138 and Ascot Doilly within the period 1129-42. The third, Wareham, was built before 1106, but its gravel mound is thought to have been an addition and may have formed part of the Earl of Gloucester's work at the outbreak of the Anarchy (Renn 1973, 47).

At Walden a rectangular forebuilding projected from the north end of the west side of the keep, and was approached by a staircase of which at least the upper flights lay beside the keep's west wall. On all structural evidence this western annexe is clearly a primary feature of the keep. Its plan, with the enlarged northern unit forming a rectangular forebuilding on an east-west alignment, suggests that the latter could perhaps have contained a chapel in its top storey, an arrangement most commonly found in the later keeps of the 12th century. The form of the whole castle is best described as a keep and bailey. This, again, suggests that it may date from towards the end of the period (1103-43) within which it was most likely to have been constructed. So in general a date in the second, rather than the first, quarter of the 12th century seems more likely.

The price of Geoffrey (II) de Mandeville's release after his arrest in 1143 was the surrender to Stephen of the Tower of London and of his two castles of Walden and Pleshey *(Gesta Stephani,* 102; *Henry Hunt,* 276; *W Newburgh,* i, 45). Walden castle was thereafter entrusted to Turgis d'Avranches, until 1145, and then perhaps to Reginald fitz Count.[44] It was restored to Geoffrey (III) de Mandeville, second son of Geoffrey (II), in 1156, on whose death in 1166 it passed to his younger brother William (II). In 1157-8 £9 12s 4d was collected 'for throwing down Earl Geoffrey's castle(s)' in Essex: *In p[ro]st[er]nend' Castell' Com[itis] Gaufr[idi] (Pipe Roll* 4 Henry II, 132).[45] There is little doubt that this work was done at Pleshey (Rahtz 1960, 13-14; and below, n64), and the excavations in Castle Meadows suggested that Walden castle also was at least partially demolished (below, p 60).

While it is clear that William de Mandeville was permitted to refortify Pleshey between 1167 and 1180 (PRO Duchy of Lancaster Misc 10/12),[46] nothing further is known of the structural history of Walden castle until in 1347 Humphrey de Bohun, 7th Earl of Essex, was given licence to crenellate his *manerium* at Walden (Pat 21 Edward III, *p* 3, *m* 4).[47] Manorial court rolls only survive after 1381 to give details of contemporary structural work in the castle bailey (ERO D/DBy M1-4).[48] From them it appears that a

Fig 9 E J Eyre's 1758 map of Walden (ERO T/M 123)

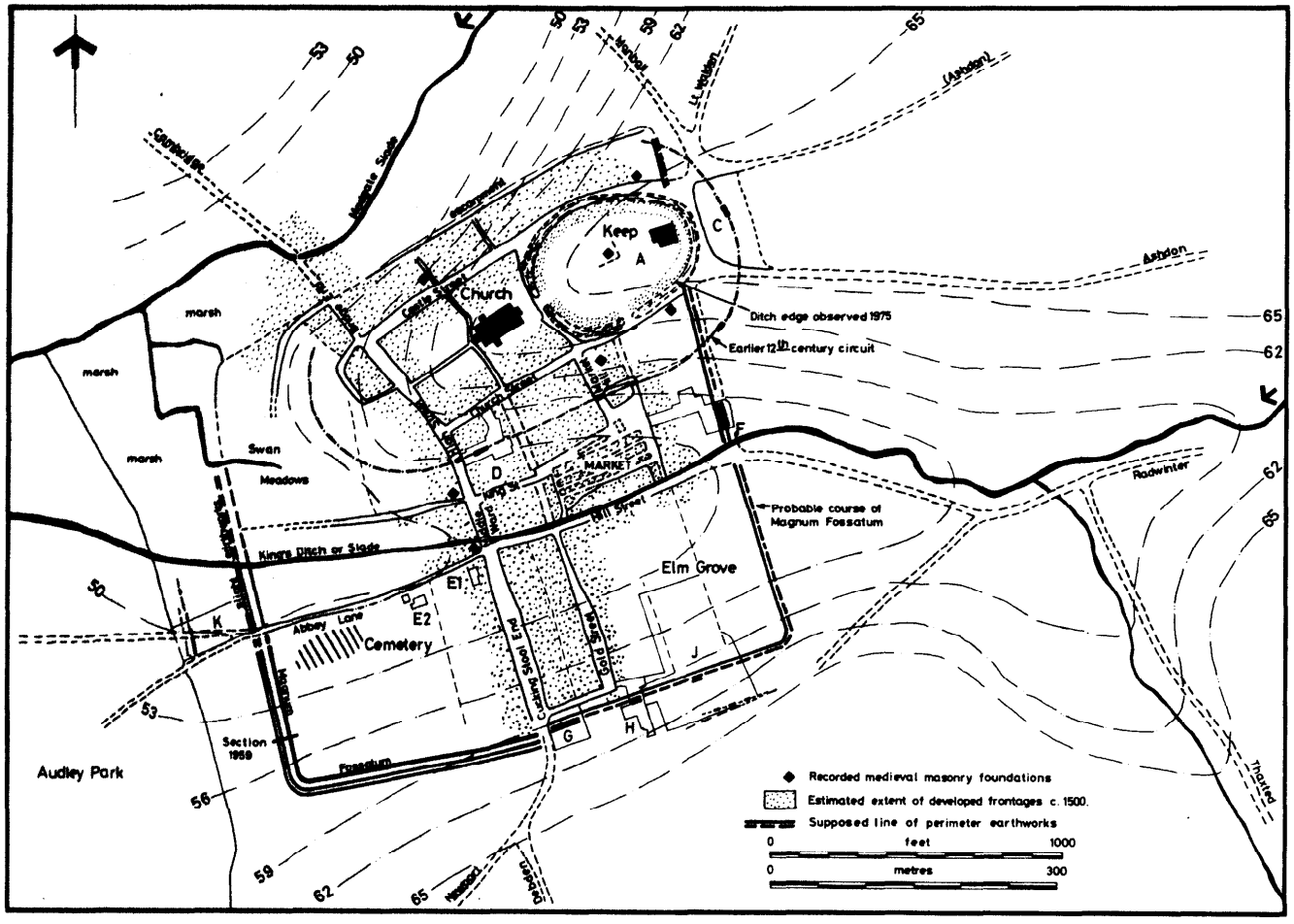


Fig 10 Later medieval Walden, on the basis of archaeological, architectural, and topographical evidence. Excavation sites: A, B, Castle Meadows (for B, see Couchman 1976, 165-6); C, Castle Hill House; D, Barnard's Yard; E1, E2, 53 High Street; F, 'Rose & Crown' Hotel site; G, Cinema-Maltings; H, Gold Street Maltings; J, Elm Grove; K, Abbey Lane site

masonry hall had been built at some time a little distance to the west of the keep but still *infra motam.*[4 9] This hall was being leased out to Walden men for short terms, while an apparently timberbuilt house in the town proper *(extra motam)* served the lord or his steward. The entire bailey seems to have been surrounded by a masonry wall and divided into an inner and an outer area by a crosswall between the masonry hall and the keep (Cromarty 1967, fig 1). Both areas contained other, lesser buildings. The construction of these walls, and perhaps the initial recutting of the ditches which appear to have accompanied them, may well belong to a scheme of refortification after the 1347 grant of licence to crenellate.

There is, however, a little evidence to suggest that some refurbishment of Walden castle had occurred before 1200, perhaps at the time of the restoration of Pleshey. The *Liber de fundatione Caenobii de Walden* records how Geoffrey fitz Piers persecuted the monks of Walden, in the years between the elevation of their house to an abbey (1190) and his creation as Earl of Essex (1199). His men rounded up some of the monks' sheep and 'thrust them into the castle which is over against us'. A short while afterwards others of their sheep and oxen were also 'shut up in the castle'. Eventually 'the unquiet clients of Satan' committed 'a deed of horror, which had never been heard of before among the nations... for they suspended the [sheep's] corpses, which had turned through excessive corruption into noisesomeness, on the tops of the walls, and thus raised them on high' *(Liber* IV.xv). While this in itself constitutes no proof that the castle had by then been at least partly restored, a further remark from the same work seems to do so. The *Liber* records that in 1199 (or perhaps in 1200) Geoffrey fitz Piers visited Walden to interview the monks; 'But he disdained to come to us, as was fitting for him to do first of all; nay, surrounded by a dense band of fellow-riders, he turned his rein, and betook himself to the Castle'. The next day he returned with his 'great suite' and a large crowd of townsfolk *(Liber* V.iii, iv). The implication is clear that the Earl and his retinue had lodged overnight in the castle.

(b) The two lines of earthwork defences around the castle (Figs 4, 8-10)

By 1143 it seems probable that the keep on Bury Hill was enclosed within two distinct lines of earthworks. The bailey proper, of curvilinear plan and with an internal area of *c* 1.25 ha *(c* 3 acres), was defined by an inner earthwork now mirrored by the line of Museum Street (to the west) and of the eastern parts of Castle Street and Church Street. Maynard found its ditch in sewer trenches at various points in Castle Street and Museum Street in 1911-13; and in 1975 Mr M R Petchey observed the ditch's inner edge to the south of the keep (site B on Fig 10; Couchman 1976, 165-6). The exact line of the eastern return is unknown but there are indications (below, pp 61-3) that it passed only a short distance to the east of the keep, and certainly to the west of the ditch located in the grounds of Castle Hill House. The bailey was divided internally by a chalk rampart, apparently unaccompanied by a ditch, which ran on a north-east to south-west alignment from the south-western corner of the keep to the vicinity of a southern gatehouse.[50] There may have been other such divisions but nothing is known of them. It is thought that the earthworks consisted of simple banks and ditches. There may have been some form of palisading on the banks, but it is unlikely that they carried masonry walls before the mid 14th century.

The outer earthworks, however, present considerable difficulties. While observing sewer trenches in 1911-12, Maynard (SWM) located a ditch *c* 6.50 m wide, with what he thought was another, lesser ditch to the south, immediately east of High Street (at TL 53693848). He again saw the former in two places north of the Market Place (at TL 53853855 and TL 53883856),[51] and probably under Common Hill.[52] So it seems likely that the line of the massive ditch excavated on the Barnard's Yard site (below, pp 64-6) continues to the east under the southern end of Market Hill and curves around under Common Hill to pass some 50 m east of the keep, where it was sectioned in the grounds of Castle Hill House (below, pp 62-3, where its eastern return is discussed in more detail). To the west of Barnard's Yard its course is entirely unknown but can probably be deduced from other considerations. It is clear that the whole earthwork was laid out to enclose the western part of the promontory between the Madgate and King's Slades. Its northern arm will presumably have lain along the upper side of the Madgate Slade valley, probably at much the same distance below break of slope as the southern arm does. So the back boundary line shared in common by many of the properties on the north side of Castle Street (and shown as an almost continuous line on the 1758 map) may mirror the inner edge of the earthwork.[53]

To the west of High Street the curving alignments of Freshwell Street and Myddylton Place (formerly Horn Lane) suggest the approximate course of its continuation. The former joins High Street a little beyond the line of the back boundaries to the north of Castle Street and marks the limit of the late medieval town in that area. To the west of it lie Swan Meadows which were made marshy until recently by a number of springs rising at the base of the promontory. One of these feeds New Pond, which lies at the former southern end of Freshwell Street (TL 53503845).[54] Myddylton Place joins High Street opposite Castle Street, and has medieval structures fronting its northern and western arms. To the south, a narrow alleyway runs back from its southern end to High Street, but this may not have formed part of the original course of the lane.

Freshwell Street and Myddylton Place may well lie to either side of the former western arm of the earthwork excavated in Barnard's Yard. Both streets may first have developed while the earthwork was prominent (in its original form or, later, while it still remained an effective line of demarcation through the area). Freshwell Street, however, is as likely to have developed within the north-western angle of the *magnum fossatum,* if this was continuous through the marshland in the vicinity.

(c) The market of the 1141 charter

(Figs 4, 8-10)

The purpose of the outer earthwork circuit was probably partly defensive, partly to demarcate an area of seigneurial market rights. It is very likely that the new market of 1141, moved from Newport *in Castellum suum de Waldena cum omnibus Consuetudinibus que prius mercato illi melius pertinuerunt* (into his castle at Walden, with all the customs which better belonged to that market before then), was established within this enclosed area, and that it lay to the west of the castle bailey proper. Its location cannot be precisely determined but was apparently immediately to the east of High Street, between Church Street and Castle Street (which seem likely to have developed, or been laid out, along its southern and its northern edge respectively). It probably also extended a little to the west of High Street, where the northern and western arms of Myddylton Place should indicate its limits in that area. The present southern return of Myddylton Place is merely a narrow alleyway but clearly continues the line of a track from High Street to the western end of St Mary's church.[55] The track, exactly midway between Church Street and Castle Street and parallel to them, may have formed, or may mirror, the central axis of a marketplace predominantly aligned at right-angles to High Street, so as best to utilize the prevailing topography of the area. This market probably remained on the site under discussion until the time of the planned enlargement of the Bury Hill nucleus in the earlier 13th century.

There are two other pieces of evidence to support the suggested location of the 1141 market. The first is the course of High Street itself, since it seems that this must represent part of a major new road, constructed to divert Cam valley traffic eastwards across the west end of the Bury Hill promontory. This road clearly superseded the former north-south route (above, pp 14-5; through the existing valley settlement at *Waledana* (Fig 4B, C). This diversion clearly relates to

the seigneurial development of Bury Hill and was very probably a deliberate act at the same time, which caused the road to pass through the new earthwork enclosure and, in all probability, through or beside its marketplace. This should certainly be viewed as a device by which the greatest benefit would be gained from Geoffrey (II) de Mandeville's newly acquired right, by the Empress Maud's first charter *(Reg* III, 1968, 274; Round 1892, 90) to divert all Cam valley traffic to Walden: *do ei et concedo . . . ut vie de Niweport quae sunt juxta littus aquae dirigantur ex consuetudine ad Waledenam* (I give and grant to him . . . that the Newport roads which run along either bank of the river should be diverted from their customary courses to Walden). Some extramural settlement may subsequently have developed alongside it for a short distance to either side of the outer earthwork circuit. Presumably the laying out of the later 'new town', to the south of Bury Hill, caused a slight modification of the road's route beyond its crossing of the King's Slade.

Second, it is a conspicuous feature of the frontages along the north side of Castle Street and of the northern arm of Myddylton Place, and also of those along the south side of Church Street, that, with very few exceptions, the width of each modern property approximates to 30 feet (9.14 m) or to an exact multiple of it (Fig 8). On Castle Street this holds good from its western end as far east as a little short of its junction with Museum Street, except for a gap eight feet wide *(c* 2.5 m) for the entrance from the street to Lower Square, immediately opposite the northern end of Church Path; this is similarly so on Church Street, from its western end as far as Market Hill, except for a gap of some 25 feet *(c* 8 m) opposite the southern end of Church Path.

On the south side of Castle Street and the north side of Church Street, as well as on both sides of the length of High Street-Bridge Street which lay within the perimeter earthwork defence, it is possible to find other modern properties whose width in each case approximates to 30 feet (9.14 m) or to a multiple of it; but the consistency which characterizes the other frontages is clearly absent.

So it seems that tenements were laid out systematically along three sides of a rectangular area to the west of the castle's inner defences-an area which is, therefore, all the more likely to have contained the early market. Occasional elements of a similar planned layout within the marketplace proper, or on its site after its removal elsewhere, may also survive in the modern divisions, but these instances may be coincidental.

The market was eventually moved to a site immediately beyond the southern arm of the outer earthworks around Bury Hill. Several considerations may have prompted this, not least the need to enlarge its area. Its original site was confined by developed frontages to the south, west, and north, while the castle bailey set an absolute limit to expansion eastwards. Otherwise it is possible that the desire to provide St Mary's church with a cemetery in its immediate vicinity encouraged the relocation.

(d) The parish church of St Mary

(Figs 4, 8, 10, 11)

The position of St Mary's church seems largely consistent with the arrangements suggested above, if one assumes that it did not reach its present site before the earlier 12th century. In a generally more level area it would perhaps have been put at the end of the marketplace furthest from the castle bailey, especially if it was specifically meant to serve as the market's church; but the prevailing topography amply explains its chosen location. What is not clear, however, is the status of the first church on Bury Hill. It may have begun as a dependent church, attached to the market, and then-as seems to have happened, in similar circumstances, to St Michael's, Braintree (Bassett & Drury 1976, 134-5)-it may have replaced its mother church as head of the parish, as the market prospered and the seigneurial plantation eclipsed the earlier settlement to the south-west. Alternatively the first church built on Bury Hill may simply have been a rebuild of that other one on a new site, presumably in response to the relocation of Walden's manorial centre.

The earliest reference to a church in the parish occurs in the foundation charter of Walden monastery (dated to between December 1139 and the end of 1143; below, n58), but this includes no mention of its dedication or site. The *Liber de fundatione Coenobii de Walden,* however, states that the monastery had had assigned to it by the same charter 'the parish church of the Blessed Mary of Walden' (1.vii). But nothing in the *Liber* (probably written not long after 1203) hints at the church's location at any time, or refers to any building or rebuilding of it on its present site. In view of the *Liber's* statement (1.vi) that Geoffrey (II) de Mandeville had 'determined to fulfil the purpose of his heart rather at Walden, which he desired to honour with a monastery, and had already distinguished with a castle, than elsewhere', one could choose to argue *ex silentio* that the parish church of St Mary continued on its valley site until 1203 at least. In fact there is no conclusive evidence that any church was built on Bury Hill before the 13th century, although a cross clearly stood there from the 12th century. There is a fragment of the shaft of a stone cross of no later than 12th century date in the east wall of St Mary's 15th century porch, and another piece of it was found nearby in the early 1930s.[56] The cross may originally have stood in the marketplace, predecessor of any church there. So, one could argue, the present site was not adopted until the time of the earlier 13th century resiting of the 1141 market, or shortly afterwards (especially as the pottery evidence from excavations in and near the early cemetery suggests that the adjacent settlement was continuously occupied until the early 13th century). But other evidence, set out below, shows that the church may well have reached its Bury Hill site rather earlier.

The earliest datable work *in situ* in the present St Mary's church is of later 13th century date (Fig 11). It consists of the chancel arcades; the arches which open from the present aisles into the north and south

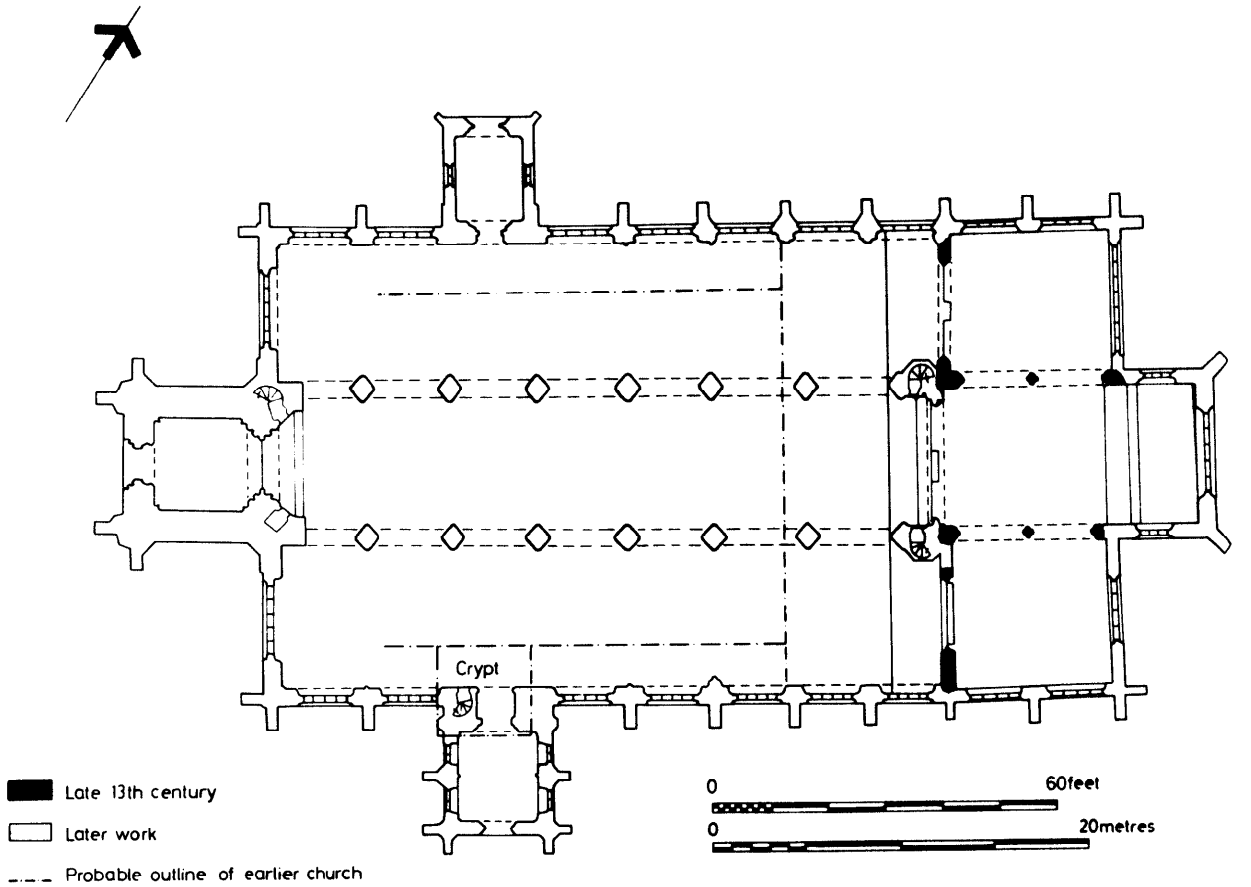


Fig 11 St Mary the Virgin, Saffron Walden (after RCHM 1916, 230)

chapels; and a crypt—or at least its stone vault—which lies partly below the south porch and partly below the south aisle (RCHM 1916, 229, 232). The RCHM argued, however, that 'the position of the crypt indicates the existence, in the 13th century, of a S aisle narrower than the present aisle, and much too narrow for the 13th century arch to the [south] chapel' (1916, 228), and therefore that the church may formerly have had north and south transepts (on the site of the two eastern bays of each of the present aisles) and a central tower. This is supported by accounts of the presence, below the existing nave floor, of what sound like the foundations of an earlier nave or at least of its aisles. It is not clear when these were exposed. They are not mentioned by the RCHM, but the church's guidebook (Fancett 1949) claims that 'the width of the former aisles ... [is] shown by their foundation walls which can be traced under the pavement'. According to Braybrooke (1836, 197), 'There can be no doubt, from the foundations frequently met with in digging graves, that the site of the present church at Walden was occupied by one of a much earlier date, and probably of smaller dimensions, though nothing certain is known of the extent or character of the former building'. The southern wall foundations were probably on the line of the north wall of the crypt, though this is not certain. In addition there are fragments of four-inch column shafts of Barnack stone, reused in the north wall of the north chapel, which could be of either 12th or 13th century date.[57]

There is, moreover, a clear relationship between the orientation of St Mary's and the alignment of Church Street and Castle Street to either side of it. If the church had been built on an unrestricted site or even added to an existing layout after the marketplace's relocation, Bury Hill is not so narrow there that its orientation need have been so rigidly predetermined. Yet on its long axis the church lies some 39 degrees north of east. This argument, however, should not be pressed too hard, as the predominant trend of the promontory at its western end may seem likely to have exercised a greater influence on the alignments of structures, streets, and earthworks than any of them would have had on each other. So on the whole it seems best to concentrate less on the precise relative chronology of their origins than on the impression that all three components were probably part of the same seigneurial scheme of the 12th century.

(e) Walden Abbey and Brookwalden

(Figs 4, 52, Pls 4, 18)

The Benedictine monastery of St James was founded as a priory by Geoffrey (II) de Mandeville, probably at some time between December 1139 and the end of

1143.[58] Before it was made an abbey in 1190, its buildings occupied three successive sites, all within a small area near the confluence of the Slades and the River Cam. The monastery's early history is given in the *Liber de fundatione Coenobii de Walden,* probably written not long after 1203.[59] The first part of the *Liber* (of which the first five chapters of Book I and some of the sixth are missing) seems to contain a number of quite serious errors.[60] But there is no reason to reject its descriptions of the priory's successive sites, which Mr Drury discusses in detail (below, pp 94-7); and, in all, the *Liber* contains a very useful amount of topographical information about the monastery and its environs.[61]

The second and third sites of the priory, which were immediately adjacent, lay 'at the intersection of four main roads' *(Liber* I .vi). It can be shown with some certainty where these four roads were (Fig 4, and below, p 97). Two of them were roads in use in the Roman period, and the third was an important medieval route to the Cam valley from the boulder clay uplands to the east (below, Section 7.2). The fourth lay to the west of the priory, and was clearly the major contemporary thoroughfare along the eastern bank of the Cam (ibid). How and when it came to replace the earlier road some 200 m to the east[62] is not certain, but a sequence for the north-south routes has been suggested above, p 14.

The study of these and other roads in the area gives a useful amount of information about the abbey's later history and the growth of *Brookwalden* around-it. This is fortunate, as there is very little evidence for the place from other sources. The first known occurrence of its placename (which is overlooked by Reaney 1935) is of 1387, in the *Registrum de Walden* (BM Harl MS 3697). The entry relates to a 'Messuage lying in Brocwalden close to the site of the Abbey . . . at Castelmel'. In 1400 there was a reference to a shop and 51 houses on two streets, *Augeres lane* and *Smalbroc lane,* and other houses around *(Survey of the Lands of Walden Abbey,* Camb UL MS Add 7090; photographic copy in Essex Record Office: ERO T/A 63).

Of the four main roads which bounded the priory precinct after its first change of site, none has survived in its immediate vicinity, though they can all be reconstructed with some accuracy.[63] Two of them were directly affected by prior Reginald's successful schemes for improving the house's facilities and status (11661203). The road beside the King's Slade was shut off beyond its junction with the surviving section of the eastern of the two Cam valley roads, and one of the priory's ponds laid out over it *(Liber* I.xvi). Second, the road from Thunderley to the Cam valley, where it ran past the priory precinct, was moved south by some 70 m *(Liber* II.iii). A small remnant of its earlier course is shown as a relict feature on an 18th century copy of a pre- 1603 estate map of Audley End (Pl 18). Probably part of the same scheme was the westward division of the then existing route along the east side of the Cam (Fig 4B, e-f; cf Fig 4E). Parts of both courses, the original and the diversion, still exist to the south of the marker-street, the former called Oziers Lane on the 1758 map (ERO T/M 123) and the latter Back Street. To the north of the market-street, all landscape features as far north as the King's Slade, except for the great ponds, were obliterated when Audley End was rebuilt *c* 1603-16.

In 1295 the abbey was granted its own Tuesday market (charter 16, 23 Edward *I: Calendar of Charter Rolls* II, 1906, 460). This may well have been followed by the widening of the road by then bounding the precinct on the south to form a market-street, and possibly also the laying out of new house plots along its southern and part of its northern sides. Certainly early maps of the area show this road unnaturally wide and regular for at least 360 m east of its junction with the later Cam valley road, and perhaps for a further 60 m (to the river) on the west. Aerial photographs show regularly spaced tofts on the north side of this road, east of the abbey precinct (eg Pl 4); and a hint of regularity is still discernible in the layout along the south side, although this has been largely lost in its 18th century and later redevelopment. The road was still known as High Street as late as 1758.

(f) Discussion (Figs 4, 10)

In view of all the above, it is reasonable to believe that the masonry keep and its two roughly concentric lines of enclosing earthworks were all constructed as parts of the earlier 12th century development of Bury Hill, and that a marketplace and tenements around it were laid out at the same time. A new road was probably established to bring Cam valley traffic to the market; and the first church on St Mary's site may also have been built then. The creation of this pre-urban, or perhaps proto-urban, nucleus (its inhabitants' status is unknown) may well explain the origin of' the placename *le Berihell,* first recorded in 1382 (Court Rolls, ERO D/DBy M1—4).

Yet several important questions are still unresolved. The most pressing of these concerns the location of the earlier Norman manorial centre and of its Anglo-Saxon predecessor. There are two possibilities: either the earlier 12th century development on the promontory replaced a manorial centre on the same site, or its predecessor lay elsewhere, presumably in or adjacent to the valley settlement of *Waledana* to the south-west.

In 1066 the manor of Walden was held by Asgar the Staller, its 19.5 hides valued at £36 *(DBii,* fos 62, 62b). By 1086 it had passed to Geoffrey (I) de Mandeville and soon, if not at once, became the chief Mandeville seat in Essex. At the time of the Survey its value had risen to £50; Round saw it as a 'great and valuable manor' *(VCH* 1, 512 n4), clearly a baronial residence of importance. If its centre had been on Bury Hill since the Conquest or before, it would indeed be surprising that no 11th century or earlier pottery has ever been found in that area; while the excavations in Castle Meadows (though of-only limited extent) suggested that the masonry keep and its ancillary earthworks were primary on the site. Yet construction of an earthwork castle might well have followed closely on the Mandeville acquisition of a manor so well endowed and situated on a major thoroughfare. So it is likely that the pre-Conquest and

early Norman manorial centre lay in the valley settlement of *Waledana* until its removal to a new site on Bury Hill in the earlier 12th century.

There is a further relevant consideration. It is probable that the other Mandeville stronghold in Essex, Pleshey castle (in High Easter manor), was constructed before the end of the 11th century.[64] It may at first have been intended as the chief baronial residence, situated at the very heart of the extensive Mandeville estates in Essex. So it is instructive to note that Little Domesday Book records ten arpents of vineyard at Waltham-the only vineyard known throughout the many Mandeville holdings and the third largest on record in England in 1086.[65] This apparent early preference for Pleshey may also reflect the close proximity to Walden of the royal manor and market of Newport (TL 5234). Masonry foundations are said to have been uncovered during the construction of Newport Grammar School (TL 520344), marked by the Ordnance Survey as the site of a castle, but no record of these was made and the identification is unsupported by any documentary reference to a castle in the manor. Nonetheless the north-eastward projecting spur on which both the School and the parish church (to its west) are situated seems the obvious site for an early manorial centre. This may well have included an unrecorded early Norman earthwork fortification.[66]

Alternatively the Crown may have strongly resisted any attempt by Geoffrey (I) de Mandeville to erect his own castle at Walden so close to a royal manor and its market, the more so if the latter was itself undefended. In any event it seems likely that Walden remained a lesser, although nonetheless profitable, Mandeville seat until the exigencies of Stephen's reign persuaded the Empress Maud to grant Geoffrey (II) in 1141 *(Reg* III, 1968,274; Round 1892, 90) the right to remove Newport's market into his castle at Walden, as well as to divert ail Cam valley traffic to the new market at Walden. This grant may signal the elevation of Walden to the position of chief seat *(caput honoris)* of the Mandevilles. The military advantages of its site, commanding the northern end of the Stort-Cam route between London and the Cambridgeshire Plain, need no further emphasis, not least while its owner held *inter alia* the offices of Justice and Sheriff of both Essex and Hertfordshire.

The economic possibilities at first inherent in its situation were also considerable, though the question remains why the new market was located at some distance from the valley road and not, for instance, at the gates of the newly founded monastery. But so long as that house's foundation and the construction of the castle cannot be accurately dated-it is conceivable that neither was undertaken before 1141-there is little room for useful discussion of this point. The optimal strategic location for the castle may have been the decisive factor; for its powers of attraction were very probably strong enough to offset any slight disadvantages which the new market might otherwise have suffered by its resiting away from the Cam valley thoroughfare (eg Beresford 1967, 125). All traffic to the Cam from the clay uplands to the east and south-east could be channelled into the upper Slade valleys, and the Cam valley routes themselves were soon diverted. So in the event it is less surprising to recall the Walden monks' complaint that their house was 'very remote from . . . towns moreover, or markets containing merchandise' *(Liber* I.vi), despite its valleyside location.

1.6 Walden in the 13th century

(a) Introduction (Figs 8-10, P1 1)

Walden's medieval streets and its principal property boundaries clearly conform, as far as the natural topography allows, to a rectilinear layout (Fig 8). It is equally clear that the earthworks known as the *magnum fossatum* conform to the same alignment and so are very probably part of the same layout. Deliberate planning is indicated. The position of the late medieval marketplace is equally significant, well away from High Street and the town's nodal centre.

It seems that this rectilinear layout, which still dominates the street plan of Walden, is derived from two distinct periods of proto-urban or urban development. That of the earlier 12th century, within the outer earthwork circuit round Bury Hill, has already been discussed. Its chief contribution to the modern plan is the line of High Street, Castle Street, and Church Street, and the shape of the castle's inner bailey. The second period of development saw the laying out of the *magnum fossatum* and of streets and major property boundaries to the south of the promontory. This was probably accompanied by a wholesale levelling of at least the southern and eastern arms of the earlier outer earthworks, if this had not already been done after Henry II's order of 1157-8 *(Pipe Roll* 4 Henry II). The available documentary and archaeological evidence suggests that this scheme of enlargement took place in the earlier 13th century, begun not earlier than 1227[67] and perhaps largely accomplished during the 1230s, and that it was the work of Humphrey de Bohun, who granted a charter to the burgesses of Walden in 1236 (ERO facsimile: T/A 94/123).

(b) The *magnum fossatum* [68] (Figs 8-10)

The earthwork survives as a ditch and bank, running southwards from Abbey Lane to an almost right-angled corner and returning to the east as far as Gibson Gardens (below, Section 3.9, pp 91-2). Within the past two centuries it survived as far as the west side of High Street, where Cuckingstool Pond clearly marked the butt end of the ditch. To the east of High Street the line of the earthwork has been firmly established by recent excavations as far as the Elm Grove site. From there it seems to have continued eastwards to make a return to the north along the line of Fairycroft Road (under which its ditch was seen by Maynard during sewer laying in 1911).

In Braybrooke's time traces of the earthwork along Fairycroft Road were still visible, while an extension

of its western arm, between Abbey Lane and the King's Slade, had only recently been levelled (1836, 148).[69] This latter was of slighter form than the extant earthwork and was again observed by Maynard in 1911. Mr Petchey located its ditch in 1976 on his Abbey Lane site (below, p 90). Maynard also noted 'artificial earthworks' slightly north-west of the former limit of the western bank, ie to the north of the King's Slade; he tentatively interpreted these as the remains of a dam across the stream (Maynard, SWM). They are still visible in Swan Meadows and seem to continue the line of the extant western arm of the *magnum fossatum.*

During the laying of the present sewerage system in 1911-13 the course of the King's Slade was modified through Swan Meadows. Formerly it turned sharply to the north in the area immediately west of Maynard's 'artificial earthworks' and joined the Madgate Slade some distance east of its present confluence. This earlier course had also been artificially created at some time between 1758 and 1845.[70] Originally it seems that the King's Slade ran more or less due west into Audley Park, where its continuation is still spring fed. This earlier diversion, and the probably contemporary creation of other channels to the north from the base of Bury Hill, were clearly intended to drain an extensive area of marshland to the west of the promontory (ie the present Swan Meadows). Since the area was probably just as marshy, if not more so, in the 13th century, continuing the *magnum fossatum* through it may well not have seemed either feasible or necessary. The earthwork's construction could have been resumed a little to the west of the angle of Freshwell Street, where the land rises quickly eastwards. The presumed northern arm of the *magnum fossatum* probably followed the suggested line of the northern arm of the earlier 12th century perimeter earthwork (above, p 19).

To the east of the late medieval marketplace, a continuation of the ditch below Fairycroft Road was found to the rear of the 'Rose & Crown' Hotel (Fig 10, site F); but the earthwork's course further north is unknown. As it was not found during excavations in Castle Meadows it clearly stopped at or just short of the castle bailey ditch, a little to the west of Church Street's junction with the modern road Common Hill. Its course should be mirrored in the uniform frontage of buildings along the latter's west side beyond site F. That line's exact continuation appears north of the castle bailey as a long boundary between 105 Castle Street and the properties fronting on the west side of Little Walden Road, and should indicate the *magnum fossutum's* course to its north-east corner.

In general it seems very likely that the earthwork was continuous around the late medieval town (except perhaps through Swan Meadows). From his observation of sewer trenches Maynard confirmed that its ditch did not run beneath High Street on the south side, so that there was an original entrance there. There must have been another where Bridge Street (High Street's continuation) passed through the earthwork's northern arm. Other medieval entrances must have lain on Abbey Lane (through the western arm) and George Street-Hill Street (through the eastern arm); and there were probably gates or posterns at the east end of Castle Street and Church Street.

There were indications on Mr Perchey's site in Abbey Lane (site K; below, Section 5) that another earthwork may have been constructed at the same time as the *magnum fossatum,* parallel to it and just a short distance to the west. His suggested toft boundary F1 was eventually replaced by a succession of palisades (Fig 48) which, in turn, seem likely to have been superseded by F8. Mr Petchey suggests that this ditch F8 had two other phases, and that both were later than a shallow east-west feature F16 which cut across F1 and the palisades to the west. He believes that F8 may have been a property boundary ditch. All this may be so, but an alternative explanation of the sequence is possible.

It is clear that F8 was a wet ditch for much of its course north of Trench A as it approached the King's Slade a short distance beyond Trench F. To the south, however, section A-B shows F8 in its original form. The profile and dimensions of its 'first phase' compare so closely with those of the *magnum fossatum* elsewhere that the feature seems very likely to be contemporary with that earthwork. Since the *magnum fossatum* itself lies some 60 m to the east, F8 is unlikely to form an outer line of defence of any length, for instance part of a barbican associated with the new town's west gate. But it might well mark the eastern boundary of the abbey's park, laid out together with the *magnum fossatum* to give clear definition to the extent of two areas of separate privilege. The intervening strip of land would certainly still have been used by the road across the Slade valley, even if usually only for local agricultural traffic by then.

What Mr Petchey interprets as a recut of F8 at its southern end may in fact merely be a discrete feature beside Abbey Lane, which was dug into the southern butt end of the ditch when it had very largely filled up. It may have been this much later feature, whose northern extent apparently could not be established, which cut F16, rather than F8 proper.

If the ditch F8 was dug to demarcate the eastern limit of the abbey's park, then the various palisades (Fs 2, 4, 6, 31) had presumably done so until that time. (The space between them and F8 would have contained the latter's bank.) It is interesting to note that the *Liber de fundatione* (II.xix) refers to a bequest from William de Mandeville to the monastery of 'a half of all his demesne in Walden', including his 'little park enclosed with a fence'. This may not of course be relevant to the present site, but it does show that the abbey would have used palisades to enclose quite extensive areas. Ditch Fl may well predate the monastery's foundation in the earlier 12th century, but doubtless the boundaries of its lands would in most instances coincide with earlier property or field boundaries. Certainly the eastern limit of Audley Park, the land granted to Sir Thomas Audeley at the Dissolution, has always stayed within a few metres of these earlier lines to the present day.

(c) The rectilinear street plan

(Figs 8-10, P1 1)

It is certain that the rectilinear layout of streets, south of Church Street and within the *magnum fossatum,* was the result of a planned development of the area; but the full extent of this planning may not seem entirely clear. Some of the most prominent elements of the landscape beyond Bury Hill were already in existence in the earlier 13th century: the north-south thoroughfare of which High Street is the modern counterpart, and much earlier north-south trackways to west and east (Fig 4); a road along the north side of the King's Slade, more or less on the line of Abbey Lane and George Street-Hill Street; and perhaps an east-west road across the southern valley side now roughly followed in part by Audley Road.

The location and alignment of these routes conform well to the prevailing topography, and it could be argued that their pre-existence, in an area where a recently rejuvenated stream flowed through a wide east-west valley, would ensure that any subsequent 'urban' growth conformed to a largely rectilinear plan. Moreover the course of the earlier 12th century earthwork circuit round Bury Hill would have strongly influenced the alignment of boundaries laid out south of it-an influence which may not have ended with its deliberate levelling.

Nonetheless, there is an extremely strong argument for wholesale planned development of the area newly enclosed by the *magnum fossatum.* For the land to either side of High Street, south of its junction with Church Street, divides up regularly into square parcels of land measuring 12 by 12 perches *(c* 60 by 60 m). Each line of division coincides neatly with a major known, or reasonably presumed, medieval boundary or street frontage.

To the east of High Street the layout, *west to east,* is as follows:

(a) between the frontages on the eastern side of High Street and those on the west side of Gold Street, 12 perches. The line of the frontages on the west side of Gold Street, projected north, coincides with the western end of the late medieval marketplace (as mirrored in the abrupt change of width of King Street);

(b) between the frontages on the east side of Gold Street and the probable back boundary ditch excavated on Elm Grove (site J, F300, F301, F302), 12 perches;

(c) between that ditch and the ditch (later replaced by a palisade) further east on the same site (F315 and F318), 12 perches. The latter lies on a line which is the exact continuation of the frontages on the east side of Market Street, ie on the line of the east edge of the late medieval marketplace;

(d) a further distance of 12 perches produces a line, a little to the west of Fairycroft Road, which can be reasonably held to mirror the west edge of the *magnum fossatum* there (probably the west edge of its bank). To the east of Market Street this same line lies a little over 30 feet (2 perches?) from the west edge of the ditch found behind the 'Rose & Crown' Hotel (site F).

To the east of High Street the layout, *south to north,* is as follows:

(e) between the frontages on the north side of Gold Street (where it returns west to High Street)--with the eastern continuation of that line-and a major property boundary shown on the 1758 map (between Gold Street and the eastern limit of Elm Grove), 12 perches;

(f) between that property boundary and a further such boundary on the 1758 map (somewhat fragmented, between Gold Street and Fairycroft Road; the line survives in an even more fragmentary state in the modern layout), 12 perches;

(g) between that boundary and the line of George Street-Hill Street, 12 perches. This street is not altogether straight and its southern frontages, with which the 12 perch division coincides for only a little of its length, are relatively recent. The line, however, is that of the south edge of the late medieval marketplace;

(h) between the line of George Street-Hill Street and the frontages along the south side of King Street[71] (east of Cross Street) and of the modern marketplace, 12 perches;

(i) between that line of frontages and those on the north side of the Cock Pit and Emson Close (which exactly mirrors a former track continuing the course of the Cock Pit to a gate on the west side of Common Hill: Survey of Walden of *c* 1600, ERO D/DBy M38), 12 perches. The north side of the Cock Pit marks the northern edge of the earlier 12th century outer earthwork's ditch where seen in the area by Maynard.

To the west of High Street the scheme is not nearly so apparent as to the east, as there seems to have been scarcely any frontage development except in the immediate vicinity of High Street itself. As a result few elements of the original planned layout of the area survive in the recent pattern of land use. Nonetheless,

(k) the back boundary shown by the 1758 map to be shared in common by premises fronting on the west side of High Street lay 12 perches to the rear of their frontages;

(1) the eastern edge of the bank of the western arm of the *magnum fossatum* lies 48 perches to the west of those same frontages on High Street.

It is noticeable that the west and south arms of the *magnum fossatum* do not meet at a right-angle but at an angle of 93 degrees. (This explains why its ditch, to either side of the southern end of High Street, does not lie on a continuous line but is slightly offset from one side of the street to the other.) A theoretical 12 perch framework, however, can be constructed between the eastern edge of the bank of the western arm of the *magnum fossatum* and the line of frontages along

the west side of High Street (the two are parallel and 12 perches apart). If its south-west corner is made to coincide with the south-west internal angle of the *magnum fossatum,* two observations can be made: (a) that the southern edge of this theoretical framework, projected across High Street, coincides exactly with the north side of the southern return of Gold Street; and (b) that the junctions of Abbey Lane and Park Lane with High Street lie exactly 36 and 48 perches respectively to the north of the framework's southern edge (though, further west, both lanes diverge from its lines of division, as is only to be expected in an area of little or no medieval frontage development). It would be interesting to know if the *parvum fossatum Roberti de Aschendun,* mentioned in two charters of 1331 which relate to the same piece of land, was a boundary laid out 12 perches east of the western arm of the *magnum fossatum* across the area to the south of Abbey Lane (Fig 8; Ravetz & Spencer 1961, 10, 13, and fig 8).

It appears then that an excellent case can be made for a planned laying out of the area newly enclosed by the *magnum fossatum* to the south of Church Street. This rectilinear development seems to have been based primarily on High Street, though a further street to the east was apparently also an integral element of the scheme. Since excavations on site H suggested that Gold Street had never continued beyond the line of its present southern return (directly to the rear of the *magnum fossatum),* the whole scheme was very probably carried out in conjunction with the earthwork's construction. Gold Street, the former course of Cross Street (along the western edge of the later medieval marketplace), and Church Path all lie on the same line; so it seems that there may once have been a continuous road between the southern end of Gold Street and Castle Street (or beyond), of which only the length between King Street and Church Street has been entirely lost (though it still seems to be reflected in the property boundaries there). The present line of Cross Street presumably marks a major encroachment into the marketplace, or else the promotion of an alleyway between rows of stalls lying at its western end beside the street's former course. Gold Street itself shows clear signs of progressively greater encroachment by its frontages from south to north, ie towards the market.

Elsewhere, a Survey of Walden of *c* 1600 (ERO D/DBy M38) hints that Market Street may once have continued as far north as Church Street, since it records a trackway on its line running to a gate nearly opposite the presumed site of the castle's southern gatehouse (see n50). It is possible that Market Hill was a secondary development .

Despite clear evidence of an overall pattern of land division to which the streets and the most important property boundaries created in the earlier 13th century neatly conform, there is no sign whatever of any wholesale or uniform laying out of burgages within the 12 perch *insulae.* It is quite possible, of course, that the continual amalgamation and subdivision of properties over a long period, and the rebuilding of groups of frontage buildings, might obscure and eventually destroy patterns of regularly laid out burgages. This has not happened, however, in the area of the earlier 12th century development of Bury Hill. Moreover, the numbers of 15th and 16th century timberframed buildings fronting the streets between the 12 perch *insulae* (some of them probably overlying earlier cellars) should guarantee the antiquity of many of the property boundaries shown on Walden's earlier maps.

Within each *insula,* however, a regularity of plot divisions can sometimes be made out which is peculiar to that 12 perch parcel of land. So it is possible that the founder of this second planned layout may have leased out an entire *insula,* or at least a large portion of it, at one time, and allowed the lessee of it to subdivide it as he wished for further leasing. This may not have been the founder's original intention, but one forced on him by the relative failure of his 'new town' to attract prospective burgesses. The excavations on site J suggested that some *insulae* had never been properly settled, but the upper levels there were too disturbed to show evidence of any preparatory laying out of regular but shallow subdivisions. At a future date, however, it may be possible to examine a site in one of the more successful *insulae,* and to learn rather more about its initial internal arrangements.

(d) Discussion (Fig 10)

This scheme of planned enlargement of the Bury Hill nucleus was clearly over-ambitious. In Beresford's words (1967, 154), adoption of a grid plan 'assumed from the very beginning of a town that there would be enough development to occupy all this area', There never was enough in *Chepying* Walden, most of the southern half of the town remaining under- or undeveloped until the present century.[72] Why this was so is not clear but there is room for speculation. It may be that the chartered liberties of the burgesses, granted by Humphrey de Bohun in 1236, were too limited to attract settlers from beyond the immediate hinterland of the town. Exemption was granted from the payment of relief and heriot, while the burgesses, as the leading merchants of the town, were entitled to elect the Bailiff of the Market from among themselves. Otherwise they were largely unprivileged.[73] Furthermore it appears that, although rents were relatively low, entry fines in Walden were very considerable by comparison with those levied on rural tenements. It is even likely that the fullers and dyers who figure so prominently in Walden court rolls were for a long while compelled to set up their works only on demesne land. By the end of the 14th century so many dye works had been established in and around the castle bailey that Bury Hill was becoming known as *Tointereshill.*[74] There seem, however, to have been very few, if any, dye works elsewhere in the town at that time.

Further reasons can be suggested for the shortage of burgesses which underdeveloped areas of the new borough may imply. It is probable that Walden's location proved disadvantageous to urban growth once it no longer held the chief seigneurial residence of its lord. Much potential traffic through the town would

also have been lost to an increasingly wealthy abbey set immediately east of the London-Cambridge thoroughfare in the Cam valley. Moreover, markets were held by Walden abbey (by 1295) and at Newport and Great Chesterford in the later medieval period.[75] The effect of these centres so close to Walden and straddling the thoroughfare-almost small towns in their own right— must have constituted a further, serious, handicap to the town's ability to fill the area enclosed by its *magnum fossatum.*

Further research, both documentary and archaeological, is required for any detailed picture of Walden's development from the mid 13th century onwards. The nature of the surviving court rolls and other records precludes their use for an assessment of the scale of the woollen and associated industries in Walden before 1420, even though they provide a rich source of incidental information (eg Cromarty 1967). But it is clear that the evident prosperity of the town thereafter rested on the increasing numbers of its sheep and on specialized cultivation of the Crocus *sativus* for saffron dye. This new period of economic expansion seems to have begun by the earlier 15th century and is perhaps best mirrored in the present fine church of St Mary.

Archaeological evidence for the late medieval period is almost entirely lacking at present. No excavations have yet been undertaken on a deeply stratified frontage site. In fact the very numerous cellars in older parts of the town put a severe limit on the detailed investigation of its medieval domestic structures below ground level. In the past the foundations of very substantial masonry structures, presumably of medieval date, have been located in contractors' trenches in parts of the town (Section 7.4, pp 107-8). Despite contemporary explanations of them in terms of the castle these foundations could only have belonged to town houses, perhaps buildings of the 'first floor hall' type common in urban contexts in the later medieval period. (After a thorough search, it appears that no upstanding domestic masonry of medieval date has survived in the town.) The earliest timberframed buildings extant in Walden date principally from the 15th and 16th centuries. There is, however, a strong possibility that quite a few of the cellars below these and later structures are lined with flint walls which acted as the foundations of medieval masonry buildings.

Section 2 The excavations on prehistoric and Romano-British sites

2.1 Excavations at Elm Grove[76]

(Figs 12-18)

On the lower level of the site," machine cut trial trenches (shown on Fig 13) to the base of the ploughsoil located several large features which contained 1st century AD and earlier sherds and many struck flints. Accordingly an area of some 1440 sq m was machine cleared of ploughsoil and various post-medieval deposits (altogether, *c* 0.85 m deep). The natural subsoil chiefly consisted of brickearth overlying extensive coombe deposits.

In a short initial season (in the summer of 1972) the area was carefully cleaned of any residue of disturbed soil. Features with well defined soilmarks were excavated at once; all except F209 were of medieval and later date.[78] The area was then left open, as had been done at Little Waltham, so that it might gain the maximum benefit from a prolonged period of subaerial weathering.[79] By February 1973, at the start of the second season of excavation, many soilmarks were discernible for the first time through the darkening of the humic content of their latest fills.

After a considerable number of these had been excavated but relatively few found to be satisfactorily archaeological features, a pedological survey was made by Dr S Limbrey (then of the Ancient Monuments Laboratory). Her report (Section 2.2) indicated that many of the excavated features, and probably most of those still in soilmark, were of periglacial origin, and, furthermore, that the processes of soil formation on the site had introduced small artefacts, such as sherds and struck flints, into entirely natural contexts. Subsequently, only soilmarks with relatively very humic fills were excavated. A number of other partly dug features of probable periglacial origin were completed, to provide further pedological evidence (Limbrey 1975, 182—4 and fig 29).

The prehistoric and Romano-British features

In view of the cautionary remarks in Dr Limbrey's report, each excavated feature may conveniently be assigned to one of the following categories:

1. Certainly man made;
2. Probably man made: features which, though satisfactory in most respects, were not found clearly associated with others of category 1;
3. Probably or certainly formed naturally.

Many of the features in category 3 contained flint flakes and tools, and sherds were found in four of them (Fs 15, 56, 138, 175).

Features of category 1

These consisted of part of a probably Iron Age fence; a late Iron Age pit; and a small part of a 3rd century AD chalk quarry.

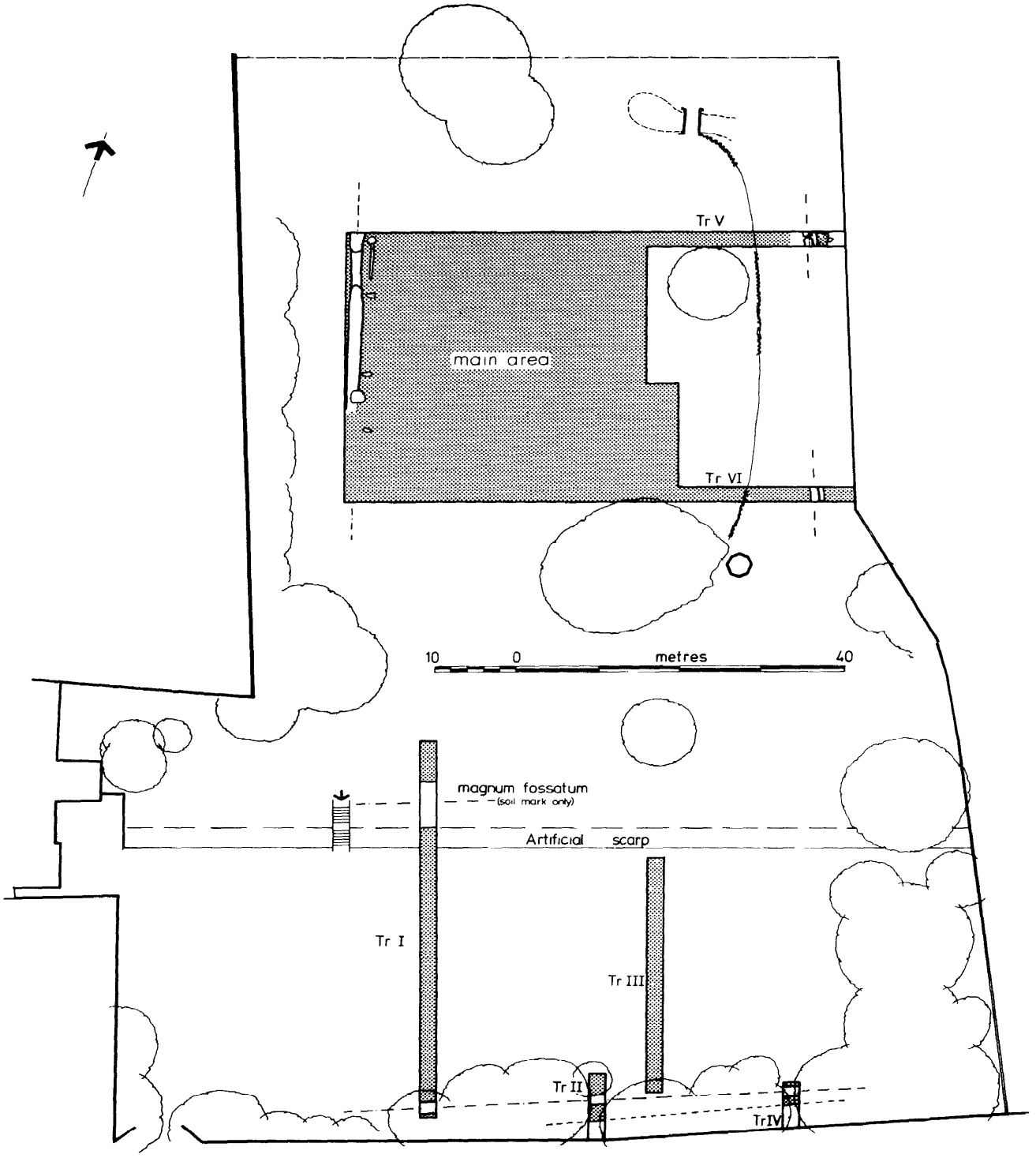


Fig 12 Elm Grove, site plan and medieval features

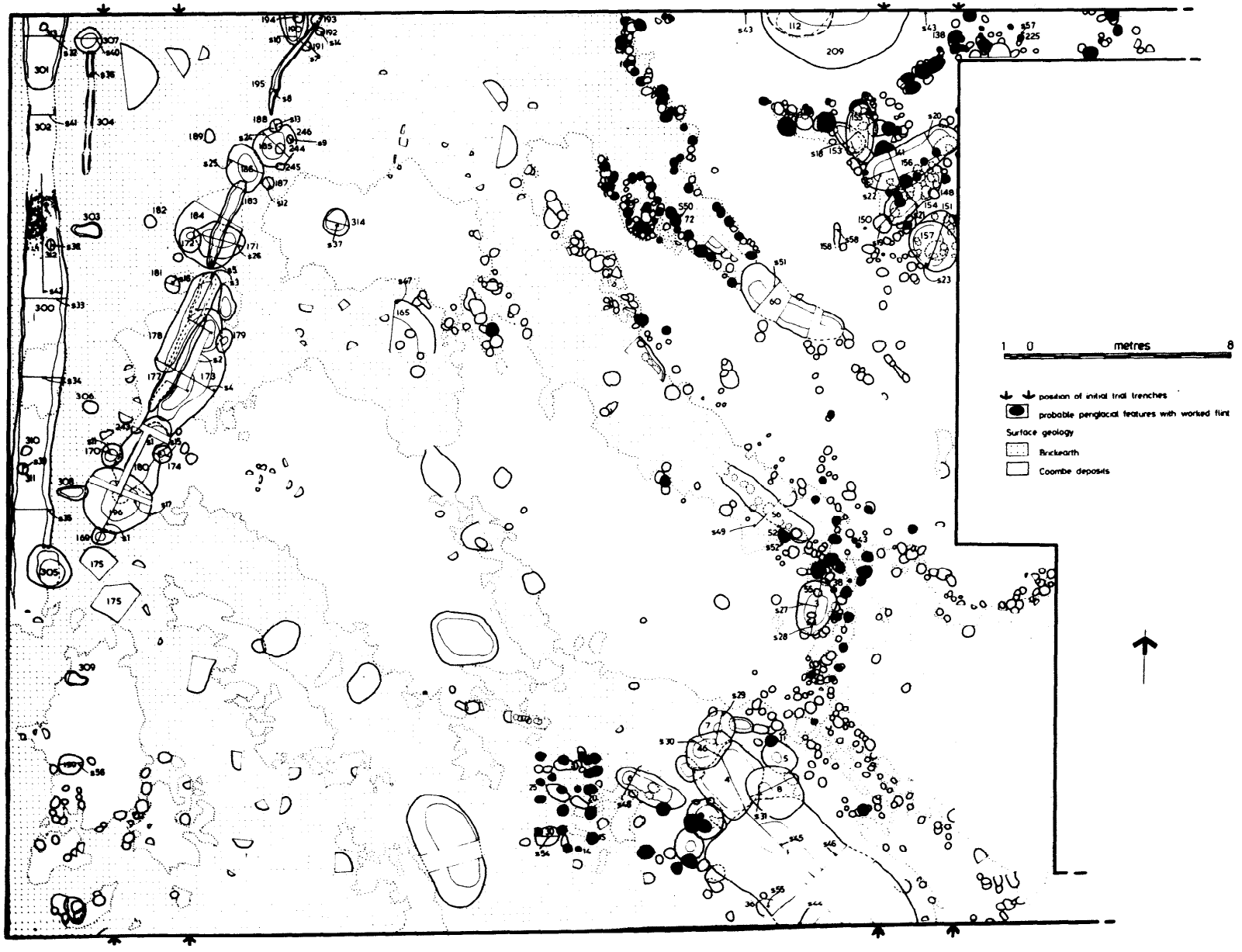


Fig 13 Elm Grove, main area: all periods

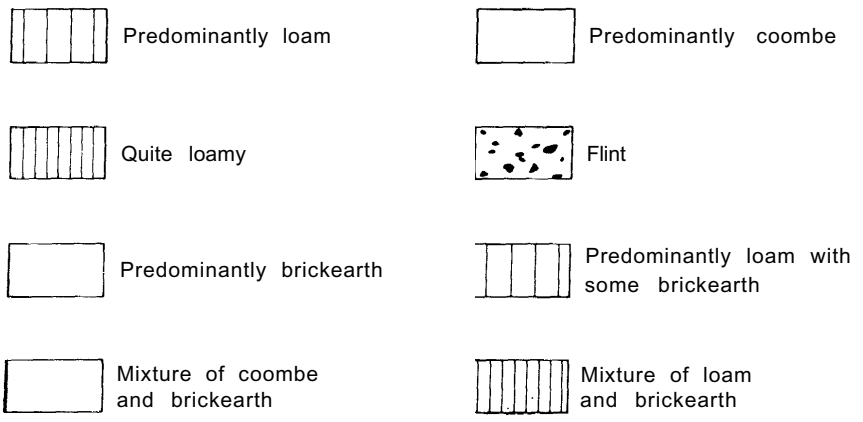


Fig 14 Key to sections

The probable Iron Age fence (Figs 13, 15)

A number of linear features, probably all cuts to remove runs of posts, lay across the north-western corner of the site. Several postholes in the vicinity may have been associated with them. The whole series apparently formed part of a fenced enclosure which passed beyond the northern edge of excavation but seemed to end to the south within the site. Its history was quite involved and apparently included several separate structural phases.

Rows of deeply set posts probably flanked two wide entrances (F190, F173/180), During the replacement of some of these, the northern entrance was narrowed by *c* 1.50 m (F177, then F178), and a new 2 m wide one may also have been formed a little to the south (between F178 and F180). The northern entrance was at some time considerably narrowed, probably by two further lengths of posts; but the relevant features (F183, F195) were too shallow to show if they were post-removal cuts or merely ditches. Five individual posts may also have been used to restrict or close off this opening (Fs 187, 188, 244-6). Beyond the south end of F180 any similarly shallow features lying in the southern entrance were entirely destroyed by subsequent ploughing (cf medieval ditch F300; F175, though it contained two sherds, was clearly natural). A single post-removal pit (F169) may have been the only survivor. Some of the other postholes in the vicinity may also be associated with the enclosure, especially Fs 191-4 and F243.

The absence of 'ghost' post impressions in, for instance, F180 and F178 showed that the enclosure had eventually been dismantled. During its life, the cuts made to remove posts in need of replacement had been carefully infilled with layers of compacted soil before new lengths were set up. Only the final removal cuts were left to infill naturally.

It is quite possible that all the above represent only the bottoms of the deepest features associated with the maintenance of a linear boundary over a very long period (cf the amount of early Iron Age pottery from them; below, pp 45-6). Moreover, the fact that, while the features forming the boundary contained many struck flakes, a zone some 12 m wide, parallel and to the east of it, produced neither flints nor archaeological features at the cleared level, suggests that the boundary may have been flanked by a substantial lynchet. If, as seems probable, the boundary was in existence by the early Iron Age, the lynchet was presumably developing from this period onwards, preventing that disturbance of the topsoil which would have encouraged the subsidence of flint and other artefacts into the underlying natural deposits.

Only a handful of sherds, some heavily abraded, and many small fragments of fired clay were found in all these features, although many of their fills were charcoal-flecked. No bone was found, but this (and probably most of the charcoal) would only have survived for a relatively short while in the site's very acidic soils. It was clear however that the enclosure was not very close to any contemporary settlement.

A late Iron Age pit (Figs 13, 15)

Some while after the final dismantlement of the enclosure, during which time F180 had become largely infilled, a sizeable carefully shaped pit was dug through its south end (F196). It contained some 40 potsherds, most of which were small, abraded, and apparently residual (pp 45-6). Since none of them was Romano-British it is clear that F196 was a strictly late Iron Age feature. Its function was not clear; but the smooth regular sides suggest that it may have been wicker-lined, perhaps for agricultural storage. On abandonment the feature had infilled naturally.

The cuts made to dismantle the palisade must have remained visible for some while afterwards. There were two unabraded sherds of the later 1st century AD in the top of F178 and one in a similar position in F170 and in F177. These may suggest a vague *terminus post quem* for Roman ploughing in the area.

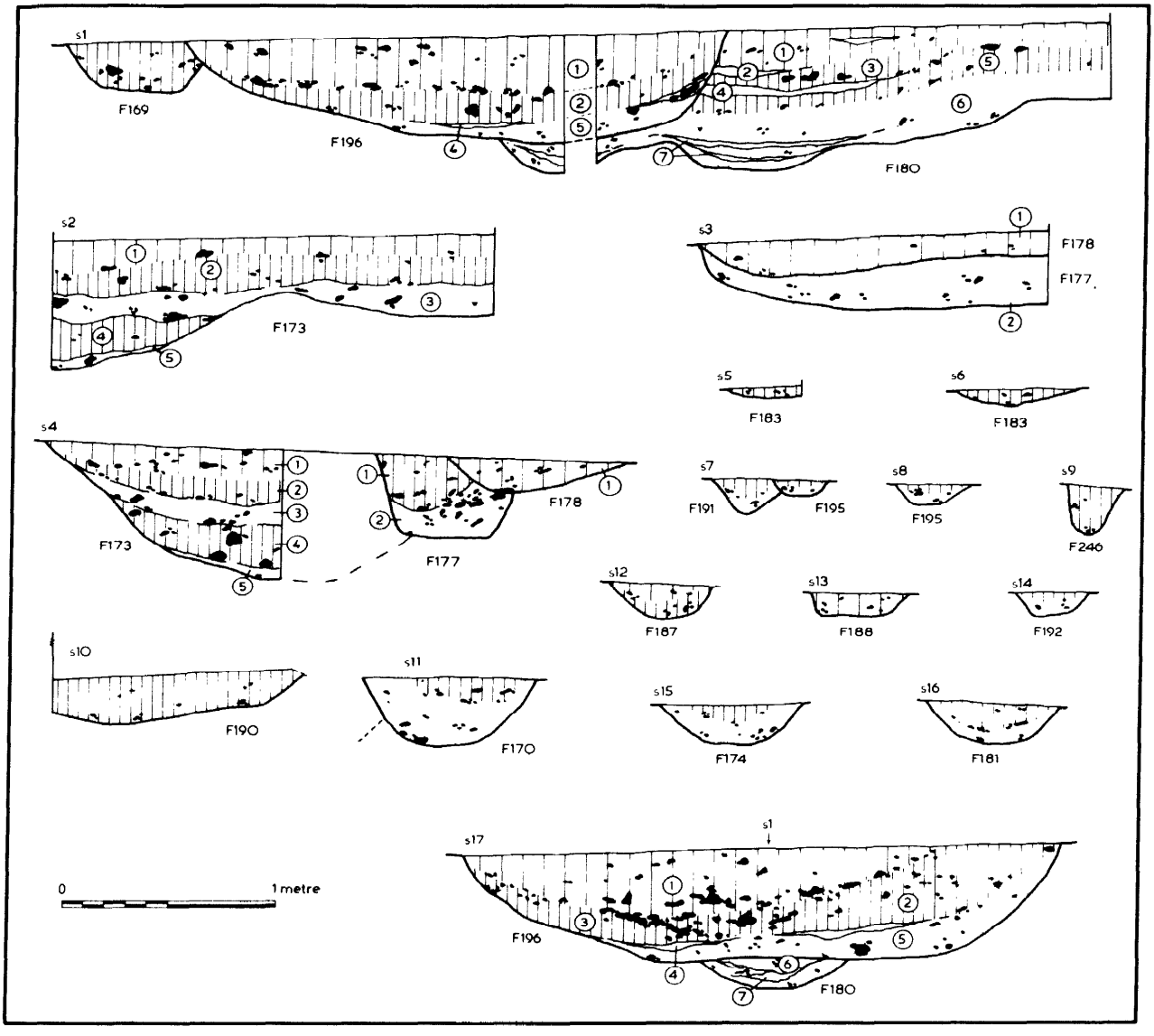


Fig 15 Elm Grove, sections s1-s17. For key see p 30

The probable Romano-British chalk quarry
(Figs 13, 17)

The lip of what may have been an extensive quarry lay at the northern edge of excavation (F209). Its lower fills were probably partly derived from the collapse and weathering of upcast piled near its top edge. Subsequently a long period of humus growth had completed F209's infilling. There had been no ploughing over the top of the feature until after its fills had largely consolidated, as the absence of any sunken ploughing horizon showed.

Features of category 2 (Figs 13, 16)

These consisted of four pits (one extremely large) and four other, probably agricultural, features; all may be of no later than early Iron Age date.

Pits F3, F151, and F157 (possibly a replacement for F151) are of little interest, but F112 demands attention. The feature was dug originally as a nearly vertical-sided, flat-bottomed pit, and within the site was *c* 3.1 m wide at maximum and 1.25 m deep below the cleared level. After only a little chalk wash had gathered in the bottom, its sides suffered extensive collapsing (which continued intermittently thereafter).

The regularity of its sides and its flat bottom strongly suggest that F112 was a lined storage pit, although the absence of pottery or other fired clay from its backfill is worrying. The feature could not

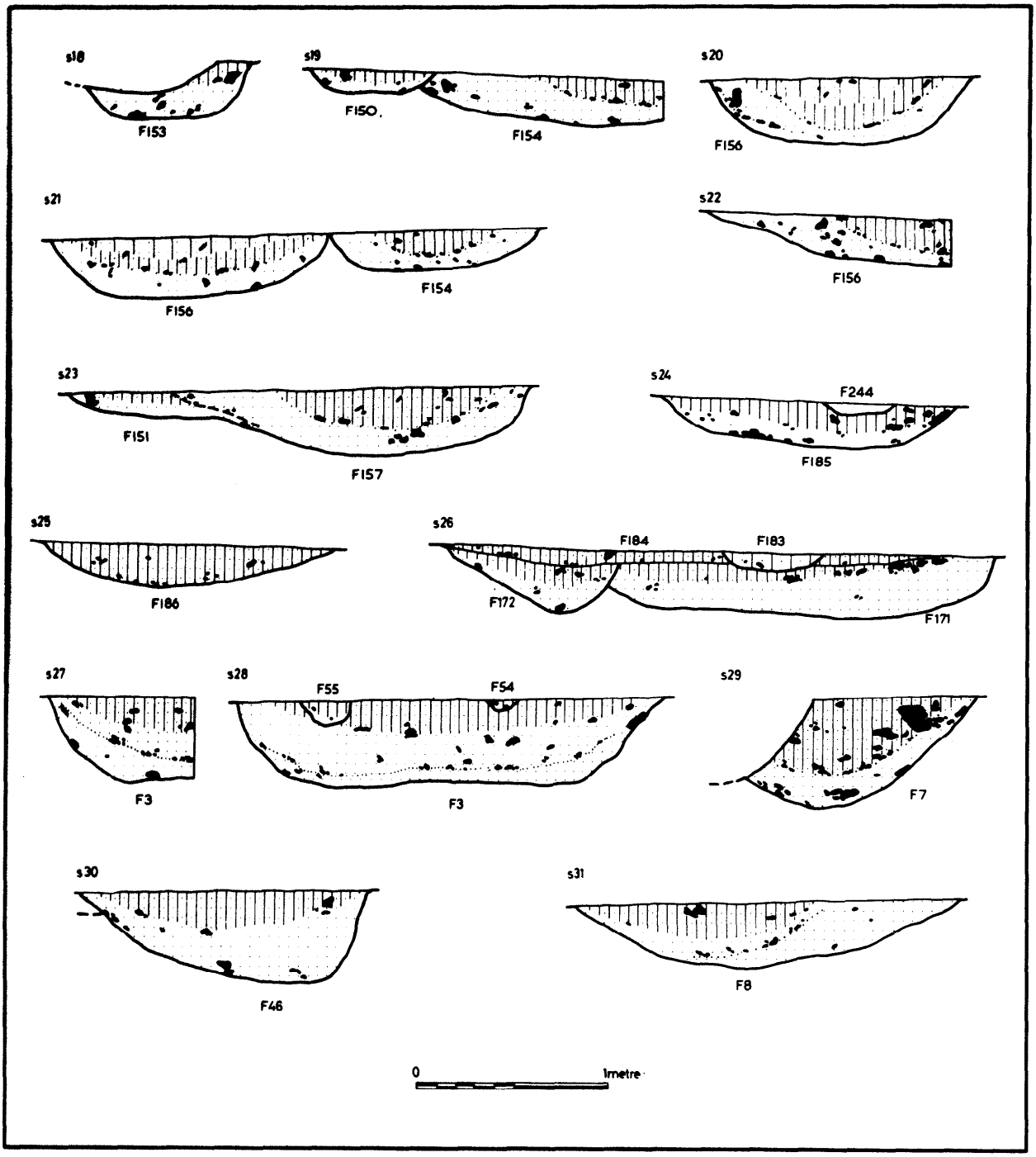


Fig 16 Elm Grove, sections s18-s31. For key see p 30

have lain close to any contemporary settlement, unless the pronounced acidity of its fills broke down soft sherds (but this is unlikely). Artefacts were not entirely absent: F112 contained 47 struck flints in its upper fills, but these were probably all residual.

Four other features lay in the same area (Fs 153-156). These were short trenches with rounded ends and wide moderately flat bottoms. Each could have removed a number of posts (there were no 'ghost' post impressions) perhaps supporting a windbreak or some farm of rack, or they may have served some other agricultural purpose. F156 is clearly Neolithic (below, p 49, as the other three of the series may also be by association.

Features of category 3 (Figs 13, 18)

Many of the excavated features assigned to this category may well have been humanly, not naturally, formed; but the absence of sherds or other occupational debris from all but a few must make them suspect. There could for instance be many valid

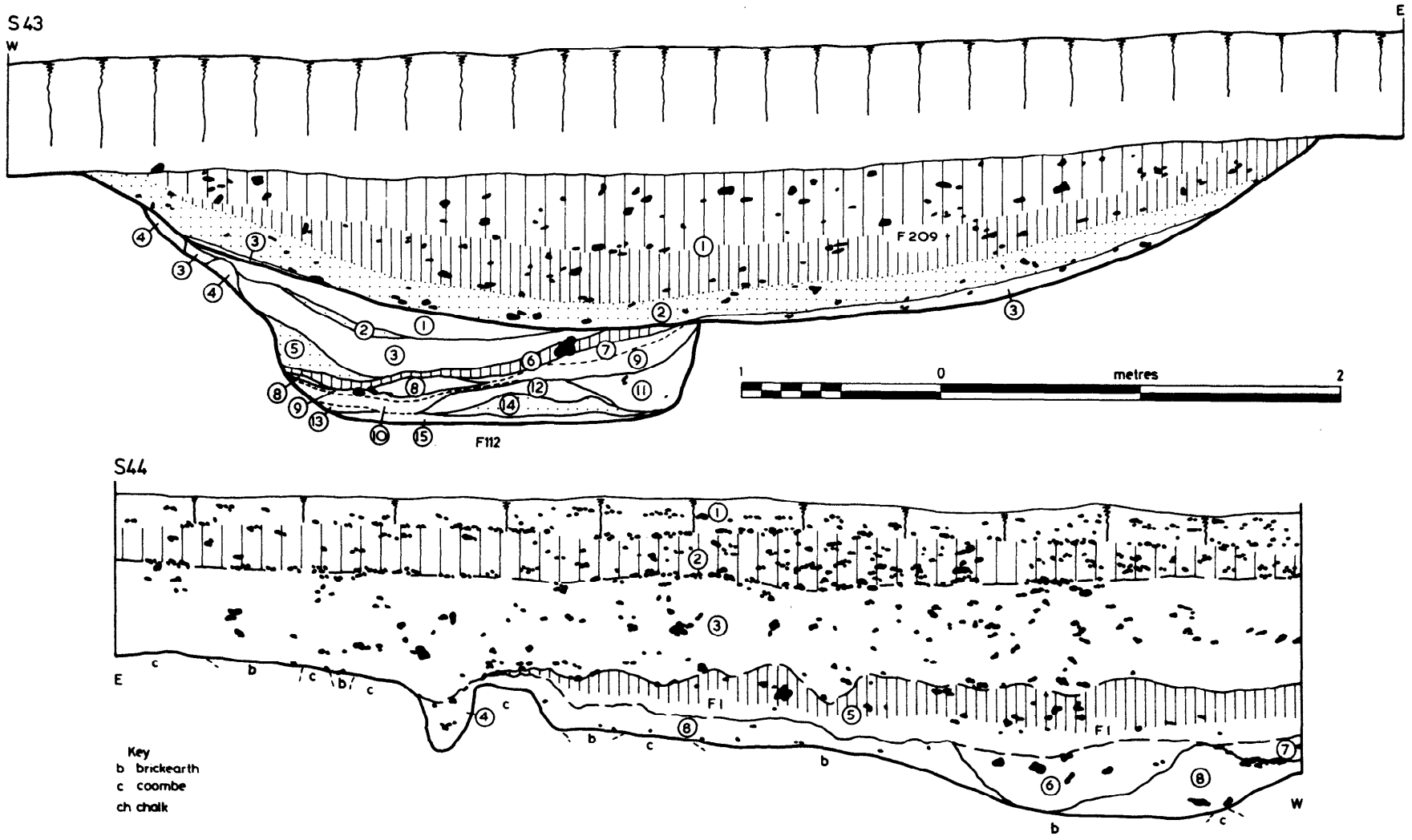


Fig 17 Elm Grove, sections s43, s44. For key see p 30

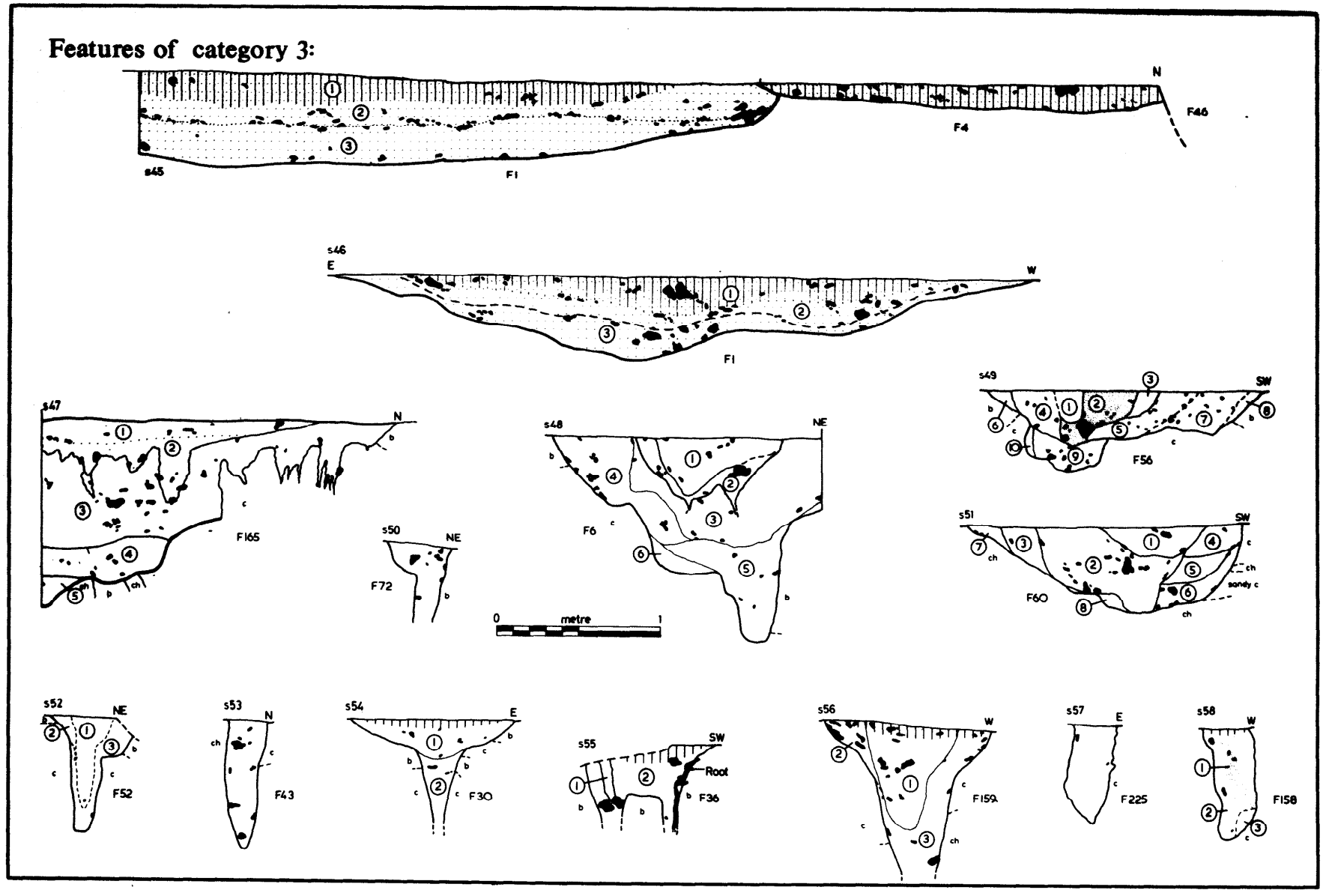


Fig 18 Elm Grove, sections s45-s58. For key see p 30

postholes on the plan which have been overlooked for this reason. Their detection was made almost impossible by the tendency of root-formed hollows to be well shaped, and to have an inner and an outer fill very reminiscent of a 'ghost' post impression and its encircling backfill. F148 and F150 were two acceptable postholes in association with Fs 153-6 near the north-eastern corner of the site, but a number of other features nearby, such as F141, may also have been properly archaeological. The same could be true of the latest pitlike features adjacent to F1 near the S edge of excavation, eg F7, F8, and F46, but none of these produced finds other than struck flint flakes.

In any case it is quite clear that no archaeological features of any particular interest have been overlooked, either on site or in this report. Most features of category 3 were clearly formed by natural processes, even though many contained artefacts.

2.2 Elm Grove: the periglacial features (Figs 17. s44, 18)

by S Limbrey

The geological substratum of the site is convoluted chalky loessic material of the type generally known as 'coombe deposits'. Chalk lumps are embedded in a matrix of light yellowish brown (10YR 6/4) sand or sandy loam, a mixture of chalk mud and loess, the loess being of a sandy texture here. The proportion of chalk to matrix varies from almost entirely chalk to predominantly matrix with a scatter of small chalk particles. The materials of different composition lie in broad bands trending downhill, though there is much variation within the bands. This is a typical cryoturbated material of a type found widely on gently sloping chalk lands in southern England. Cryoturbation polygons in which chalk is heaved up and the loess mixed and convoluted with it are elongated into strips on sloping ground by solifluction. Such deposits are known to have formed in at least two phases of cold conditions during the late Devensian period.

Soil formation

The 'brick earth' appears to be the result of decalcification and soil formation on the coombe deposits. Decalcification has proceeded to greater depth where the coombe deposits are less chalky, producing deep hollows; there may have been some drop in surface level over these hollows, the soil settling as the chalk component was lost. Continuing soil processes have resulted in movement of clay and iron oxides downwards in the decalcified soil, leaving an eluvial horizon and producing a strongly coloured, reddish brown to yellowish red (5YR 4/6) and more clayey textured lower horizon, that is, an argillic horizon. Hollows and pipes going deeply into the coombe deposits may have been initiated or developed by tree roots during forest growth, the roots growing preferentially where there was a greater loessic component, holding more moisture, and the root environment intensifying dissolution of the chalky component. Decalcification continues in such pipes after the root has decayed, and leaching of the soil is concentrated within them, producing intensification of the clayey horizon, which appears to line the hollow, and a downwards penetration of the pale-coloured eluvial horizon soil, which appears to form a core. Worm activity has contributed to the unevenness of the soil boundaries, dark soil from the present surface and small stones brought down by the worms being found at depth, and in some places forming an almost continuous deposit at the boundary with chalky material. At an earlier stage in the history of the soil, worm activity would have been much greater, and the whole of the depth of the 'brick earth' may have been worm mixed, introducing any stones and artefacts deposited on the surface into the lower part of the soil. The intensity of development of eluvial and argillic horizons suggests that the soil had become sufficiently impoverished for worm activity to be reduced, before the surface of that time was disturbed and buried in the course of cultivation.

Cultivation has truncated the uneven surface of the soil and substratum. Where the chalky material remained at a higher level, that is, where the chalk component predominates and decalcification and soil formation has been shallower, the soil has been completely disturbed and the substratum cut across, leaving only the deeper pockets of 'brick earth'. Where the soil was deeper, the surface appears to have been lower too, so that cultivation has buried a more complete soil profile. The deep deposits of ploughsoil now covering the site are the result of downslope movement of soil.

Archaeological features

The great majority of the features excavated appear to be the result of the natural processes outlined above. The linear arrangements are the result of the downslope trend of the periglacial features, and the concentration of pipes and hollows alongside the 'brick earth' filled hollows appears to be the result of the truncation of the soil profile, so that at this point the pipes show as 'brick earth' patches in the chalky material or as leached cores within the 'brick earth'.

Features which run across the general downslope trend may be viewed with greater confidence, but otherwise the problem of identifying any real archaeological features among the maze of natural ones remains. In such a situation a machinecut trench across the site will reveal the full complexity of the periglacial features, and so form a background against which any archaeological features may be sought.[80]

2.3 The flintwork

by E Healey, with a contribution by A Clydesdale [81]

Circumstances of discovery

Worked flint was recovered from residual contexts on most sites excavated between 1972 and 1978; for the

sake of completeness, that recovered from the Battle Ditches excavation, 1959 (Ravetz & Spencer 1961, 151) and the 1876 cemetery excavation (Smith 1884, 319), but only summarily reported, is also considered here in full. The main assemblages are of mixed character, ranging in tradition from Mesolithic to later Neolithic and possibly early Bronze Age.

All the flintwork is from residual contexts. The largest collection came from the Elm Grove (1163 flints) and Cinema-Maltings (59 flints) sites, which have been treated as a single unit, since the areas are adjacent and no differences in the assemblages could be detected. The flint seemed to be concentrated in the north-east corner of the Elm Grove site, where Neolithic sherds were found, but there was no direct association between the pottery and flint (see also below, p 45). There were also two lesser concentrations to the south of the main area. However it is probable that these apparent concentrations are due to a later prehistoric lynchet and associated agricultural activity. A single sherd of late Neolithic pottery was also found on the 'Rose & Crown' Hotel site, but not in direct association with the flint.

Raw material

The flint selected for use seems, on macroscopic examination, to be similar in all the assemblages, the only exception being that from Castle Meadows which has a heavy chalky-white patina and very fresh cortex. The flint varies in colour from dark grey to light grey to grey-brown; it is often mottled. The occasional piece of whitish opaque flint is used (for example, Fig 19.16).

A light patina is present on about one third of the struck flint from the Elm Grove site, a fifth of the flint from Abbey Lane, and a quarter of the flint from the Battle Ditches. A smaller porportion of the flint has a heavy white patina, usually on a naturally fractured surface, but occasionally it occurs on struck material, like the scars on a core from Abbey Lane and on some flakes from Elm Grove, and seemingly indicates two distinct periods of use. A fairly high proportion of the flint has areas of cortex remaining: Elm Grove, just over half, Abbey Lane, half, and Battle Ditches, two-thirds. The cortex is generally fresh, but some examples of weathered cortex are present.

There is an abundant and easily available supply of flint from several sources in the area; the heavy white patina suggests that at least some was obtained from outcrops in the chalk, while the flint with rolled cortex may have been taken from gravel deposits.

Classification

The assemblages have two main parts: A, the debitage and B, the tools and retouched pieces. The composition of each assemblage is tabulated below (Table 1); a brief description of each type follows together with a general discussion of the assemblages; the illustrated flintwork is then described in the catalogue. A fuller typological discussion will be found in the forthcoming publication on central Essex flintwork (Healey, in prep). The numbers of flints from each site are of course too small to draw any meaningful conclusions as to the relative proportions of the types in each assemblage. A detailed catalogue of the illustrated flintwork appears in microfiche section 1.

Debitage

Debitage includes all unretouched and apparently unutilized pieces. (It is of course possible that some pieces were struck and used for an immediate purpose which has not left any trace on the flint visible to the naked eye-see for example Isaac 1976, 46.) Recent research suggests that this waste material may in fact provide as much information about an industry as the retouched pieces (Pitts 1978a; b; Pitts & Jacobi 1979). In the past analysts have perhaps tended to over-compartmentalize types and to see each type as a separate entity rather than viewing the various categories as different aspects of a single industry. The analysis of the flintwork from Saffron Walden was undertaken before these ideas had been fully formulated, but where possible the results have been reinterpreted to take account of recent developments in lithic analysis.

Typologically debitage is found in three main forms:

i cores or parent waste;
ii products of knapping;
iii products of tool manufacture.

The main subdivision of these categories is into various kinds of specialized and unspecialized types, as will be explained in the appropriate place.

Cores

The cores were originally classified following Clark's system (Clark *et al* 1960, 216) which was then the most generally adopted scheme; the results are given in Table 2. Since then other schemes have been developed including the suggestion by Green (1974, 84) that they can be divided into specialized and unspecialized types.

Specialized cores are rare and include blade cores Fig 19.2, 4 from Elm Grove, probably Fig 20.60 from Abbey Lane, and the keeled core Fig 21.100 from the Battle Ditches. Most of the cores appear to be *sui generis* but the presence of blades and flakes with facetted butts (see also scrapers) confirms the use of specialized production techniques. The virtual absence of such cores probably has little or no significance, and is likely to be an accident of survival. The large proportion of unclassified pieces and stuck nodules reflects post-depositional damage to the assemblages.

The nodules used as cores are relatively large compared to the amount of nodule surface actually used; for example, some cores measure 50 mm whereas the longest flake scar is only 35 mm. This in fact compares favourably with the size of the unretouched waste flakes, whereas the flakes selected for retouch are larger. Differential patina on two cores from Abbey Lane (Fig 20.60) suggests two phases of

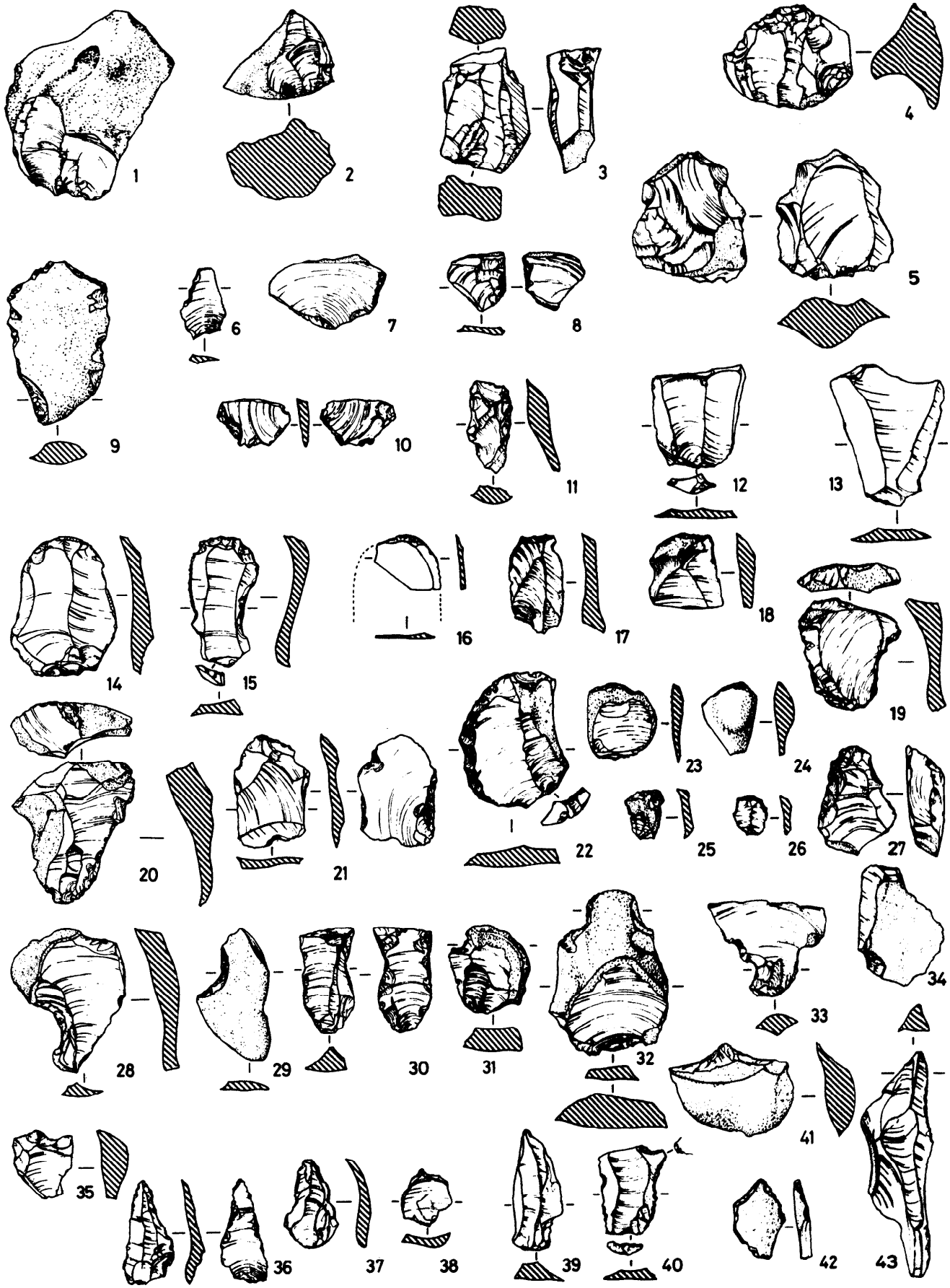


Fig 19 Flint: 1-43, Elm Grove. Scale 1:2

Fig 20 Flint: 44-59, Elm Grove; 60-82, Abbey Lane. Scale 1:2

Table 1 Composition of the assemblages

	Elm Grove and Cinema-Maltings	*'Rose & Crown' Hotel*	*Castle Meadows*	*Abbey Lane*	*Battle Ditches*	*1876 cemetery*
The debitage (unretouched)						
Cores	32	-	-	7	7	1
Other struck nodules	32	-	-	10	7	1
Products of knapping	941	3	23	277	35	-
Products of tool manufacture	11	-	-	6	-	-
The tools and retouched pieces						
Misc utilization and retouch	88	2	2	12	15	-
Hammerstones	1	-	-	-	-	1
Scrapers	28*	-	-	13*	-	-
Notched pieces	22*	1	1	12*	-	-
Awls and piercers	24	-	-	4	4	-
Spurred implements	2	-	-	3	-	-
Serrated flakes and saws	18*	-	-	4	-	-
Denticulates	-	-	-	-	1	-
Gravers	5	-	-	7	-	-
Truncated blades	15	-	-	6*	-	-
Pick	-	-	-	1	-	-
Adze		-	-	1	-	-
Arrowheads	6	-	-	1	-	-
Composite tools	9	-	-	2	-	-
Totals	1222	6	26	324	69	3

*see also composite tools. These are considered under both tool categories in the following discussion.

working. The majority of cores had areas of cortex remaining varying from a small amount, as Fig 19.3, to quite large amounts, as Fig 19.1.

The striking platform is usually a struck flake scar but suitable thermal scars are also used nine times at Elm Grove, and in two instances flakes have been struck directly from the unprepared surface or cortex of the nodule, as Fig 19.4. A few scrapers and blades, like Fig 19.22, Fig 20.62, have facetted butts, suggesting preparation of some cores. The butt ends of some flakes indicate that trimming of the core edge was also practised though it was only observed on two of the Elm Grove cores. This is little evidence for the reuse of cores, though two have notches and battering on others suggest possible use as hammerstones.

Because of the small number and relatively unspecialized nature of the cores, it is difficult to date them. Optimistically it might be said that the prismatic core Fig 19.3 and semi-conical core Fig 19.2 would not be out of place in a Mesolithic context and that the discoidal core Fig 19.5 and the keeled core, Fig 21.100, are of types most usually found in later Neolithic industries, but it is not possible to date them with any certainty.

Products of knapping

These are typologically subdivided as shown in Table 3. Spalls and chips (resulting from knapping) are virtually absent, almost certainly because of the conditions of preservation of the flintwork.

(a) Flakes and blades

These have been grouped together here, as the term 'blade' is used of any flake with its length more than twice its width and is determined by metrical analysis (see below).

(b) Core-rejuvenation flakes

The types present (see Clark 1954, 100) include (a) pieces struck at an oblique angle to the core face to renew the edge of striking platform, eg Fig 20.63-64 (Elm Grove 13, Abbey Lane 4); (b) flakes struckin the same plane as the core striking platform (Elm Grove 2); (c) a plunging flake removing the apex of a core from Abbey Lane (Fig 20.65); and (d) a flake (from Abbey Lane) removing the top of a core damaged by imperfect strikings from a second platform. Eight other rejuvenation flakes had also been used for tool blanks.

(c) Trimming flakes

Twelve flakes obviously struck to renew the face of the core and to eliminate ridges or areas of step fracturing were isolated from the Elm Grove industry.

Table 2 Classification of cores (after Clark *et al* 1960, 216)

			Elm Grove	*Abbey Lane*	*Battle Ditches*	*1876 cemetery*	*Totals*
Class A	ii	Single platform	8	1	1	-	10
Class B		Two platforms:					
	i	prismatic	1	-	-	-	1
	ii	oblique	3	2	1	-	6
	iii	at 90°	2	-	-	-	2
class c		Three platforms	3	-	-	-	3
Class D/E		Keeled edge and another platform	1		1	1	3
Unclassifiable		fragments	14	4	4	-	22

There arc also 51 struck nodules defined here as nodules with a single flake bed or random scarring, probably caused accidentally rather than by deliberate striking.

(d) Others

These are flakes with flat, often multidirectional, flake scars on their dorsal face, usually considered to have been struck in the course of flaking an artefact like an axe or a laurel-leaf (Pollard 1966, pl IV, 12f) but which may have been struck from discoidal cores similar to those of late Neolithic date from Lion Point, Clacton (Wainwright 1971, 121, pl XL, 4). Thirteen such flakes (one with a notch and two with edge retouch) were distinguished from Elm Grove.

Products of tool manufacture

These are highly characteristic types resulting from the manufacture or resharpening of certain classes of tools.

(a) Adze-sharpening flake

A single sharpening flake (Fig 21.98) detached from a tranchet adze was recovered from Abbey Lane.

(b) Graver spalls

Six long narrow spalls consistent with the type of flake struck to provide a graver edge were found at Elm Grove.

(c) Microlith manufacturing debris

No microliths were found, but one probable micro-burin was present at Elm Grove (Fig 20.53) and a further nine flakes have been snapped across steeply retouched notches (four from Elm Grove, five from Abbey Lane) and may be mis-hits. One (Fig 21.94) has extensive trimming. Two other thin blades from Abbey Lane, like Fig 21.95, with lateral notches and abrupt retouch on the opposite edge may be unsnapped forms. The distal end of a broken blade has a small deep notch and retouch down one edge, and may also be a micro-burin failure. These forms are highly characteristic of Mesolithic industries.

Metrical analysis

Despite the fact that the assemblage is of mixed character, a metrical analysis of waste products and some tool types was undertaken to try to answer a number of specific points; though even then interpretation of them must remain speculative:
(a) to isolate the blades and to determine whether any internal groupings were apparent;
(b) to compare the size of the waste material with the size of retouched pieces;
(c) to compare the immediately local sites (eg Elm Grove with Abbey Lane).
The results are set out in Table 4.

It is clear from inspection of the ratios of breadth to length that blades formed a small but not insignificant proportion of the industry (Miss Clydesdale also noted 24 blade fragments from Abbey Lane), although the majority of flakes are broad (many with ratios above 5:5). Scrapers are also relatively broad but form a much more homogeneous group; they are also clearly larger than waste flakes. The retouched material as a whole shows the same general trends, if a little less clearly, and it seems likely that the knapper was carefully selecting blanks for retouch.

Visual comparison of the metrical data pertaining to

Table 3 Products of knapping

	Elm Grove	*'Rose & Crown' Hotel*	*Castle Meadows*	*Abbey Lane*	*Battle Ditches*
(a) Flakes and blades	901	3	23	271	35
(b) Core rejuvenation flakes	15	-	-	6	-
(c) Trimming flakes	12	-	-	-	-
(d) Others	13	-	-	-	-

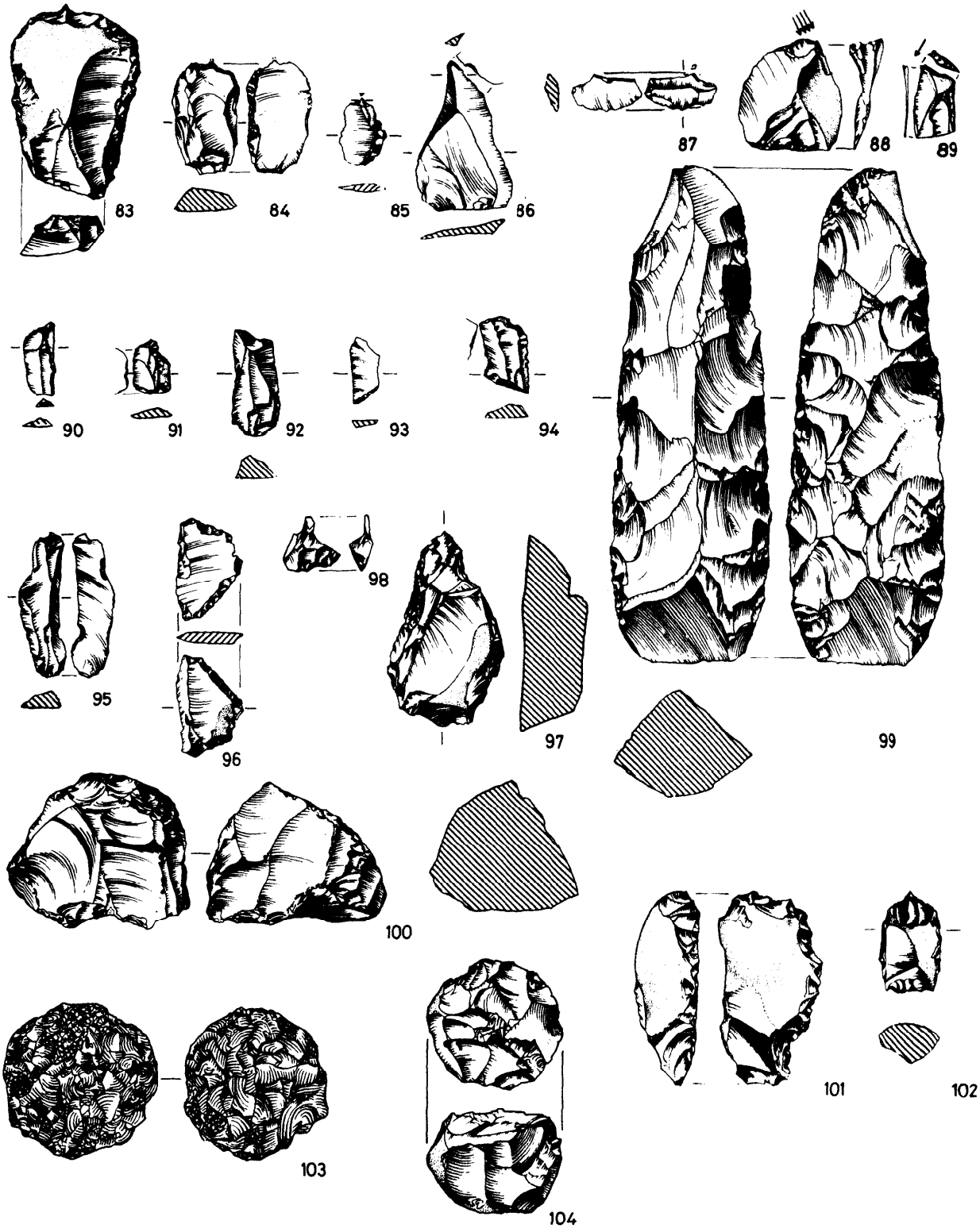


Fig 21 Flint: 83-99, Abbey Late; 100-102, Battle Ditches 1959; 103-4, cemetery excavations 1876. Scale 1:2

Table 4 Metrical data

Dimensions of unretouched flakes and blades

	0	10	20	30	40	50	60	70	80 mm	Total
Length										
Elm Grove	4	203	241	153	56	15	8	2	-	682
Abbey Lane	2	18	47	36	8	4	-	2	-	117
Battle Ditches	-	6	10	4	3	-	-	-	-	23
Breadth										
Elm Grove	51	291	208	95	23	10	4	-	-	682
Abbey Lane	4	54	40	11	4	2	1	-	1	117
Battle Ditches	1	6	8	6	2	-	-	-	-	23

Dimensions of tools (all sites)

Length								
Scrapers	-	4	5	12	7	6	-	34
Serrated and notched flakes	-	-	3	6	7	2	3	21
Breadth								
Scrapers	-	7	9	9	8	1	-	34
Serrated and notched flakes	1	1	6	8	5	-	-	21

Breadth length classes (percentages)

	0.5	1.5	2.5	3.5	4.5	5.5	7
Flakes:							
Elm Grove		3.8%	17.7%	24.0%	22.5%	32%	
Abbey Lane			21.7%	30.4%	21.7%	39%	
Scrapers (all sites)			14.7%	20.6%	44.0%	20%	
Other retouched pieces (all sites)		2.3%	20.2%	28.6%	28.6%	20%	

the flintwork from the various sites within the town confirms the typological analysis and does not appear to reveal any major differences between them. Inter-site comparison on a wider scale is not relevant here because of the residual nature of the finds, though it may be worth noting that the figures given by Pitts (1978b, 194) suggest that industries with a largish proportion of broad flakes are more typical of the later prehistoric flint industries.

The retouched material

Utilization and miscellaneous and unclassifiable retouch

In a group of flints which has suffered much post-depositional damage, it is often difficult to distinguish accidental damage from that caused by deliberate use, and even retouch. Utilization, where recognizable, is irregular chipping of Smith's type B (Smith 1965, 92). Unclassifiable retouch comprises (a) flakes and blades with (usually) heavy and/or purposeful retouch, but which have been damaged beyond reconstruction and are therefore unclassifiable (13 examples); and (b) flakes with varying degrees of apparent retouch (though it is not always possible to be certain whether it is deliberate retouch, spontaneous retouch, or accidental damage, Fig 19.6-13). They lack the characteristic features of any of the usual artefact types and so do not fit into any particular category, but may have been *ad hoc* tools.

Hammerstones

Two complete flint hammerstones are present: one from Elm Grove, and a fine spherical example from the 1876 cemetery (Fig 21.103). Six flakes in the Elm Grove assemblage have severe contusions on their butt ends and dorsal surfaces and were probably struck (either accidentally *or* deliberately) from hammerstones; several cores are also heavily abraded, suggesting the reuse of abandoned cores as hammerstones.

Scrapers

The most generally adopted classification scheme for scrapers is that devised by Clark and used, for example, at Hurst Fen (Clark *et al* 1960, 214). This scheme is somewhat limited, as will be shown below, but is used here (Table 5) to summarize the scraper types for comparative purposes.

One of the main difficulties with this scheme is that

Table 5

	Elm Grove	*Abbey Lane*
Scraper edge on struck flakes:		
Ai	-	-
Aii	12	4
A	6	-
B	2	-
C	-	1
D	-	1
Dii	5	1
E	-	1
A/D	5	2
Scraper edge on thermal flake	1	1
Scraper edge on nodules	2	3

Cortex is present on 24 scrapers from Elm Grove and 11 from Abbey Lane.

while it describes the position of the working edge on the blank (provided that this is a flake or blade), it does not describe attributes pertaining to it, such as type of retouch, shape or plan, size, and possibly angle of retouch, a more sensitive chronological indicator than Clark's categories (Green 1974, 86).

There is no terminology in current use amongst post-glacial lithic analysts which describes the type of retouch on a scraper; observations about retouch types are of course to be found, but are not regularly or quantitatively recorded. In outline the main types are (a) 'classic' or specialized scraper retouch, like Fig 19.14, 15 and Fig 20.71, 72; (b) invasive scale flaking, characteristic of Beaker and early Bronze Age industries (Clark 1933, 107; Smith 1965, 107); and (c) 'non-specialized' edge retouch (eg Fig 20.68), which may prove to be characteristic of later Neolithic industries (Alexander *et al* 1960, 291). At Saffron Walden the scrapers seem to be more or less equally divided between those with classic retouch and those with light edge retouch. Scale flaking, with the possible exception of Fig 19.16, is absent.

The shape or plan and the dimensions of the retouched edge are often described in relation to a circle. The following shapes (which may occur in combination) were isolated by inspection: rounded 16, straight 16, pointed 4, irregular 6. The straight edged scrapers tend to have non-specialized retouch. Preliminary results of more detailed research on a number of dated industries suggests that size and shape may be more usefully expressed as the ratio of width (a straight line joining extremes of retouched edge) and its length (measured at mid point of imaginary line drawn from extremes of retouch).

Angle of retouch is notoriously difficult to measure consistently, and in any case many scrapers have varying angles along their edges. It has been noted however that the angle of retouch tends to decrease with time (Green 1974, 86). The majority of the Saffron Walden scrapers are over 70"; indeed about 30% are actually undercut. The apparent steepness of the retouched edges seems to reflect the nature of the retouch and shape of the edge. The scraper illustrated in Fig 19.16 is an exceptionally finely retouched shallow example.

A number of scrapers are made on flakes with facetted butts (Fig 19.22); it has been demonstrated elsewhere (Smith 1965, 95) that facetted butts are more common on scrapers in later Neolithic than earlier Neolithic industries.

In so far as any of the scrapers are datable, a later Neolithic context seems likely for most of them.

Notched flakes

Two types are distinguished here by the size of the retouched concave area. Flakes with retouch in wide shallow concave areas are termed 'concave scrapers', eg Fig 19.15, 28-30, Fig 20.78-80, and flakes characterized by smaller (under 16 mm in diameter) semicircular notches are termed 'notched flakes' (Fig 19.31-34, Fig 20.81, 82).

Concave edges are found both on blades and squat thick pieces including a thermally detached flake and a core (Fig 20.78). One from Elm Grove (Fig 19.30) is heavily worn.

Deliberately formed notched pieces are not always readily distinguishable from accidental forms; the type is not closely datable. Notches vary between 5 mm and 16 mm in diameter and between 1 and 3 mm in depth, the majority of notches being under 10 mm in diameter. The retouch forming the notch is normally abrupt and may continue along the flake edge beyond the shoulders of the notch. Notches occur either alone, or with retouch and other tool types. The edge opposite the notch has been retouched or 'backed' in fourteen instances. Notches also occur with five scrapers (Fig 19.17, 21, Fig 20.70), two truncated blades (Fig 21.91), and a serrated edge (Fig 19.34).

Awls and piercers

These have been divided into tools with long points and heavy retouch (ten examples) and shorter points with the minimum of retouch (22 examples). Two are worked from both faces and may be described as rotating awls (Clark *et al* 1960, *223).*

Apart from the length of the point the tools also vary in the amount of retouch on the point and the way the point is offset. The longer points tend to be extensively flaked, and one from Elm Grove is bifacially worked. The short points often take advantage of the plan or shape of the blank and tend to be minimally retouched. Both types of point are also offset by notches, for example Fig 21.85.

The dating of the tools is uncertain, but it may be remarked that at least some of the piercers with long points like Fig 19.36 and Fig 19.37 are not unlike the late Neolithic piercers from the upper levels at Windmill Hill and West Kennet Avenue (Smith 1965, 108 and fig 48, F157-159, 239 and fig 81). Undistinguished short points with a minimum of retouch seem to belong to an earlier Neolithic context, eg Hurst Fen (Clark *et al* 1960, fig 15) and Windmill Hill (Smith 1965, 93 and fig 39), or possibly a Mesolithic horizon (cf Wymer 1962, 348 and fig 12, Nos 159-60).

Spurred implements

This type is characterized by a spur or blunt point projecting either (a) from a steeply retouched scraper-like edge (three examples) or (b) offset by two notches (Smith 1965, 105) (one example). Morphologically type (a) is not unlike small nosed scrapers and the more pointed examples especially of type (b) tend to grade into piercers (cf Fig 19.38).

An unclassifiable fragment from Elm Grove has been heavily worn, presumably in use. The type seems to have late Neolithic associations (Smith 1965, 105-239).

Serrated flakes, saws, and other denticulates

These are blades with regular minute denticulations or serrations formed by the removal of a spa11 on either side of a tooth (Smith 1965, 91-2). At Elm Grove about two-thirds of the denticulated edges have eight or nine teeth per cm, although they range from four to fourteen teeth per cm. At Abbey Lane both examples have about ten teeth per cm. The serrated edges are normally straight but in five instances the edges are concave. Blunting (worn smooth in one instance) on the edge opposite the serrations was observed on six flakes, eg Fig 20.45, and four other flakes, like Figs 19.34, had cortex on this edge; Fig 19.34 has a small semicircular notch immediately below the serrations (see also notched flakes).

Serrated flakes have a wide date range featuring in industries from the Mesolithic (eg Thatcham: Wymer 1962, 348) through the Neolithic (Smith 1965, 91-2, 108, and 239). Details of the number of teeth per cm, size, etc are only available for a very small number of industries, but from the evidence it would seem that later Neolithic examples tend to be coarser than those from earlier Neolithic contexts. Blunted backs have been noted on the later examples (Smith 1965, 239).

Two flakes from Abbey Lane have larger crude denticulations, and although irregular saws are known, these 'teeth' are more likely to have been caused by damage rather than deliberate retouch.

A tool (Fig 21.101) described as a 'denticulate' from Battle Ditches has coarse teeth on one edge. These have been formed by the removal of a larger flake and trimmed by several small removals, and the tool is not unlike F149 from the upper levels at Windmill Hill; it may be a later Neolithic type (Smith 1965, 108, fig 48).

Gravers

The gravers or burins have been classified as shown in Table 6.

The simple gravers are all uncertain examples and may have been accidentally produced. The angle graver from Abbey Lane is oblique, the other two are transverse.

Gravers are found mainly in Mesolithic contexts but are not unknown in earlier Neolithic assemblages (Clark *et al* 1960, 224; Wainwright 1972, 68).

Table 6

	Simple gravers	*Angle gravers**	*Dihedral gravers†*
Elm Grove	3 (?)	2 (Fig 20.46)	-
Abbey Lane	5 (?)	1 (Fig 21.89)	1 (Fig 21.88)

*Froom 1976, 144, gp3 †Froom gp2

Truncated blades and related forms

Three fine truncated blades, eg Fig 20.47, and nineteen more typical examples (like Fig 20.49, 50) occur in the Elm Grove and Abbey Lane (Fig 21.90-91) assemblages. All but two are obliquely truncated; one of these has the butt end removed (Fig 21.93). A single example (Fig 21.92) is concave and there is a doubtful transversely truncated example from Abbey Lane. One truncated blade has a lateral notch.

Pick

The tool illustrated in Fig 21.97 seems to be a small pick of the type described by Saville (1977, 3). It is made on a thermally fractured piece of flint and has been extensively retouched to produce a pointed end. It is likely to be of Mesolithic date.

Tranchet adze

Fig 21.99 from Abbey Lane, is a very fine *tranchet* adze measuring over 180 mm in length. It has an unequal lozenge cross section, one face being much flatter than the other, and has been sharpened on both faces by transverse blows. It is a typically Mesolithic artefact and occurs in both early and later industries (Mellars 1974, 91). There is also a small adze sharpening flake (Fig 21.98) (see also tool manufacturing debitage).

Arrowheads

I am very grateful to Dr Green for discussing the arrowheads with me, and for providing details from his work on arrowheads in advance of publication (Green 1980). Two barbed and tanged arrowheads were recovered from Elm Grove. Fig 20.58 is of Green's Conygar type which occurs with Food Vessels and throughout the early Bronze Age, but is rare with Beakers, and Fig 20.59 is of Green's Sutton B type which is characteristic of the whole range of Beaker graves and occurs throughout the early Bronze Age.

Two *petit tranchet* arrowheads are also present from Elm Grove (Fig 20.54 and 55) and there is one certain chisel ended type (Fig 20.57) and two doubtful examples (eg Fig 20.56). Both types occur in late Neolithic contexts. Although theoretically the *petit tranchet* forms could be Mesolithic, none have been recovered from a certain Mesolithic context in Britain.

The reconstruction of the arrowhead from Abbey Lane (Fig 21.96) suggests that it was probably an oblique form, and also of late Neolithic date.

Summary and conclusions

Although spread over a wide area, the excavated sites in Saffron Walden have each produced small groups of flint. The reasons for the widespread but broadly homogeneous occurrences of assemblages of flintwork are not clear, since the relationship of the sites in earlier prehistoric periods is unknown; but there is a strong likelihood of a similar level of occupation, and in the Neolithic period, of cultivation, along the whole of the valley in which the town lies. Repeated occupation of an area in prehistoric times is of course a well known phenomenon.

Unfortunately the bulk of the flintwork is not closely datable, but both technology and typology suggest strong Mesolithic and late Neolithic elements, with some clearly early Bronze Age types also present. An early Neolithic horizon is less easily documented.

Mesolithic technology is shown by the debitage from tool manufacture-the adze sharpening flake in particular, and possibly the burin spalls and micro-burins. Other probable Mesolithic debitage includes the two blade cores from Elm Grove and the core rejuvenation flakes.

Mesolithic tool types include the *tranchet* adze, the truncated blades, and probably the pick and the gravers. This element is present at both the Elm Grove and the Abbey Lane sites and probably at the 'Rose & Crown' Hotel site. Other Mesolithic finds have been recorded from Saffron Walden itself and from the surrounding area (for example Great and Little Chesterford, Plegdon and Newport: see Wymer 1977, 88-95).

The late Neolithic element is documented technologically by the flakes and scrapers with facetted butts and possibly the discoidal and keeled cores and some of the trimming flakes, and typologically by the spurred implements, the *petit tranchet,* chisel ended and oblique arrowheads, some of the scrapers, and probably the denticulate. These finds are from Elm Grove and the Battle Ditches. There is also a sherd of Grooved Ware from the 'Rose & Crown' Hotel site, but no demonstrably late Neolithic flintwork was found there.

The early Bronze Age is represented by the two barbed and tanged arrowheads from Elm Grove, but with the possible exception of the scraper, Fig 19.16, no other early Bronze Age finds were made; it is probable that the arrowheads were either lost during hunting or have perhaps come from destroyed burials.

The presence of early Neolithic plain ware at Elm Grove and the apparent absence of contemporary flintwork is puzzling (there is a similar lacuna at Little Waltham: Healey 1978, 110). It is true that the pottery was found on the periphery of the excavated area and that an associated industry may remain to be found, but from the amount of flintwork recovered from the same area as the pottery this seems unlikely. A more probable explanation is that some contemporary flintwork is present, but because there are no diagnostic types it has not been possible to isolate an industry. The difficulty is accentuated because some types, possibly of early Neolithic date like piercers, serrated flakes, and scrapers, have a long history and chronologically sensitive features have not yet been pinpointed.

It may also be noted that while some earlier Neolithic sites produced large quantities of flint, eg Hurst Fen (Clark *et al* 1960, 214), Windmill Hill (Smith 1965, 86, 87, and 91), and Broome Heath (Wainwright 1972, 66), others produced relatively small amounts of largely undiagnostic flint, for example Eaton Heath (Wainwright 1973, 7, 13-15). Admittedly Eaton Heath is a different category of site from the others, but equally the nature of the occupation during the early Neolithic at Saffron Walden is unknown.

This contribution was completed in 1978.

2.4 Prehistoric and Roman material other than flint

by P J Drury

A detailed catalogue of the prehistoric and Roman material from the sites excavated by S R Bassett appears in microfiche section 2.

Elm Grove

Feature 156 produced an abraded early Neolithic rim of Broome Heath form B (Fig 22.1 here; Wainwright 1972, 23), together with six other flint-tempered sherds also probably of Neolithic date.

Several fragments of Iron Age fine wares of Cunliffe's Darmsden-Linton group (eg Fig 22.3-4; Cunliffe 1974, 39 and fig Al 1) were found, together with many flint-tempered sherds of pre-1st century BC, probably early Iron Age, date.

A late Iron Age rim sherd (Fig 22.5), probably belonging to the second half of the 1st century BC, was residual in F209. This was in a sandy fabric typical of the middle pre-Roman Iron Age, and several body sherds were found which could be contemporary with it, or as early as the 3rd century BC. Two rims (Fig 22.6-7) and many other sherds, including one with combed decoration, in more normal late Iron Age grog-tempered fabrics, came from F196; some also came from other contexts.

Feature 209 included samian of pre-Flavian date onwards, but the date of its filling is indicated by the probably late 3rd century Nene Valley flagon (Fig 22.8), and coarse wares of 2nd-3rd or 3rd—4th century date (eg Fig 22.9-ll), including a fragment of a Northamptonshire mortarium with angular black trituration grits. A few Romano-British sherds also came from other contexts.

There was a high proportion of residual material in features 196 and 209, each of which produced a relatively substantial amount of pottery. Most of the pottery in these features must have been derived from a scatter of occupation material on and in the soil in the areas concerned. This being the case, it is clear that the one or two small and abraded sherds which

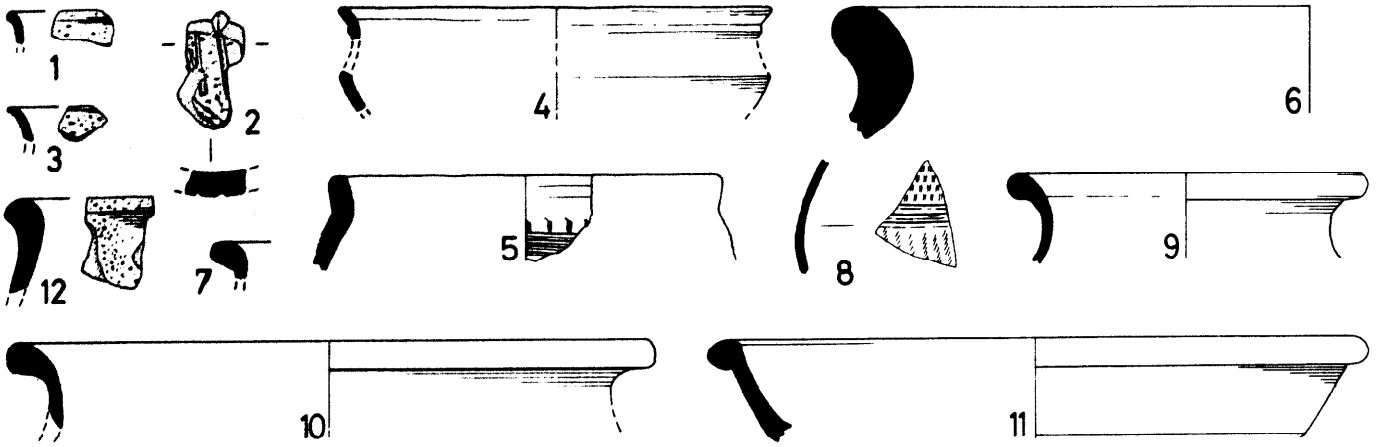


Fig 22 Prehistoric and Romano-British pottery 1, 3-11, Elm Grove; 2, 'Rose & Crown' Hotel site; 12, cemetery excavations 1876. Scale 1:3

comprised the contents of many features cannot provide any more than a *terminus post quem* in each case. Indeed the normal size and condition of the sherds makes even this limited inference uncertain in many cases, since the 'natural' F56 produced a larger, less abraded sherd of pottery than F3. The presence of these small shards is clearly of little value in assessing even whether a feature is man made, let alone its date.

Feature 156 contained pottery exclusively of Neolithic type; some body sherds are relatively unabraded, whilst the early rim Fig 22.1 is in very poor condition. It is conceivable that the pottery represents a later Neolithic sample of the contents of the soil close to a settlement, There was no obvious scatter of sherds of this period in later features; this may be due to the problems of differentiating between small formless sherds of Iron Age and earlier flint-gritted pottery, or it may reflect the extremely fragile nature of the material.

The relatively substantial amount of early Iron Age pottery, in the Darmsden-Linton style probably current in this area in a period centring on the 5th century BC (Drury 1978a, 74), suggests a contemporary settlement in the vicinity, from which manure, including domestic refuse, was spread on the fields. Much of the material is associated with the north-south boundary, and although no substantial groups were recovered an early Iron Age origin for this feature is highly probable. The material from F196 suggests its continuation into the late Iron Age, but there is nothing which *need* be of middle Iron Age date. However, it is clear that by the middle of the 1st century BC circumstances affecting the deposit of pottery similar to those prevailing in the early Iron Age again existed and seem to have continued to do so until at least the late 3rd century AD, Only two features produced convincing groups of pottery of this phase: F196, which is clearly pre-Roman, and F209, which seems to have silted up by the end of the 3rd or the beginning of the 4th century AD, since typical 4th century forms and fabrics are absent. The relatively high proportion of samian, particularly the 1st century fragments, suggests a reasonable level of prosperity in the Roman period.

Castle Meadows

A scatter of early Iron Age material was found, consistent with the area having been under cultivation during that period. A slight scatter of Romano-British material may have been similarly introduced, but from a more distant source.

The 'Rose & Crown' Hotel site

A late Neolithic Grooved Ware sherd (Fig 22.2) came from the ditch, F1. The site in general produced a scatter of middle to late Iron Age and Romano-British pottery. This material is presumably to be explained in the same terms as that from Castle Meadows.

The 1876 excavations and the Gibson Estate

Amongst the surviving material in Saffron Walden Museum there are only a few sherds of prehistoric pottery. It is clear from Smith's account that more was found (1884, 319-20) but his description is of little use in assessing its date. There is a surviving rim (Fig 22.12) in a black fabric containing some sand and much finely crushed flint; it has orange-red, rather abraded but smoothed surfaces, and seems to be of early/middle Neolithic date. Smith (1884, pl VII.1) illustrates part of an early Bronze Age 'food vessel', which has been noted by Couchman in her recent survey of the period in Essex (Couchman 1980, 40-1). There are also two sherds of middle to late Iron Age pottery, one found c 1935 (sand-tempered, cf Little Waltham Fabric H: Drury 1978b, 58), the other (SAFWM: 1911:13) grog-tempered, and probably belonging to the century before the Roman conquest.

Surviving fragmentary Romano-British pottery is also small in quantity; it spans the entire period, and includes Hadham and late Nene Valley sherds. Frag-

ments found 'opposite the [Congregational] chapel' *c* 1935 are larger and less abraded than the majority, They span the lst-3rd centuries, but may be from a pit (Collar, SWM). There are also two spindle whorls, one formed from the base of a late Nene Valley jar (SAFWM: 1913:137; Smith 1884, pl VI.5) and another made from a Romano-British tile fragment (SAFWM: 1911:140). Fragments of Millstone grit and Niedermendig lava querns also survive.

Smith illustrates a key handle (1884, pl VIII.3) and three items with military associations, initially brought to our attention by Dr W J Rodwell. In pl VIII.6, Smith (1884) illustrates a Hod Hill type brooch of Claudian date; cf Brailsford 1962, fig 8. C53-6 and Hawkes & Hull 1948, pl XCVII.140—4; and in pl VIII.5 he illustrates a strap end of military type. Smith's pl X.6 is a catapult bolt, cf Brailsford 1962, pl VI. B117—183. These items are commonly found on 1st century military sites. There is also a lance-head (Smith 1884, pl XII.5), which is similar to examples from Hod Hill (Brailsford 1962, fig 15.013-15). Unfortunately none of these items can now be located.

Because of the unknown but probably significant bias in both the collection and survival of material from the site, it is difficult to draw any conclusions about the relative intensity of activity in any period represented by the artefacts recorded. However, it seems probable that, like the other excavated sites in the valley, it has been used in some way since the Neolithic, and moreover that in the Roman period it lay at least on the fringe of a substantial settlement. The evidence for its having been the site of a Roman fort is discussed above (p 5).

The Romano-British elements in the 'Battle Ditches' cemetery

Notwithstanding the inadequacy of the records, it is clear that several inhumations in the so-called 'Battle Ditches' cemetery were accompanied by Romano-British grave goods. From the 1830 excavations (Braybrooke 1836, 149; Smith 1884, 312-13), which seem to have continued through the decade 1830—40, we have the following, all in Saffron Walden Museum:

SAFWM: 1839.441 A 'small and perfect vase in samian ware', Dech. f72, *c* 70 mm high, post *c* 150 AD; Smith 1884, 313 ('discovered among a series of skeletons') and pl VI. 1.

SAFWM: 1834.281 Samian ware bowl, Drag f44, late 2nd or 3rd century, 'found this year in a field at the back of [W G Gibson's] house by the side of a body' (SAFWM accession register).

SAFWM 1839.440 Green glazed bowl of unusual form, described elsewhere by Paul Arthur (p 48); probably Flavian-Hadrianic. 'Found by the side of a skeleton near the Repel Ditches' (SAFWM, 1845 catalogue). Illustrated but not described by Smith (1884,pl VI.8); also illustrated by Maynard (1916) and mentioned by Fox (1923, 209).

In September 1844, a 'Roman urn, and a basin, apparently of later date', found in the garden of W G Gibson Esq, were exhibited to the British Archaeological Association by J Clarke *(Archaeol J,* 1, 1845, 280). The 'basin' may well have been 1839.440, but the urn would seem to be otherwise unrecorded.

The relevant pottery from the 1876 excavations cannot now be traced, but the following were illustrated by Smith (1884):

pl VI.2 Nene Valley flask, 4½ ins [115 mm] tall, light-coloured fabric, slip red on interior, brown on exterior, decorated with white painted bands and scroll decoration; 3rd to 4th century. Found 'at the head of one of the skeletons'.

pl VI.3 Narrow necked jar, 'of red earth, 6 ins [150 mm] high . . . the surface covered with concentric lines in slight relief. This is reminiscent of the surface finish characteristic of some Hadham ware vessels. The form occurs at Mucking (Rodwell 1973, type N, esp fig 8.73). Late 3rd or 4th century. Found 'lying with the curved foot of a skeleton'.

pl VI.4 Flagon or bottle in 'cream' fabric decorated with horizontal bands of red slip; the text is unclear but association with a skeleton is inferred. Probably Oxfordshire parchment ware, cf Young 1977, forms l–4; the likely date range is mid 3rd century to the end of the 4th century (Young 1977, 82-4).

There is one other grave with Roman grave goods: 22 bracelets, all found on the lower part of the skeleton (Smith 1884, 327, n12), not as stated in *VCH* 3, 195. The 15 illustrated examples (Smith 1884, pl IX) are all normal late 4th century or later Romano-British types; compare Frere 1972, fig 32.32–5, in contexts dated *c* 360-70 and later, and Brodribb *et al* 1971, fig 30.20–26, and 1973, fig 54.188–202, all dated late 4th century. Many of the bracelets survive in Saffron Walden Museum; SAFWM: 1910:66.

In total, therefore, seven inhumations can be shown to have been accompanied by Romano-British grave goods. Of these, the three discovered *c* 1830 are clearly the earliest; the vessels seem to have been manufactured in the second half of the 2nd century or soon afterwards, and deposition during the first half of the 3rd century seems likely. The four graves found in 1876 probably belong to the late 3rd and 4th centuries, that containing the bracelets probably being the latest of all. In most later Roman inhumation cemeteries, the proportion of graves containing grave goods is small (eg 1 in 9 at Chichester: Down & Rule 1971, 71). The implication for the Walden cemetery is that a substantial proportion (perhaps at least 50) of the total number of graves present are likely to be pre-Saxon; this need not imply, however, that a substantial proportion of the excavated sample are Romano-British.

Hill Street, opposite the former Borough Council offices (TL 539385)

A bronze bracelet with cable decoration, external diameter 63 mm, internal diameter 56 mm, said to be Roman, was found here in an upcast of silt from the King's Slade (SRB; information from SWM slips; object now lost).

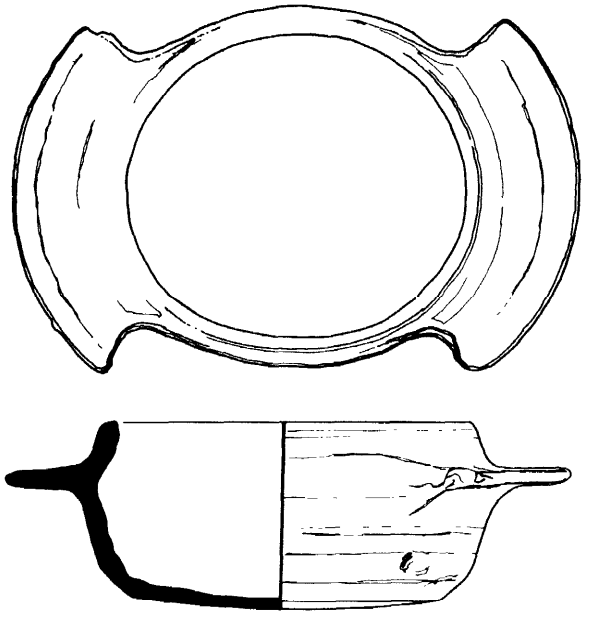


Fig 23 The lead-glazed bowl from the so-called Battle Ditches cemetery. SAFWM 1839. 440. Scale 1:3

Acknowledgements

I am grateful to Dr Isabel Thompson for her comments on the Belgic material, and to Dr W J Rodwell for his notes on the samian and military metalwork.

2.5 The lead-glazed bowl (Fig 23)

by P Arthur

The lead-glazed vessel from the so-called 'Battle Ditches' cemetery, Saffron Walden (SAFWM 1839.440), is in a hard dark grey fabric with an overall, slightly mottled, medium yellow-green glaze. It is a wheel-turned bowl with an uneven, fettled base, and with opposing horizontal handles. The handles were formed by the potter cutting away sections of a continuous horizontal flange whilst the vessel was still in its leather-hard state.

The writer knows of no parallel to this simple and crude vessel, and neither the fabric nor the glaze are similar to known examples of Romano-British lead-glazed pottery. As it is unlikely to be later, and does not appear to be an import, it should perhaps be considered as a unique vessel produced by one of the Romano-British potteries. It is not unusual to find unparalleled types amongst Romano-British glazed wares and it seems that there was much experimentation in glazing technology in early Roman Britain. Glazing occurred from the Flavian to Hadrianic periods and the Saffron Walden vessel is presumably to be dated within that time span.

Section 3 The excavations on medieval sites

3.1 Castle Meadows

(Figs 24–30, Pls 5–13)

A short period of research excavation was undertaken in 1973, in and around the keep of Walden Castle.[82] A small excavation undertaken by Essex County Council in 1978, in advance of the consolidation of the west side of the keep, added nothing to the medieval history of the building, and has been reported elsewhere (Eddy & Buckley 1979). However, the accompanying clearance of vegetation from the walls and the interior made possible a new survey of the building, undertaken by P J Drury in the autumn of 1980. The resulting plans and section are published here (Pls 9-10).[83] The date of the keep is discussed above (p 15).

The structure of the keep

by S R Bassett and P J Drury

18th century illustrations of the building

Richard Gough made sketches of the interior and exterior of the keep in 1761, and the exterior of the forebuilding in 1765 (Pls 5–6). His accompanying description runs:

'Ye remains are only ye walls on ye top of ye keep ab^{t} ye height of two stories: in ye middle, a pile of flints & rubble (of which ye walls are also compos'd) call'd ye Table, supp^{d} to have been intended for resting ye ends of Beams, holes for which corespond all round. There are semicircular arches or niches within, & ye entrance at ye SE corner is quite irregular. A great deal of it has been carried away to mend ye roads; but ye charge & trouble of breaking it down was Sd at last not to answer.' (Bodl MS Top gen e18, f120–5).[84]

A rather inaccurate view of the keep, made in 1777, was published by Grose (1787, v, pl 69).

A set of drawings now in the 'scrapbook' at Audley End comprises (a) a plan, showing a barn within the keep (added to Pl 9), the north wall intact, but otherwise the structure as it now exists (p 94), (b) external elevations (in watercolour) of the walls (p 93 in the book; Pl 7 here), and (c) an elevation (in watercolour) of the west wall, which differs in detail from that in (b), and which also shows an oval turret above the forebuilding, surmounted by a flagpole (p 92 in the book; Pl 8 here). All the drawings are unsigned and undated, but are linked by similarities of draughtsmanship (although the scale added to the plan is in another hand). These details, particularly the rendering of the bushes in the elevations, link the drawings to an engraving of Saffron Walden church 'from an original drawing by J Wallis', who is thus probably the author of the castle drawings. They form

part of the primary contents of the scrapbook, compiled (as its title page tells us) in 1809. All, however, are likely to be copies of working drawings made by Placido Columbani (for whom see Colvin 1978, 231), who was employed by Lord Howard de Walden in 1796 to supervise the repair of the building and the addition of the turret, which survives (ERO, D/DBy A54/8,10).

The Norman building

As built, the keep comprised a basement with a hall above (both of which survive in whole or part), and presumably at least one further (chamber) storey. The walls, including the external quoins, were built of flint, sometimes laid herringbone fashion, with a flint rubble core. Differential weathering on the north and west exterior faces has accentuated the delineation of the lifts in the masonry (see further below, p 53). Each runs unbroken through the keep walls, the buttresses, and the forebuilding, clearly dcmonstrating that the entire structure is of one build. There is considerable variation in mortar colour, from yellow to shades of buff, between the lifts. In the centre of the keep is a pier, surviving *c* 0.8m high, built in the same fashion as the external walls, but with quoins of clunch.[85] In 1761 the pier stood to first floor level (PI 5). It was clearly intended to support the first floor, and is so massive that it almost certainly continued upwards in some form to support a second floor, with an offset at first floor level (PI 9).[86]

The form of the first floor is clear from surviving traces in the keep structure. The north and south walls have offsets *c* 0.45 m wide (measured at the north-east corner, where the internal facing survives in part both above and below the offset). On the north offset rested a roughly squared plate *c* 180 mm wide x 130 mm high, the socket of which survives in the north end of the east wall. The arrangement on the south was probably similar. On the plates were set roughly-squared common joists *c* 220 mm thick and 200-300 mm wide, at *c* 900 mm centres. Recesses marking the position of six survive in the north wall, and a further five (less well preserved) in the south wall. Late in the 18th century, more joist holes were visible (Gough, above, and P1 5). The common joists spanned either to the central pier, or to beams on the east-west axis of the building, spanning between the pier and the east and west walls. The socket for such a beam survives in the east wall. Its base is level with the offset, indicating that the beam was *c* 0.35 m deep (the combined depth of the plate and common joists). The socket is *c* 0.45 m wide, but rather weathered; the beam was thus probably *c* 0.35 m square.

The floor level indicated by the joist holes is a little above the highest surviving level of the hearth of the fireplace on the first floor, but the hearth paving has been totally robbed. Originally it would have been at, or just above, first floor level. The abuttal of the western beam carrying the first floor with the west wall has been entirely robbed away. The reconstructed plan (P1 9) shows the beam built into the front of the hearth; this is consistent with Gough's sketch (although this shows the layout of the holes schematically). All the floor timbers were fixed when the masonry reached offset level, before it was continued higher-it is clear that the walls were built around the rather irregular ends of the joists and plates.

The basement (*c* 4.5 m high, floor to floor) was unlit and unheated, and thus probably used primarily for storage. In its walls are four arched recesses, which were originally partly walled off from the main area. The stubs of walls flanking a central opening are visible in the north and south recesses; the others, more extensively robbed, were probably similar. There is no real guide to the original width of the openings, although the extent of surviving clunch voussoirs offers some clue (eg at the south side of the south recess shown on P1 10). It is probable that they were fitted with doors, to form secure stores for valuables. Areas of mortared flint paving have survived in the southern recess. This is, in effect, the top of the wall foundation, and is unlikely to have extended into the main area.

The main room on the first floor was evidently the hall; there is no sign of internal division, and it was provided with a large fireplace in the west wall. This is badly weathered and robbed, but a small area of the facing of the rear wall survives (Pl 10). A woodcut of *c* 1835 (Braybrooke 1836, 141) shows four voussoirs of the arched head still *in situ*. The approximately rectangular plan of the fireplace is probably due to alteration (below, p 50).

The windows of the hall must have been at high level, since no traces even of the bases of splays now survive. Access from the forebuilding to the keep was clearly above hall floor level, since no opening exists between them in the surviving west wall of the keep. It may have been at second floor level, or at an intermediate stage, in other words, to a hall gallery, either intra-mural, cantilevered from the walls, or a combination of the two. Some support for the former existence of a gallery may be given by the fact that all four walls of the keep stood in the mid 18th century to approximately the same level (Pls 5-6). Demolition as far as the floor of a gallery would be relatively easy, but beyond that point difficult and uneconomic, as Gough tells us it was (p 48). Late in the 17th century, it was found impractical to demolish the great keep of Colchester below the floor of the intra-mural gallery (for description see RCHM 1922, 50-4; demolition, Morant 1768, i, 7-8).

The simplest means of supporting the second floor would have been to copy the construction of the first floor. Replacing the pier by a column, supporting an arcade of two bays on the north-south axis (not the east-west axis because of the hall fireplace), would have been grander, but more costly and time-consuming to build.

In the north-west corner of the keep is a circular well shaft. Its robbed remains can be discerned as far as the surviving top of the north wall, and it is shown clearly by Gough (Pi 5). The north side is shown by a dotted line on P1 10. Just above basement floor level, some fragments of the shaft lining, of clunch blocks,

remain *in situ.* It seems probable, although only excavation can determine the point, that the shaft was fully enclosed within the basement and first storeys, and extended at least as far as our putative gallery level. The well was cleared in 1881. It was found to be more than 25 m deep, cut through the solid chalk. The interior was filled with structural debris, including chevron mouldings (Maynard 1886, 1xxxvii).

There was a circular stair in the south-east corner of the keep; it has been largely destroyed by the opening cut through the angle. The pattern of robbing revealed in excavation must be a reflection of its plan, but of its structure only several very weathered pieces of clunch have survived *in situ,* reflecting the western side of its well in the basement. At higher levels, the clunch lining, if it existed, evidently did not penetrate so far into the core (P1 9).

External access to the keep was by a partly covered (at least) stair to a rectangular forebuilding, but the precise arrangement is not known." The forebuilding and two or more cells of the staircase substructure lie against the keep's west wall, whose line varies within each of them (P1 9). Gough (P1 6) shows a mound here, apparently of overgrown debris, and Maynard (1886, lxxxix), without giving his source, confirms this: 'The entrance to the keep is said to have been over the hollow space on the western side which was reached by a flight of steps, and so recently as 1780 a large portion of this was below the surface; the earth which formed the rising ground having been cleared away some hundred and twenty years ago'. There were timber floors at first floor level in the forebuilding and the northernmost staircase cell, as the surviving joist sockets indicate. As noted above, access to the keep was at least one, perhaps two (forebuilding) storeys higher than these floors. Probably in the post-medieval period, access to the lower cell of the forebuilding seems to have been gained by the surviving opening cut through its west wall. For this to be possible, some soil must have been cleared from against the keep on this side, and Gough's drawings (Pls 5-6) indicate how much general levelling of the mound has taken place since the mid 18th century.

The later history of the keep

The archaeological and documentary evidence suggests some dismantling of both the keep and its associated earthworks between 1157 and 1167 (below, p 60). The subsequent fate of the building is uncertain, since most relevant archaeological levels have been destroyed, and there are few signs of alteration to the surviving structure. Nevertheless, there is some evidence that the keep was repaired in the later 12th century, and remained in repair probably until the 16th century.

Fireplaces with openings of square plan normally belong to the next generation of keeps, for example Orford, built 1165-73 (Brown 1964, 4). The hall fireplace in the Walden keep, although badly robbed, clearly had a square rather than a semicircular hearth, and the most likely explanation of this seems to be that the original was enlarged to this shape. The necessary refacing and making good has long since been robbed, or has fallen away. In the south-east angle of' the keep, two grooves cut into the wall faces slope downwards from the now robbed angle. These clearly housed some structure which related to the door from staircase to hall immediately below. The joist holes in the south wall also appear to have been altered.

The correlation of the keep with the castle hall whose roof was repaired in 1393 (Cromarty 1967, 105) is unwarranted and unlikely, but the retention of the keep as part of the complex of manorial buildings throughout the later medieval period does seem probable. In 1594 the keep (presumably) was described by Norden (1840, 27) as 'the ruynes of an ancient and stately castle, wherin are yet to be seene sundrye deepe and horrible dungions or prisons' (the lower chambers of the forebuilding?). This concurs with the archaeological evidence, the trenches dug to rob the wall faces being not earlier than the 16th century (p 61 below). Gough's description also implies that the demolition of the upper part of the building occurred not long before his visits. The fact that the central pier in the basement then survived to full height is certainly more compatible with a building ruinous for two centuries than for six.[88]

After Gough's visits, some small scale robbing seems to have continued, and the central pier was demolished. Later (Braybrooke (1836, 154) states before 1793) a barn was built inside the shell (P1 9), and the then existing entrance at the south-east corner enlarged to admit wagons to it (Maynard 1886). In 1796, a small turret was added above the forebuilding, under the supervision of Placido Columbani, for Lord Howard de Walden (above, p 49). It was built by Richard Ward, a local bricklaver, of flint (to match the keep), around a core of red brick, now partly exposed. The use of similar red brick to underpin the tunnel cut under the north-west corner of the keep (doubtless an attempt by stone robbers to undermine it) suggests that Ward also generally repaired the structure (although this brickwork may be earlier: Eddy & Buckley 1979). A patch in the flint facing of' the interior of the north wall may also be his work. Ward received, in September and October 1796, a total of £338s4d for labour, 470 bushels of lime, and 60 bushels of 'Senderdurs' or 'Sender Dust' (ERO, D/DBy A54/9, 10). This was presumably some form of powdered ash or slag, a pozzolanic material which, when added to the lime (and sand), would produce a hydraulic lime or 'cement' mortar of greater strength and weather-resisting abilities than ordinary lime mortar (Davey 1961, 102). Thomas Spicer, smith, was paid 14s3d for the ironwork connected with the flagpole (ERO,DIDBy A54/9), the fittings for which still remain *in situ.*

A most curious entry occurs in one of Columbani's bills:

'To a Drawing of a Pine apple and time for enquiry concerning the Price of it, an owtline for the apparatus [ca]rried to Mr Parker etc £1 1s 0d' (ERO,D/DBy A54/10, bill from P C endorsed 'Mr Columbania for Surveying work at the Castle', October 1796). Wm

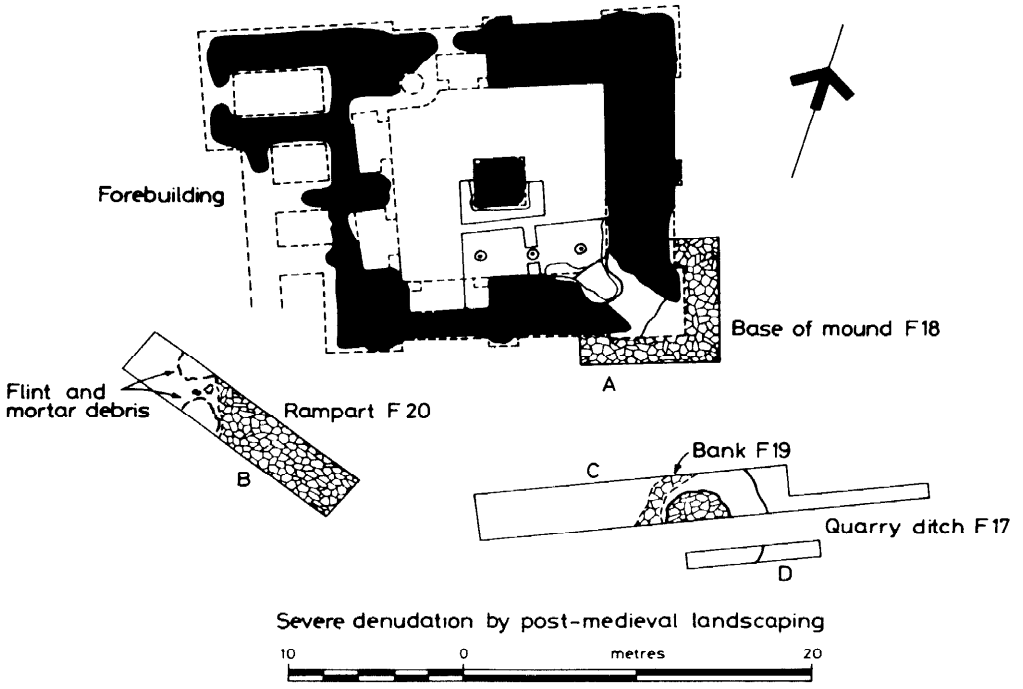


Fig 24 Castle Meadows, keep and Trenches A-D

Parker and Son, of 69 Fleet Street, London, supplied on October 5

1 11 Inch Globe Cutte	4. 4. 0
Brass work & Pine	1.11. 6
Case	0. 2. 0
	£5.17. 6

This bill is also endorsed 'to castle' (ERO,D/DBy A55/1). Braybrooke (1836, 155) states that the turret was erected 'for the purpose of hoisting a flag there; but the staff was blown down in a gale of wind, and not replaced'. No mention is made of the pineapple or the [glass] globe. A G Wright (pers comm) suggests that it might have been connected with military signalling in the event of Napoleonic invasion. Certainly the autumn of 1796 saw the beginning of active preparations for defence, in which Lord Howard, recently promoted Field Marshal (*Chelmsford Chronicle,* 23.9.1736) and Lord Lieutenant of Essex since 1784 (ERO, D/DBy 010) was closely involved (Cranmer-Byng 1952, l-5). The RCHM (1916, 234) record the tradition that the turret was built as a semaphore station (which, on the evidence of Wilson 1976, it was not).

Lord Howard's action in 1796 undoubtedly saved the remains of the keep from at worst further robbing and destruction, or at best continuing decay. Thereafter, despite antiquarian interest evidenced by Braybrooke (1836, 155) and by the removal of the barn and excavation of the interior in 1881 (Maynard 1886), the maintenance of the structure seems to have been wholly neglected. Only in 1980 was the west wall cleared of ivy and repointed, the first stage in the general consolidation of the monument.

The excavation

The primary aim of the 1973 research excavation was to assess the extent to which medieval stratified levels had been disturbed or destroyed by stone robbing, by post-medieval landscaping beyond the keep, and by the 1881 excavation within it. No further work was intended wherever this preliminary investigation suggested that the surviving levels could not be excavated with proper understanding in the limited areas available. In the event post-medieval disturbance was found to be very extensive, and the medieval deposits in Trenches A-D seemed likely to give specific information without jeopardizing the success of any future work on a larger scale.

Accordingly, the following lines of enquiry were proposed: (a) to discover whether the stipulated destruction of Mandeville castles in Essex in or after 1157-8 included Walden (above p 16); (b) to determine if, in the apparent absence of any splayed plinth, the keep had been surrounded by a low mound; (c) to examine the low ridge which approaches the south-western corner of the keep from Church Street (Fig 8);[89] (d) to locate the inner lip of any ditch which lay to the east of the keep[90] but west of the ditch found in the grounds of Castle Hill House

(below, p 62); and (e) to determine if the keep had any immediate predecessor on the same site.

Excavation in Trenches A-D continued to the surface of the natural clay with flints or, in its absence, to the underlying chalk. In Trench E, however, the superficial deposits made further excavation seem inadvisable (below, p 61).

This description of the results of excavation is arranged according to a broad scheme of periodization based wholly on the interpretation of excavated deposits and of observed stratigraphical relationships. The absolute chronology suggested for Periods Ia, Ib, and Ic comes from an attempt to correlate the results of excavation with those of documentary research by others, and so is unsupported by independently datable artefacts from the relevant archaeological deposits. [91] The chronology suggested for Periods III and IV, however, is based on the use of all three forms of evidence.

Period		
0	Levels earlier than the construction of the keep	until the earlier 12th century and ending not later than 1141[92]
Ia	Construction of the keep and associated earthworks	during the earlier 12th century and begun by 1141
Ib	Use of same	from not later than 1141 until 1157-8[93] at the earliest
Ic	Probable slighting of same	in or after 1157-8 and probably by 1167[94]
II	Probable reconstruction and use of the keep during the medieval period	from the later 12th to the later 16th centuries (on pottery and documentary evidence)
III	Stone robbing and landscaping activities	from the later 16th century until 1796 (on both pottery and documentary evidence; see n 110)
IV	Recent levels	from 1796

Descriptions of layers and feature fills are set out in microfiche Section 6. In the text, layer numbers are written: 126; and feature numbers: F18.

Period 0

In Trench A, layer 1 may, at least in part, be the residue of a pre-construction topsoil. No distinction could be seen within the layer between any such residue and overlying turf or topsoil derived from initial clearance in the area of the keep itself (in Period Ia), but the configuration of 1, and of 2 above it, suggested that such a distinction might once have existed. A few very limited patches of 1 were also found in Trench C in the bottoms of features F1a and F1b, where the deposit was less loamy, more clayey.

In Trench A the layer contained a small very abraded sherd of Romano-British coarse pottery and a fragment of *imbrex;*[95] in Trench C, there were 23 sherds of handmade pottery of probable early Iron Age date. None of the areas examined, however, contained features which certainly predated the clearance of topsoil and underlying deposits immediately before the construction of the keep and its associated earthworks; while only Period Ia features Fla-j and F16 may reflect earlier land use. So no evidence was found of a predecessor to the keep or of any earlier earthworks. If there was an earlier motte or ringwork on the site, it must have been thoroughly displaced during the initial clearance of Period Ia.

Period la

Quite a clear impression was gained of the sequence of events involved in construction of the keep and the earthworks in its immediate vicinity. Topsoil and subsoil had been stripped from the area in which the keep was to be set, and also-on the evidence of Trenches B, C, and D-from adjacent areas where mortar mixing and other constructional activities would be most concentrated.

A series of nearly parallel linear depressions, Fla-j, were in some way directly associated with this soil clearance. Ten of them, lying on an east-west alignment across Trenches B and C, were wide but extremely shallow cuts (?) into the top of the natural clay with flints. Apart from a few limited patches of 1 in the bottom of F1a and F1b, the depressions stayed unfilled until the deposition of mortar spreads 3, 11, and 15. It could not be decided if they were the result of the removal of loose soil from earlier features (whether found concealed below the contemporary level or used in some capacity until shortly before clearance began) or else if they had been formed, incidentally or deliberately, during that operation. It was clear, however, that the depressions were not sinkages over old linear features; while the location of the castle earthworks showed that they had not been dug as marking out trenches (Renn 1973, 14).

The southern and eastern edges of soil removal in the area of the keep were preserved in Trench A by F2 and F3 respectively. Their location, relative to the foundation trenches, suggests that a rectangular area had been marked out before this clearance began (its edges coincided with the front faces of the keep's clasping and pilaster buttresses). F4 was a shallow linear feature extending eastwards from the south-east corner of the stripped area, and with a fill (5) indentical to what survived in F2 and F3. Since its depth decreased consistently from the west, where its bottom lay at the same level as those others, F4 may have been dug as a wheelbarrow run.[96]

After general soil removal, wall foundation trenches were cut through the shallow natural clay with flints" to the surface of the underlying chalk. A little of the spoil from these operations was heaped just beyond the new trenches (2, and possibly the upper part of 1, in Trench A; perhaps 56 in Trench C; and 7,8,9, and 10—which formed a limited mound of upcast, F5-in Trench B). The remainder may have been temporarily moved to beyond the areas examined. In any event, it

seems that the bottoms of F2 and F3 marked the approximate level to which soil clearance proceeded throughout the area of the keep, so that most or all of 1 found within the area was in a redeposited context.

In the area of the south-eastern buttress, the vertical outer edge of its construction trench formed a near right-angle. The equivalent inner edge, however, had been cut back diagonally across the internal corner (along a line followed by the north-western edge of robbing cut F36). This truncation of the inner corner (F7) allowed a spiral staircase to be included within the buttress. Access to it at basement level was through a door set in the south-western end of the short length of wall against this edge. Within the same foundation trench a further shallow cut, F8, was made into solid chalk to contain the lowest ashlar courses of the staircase proper (the near semicircular plan of F8 is preserved in outline by robbing cut F37).

It is likely that the flint rubble walls of the keep were raised piecemeal by stages ('lifts') of roughly equal height. Close inspection shows that the flint facings and core are contemporary. The faces were probably formed by carefully placing flints against the sides of shuttering (occasionally in a herringbone pattern). The flint and mortar core was then placed between them. The lowest stage, however, does not extend above the shallow foundation trenches and is unfaced. There is no foundation offset on either side of the walls.

It was not possible to deduce the form or dimensions of the sections of timber shuttering, but the effect of weathering on areas of wall core exposed above the modern ground surface provides some valuable information. Differential decay of the mortar has formed a series of narrow horizontal indentations (at intervals of c 0.7 m-l m) in the wall core. It seems likely that the indentations have formed along natural lines of weakness within the wall, ie at the interfaces of its successive lifts (see also above, p 49). Although nothing found in Trench A gave any specific information on how the shuttering had been held in place, three large postpits,[98] Fll, F12, and F13, were found. These lay at approximately 3 m intervals on an east-west line some 1.40 m north of Wall II. They may have formed part of a continuous series of such features containing the posts of a square framework of scaffolding. Subsequent post-removal had destroyed the stratigraphical relationship between the postpits and adjacent primary builders' levels but they were probably dug before, or only a short while after, wall construction had begun. Post-removal pit F24 probably contained an ancillary scaffold post, set less deeply but on the same line. No other constructional features were located inside the keep.

Outside it, linear feature F25 lay partly concealed beyond the southern edge of Trench A. It is likely, however-since it was cut through the primary levels of the mound —that it had removed a plate spreading the weight of scaffold posts on made ground, rather than posts themselves. These would have been on an east-west alignment not less than c 4.50 m south of the outer face of Wall II, and in contemporary use with posts in F11, F12, and F13. No similar feature was found to the east of Wall I, nor were there any other postholes or post-removal pits in the Trench which could be associated with wall construction.

Trench A, inside the keep (Figs 25,26,29)

Although the excavation of 1881 had indiscriminately removed over a metre's depth of stratified deposits,[99] a remnant of the primary builders' levels survived undisturbed. Sealed below 223 (a thin spread of 1881 spoil and trample) and 224 (a subsequent gravel surface) was found a series of interleaving patches and spreads of various mortars and other constructional debris. The lowest of these was a discontinuous and generally thin spread of cleanish coarse yellow mortar containing tiny rounded pebbles and flint chips (6 and 38a). This mortar was very similar to that of the lower core of Walls I and II and of the central pier, F6, and was probably derived from spillage during their construction. It also survived below robbing cuts F35 and F36 as a very thin but hard spread (38b) adhering to the natural chalk bottom of foundation trenches F7 and F8, and in the former was presumably a final residue of the flint rubble walling which had encased the spiral staircase.

Mortar layers 6 and 38a were overlain by more limited, but generally thicker, patches of variously mixed coarse yellow mortar, dirty chalk, and soft brown clay (39). These could not be usefully separated in excavation but appeared as amorphous lenses and lumps merging into a basic dirty mortary clay matrix. Towards the north-west the patches became thinner and less clayey, wherever they could be recorded separately (14). The spread 39 was probably an accumulation of trample derived from the various exposed surfaces within the keep and from mortar spillages.

It was overlain by a more or less continuous spread of cleanish sandy golden mortar (40a) which thickened into the south-eastern corner of the keep, where it had been truncated by robbing cuts F35 and F36. This mortar was probably the same as 40b, which was set into the little that remained of F8 where it overlay the tailaway of 38b. Elsewhere the golden mortar was found in discontinuous spreads from the inner faces of Walls I and II, (generally tailing out c 0.50-0.60 m to the west and north respectively), and around the base of the central pier. It appeared identical to the mortar in which the coursed flint facing of the walls had been set, and may also have been used for the ashlar courses of the spiral staircase.

Since the scaffold post in F13 had clearly been removed (by F23) after the deposition of mortar 40a, as also the post removed by F24, it seems likely that those in F11 and F12 were withdrawn (by F21 and F22 respectively) at the same time. The three large post-removal pits were filled with compacted clean brown clay and flints (an isolated patch of the same clay, 70, was found a little south of F23 at the same level). The whole area within the keep had then been

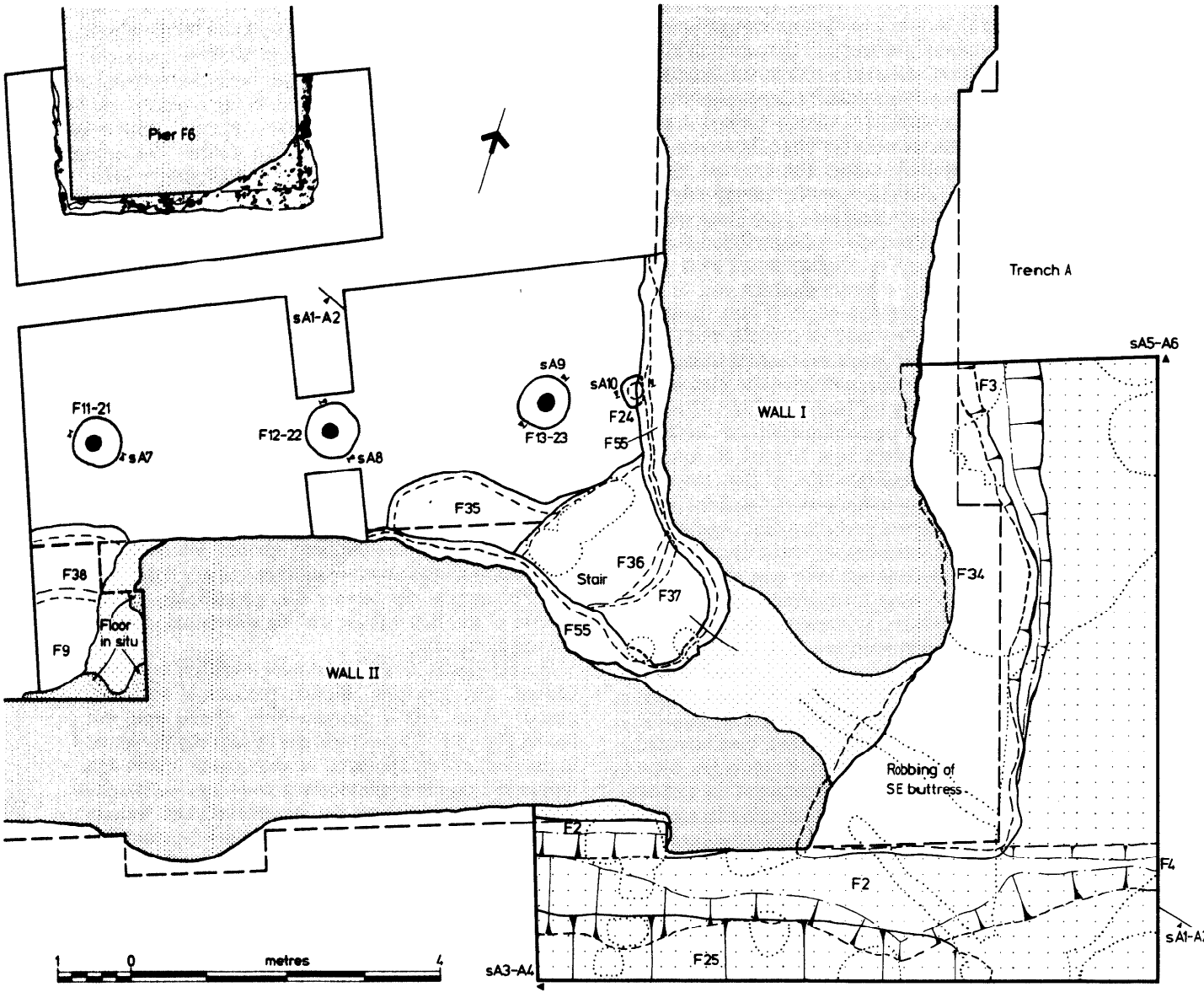


Fig 25 Castle Meadows, plan of Trench A

carefully surfaced with a depth (generally 20-30 mm deep) of coarse sandy mortar (71-74), laid as a floor. It contained many very small rounded pebbles, some flint chips, and varying amounts of chalk.

This floor was differentially worn, and in places had obviously been disturbed in 1881. Where best preserved it was seen to be composed of several separate but marginally overlapping spreads laid to the same surface level. In the south-east comer of the keep 72 was a dirty buff-grey colour and contained much crushed chalk and some small rounded chalk lumps; while to the west and immediately south of the central pier, 73 was a similar composition but a slightly lighter grey. Elsewhere 71 and 74 contained considerably more sand and less chalk, and consequently were a light yellowish-grey colour. Small redeposited fragments of these mortars overlay the floor in several patches (97 and 98); these may have been disturbed, or more probably first deposited there, during the 1881 excavation. Ail subsequent medieval levels were entirely removed at that time.

Discussion

It is very probable that the supposed scaffold posts were not removed before the keep had been raised to at least first floor level, but it could not be shown if they had remained in use during the entire period of wall construction. There may have been attempts, for instance, to clear builders' debris from within the keep before the laying of mortar spreads 71-74. If the posts in F11, F12, and F13 were removed after the

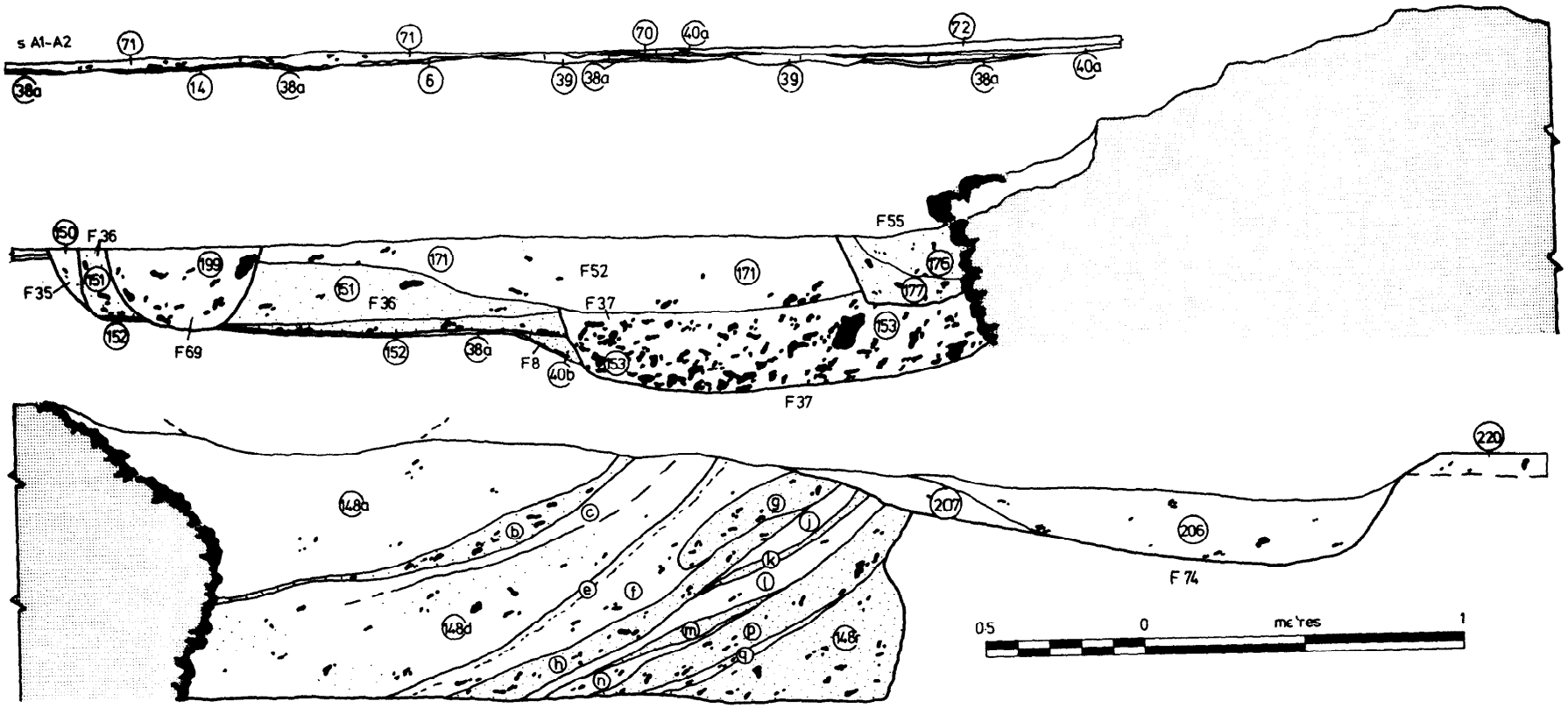


Fig 26 Castle Meadows, Trench A, section sA1-A2. For key see p 30

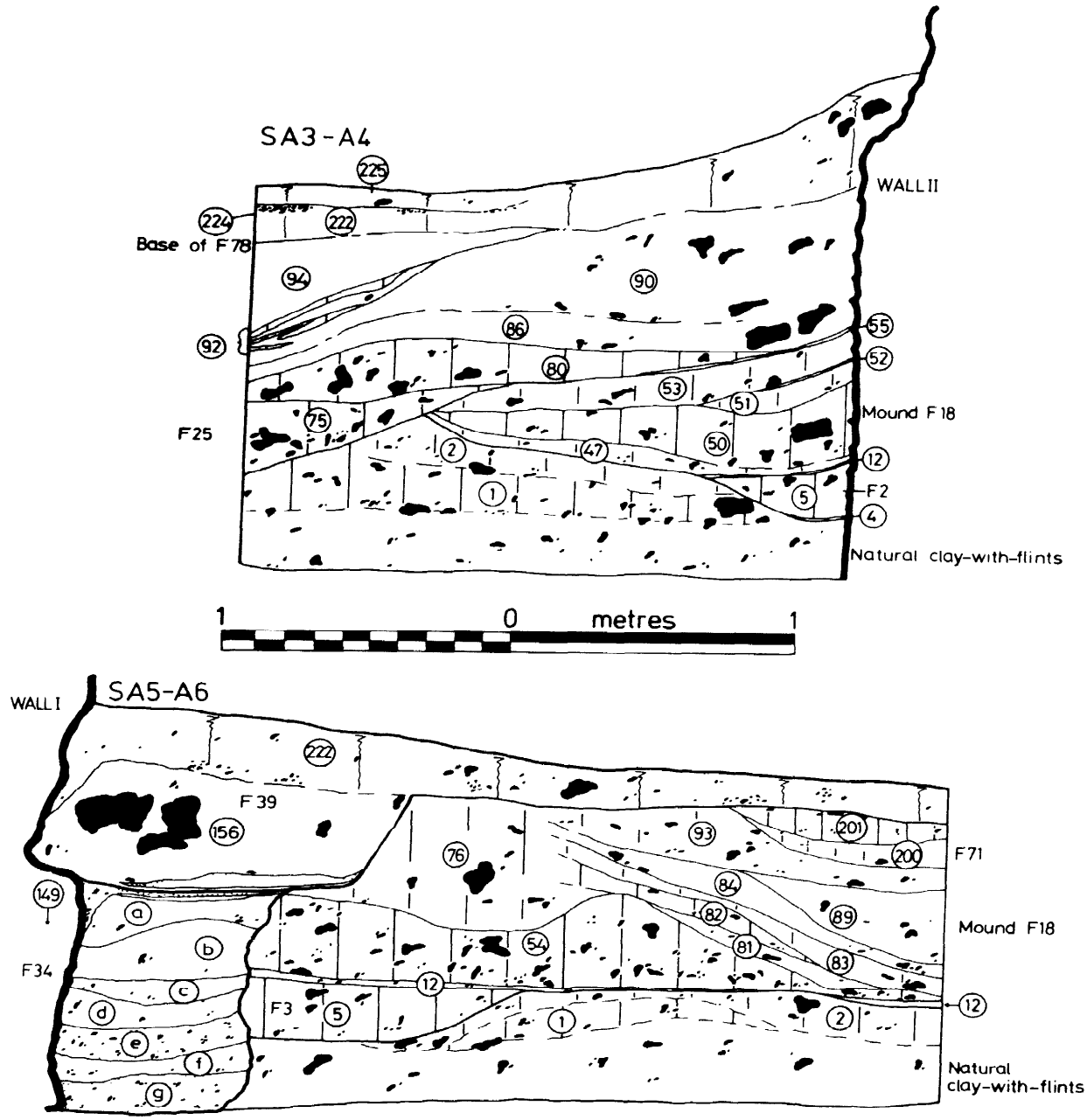


Fig 27 Castle Meadows, Trench A, sections sA3-A4 and sA5-A6. For key see p 30

walls had only been raised to first floor level, framed scaffolding must have rested on the framing of an upper floor as each new stage was constructed. In any case it is likely that the latest surviving mortar was laid as the primary floor in the basement, and not before the second storey floor had been inserted.

Trenches A (outside the keep), B, and C
(Figs 25-30)

The freshly exposed natural clay with flints had been covered with a thick mortar spread (11 in B, 15 in C) which served as a very durable working surface during

wall construction. In Trench A, to the east of Wall I, identical mortar 12 had been laid over F3 and the deliberately levelled top of upcast 2. There seems no reason to doubt that all three mortar spreads were in contemporary use. [100] To the south of Wall II, however, no similar horizontal truncation of 2 was found, and it was obvious that there had been no attempt to extend mortar 12 into the area just south of that wall and of F4.

In Trench C equivalent mortar 15 extended eastwards as a continuous spread for no more than 6 m from the western edge of excavation. To the east F10 may have been a timberlined tank containing water for use in mortar mixing; while F15 was either a similar but smaller tank, or else an unsuccessful attempt to make one of a comparable size. In the area between F10 and the eastern edge of continuous mortar 15, several large patches of mortar (13, but of an identical colour and composition to 15) were found. These were so interleaved that the lines of separation between them could not be followed for any distance. The patches had almost certainly resulted from mortar mixing in the vicinity of the water tank. Although all medieval levels to the east of F10 were removed by later landscaping, this activity had probably been confined to the area west of it.

The mound around the keep, F18 (Figs 27,30)

In Trench A it was clear that the raising of the flanking mound had started before the completion of wall construction. Initially, thick layers of brown clay with flints and of redeposited topsoil and subsoil had been piled against the base of the outer wall faces. To the south of Wall II the primary deposits (47, 48, 50, 51, 53) interleaved with very limited spreads of coarse sandy yellow mortar (containing the characteristic tiny rounded pebbles and flint chips) and of finer golden mortar. These mortar spreads (4, 12, 52) were confined to within 1 m of the wall face, and were presumably derived from spillage during the construction and facing of its upper stages.[101] Linear feature F25 (the possible scaffold post-removal trench) was cut from the surface of 53 (the uppermost of the initial mound deposits), at which level the latest spread of construction mortar (55) was found. This was thicker and more extensive than the others and, where not removed by F25, passed beyond the southern edge of Trench A.

To the east of Wall I, however, the first level of mound make-up (54) had apparently not been deposited until after wall construction was complete. Mortar spread 12 was directly overlain by a series of interleaving trails and patches of both the coarse yellow and the golden mortars. These could not be accurately separated in excavation and so were numbered as composite layer 49. They were thickest for no more than 1 m from the face of Wall I and tailed out a little to the east. Mound make-up layer 54 had been deposited over them or, in their absence, over the original working surface mortar 12. No trace of any mortar was found on the surface of 54, and it seemed chat mound construction must have continued throughout the area as soon as this layer had been deposited.[102]

In Trench B mortar spread 11 (above, p 56) overlay a small area of apparent upcast, F5 (p 52), which in turn covered a very thin and limited spread of mortar (3) identical to 11 and inseparable from it beyond the limits of F5. All such debris in the area may have come primarily from construction of the forebuilding and external staircase (no parts of which lay within the excavated areas).

The bank F19 (Figs 28,30)

This feature presented difficulties of interpretation. It seemed that the little of 56 and 60 which survived post-medieval landscaping had formed part of a bank (roughly north-south aligned through the areas of Trenches C and D) which would have converged with the mound F18 a little to the south of Trench A.[103] Its eventual continuation south of Trench D probably formed that part of the perimeter earthworks at present mirrored in the line of Church Street.

The essential problem is to decide in which Period each of these layers were deposited, that is, whether during 1a (as original make-up), 1b (as a weathering product), or 1c (as displaced make-up after the presumed destruction). In Trench C only 56 and 60 can be ascribed to Period 1a with any certainty, because of their presence as sinkage fills in the top of F10. Although 95 is likely to be the same deposit as 60, or derived from its displacement, post-medieval landscaping reduced them to separate spreads with no point of contact. The latest layers apparently associated with the bank (96 and 135) were probably not deposited until Period 1c, on account of their stratigraphical relationship with Period 1b mortar spread 69 (below, p 60).

In Trench D further layers of probable bank makeup were found (111, 120, and 121). The latest one to survive Period 1c destruction, although severely truncated, was 121; this was very similar in composition to 56 in Trench C. Immediately below it, 120 reached its western limit across the south-western corner of the Trench.

Layers 109, 110, and 111 directly overlay natural chalk which had been exposed by a cut (?) through the Period 0 topsoil and subsoil. This presumed cut, F16, had also removed any superficial natural clay with flints, and (within the Trench) had created three near-horizontal levels which stepped down irregularly to the south-east. It was not possible to explain the purpose of this continuation into the natural chalk of a cut which elsewhere had removed only topsoil and subsoil. If, as is thought, the bank F19 was constructed during Period 1a (even if only near the end of that Period) it seem unlikely that there would have been any superficial quarrying of chalk along its intended course. Rather, the cut may have been made to eradicate the remains of activity during Period 0; or perhaps F16 was a Period 0 feature itself (of unknown function), and 109 and possibly 110 are remnants of its filling.

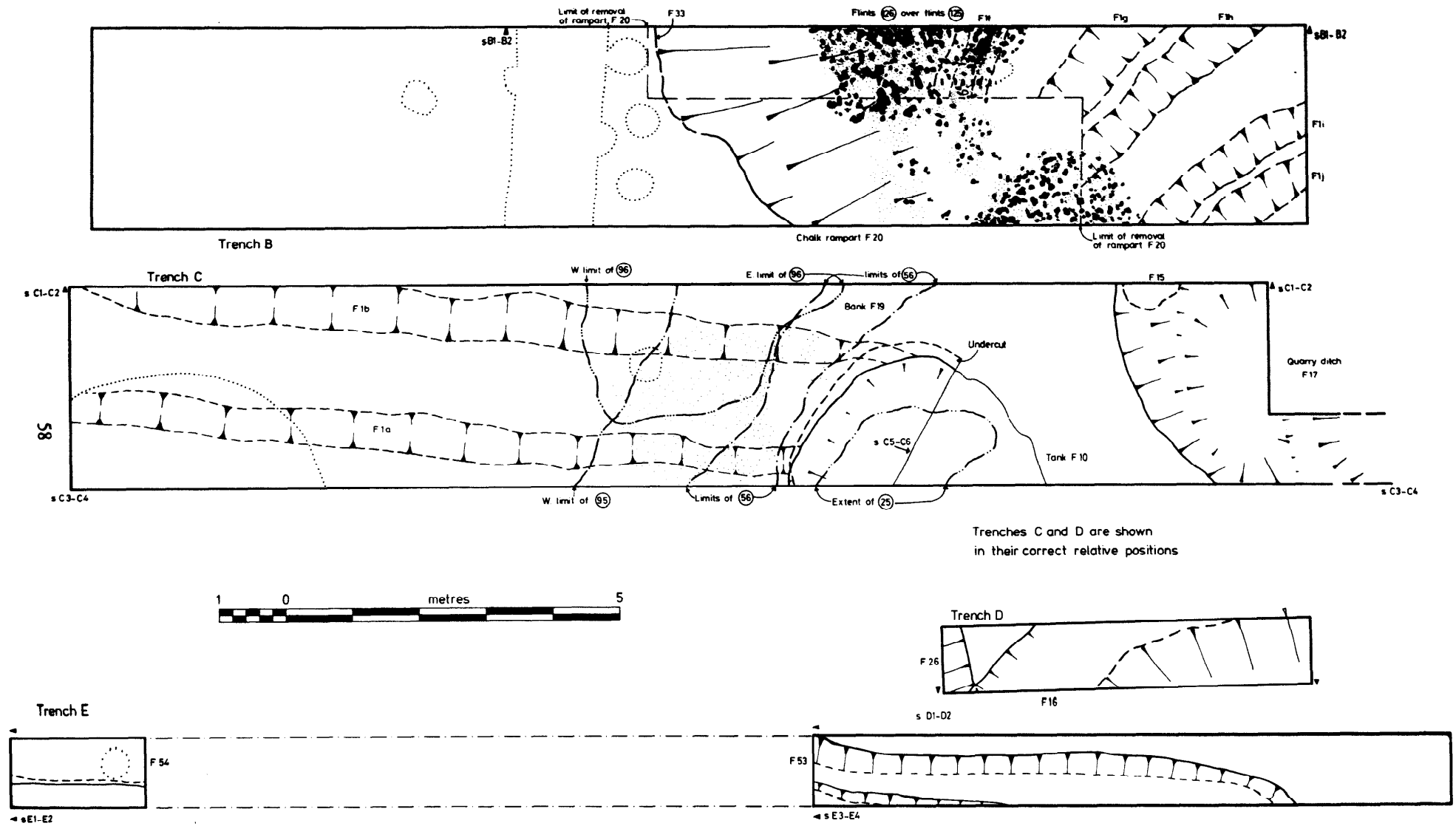


Fig 28 Castle Meadows, plans of Trenches B, C, D, and E

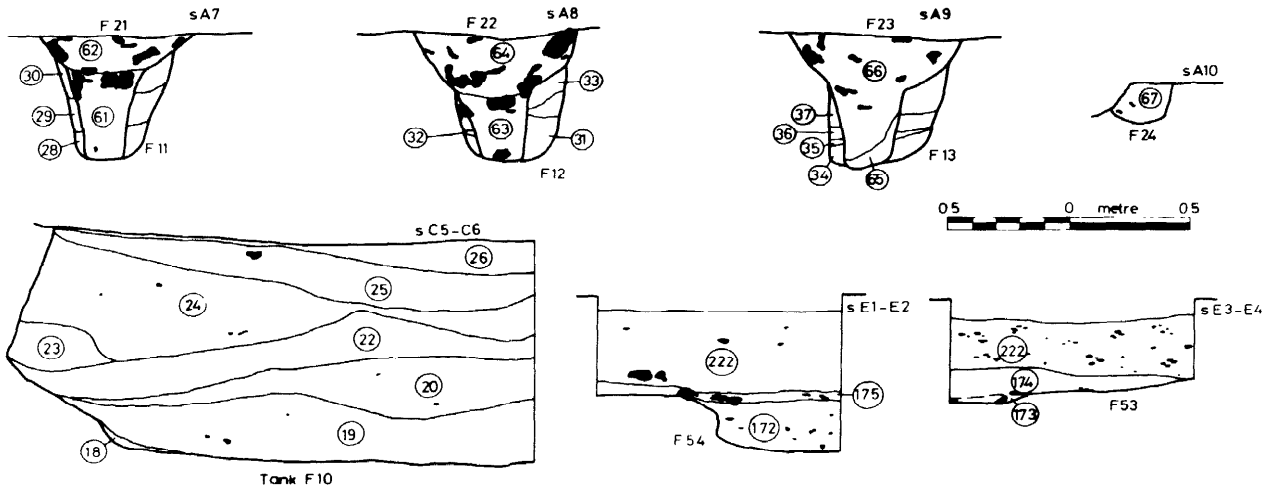


Fig 29 Castle Meadows. Trench A. sections sA7. sA8, sA9, SA10. Trench C, section sCS-C6, and Trench E, sections sE1-E2, sE3-E4. For key see p 30

Chalk quarry F17 (Figs 28, 30)

The original purpose of Trench D was to locate the soilmark of any continuation southwards of F17's western edge, but none was found. In Trench C the feature was a deep and apparently extensive cut into natural chalk. Its limits were not defined, but it may well have formed an adjunct to the ditch which, with bank F19, encircled the castle, and was probably dug principally as a chalk quarry. F17's upper western edge consisted of a series of steps which increased in number, and became narrower and more shallow, to the north. A roughly oval, flat-bottomed cut, which occupied much of the area, was clearly dug before any weathering products had accumulated in the feature. To the east of this cut, the bottom of F17 stepped down once again and then continued to slope very gently eastwards to the end of the Trench. The presence of a chalk quarry is hardly surprising, as rather more upcast would have been required for earthwork construction than was likely to be surplus after the various banks had been raised with material from their ditches.

Chalk rampart F20 (Figs 28, 30)

Trench B's chief function was to examine a low ridge which approaches the south-west corner of the keep, from the direction of Church Street, on a south-west to north-east alignment. Excavation to depth showed this ridge to mark the course of a broadly based rampart whose top had been much reduced. The rampart was constructed of clean angular chalk rubble (57) set directly on mortar working surface 11. Its sides had been consolidated with at least two superimposed layers of rammed chalk (58, 59) over which a final capping of clay with flints may have been laid. [104]

The rampart probably converged with the mound F18 at the south-west corner of the keep. Its position suggests that the lowest section of the external stair to the forebuilding may not have lain alongside the keep's west wall. This could of course have lain beside the south wall, as for instance at Rochester keep, Kent (plan in Brown 1969). But if this were so, the absence of evidence in Trench B for the south-west angle of its enclosing wall or rubble base would be strange (and in any case it is thought that the gatehouse lay to the west of the presumed junction of F20 with the perimeter defences). So the lowest section of the stair may have risen from the west, turning at first floor level in the southernmost staircase cell (above, p 50) to continue up to the forebuilding. The rampart and mound would presumably have lain against this southernmost cell.

Mortar surfaces 68 and 69 (Figs 28, 30)

Only the lower western edge of the rampart was found in Trench B, where a very thin trail of clean soft chalk (probably derived from labourer's trample and rain-wash) extended for a little over 1 m from its base. This was covered by a thick spread of coarse sandy light golden mortar (68), often at least 50 mm deep and with tiny rounded gravel and some flint chips, which was general in the area west of the rampart. (Where the chalky trample was absent, 68 directly overlay mortar 11.) In Trench C no part of the rampart was found, but identical mortar 69 had been laid on top of mortar 15. Layer 69 survived as a thick spread for *c* 6 m from the Trench's western edge and for *c* 2.50 m further as a thin and patchy surface. Its eastern limit was sealed by the tail of 96 (above, p 57). (There was no construction debris or other material on 11 and 15, but their surfaces were very worn and dirtstained.) It is likely that mortars 68 and 69 were parts of the same spread, laid down as a courtyard surface beyond the mound once the keep and its ancillary earthworks were completed.

Period Ib (Figs 28, 30)

The sparse evidence found suggested that the completed earthworks did not survive in use for long

before their apparently deliberate destruction. A little weathered material (99-106) accumulated on the sides and bottom of the chalk quarry. This mainly consisted of cleanish angular chalk lumps in a chalky wash matrix, interleaved with chalky clay and clay-loam and with some small dirty rounded chalk lumps. No turf-line had begun to develop by the end of the Period. Elsewhere, the bottom of 123, at the base of the chalk rampart's western edge, was slightly more clayey than its upper parts. This could just have been due to a little initial weathering of the rampart's surface, with the remainder of the layer not deposited until Period Ic. In Trench C the extreme western tail of 96 encroached onto mortar surface 69, but this also probably happened during the succeeding Period as the composition of the layer was consistent throughout.

In general the surface of contemporary mortars 68 and 69 showed little sign of heavy wear, although 69 was thin and patchy towards its eastern limit in Trench C. This poor preservation coincided with the area from which earlier mortar spreads 13 and 15 were largely absent, but there was no sign that immediately underlying features F1a and F1b (above, p 52) had been disturbed by excessive use of the surface. Rather, it seemed that the mortars had never been so extensive or deep there, although the reason for this was not apparent.

Period Ic (Figs 28, 30)

There is little doubt that the earthworks underwent a wholesale reduction after only a short period of use. Some evidence of the destruction of flint rubble masonry was also found, [105] but only in Trench B. In that Trench a series of layers (123-127) had accumulated against the lower side of the chalk rampart's western edge and for nearly 3 m beyond its base. The greatest depth of these was concentrated towards the south-west; only 124 and 126 extended as far as the north-eastern edge of excavation. 123 consisted of many large and medium flints in a loose crumbly mixture of chalk and mortar, with a slight clay content which markedly increased towards the bottom of the deposit. It was overlain by a thick patch of dirty crushed chalk (24) which was clearly redeposited and not pounded *in situ*. An identical patch to the north-east directly sealed mortar 68. Both areas of chalk were covered by a deep extensive spread of mixed chalk and mortar (126), with a varying clayey content which noticeably increased to the north-west. In places there was a sufficiently good zonal separation between its more and its less clayey parts for the former to be numbered independently as 125. As a whole the spread contained a great number of flints—many of which were probably freshly broken at the time of deposition; this was also true of 123—and eight undressed fragments of clunch. To the south-east the latest deposit was a thick but less extensive spread of dirty sandy mortar, very loose and decayed, with many small lumps and chips of flint and a few small rounded chalk lumps.

Much of this debris may have come from the destruction of adjacent flint rubble masonry. It is not known, however, if the mound or the chalk rampart were revetted in any way with flint and mortar,[106] or if there was masonry walling set on top of the rampart, either for its entire length or merely near its junction with the mound. So it can only be supposed that some of the flint and mortar debris may have come from the destruction of walling near the south-western angle of the keep; and that the operation involved the removal of earth mounded against its external wall faces (thereby accounting for the chalk and clay content of layers 123-127).

After these layers had been deposited over the lower western edge of F20, the rampart itself was reduced very considerably by cut F33. Evidence for this reduction was found in Trenches B and C. In B a thick spread (128) of brown loamy clay and flints covered 123-127 and also the entire area north-west of the rampart. It was generally chalk-free, but contained interleaving lenses of loose chalk lumps'"' and buff chalky clay at the base of F20. Although 128 was quite loamy, it did not seem to be a buried turf-line such as might have developed after the deposition of 123-127. Rather, the loamier soil was mainly confined to bands and streaks within the basic clay matrix in a way which clearly suggested a random mixture of turf and loamy clay subsoil. The layer may well have come from the stripping of such material from an adjoining area. Indeed, since it was overlain by a very deep deposit (138) of clean loose angular chalk lumps obviously displaced from the chalk rampart, there is little need to doubt that it came from the stripping of turf, a little topsoil, and an original coating of clay with flints from the western face of F20, preparatory to its reduction.

Nothing similar was found in Trench C, where another very deep and extensive spread of clean chalk rubble (139) overlay mortar 69. Since the tip lines within it sloped predominantly from north-west to south-east, at least the majority of this chalk must also have come from reduction of the rampart. Some, however, had entered from a more northerly direction, presumably from the area of F20's junction with the mound or from the mound itself. To the east of 139 another depth of clean chalk rubble (135) was probably deposited at the same time, during the reduction of bank F19. This overlay 96, which in turn was over 95. Both of these may also have been derived from that bank,[108] although 96 had chiefly come from the north-east,

Layers 139 and 135 converged marginally and were overlain in common by several other spreads of redeposited material (140, 141, 145, 146). It was not clear from which of the adjoining earthworks these subsequent layers originated. The majority of 140 and perhaps all of 145 had come from the east, and 146 from the north and north-west. 141, however, which interleaved with the upper part of 140, was an amalgamation of similar materials from more than one source. In Trench B 142-144 had similarly accumulated on 128 and 138.

At the eastern end of Trench C much material (107, 112-117) had been thrown down into the chalk quarry F17. This chiefly consisted of thick layers of cleanish

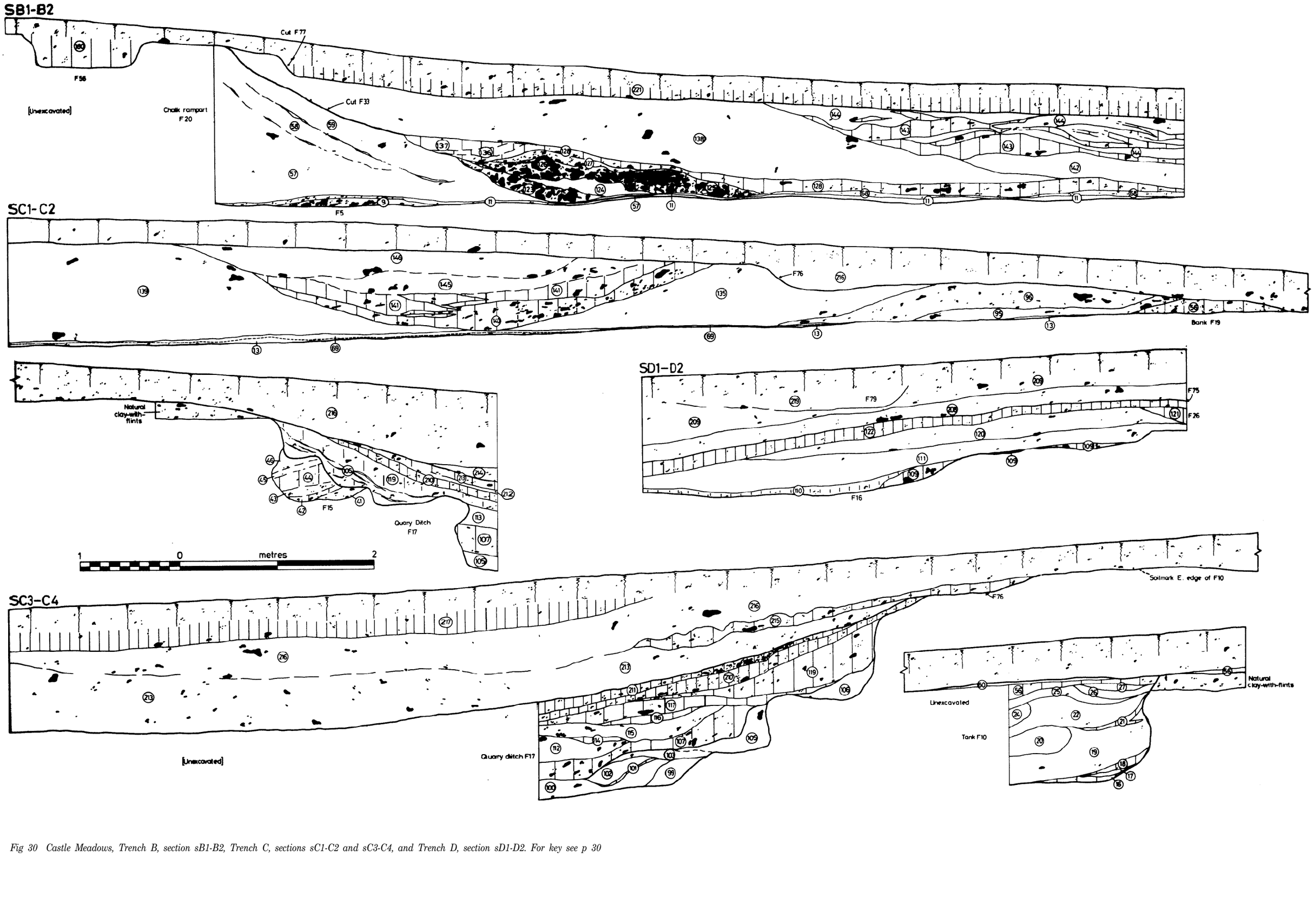
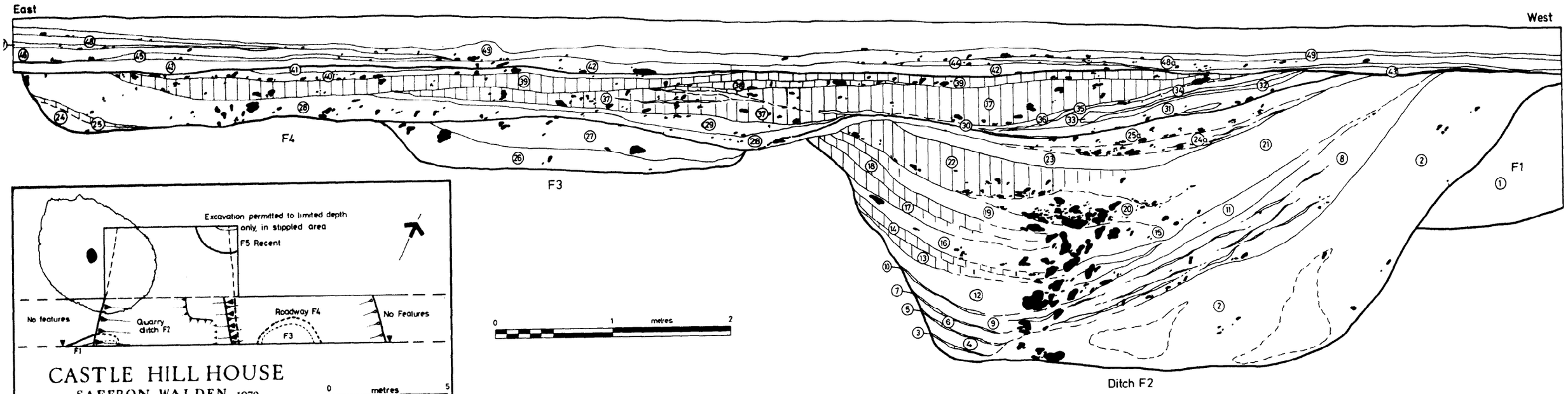


Fig 30 Castle Meadows, Trench B, section sB1-B2, Trench C, sections sC1-C2 and sC3-C4, and Trench D, section sD1-D2. For key see p 30



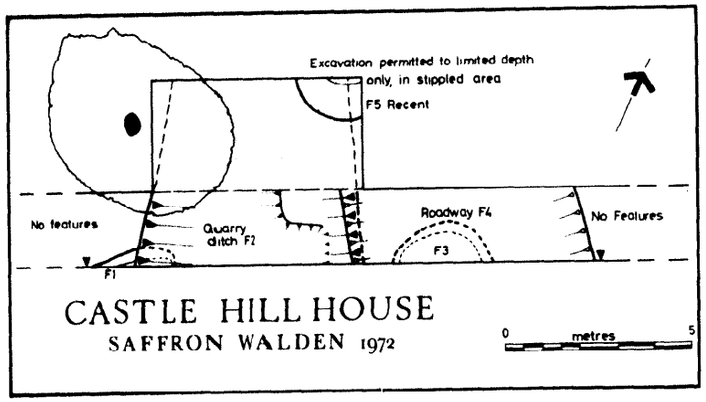


Fig 31 Castle Hill House, plan and section. For key to section see p 30

chalk rubble interleaved with brown sometimes loamy clay and generally rather merged at their interfaces. It seemed that they had all been deposited within a short space of time and were also derived from the reduction of bank F19. Indeed in Trench D, where 111 and 120 were probably bank make-up *in situ,* at most only *c* 0.5 m of F19 survived below reduction cut F26.

Period II (Figs 28,30)

Once reduction of the earthworks had ended, a deep layer of weathered material (119) accumulated in the partially backfilled chalk quarry, much of it presumably from erosion of the residue of bank F19 in its vicinity. Eventually a turf-line developed (122 in Trench D, 210 in C), very probably over the entire area modified by Period Ic activity; but subsequent landscaping in Period III removed this layer from all but the region of Trench D and the chalk quarry.

Period III (Figs 25-30)

The removal of facing stones from the keep walls may have begun long before robbing cuts were made in its interior and through the mound make-up. Such cuts seem to have started no earlier than the 16th century and to have been made intermittently until perhaps the mid 19th century.

Excavation in Trench A showed that robbing had removed most of the south-eastern buttress (initially F34, then later cuts F42 and F44), the spiral staircase and the part of its excasing wall[109] against foundation trench edge F7 (F36 and F37), and the footings of Wall II beneath its round-headed recess (F38). The external face of Wall I north of the south-east buttress had been substantially robbed by an extension of F34 and by later cuts F39 and F40, and F55 had taken smaller amounts from the internal face of Walls I and II. The footings of the central pier had also been removed at its south-eastern corner.

At some time in the later 18th century the area around the keep was very thoroughly landscaped.[110] The reduction in Period Ic had merely lowered the earthworks to a level at which they were unusable for defence, but this later operation was designed to produce a smooth surface sloping regularly away from the keep. Cuts F77 and F76 were made across what remained of F19 and F20 and into the layers of displaced make-up on their lower sides. The mound was also considerably lowered (by cut F78). It is not known if this was a contemporary or a later operation, but the former seems more likely. Some of the spoil from these cuts (2 11-217) was used to infill the top of the chalk quarry and to make up the level to the south (208 and 209 in Trench D). A topsoil (222) then developed or was introduced from elsewhere; except in the immediate vicinity of the keep this is extant.

Several features found in soilmark at this level may in fact have been truncated by the landscaping. F45 was a wide, steepsided feature of unknown function which cut through chalk rubble 139 and bottomed on mortar 69. After only a short length of time, during which a small amount of chalk (162) collapsed from its sides, the spoil from its excavation-the chalk by then rather dirty and decayed-was deliberately thrown back into the feature (163, 164). In Trench A a number of post-medieval pits and postpits with 'ghost' impressions may be associated with stonerobbers' scaffolding (eg F41, F43, F47, F48, F50).

Period IV

The later history of the keep has been dealt with above (p 50). Many of the archaeological features of this period[111] may reflect agricultural activities in the vicinity.

Trench E (Figs 28,29)

This lay on an east-west alignment opposite the front of Saffron Walden Museum,[112] and was 21.50 m long and 1 m wide. After the removal of turf and topsoil, only a 2 m length at the western end of the trench and a 9.50 m length at the eastern end were excavated further.

The sole aim of the investigation was to relocate the area where Maynard had exposed masonry footings in the summer of 1911 and, if possible, to plan whatever survived below his backfill. Although the trench was laid out to cross precisely the area in which-according to his sketch-he had excavated, no such disturbance was found. Rather, a shallow post-removal pit (F89) with a fill of modern topsoil and two linear features (F53, F54) were located.

F53 had a very shallow southern edge, which turned to the south-east to pass beyond the southern edge of the Trench, and an uneven bottom at two levels. It was cut into cleanish chalk, but it is not clear if this was naturally deposited or an archaeological fill (probably the latter but no attempt was made to test it at depth). The feature seemed to have been deliberately back-filled, but its two fills (173, 174) had no appreciable loam content. They contained fragments of medieval pegtile but no other artefacts.

F54 had a well formed and nearly vertical northern edge and a generally flat bottom. As was F53, it was cut into cleanish chalk and had been deliberately back-filled, but with a single compacted fill (172) which was not markedly similar to 173 or 174 except that it had no loam content. Once infilled, some hard thick yellow gravel was spread over it and the adjoining area to the south. This lay directly below the modern topsoil. Post-removal pit F80 was not obviously associated with it.

The two east-west aligned edges could have lain to either side of the same feature, but the dissimilarity of their fills and profiles suggested otherwise. The areas within which each was exposed were too limited for any resolution of their functions or relationship.

3.2 Castle Hill House (Fig 31 ,P1 4)

The 1758 map of Saffron Walden (Fig 9) shows a street layout, east of the keep, which seems to respect the eastern limit of the bailey.[113] This layout, however, was greatly altered in the 1820s by the cutting of a road on a north-south alignment some

30 m east of the keep (now called Castle Hill). Most of its predecessor and the area to the west as far as the new road were incorporated in the grounds of the property now called Castle Hill House.

The opportunity came in 1972 for some limited archaeological work in those grounds before their redevelopment for housing. [114]) At first excavation was confined to a single trench, 2 m wide by 20 m long on a north-east to south-west alignment, with a south-western limit some 20 m east of the site boundary on Castle Hill. Most of the earth removal was done mechanically, [115] although Fl and F3 and the lower fills of the ditch F2 were excavated by hand.

Evidence from this trench and the observation of builders' excavations clearly showed that the site's surface topography was the result of landscaping. This probably occurred soon after the new road had been laid out in the 1820s, and immediately before construction of the present Castle Hill House. A near-horizontal level was created by the removal, in places, of over 1 m of material from the centre of the site, and its redeposition elsewhere. No old topsoil or other deposits survived in any builders' trench, and the soil profiles suggested that an imported topsoil was then directly spread on the freshly exposed natural chalk. A driveway' [116] was laid from Castle Hill to the new structure: earlier features along its course (such as F2 and F4) had been infilled to a general level (layers 28-41) and then sealed with a series of thin spreads of pounded material, often clean chalk (layers 42-49). These in turn were covered by a uniform depth *(c* 0.25 m) of chalk rubble (50) laid as a base for the top gravel surface.

Only four features predated the landscaping activities, of which Fl and F3 are of unknown function or date. Only a small part of Fl lay in the area examined (at most 2.38 m wide and 1.30 m deep), where it was filled with loose dirty angular chalk rubble (1). F3 also lay partly beyond the south-eastern edge of excavation. The portion emptied was regularly formed (at most 3.21 m wide and 0.45 m deep) and had a wide flat bottom. Both of its fills (26, 27) may have been deliberate deposits; the upper, a depth of loose rounded chalk lumps, was very dirty and crushed towards the surface, where it underlay F4. Neither Fl nor F3 contained any artefacts, but Fl was cut to the east by the ditch F2. The relative ages of F3 and the ditch could not be gauged (although the former's two fills probably entered from the north-east); but F3 had certainly been cut from higher than the level at which its soilmark was found.

The ditch

F2 was a very substantial ditch on a north-west to south-east alignment.[117] It survived to a maximum depth of some 2.40 m below the landscaping. Along the south-eastern excavation edge the ditch was *c* 6.50 m wide, but it narrowed consistently to the north-west to only 5.50 m. Within the original trench its depth decreased slightly in the same direction to *c* 2.25 m at the north-western edge.

It was obvious that the feature was primarily dug as a quarry ditch, or else that its excavation had never been completed. A large area of undisturbed natural chalk in the northern corner of the ditch section had not been excavated to the general level, and there were other marked irregularities in the lower sides and bottom. Moreover, a very large amount of clean loose angular chalk rubble (2), presumably derived from a bank to the south-west,[118] had entered F2 as soon as its excavation had stopped. This had fallen directly onto the clean ditch bottom. Although a small amount of soft, initial chalk wash on it might have become inseparably mixed with the base of 2, none could be seen either during excavation or afterwards in the vertical sections. [119]

It is not clear if this clean chalk rubble collapsed into the ditch because work was abandoned suddenly, before the bank could be properly consolidated, or whether it was deliberately pushed in. It seems more probable, however, that such a collapse, although severe, would not in itself have caused the abandonment of earthwork construction but was subsequent to it. The absence of weathering product in the ditch bottom and, perhaps, of any clay or loam content in 2 makes it very unlikely that F2 was dug primarily as the quarry for a bank which continued in use for some while before chalk rubble 2 was deposited.

Nor, it seems, was anything done to consolidate the rest of the bank. Rather, it was allowed to weather naturally for quite a long while. Chalk continued to come into the ditch from the south-west (8, 11), some of it as cleanish angular rubble but increasingly as dirty decayed small and medium rounded lumps."" This interleaved with thin limited spreads of brown clay-loam (3, 5, 7, 10) against the north-eastern edge. [121] In general the area where material from either side had merged was very confused; it was not always possible to follow lines of separation between the various deposits or to determine accurately what proportion of each had entered down the north-eastern edge. Much of 12 may have come from a limited collapse of that edge,[122] but by far the greater amount of material was derived from the south-west.

Eventually a turf-line (14) developed on the north-eastern side of the ditch and in its bottom, while a little weathered chalk continued to accumulate on the opposite slope. [123] The turf-line might soon have extended further, for diminishing quantities of material from the south-west suggest that the bank had almost achieved a stable profile. In the event, however, it was buried by a series of very deep extensive deposits of chalk and clay which mainly seem to have entered from the south-west (15-23). Most of the material which came to rest on the north-eastern slope and in the ditch bottom consisted of spreads of both dirty white (angular) and buff (rounded) chalk lumps in a differentially chalky clay matrix (21).

It is tempting to think that the introduction of these deposits was part of the same deliberate reduction of earthworks suggested by the excavations in Castle Meadows.[124] The ditch had clearly formed part of the castle's perimeter defences or an obvious adjunct to them, and its bank would have suffered the same

partial reduction as F19 and F20 south of the keep. It is not certain, however, that deposits 15-23 were deliberately thrown into the ditch, or even that they had all entered from the south-west. A further collapse of the bank could have deposited 15, 20, and 21; while 16-19, 22, and perhaps 23 may have come from some activity beyond the north-eastern edge of the ditch (such as, for instance, the excavation of F3). Yet it is clear that none of this material accumulated slowly through natural weathering processes, since too many of the deposits contained clean angular chalk lumps; while most of the material lying in the middle of the ditch consisted of loose chalk rubble and large flints (almost all of which had an intact cortex), with no discernible matrix and few of the flints lying at a natural angle of rest.

In short it seems that a great amount of material entered the ditch from the south-west within a short space of time; and, if its deposition resulted from deliberate reduction of the bank (and not from any natural collapse), the clayey spreads on the north-eastern slope could have come from the same source. [125] After the last of this material had been deposited, [126] a little weathered material (24a) accumulated in the middle of the ditch and on its lower south-western slope. Eventually a turf-line (25a) developed which covered the whole area of the ditch until landscaping began in the early 19th century.

The presumed roadway

F4 was an extensive linear feature lying north-east of the ditch and parallel to it. A little weathered material lay at the base of its north-eastern edge (24) under a thin turf (25); while the turf-line which covered the ditch until the start of landscaping (25a) extended down its south-western side. Otherwise the feature stayed open until its deliberate infilling with fills 28 and above in the early 19th century.

It is suggested that F4 had not been systematically dug but was mainly due to a slow wearing down of the ground surface along the course of a road. Such a road would have passed around the east end of the castle, immediately beyond its outermost line of defences. Indeed it may have become a sufficiently well developed hollow-way in the soft natural chalk for its course to remain unchanged even when the ditch F2 was largely infilled. [127] The north-eastern edge of the ditch, and the fills lying against it, seemed to be very much worn down; but it could not be determined if the ditch top was also used as a thoroughfare at any time. (It latest fills could have been similarly eroded before the accumulation of 24a.)

F4 itself was a linear depression some 7.25 m wide. Its bottom was not uniformly flat but consisted of a nearly level central strip (*c* 2.50 m wide) bounded by two shallow gullies. Of these the south-western was the deeper (at most *c* 0.20-0.25 m below the central level) and more extensive; while the other was no more than a slight downward slope to the base of F4's steep north-eastern edge (at most only 0.1-0. 15 m below the same level). On the whole it is likely that, in the six hundred or so years during which a road may have run through the area, the passage of traffic was never confined to any one relatively narrow course but extended over the full width of F4 and the partly infilled ditch, tending to be concentrated at any given time on the firmest or most regular surface. So turf in the ditch and the particular configuration of F4's bottom, as preserved by the early 19th century infilling, may merely suggest the latest course which traffic preferred. It is not clear if the gullies were deliberately formed to drain the latest course of the road, (but there was no characteristic silt in either). No sherds were found in 24 or 25, and only one in the ditch fills. [121] The early 19th century deposits (28-50) contained an assortment of post-medieval pottery, including many 18th and 19th century sherds, and many fragments of brick, pegtile, and roofing slate. No medieval sherds were found in these recent deposits.

Discussion (Figs 8-10)

No builders' trench was sufficiently deep or extensive to locate any continuation of the ditch F2; and no further archaeological excavation could be carried out elsewhere on the site. This was unfortunate as F2's course beyond the grounds of Castle Hill House is uncertain. Three possibilities seem most likely: *a,* that it turned sharply to run north and south of the castle as the perimeter defences whose position is thought to be mirrored by Castle Street and Church Street respectively; or *b,* that it formed an adjunct to those perimeter defences, lying beyond them to the east of the keep; or *c,* that F2 is the same as the ditch seen by Maynard under the south end of Market Hill and under the alleyway a little to the east, and sectioned in 1975 on the Barnard's Yard site.

Possibility *a* seems least acceptable since Maynard's records of the 1911-13 resewering of Saffron Walden clearly show a very wide ditch under Castle Street and the adjoining properties, whose curvature was such [128] that it could not have passed through the grounds of Castle Hill House without some major realignment of its course north-east of the keep. Rather, if it had continued with that curvature, its inner edge would have passed no more than *c* 25 m to the east of the keep, ie within or only a short distance beyond the eastern end of Trench C on the Castle Meadows site. Moreover, Maynard estimated the width of that ditch as some 40 feet (*c* 12 m) while F2 would not have been much over 8 m wide at its top.

In isolation possibility *b* seems a reasonable explanation of the ditch F2. Since the castle lies at the western or 'open' end of an extensive promontory its eastern approach would have needed to be particularly well defended, But the acceptance of *b* must depend on discussion of the course of the earthwork located on the Barnard's Yard site. For reasons discussed elsewhere (above, p 19) it is probable that this ditch and its bank curved around the western end of Bury Hill, returning to an east-west alignment somewhere north of Castle Street. The course of its southern arm, east of the alleyway to the modern Market Place, is not known, but it may well have curved round to the north after no great distance, either to meet the inner

bailey near its south-eastern corner or to pass concentrically around its eastern end.

Three considerations suggest that possibility *c* is more likely to be correct. Firstly, Maynard recorded a ditch, under the road now called Common Hill, which was rather less than 27 feet (*c* 8 m) wide at its top. [129] It lay on an alignment more south-west to north-east than west to east and was observed opposite or just north of 4-5 Common Hill. [130] (In the remainder of the trench, as far north as Church Street, the only other feature seen was small and shallow, probably a pit.) If this ditch were the same as the one seen on Barnard's Yard and under Market Hill, any continuation of its apparent curvature to the north would allow it to pass comfortably through the grounds of Castle Hill House.

The second consideration concerns a linear feature partially exposed in a sewer trench along Little Walden Road, immediately north of its junction with Castle Street. Maynard did not see this feature himself,[131] but from the workmen's account he surmised that it was a substantial ditch.[132] Without prior knowledge of the ditch found in the grounds of Castle Hill House Maynard's report would be of little immediate value. Yet while his information is too vague for more than conjecture, such a linear feature-seen only some 50 m at most to the north-west of the excavated section of F2, and in the area through which F2 might be expected to pass---merits serious consideration.

Thirdly, although F2 appears to be unfinished, its width and the angle of slope of its sides are very similar to those of the upper part of the ditch excavated in Barnard's Yard. It is suggested elsewhere (above, p 19) that the latter was part of an earthwork laid out only shortly before 1141 to form an outer defensive circuit around Bury Hill. Work on it may have begun as soon as the castle proper had been completed, and it is certain that an undertaking of this magnitude would have needed a considerable time to complete. So if the earthwork had not been begun before the later 1130s at the very earliest-which seems quite likely-it would probably not have been finished by 1143, when Walden Castle was confiscated by the Crown. This in itself is no argument for the acceptance of F2 and the Barnard's Yard ditch as parts of the same earthwork, but does suggest that F2's incompleteness need be no impediment to it.

3.3 Barnard's Yard (Figs 32,33)

Permission was obtained for trial excavation, by Mr M R Petchey,[133] on the site of recently demolished maltings. The primary aims of the work were *a,* to ascertain if any stratified medieval deposits survived along the Church Street frontage; and *b,* to locate and investigate two parallel linear features seen by Maynard in the sides of sewer trenches across the site's entrance from High Street (SWM). Both of these were west-east aligned; the northern, of unknown depth, was some 6.50 m wide, and the southern-whose existence was less certain-was a little wider but very shallow. Maynard believed the deeper feature to be a continuation of the ditch which he had seen under the southern end of Market Hill and under an alleyway a little further to the east. Where this feature was found under road metalling in a trench on the east side of High Street, he recorded that the road's former line seemed to lie along the west side of, and beyond, its present course. [134]

Barnard's Yard lies on the south side of Bury Hill, between the 53 m and 56 m AOD contours, and is an L-shaped property with frontages on High Street and Church Street.[135] Before the construction of the malthouses the site's southern arm had been extensively downgraded to a level at the most some 1.30 m below the contemporary ground surface. [136] Machine-cut trenches along the eastern arm showed that this area had also been scarped, though less severely. The Church Street frontage proved to be entirely cellared, while the area to its rear contained only recent yard surfaces laid directly on the truncated natural chalk.

Three trenches were cut by machine north-south across the southern arm of the site. Trench I exposed the north-eastern corner of a recently backfilled cellar, but no features earlier than the maltings. In Trench II the south edge was found of a deep feature which seemed to have been filled in before the downgrading operation. Its full width was exposed in Trench III, where it was seen to be linear on an east-west alignment and at most some 5.80 m wide. Mechanical removal of its fills there showed it to be a steepsided ditch with a flat bottom 4.05 m below the downgraded level. [137] A continuation of III, however, beyond the northern edge of the downgrading operation failed to find any residue of bank make-up, as the less severe scarping of the site's eastern arm extended to that edge.

Excavation by hand in Trench IV then removed portions of the ditch's top fills to *c* 1.20 m below the cleared level. [138] Altogether, 131 potsherds were found in these fills, of which 5 were Romano-British, 118 of late 11th or 12th century date, and 8 of later 12th or early 13th century date (below, pp 80-85).

The work in IV was too limited for more than a general impression of the ditch's later history.[139] Accordingly the following summary is almost entirely based on the observation, and attempted interpretation, of a single vertical section of its fills.

The ditch seems to have infilled naturally for some time (fills 31-38). Much of this primary fill may have come from collapses of the upper edges and of bank make-up. The main bank lay to the north of the ditch, but there may have been a second, lesser, bank to the south. Apparently no turf-lines had developed in the ditch before it was deliberately infilled to above the horizontal level created by downgrading (fills 2-30).

Alternatively, fills 10-38 (or perhaps 15-38) might all be the result of natural processes (weathering, collapses, and the growth of humus). If this is so, then material must have been more or less continuously coming into the ditch from its northern bank. The layers of loamy soil such as, for example, 15 and 22 *could* represent buried turf-lines on the more stable southern slope, but seemed to the writer to be

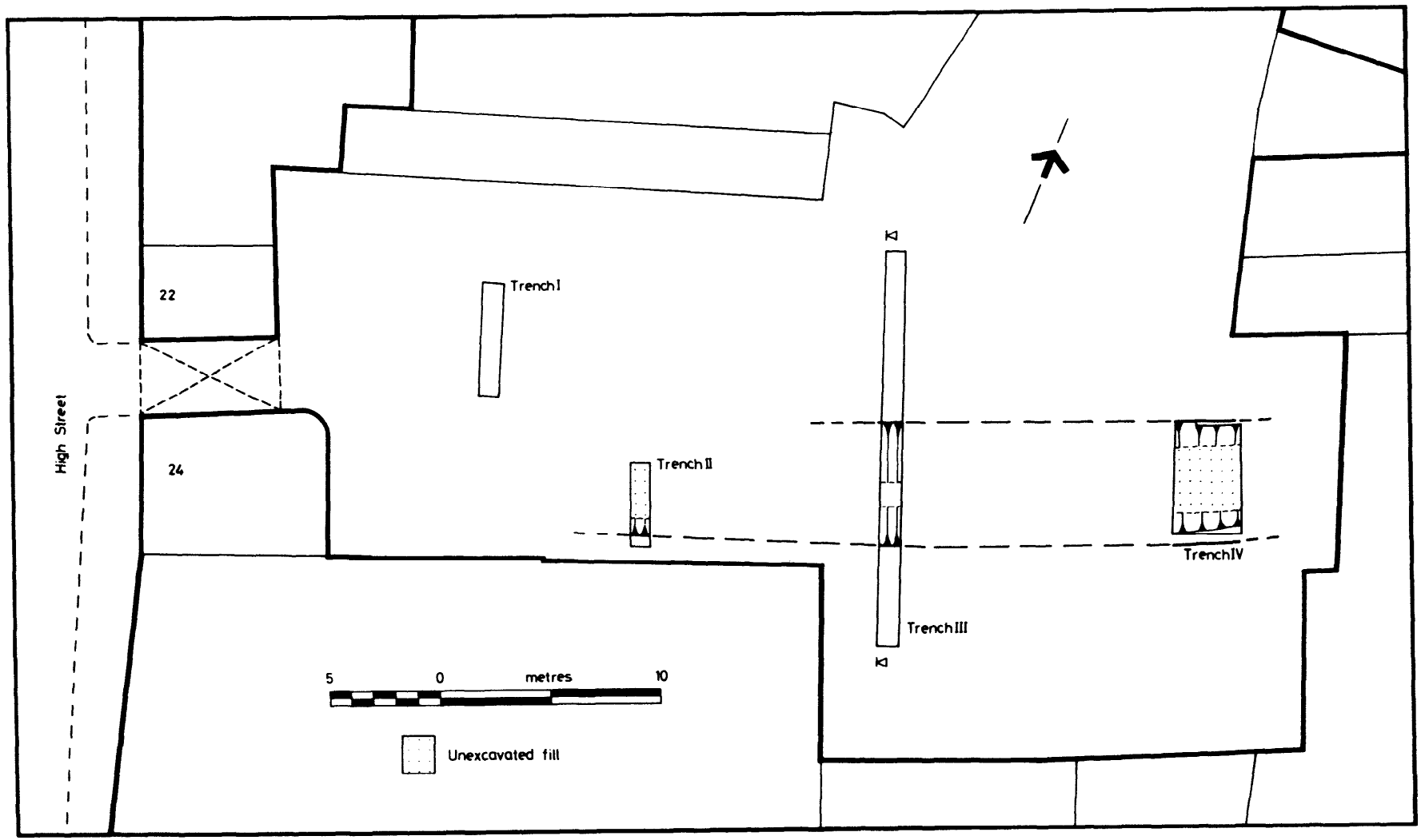


Fig 32 Barnard's Yard, plan of excavations (based on a site drawing by M R Petchey)

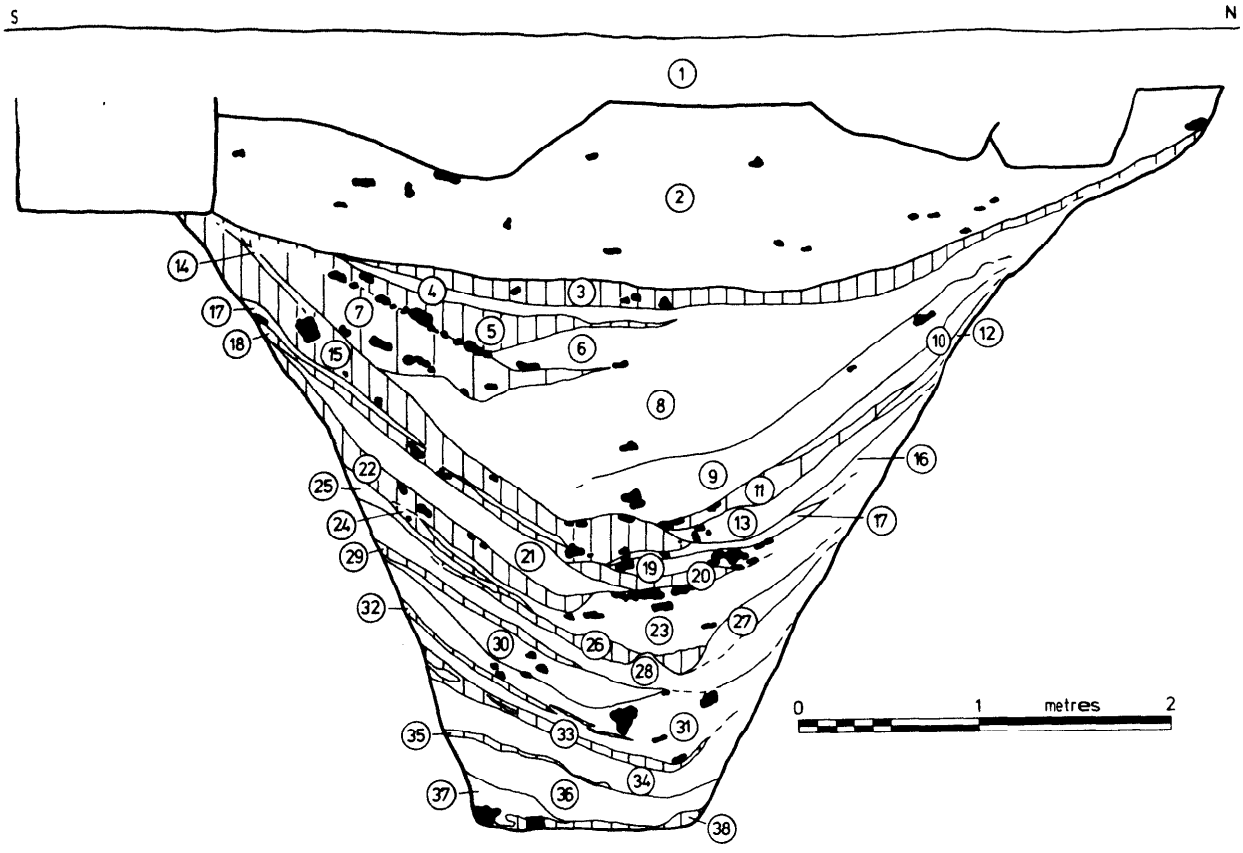


Fig 33 Barnard's Yard, section along west side of Trench III. For key see p 30

composed largely of collapsed turfs. They probably came from a secondary bank to the south constructed of the initial upcast from ditch digging; or else these layers may have been deposited during turf removal, for whatever reason, in the vicinity.

The pottery evidence clearly suggests that the ditch's deliberate infilling took place no earlier than the late 12th century, and probably in the earlier 13th. Obviously this cannot be associated with Henry II's order of 1157-8. It seems very likely, however, that the earthwork may have been levelled as part of the earlier 13th century planned extension to the south of Bury Hill, which included the laying out of a rectilinear street grid. Certainly, to the east, the coincidence of the north side of the new market place (which lay north of this earthwork's course) with a 12 perch grid line argues conclusively for its levelling by that time.

It is not clear if this outer bailey circuit was in any way affected in this area by Stephen's forfeiture of Walden in 1143 or by the order of 1157-8 (as the length east of the keep certainly seems to have been; above, pp 62-3). The drawn section presents no evidence for an earlier partial infilling; but the ditch, in its excavated form, may represent a recut or, more strictly, a cleaning out of the original. Or indeed, as to the east of the keep, the ditch may not at first have been completed, but only dug to its present depth at some time after William de Mandeville had recovered Walden from Henry II, A third possibility is that the earthwork was completed by 1143 in this area, and was unaffected by any subsequent reduction of defences elsewhere on Bury Hill.

A manually excavated section of the ditch will be needed if its history is to be fully understood. It is most unfortunate that Essex County Council's funds were insufficient for this in the present area, since another equally suitable site is unlikely to be available in the foreseeable future.

3.4 Observations: site at the junction of High Street and Abbey Lane

(Figs 8, 10, 34)

by M R Eddy

The excavation of footings for a house in the rear garden of 53 High Street, Saffron Walden, was observed by M R Eddy of Essex County Council's Archaeology Section whilst work was in progress from 3 to 6 March 1978. The site lies east of the Late Saxon cemetery excavated in 1876 and of the excavations undertaken by M R Petchey in 1976, It is located some 75 m west of the High Street frontage, south of Abbey Lane (Figs 8, 10, Site E2).

The topography of the site was considerably altered in the 19th century, when the southern part was built up and a flint rubble and brick pseudo-castle folly constructed on the artificial mound. The observed depth of topsoil decreased from *c* 500 mm at the

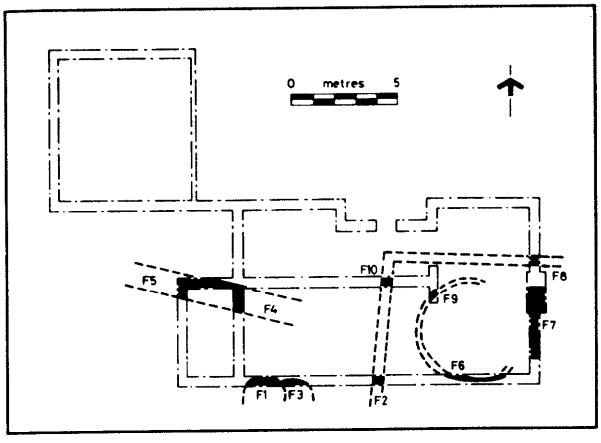


Fig 34 53 High Street, site E2, plan of features recorded

southern section to 150 mm in the northern where it was evident that the underlying cryoturbated chalk natural had been removed down to solid chalk, presumably to add to the folly mound. Chalk formed the natural bedrock throughout, though a pipe of clay with flints was noted in the south-west corner.

An undated ditch of U profile (F4/F5) ran east-west across the western part of the site. It was impossible to determine the length of the ditch within the trench though it was 1.50 m wide at the top and *c* 700 mm deep, with a fill of black friable loam.

Two pits (F1 and F3), with fills of black friable loam, were observed in the southern section. F3 produced a single body sherd of grey sand-gritted pottery and was cut by F1 from which sherds of a cooking pot (see Fig 44.85), a struck flint flake with grey patina, and a piece of burnt chalk were recovered.

Most of the eastern half of the site was occupied by early 19th century brick walls (F2, F8, F10) enclosing a possible lime kiln (F6, F7) which showed as a partial oval of burnt chalk with a pit to the east filled by crushed chalk and ash and measuring 4.0 m north-south and at least 1.70 m deep.

Observation of levelling work to form a car park immediately behind 53 High Street was carried out by M R Eddy and C R Couchman during the week commencing 13 September 1976 (Figs 8, 10, Site E1). No archaeological features were seen in the natural chalk and the thinness of the topsoil (150 mm) and the absence of cryoturbated chalk implied that any archaeological levels were removed during 19th century landscaping.

3.5 The 'Rose & Crown' Hotel site

(Figs 35, 36, Pl 15)

The site was formerly a bowling green belonging to the recently demolished 'Rose & Crown' Hotel.[140] No excavation was possible under the hotel buildings, which either had deep cellars or were to be incorporated in the redevelopment scheme. Contractors' trenches failed to show if there were stratified deposits under yard surfaces behind the main frontage area.

The site lay just south-east of the hotel outbuildings, and was bounded to the east by Common Hill and on the north by a path which continues the line of King Street. It seemed ideally suited for the location of any northward continuation, beyond the King's Slade, of the eastern arm of the *magnum fossatum*.

Initial machine work located a linear feature, F1, on a north-south alignment. Accordingly some 325 sq m were cleared of ploughsoil, make-up, and topsoil, which increased in depth (north to south) from 0.20-0.30 m to 0.90 m. (Levelling for the bowling green had removed all ploughsoil and part of F1's fill for some 4.50 m from the northern edge of excavation.) As large an area of F1 was exposed as was possible in the circumstances, but Section IV could not take in the feature's full width. The site's natural subsoil consisted of clay with flints (at most only 0.15 m deep) over deep chalk and the chalky sand fill of periglacial features.

Late medieval and post-medieval features

Several features were cut into the top of F1, all containing 17th century or later finds. F5 was an irregularly shaped pit, some 0.70 m deep below the cleared level. Two other pits, some small postholes, and several shallow brick wall foundation trenches were also excavated.

To the east of F1 three large irregular features were located as soilmarks. All had probably been dug for chalk extraction. Limited excavation suggested that F3 had been completely infilled not earlier than the 16th century and F2 (which cut it) abandoned by the earlier 18th century. The third quarry, F6, passed beyond the eastern site boundary and probably extended beneath Common Hill (road).[141] It clearly cut the ploughsoil, but a very limited excavation found nothing datable in its lower fills. F8 was a wide shallow trench from which posts at approximately half-metre centres had been removed around 1800. These probably formed a fence, perhaps marking a property boundary, but could have been horticultural. Features 9-13 contained no finds, and were probably of periglacial origin.

The *magnum fossatum*, F1

Four sections were excavated by hand. The ditch varied in width from 3.85 m, to the south, to 3.40 m, and its bottom was flat and some 0.65-0.70 m wide.[142] Its depth increased from *c* 2.25 m, to the north, to 2.47 m at the southern limit of excavation. The chalk subsoil in this area was noticeably softer than on the Cinema-Maltings site, and so would have weathered more rapidly. Again, on the latter the chalk was generally stone-free, while on the present site it contained many thickly patinated flints.

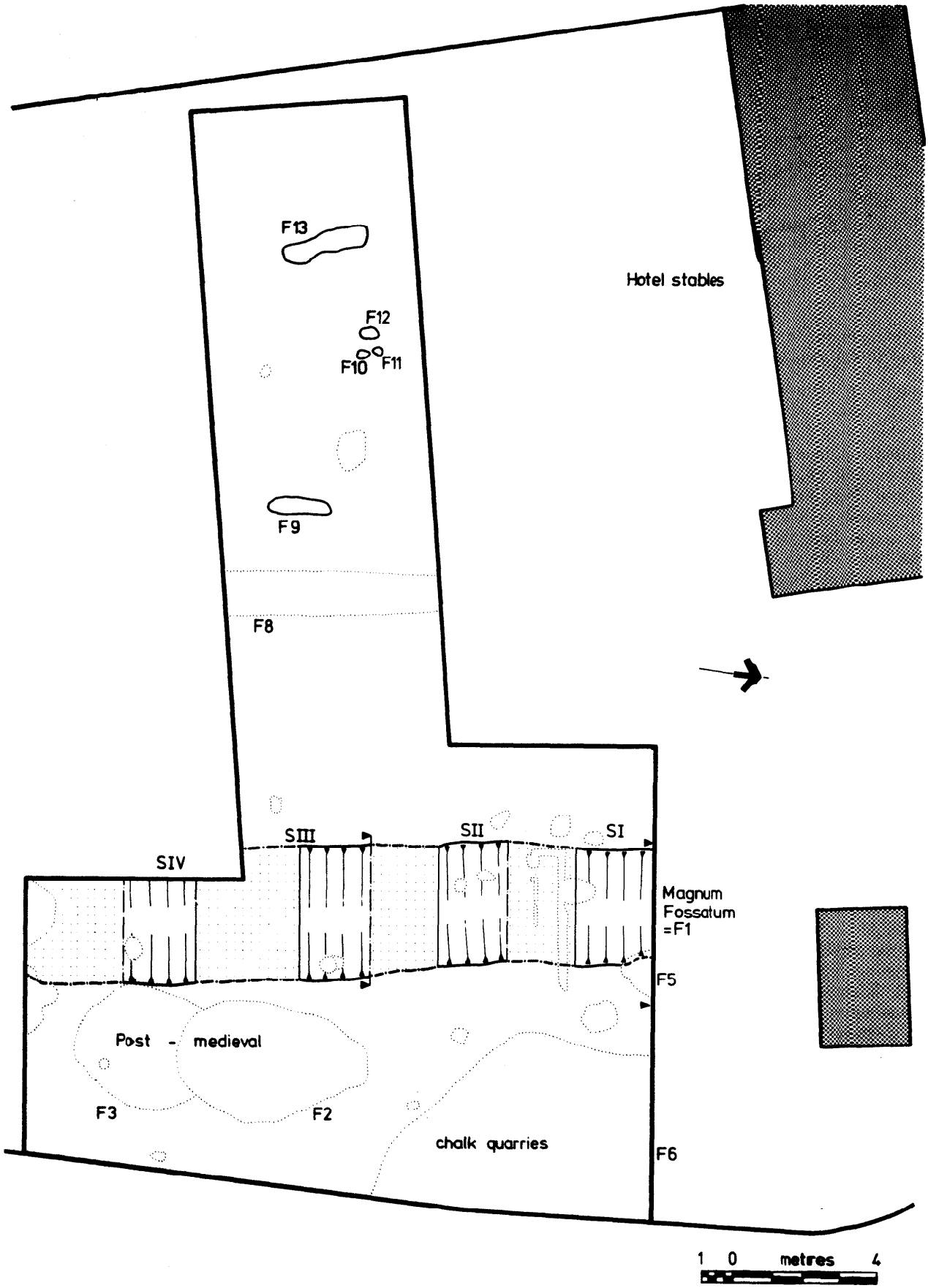


Fig 35 Site at rear of former 'Rose & Crown' Hotel

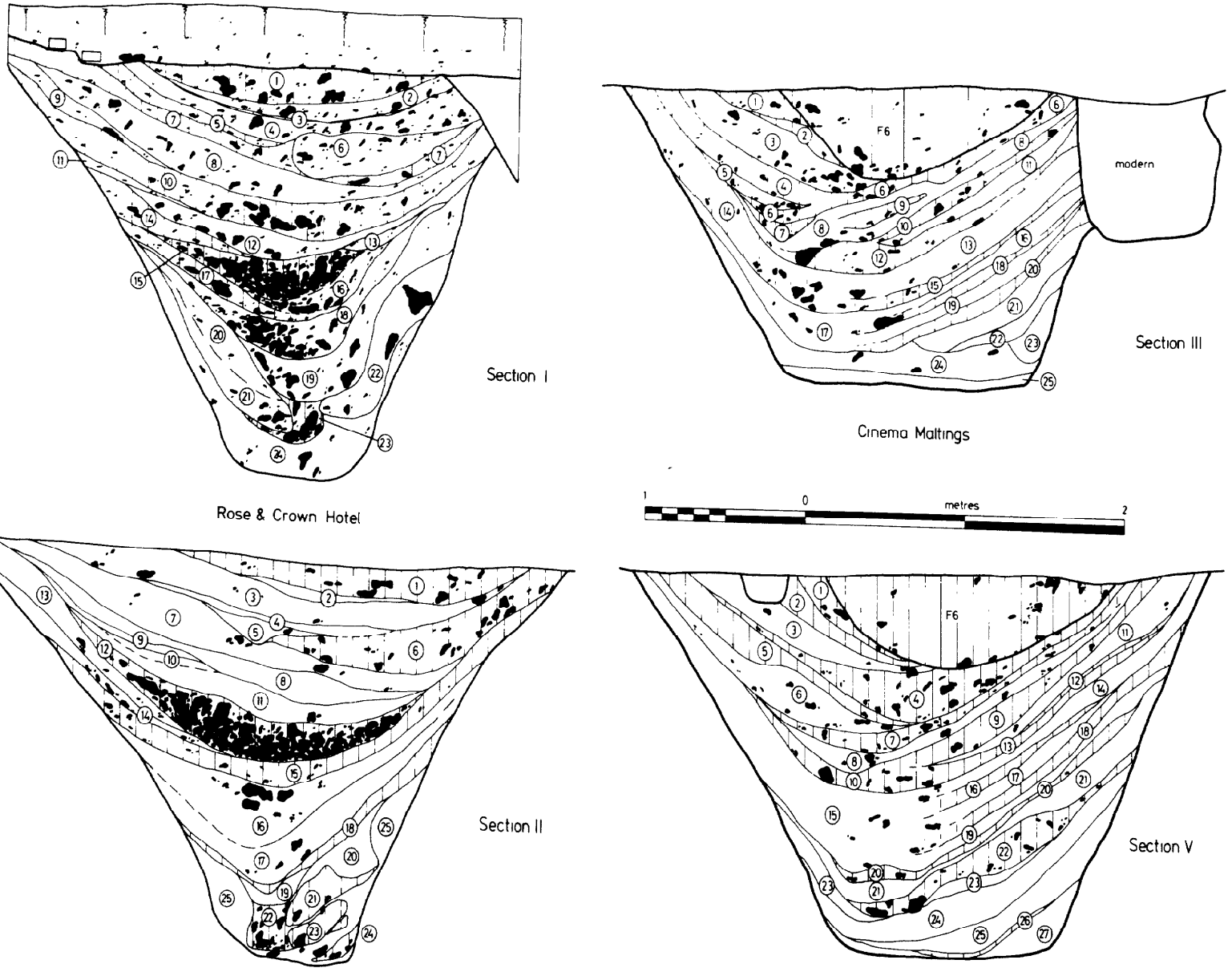


Fig 36 'Rose & Crown' Hotel site, F1, sections I, II; Cinemu-Maltings, F1, sections III, V. For key see p 30

Brief summary of the excavation of all sections

A lengthy period of primary weathering (initally , I/24;II/15, 17, 19, 21; III/25; IV/24) was interrupted by several extensive collapses of the ditch's upper sides. The collapsed material (I/20-23; II/13, 14, 16, 18, 20; III/20-24; IV/22, 23) came partly from a series of large cryoturbation features, filled with hard cemented chalky sand, through which the ditch had been cut; the most extensive of these was exposed in both sides of Section I. The material had often fallen with enough force to cause some convolution of the earlier ditch fill. Normal weathering continued (I/18, 19; II/10, 11; III/16, 18, 19; IV/15, 16, 18-21), but was faster where the ditch cut through chalk (which was less resistent) than through the cryoturbated material. Further localized collapses occurred at intervals (parts of I/18, 19; II/12; parts of III/16; IV/l 7). The overall impression gained from the four sections was that there had been a prolonged period of often severe weathering causing substantial erosion of the ditch's upper sides; it may also have dislodged some of the top layers of bank make-up. In this respect it is interesting to note that just two hours of torrential rain, a few days after excavation had finished (July 1972), caused some 0.10 m of chalk wash to accumulate in the ditch's bottom, and that there were two separate collapses of its top edges. (On another occasion, in August, 1973, runoff at the south end of High Street, by the Cinema-Maltings site, was consistently 0.04-0.05 m deep for about twenty minutes.)

Gradually a turf-line developed in the ditch's bottom and on its lower sides (I/17; II/9; III/15; IV/14). This was extensive in Sections III and IV, but more restricted in I and II where some weathering of the east side continued (I/16; top of II/10). The turfs growth however was suddenly ended by a resumption of prolonged weathering (initially, III/13, 14; IV/l 3; then I/7, 9-12; II/6; III/?9; ?10; IV/10), and by several serious collapses of bank make-up. The first, and also the most interesting, of these brought in a great many large and medium dirtstained flints (I/15; II/8; III/12; IV/12); most of them had lost much of their original cortex. They were only loosely compacted, and the resultant interstices in general unfilled. What little matrix there was was concentrated towards the outer limits of the deposit and in its top few centimetres, and perhaps was a secondary weathering product. The flints had clearly come from the west, very possibly from a collpase of some form of consolidation of the bank's nearer face (see below). Make-up continued to fall from the bank (I/8, 13, 14; II/5, 7; III/7, 8, ?9, ?10, 11; IV/9, 10), interleaving with spreads of weathered material.

Eventually a considerable amount of upcast was thrown into the ditch from the east (I/3-6; II/?2, 3, 4; III/4-6), quite possibly from the excavation of F6. In Section IV, however, normal weathering had continued (IV/8) until the growth of a rather limited turf-line (IV/7). This first deliberate infilling was immediately followed by the reintroduction of much more of the bank's make-up along the entire length of the ditch (I/1, 2; II/l, ?2; III/l-3; IV/1-6). This may well have been done so that cultivation could be extended across its line; certainly, any later fills had been removed by ploughing.

Dating and discussion

Only five sherds were found during excavation in the four sections:

IV/18:	a handmade body sherd of late Neolithic date (above, p 46);
II/18:	3 body sherds of 12th or early 13th century cooking pots;
III/12:	a rim sherd of a 12th or early 13th century cooking pot (Fig 44.54).

If the ditch really is part of the *magnum fossatum,* as all evidence suggests, then all of these sherds should be residual in their contexts.

Fragments of medieval rooftile were found in many fills above the general turf-line formed by I/17, II/9, III/15, and IV/l4, as well as a piece of Roman tile in I/10. There were a few fragments of a coarse sandy dark red brick in III/9, and several pieces of obviously late medieval or post-medieval brick in 1/5, 11/14, III/5, and III/6. Seven medieval sherds were found in residual contexts elsewhere on the site, of which the latest were 14th century. The earliest post-medieval sherds were of 17th century date.

Among the most interesting aspects of the four sections were the loose, stained flints found in I/15, II/8, III/12, and, perhaps, IV/12. They had entered the ditch from the west, and in too great a number to be from the weathering out of random flints from the ditch's edge or from the presumed bank make-up beyond. It is much more likely that they had been used to consolidate the bank's eastern face against rapid initial weathering. Loose flints may have been laid over the entire face, or else piled somehow against its lower parts. In time they would probably have worked their way down to form a loose heap along the base of the bank. There they may have been overlain by material weathering off its upper face and so have been protected for a while. Eventually, the ditch's western edge would have eroded back far enough to undermine the toe of the bank, causing the loose flints to fall forwards all at once.[143]

The 1959 section across the western arm of the earthwork found a similar deposit of loose flints. [144] This similarly overlay an initial turf-line, (though the excavators thought that both turf and flints had been thrown into the ditch, perhaps to raise the level of its bottom for use as a pathway). [145] It seems, therefore, that flints may have been generally, if sporadically, used to consolidate the bank of the *magnum fossatum.* Very little flint was found in the ditch on the Cinema-Maltings site (where the natural chalk is relatively flint-free), and it seems that a different form of consolidation was used there.

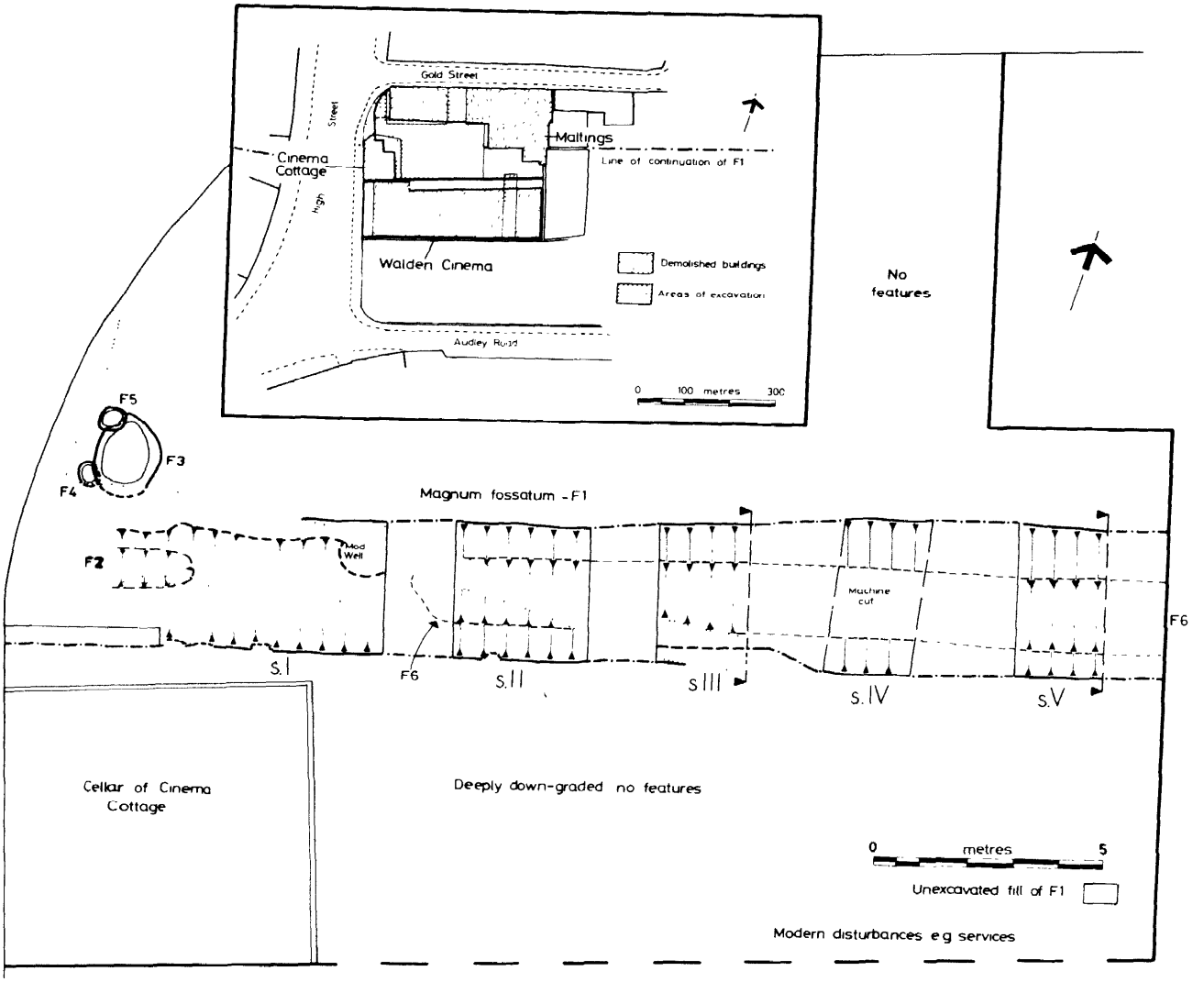


Fig 37 The Cinema-Maltings sites (inset). plan of the Maltings

3.6 The Cinema-Maltings site

(Figs 36, 37, Pls 16, 17)

Demolition of the 'Walden Cinema' and of the adjoining Cinema Cottage in advance of redevelopment"' gave access to an area known to contain a major linear feature. A ditch, 12 ft (*c* 3.2 m) wide and flat-bottomed, was seen by Maynard in 1912 'during the construction of the Walden Cinema' (Maynard, SWM). This appeared to continue the line, east of High Street, of the extant southern arm of the *magnum fossatum,* although Maynard's description was of a feature rather different from those sectioned in 1959 (Ravetz & Spencer 1961) and on the 'Rose & Crown' Hotel site.

Excavation on the 'Walden Cinema' site was greatly impeded by two superimposed concrete floors, each 0.25 m thick and general to the entire area. Two trenches were cut to the top of the natural chalk, but neither exposed any medieval or earlier features (nor anything more recent which might have misled Maynard in 1912). All surface deposits were clearly associated with the construction and rebuilding of the Cinema. No further work was undertaken on this site.

The site of Cinema Cottage and the less recently demolished Maltings had been severely downgraded to a near-horizontal surface before the latter was built. In this vicinity the land falls steeply to the north, towards the King's Slade. At one time the western end of the site would also have sloped westwards, as it still did on the Cinema site, due to extensive incising of the early course of the now much narower High Street. Downgrading, however (probably in the 17th century), had removed the natural subsoil-a little

brickearth on coombe deposits, overlying deep chalk-to a maximum depth of 2.30 m below the contemporary ground surface. A small area of the earlier surface survived in the north-western corner of the site, but examination of it and of the adjoining frontage areas produced no evidence of structures earlier than the Maltings. Documentary research (Monteith 1958) suggests that a small building incorporating a shop stood on that corner at the end of the 15th century; at which time the remainder of the site and the area extending southwards to Audley Road were an orchard.

Initial machining located the soilmark of an east-west feature, c 3.65 m wide, which a 2 m machine-cut section (IV) showed to be flat-bottomed and *c* 2.0 m deep. Since there could be no doubt that this was the ditch described by Maynard, 26 m of it were exposed in soilmark by the removal of 0.05–0.10 m of recent topsoil and malthouse floor screed. In all some 370 sq m were cleared, including a 4 m wide strip from the ditch to the Gold Street frontage. [147] There had been much disturbance of the ditch by deep service trenches, and the entrance to a cellar below Cinema Cottage had removed most of its fill for *c* 3 m east of the High Street frontage. Consequently, very little can be said about its junction with any earlier road there.

The ditch varied in width between *c* 3.70 m and *c* 3.25 m. Its depth decreased westwards from *c* 2.10 m to *c* 1.45 m. As it approached High Street the width of its flat bottom increased from *c* 1.70 m to 2.0 m. Excavation of Section I showed layers of fill rising gently to the west on a gradient suggestive of an end to the ditch within 3—4 m of the cut. [148]

In all, four sections of the ditch were excavated. Since downgrading had removed, or severely truncated, its upper fills, none of these sections allowed a complete account of its later history. No bank make-up had survived, nor any possibly associated features. The sections, however, suggested that there had been a bank to the north, probably with a wide berm, and that at least the western part of its southern face was firmly consolidated against rapid weathering, if not actually retained by frontal timbers.

A summary of general observations from all sections of Fl

The lower fills of ditch Fl indicate an initial period of silting, during which a depth of chalk wash (varying between 0.04 m and 0.11 m deep) accumulated on its bottom and lowest sides (III/25, V/27). At first the ditch was presumably cleaned out regularly, so that this lowest fill merely represents the latest such deposit. (There was no evidence of any recutting.) The chalk wash was overlain by various thick layers of material-in general mixtures of chalk with a little brick-earth and coombe—derived from more rapid weathering and, probably, from local collapses of the southern edge (III/21–24, V/23—26). The material lay thickly down the south side, while considerably less had come from the north. This pattern of infilling perhaps reflects severer weathering of the ditch's south side by predominantly downslope surface drainage. In between subsequent layers of weathering product (III/16, 17, 19; V/21) one or more turf-lines had developed on the ditch's bottom and lower south side, but each was quite shortlived (III/18, 20; V/22).

Eventually a much deeper, more extensive turf had covered the lower parts of both sides and the bottom in the western sections; to the east, however, its growth (III/15; V/20) had been abruptly ended by large amounts of generally clean, unweathered material coming from the north (III/14, part of III/13; V/15). This consisted of angular chalk rubble and varying mixtures of chalk, coombe, and brick-earth, all more or less loam-free. Since these deposits were deep in III-V, but hardly apparent in II and not at all in I, they may well have come from a partial collapse of the bank in that area.

In the parts of the ditch not covered by these thick deposits, ie to the west and on much of the southern side immediately opposite them, alternating layers of weathering product (III/11, parts of III/8, 13; V/14, 17, 19) and humus (III/10, part of III/12; V/16, 18) had continued to accumulate regularly. Although some subsequent more limited deposits of clean material had come in from the north (III/17, 9, parts of 8, ?12), the latest turf-lines overlay the area of collapsed bank make-up and so generally covered the ditch's lower north side as well (III/6; V/7, 9, 10, 13 interleaving with weathering products V/8, 11, 12).

This more normal process of infilling had then been interrupted a second time. Very much clean material had entered the ditch, consisting of layers of chalk, of chalky brickearth, and of mixed chalk, brickearth, and coombe (III/l–5; V/1–6). Most of it had come, once again, from the north but now the effects were general to the whole ditch, extending across the bottom to its south side as well.

Unfortunately the truncation of these fills by F2 and F6, and by the later downgrading, removed any indication of their full extent. So it could not be established if any (or how much) of this material had entered from the south. Nonetheless a very large part of it probably came from the bank, by then perhaps from its deliberate reduction.

Other excavated features

F2 and F6 were lengths of what was almost certainly the same feature. Their function was presumably to re-establish ditch Fl's line, but perhaps only as a local property boundary. F6 cut into the ditch fills for some 18.50 m from the eastern edge of excavation, After an interval, presumably for an entrance, of a little under 3 m, its line was continued to the western site boundary by a similar but smaller feature F2. F6 varied in width, at the cleared level, between 1.80 m to the east and *c* 1.60 m towards its western end, and had an almost constant depth of a little over 0.50 m. F2 was 0.90 m wide and *c* 0.40 m deep. Both had a single fill of very compact cleanish ferruginous sandy clay with only a few chalk lumps and flecks, A distinct ironpan had formed at its base.

The fill did not appear to be the result of any natural processes; it was entirely homogenous, and contained no bands or lenses of weathering product nor any distinct pebble trails. Since it seems to have been deliberately put in F2 and F6 before any primary silt could accumulate in their bottoms, the two may merely have been dug to remove a fence-line or wall. [149] This may have happened when, just before the Maltings were built, properties to either side were united for the first time. They certainly seem to have been dug before the downgrading was done, as the greater width of F6 suggests. [150] Alternatively, the two features may have been parts of a ditch which was kept clean right up to the time of its infilling.

A little to the north of F2, features F3, F4, and F5 were clearly post-medieval. [151] F3 was the bottom of a shallow pit, cut by post-removal pit F5 and itself cutting another, F3.

Dating and discussion of F1

The large ditch Fl was clearly a continuation of the extant southern arm of the *magnum fossatum,* which still survived as far as the west side of High Street no more than 200 years ago. [152] The 1959 section across the western arm recovered two sherds from beneath its bank. These provide an earlier 13th century *terminus post quem* for its construction[153] which should also apply to the earthwork east of High Street. Seven Romano-British sherds were recovered [154] and 19 of *c* 12th to early 13th century date, all randomly distributed in its upper fills. Only one sherd (which was Romano-British) was found below material from the initial collapse of bank make-up (IV/28 = III/25, V/27).

Perhaps the chief problem arising from the excavation of ditch F1 concerns the nature of its bank. The 1959 section across the western arm produced no evidence that, at that point, the bank had been frontally revetted; and on the present site any such evidence would certainly have been removed by the 17th century downgrading. There was, however, a very noticeable difference between the way in which the ditch's western and eastern parts had been filled.

Sections III, IV, and V received the majority of their primary fills from the south. This may simply reflect Fl's course across a pronounced south-north slope on which surface drainage carried silt into the ditch and caused its southern edge to weather more quickly than its northern. Yet the clear dissimilarity between the quantities of primary weathering product from each side might also indicate that the bank, beyond the northern edge, was firmly consolidated. A wide berm would have delayed the return of eroded make-up to the ditch; while a frontal 'wall' of stacked turfs, or a general spread of them on the bank's surfaces, would have given it a reasonable measure of stability.

Sections I and II showed that relatively little material had come from the north until most of the surviving ditch fills were already deposited; whereas considerable amounts had entered III, IV, and V from that side, only shortly after initial silting had ceased. Its quantity and order of deposition, moreover, were consistent with a succession of slumps forward of bank make-up. The lower deposits mainly consisted of chalk (of which the upper parts of the bank would have been constructed); while the later ones had a sizeable brickearth and coombe content (which would have formed the lowest layers of its make-up).

Several inferences are legitimate. The bank may have been separated from the ditch's northern edge by a wide berm, and-whether or not its southern face was consolidated-the eastern part on this site may have partially collapsed a long while before the western. Alternatively, only the western part of the bank (the length nearest to High Street) may have been consolidated, so rendering the eastern more liable to early collapse. Perhaps the latter is more reasonable, since the bank's approaches to a gateway may well have been more elaborately constructed than its intermediate lengths. This might entail no more than a short length of frontal revetting to either side of the gateway. Indeed, the apparent confinement of several successive phases of collapsed material to the same abrupt western limit seems inconsistent with the existence of a bank similarly, or not at all, revetted for its entire length on this site.

The way in which the latest surviving fills entered the ditch poses a further problem. It was clear from all sections that a large amount of essentially non-humic material had entered F1 from the north at a late stage in its infilling. This probably came from the bank, but it is not certain if it merely represented a further, but now general, collapse, or if most of its surviving make-up had been deliberately thrown back into the already substantially infilled ditch. Unfortunately F2, F6, and the subsequent downgrading removed much of the evidence relevant to solving this problem. From observation of what survived, deliberate backfilling seems inherently more likely. This need not mean the abandonment of the *magnum fossatum's* line as a property division, since there is no reason why F2 and F6, or whatever they may have replaced or removed, should not have merely re-emphasized an extant boundary rather than restored an ancient one.

There is one other problem. While the 1959 excavation may not have revealed the original profile of the ditch (below, pp 79–80), those exposed on the Cinema-Maltings and the 'Rose & Crown' sites differed quite considerably. The angle of slope of their sides was very similar, but the ditch's bottom on the former site was roughly twice as wide as on the latter. [155] The reason for the difference is not clear. It may merely be due to the work of separate teams of diggers or to some other arbitrary factor. It may, however, reflect greater difficulty of excavation through the flinty, cryoturbated chalk of the northern valley side; or, again, may have come about through a belief that the ditch would need a wider bottom, wherever it ran at right-angles to the slope, to compensate for the greater amount of weathering product deposited in it by surface drainage. (The original profile of the 1959 section was probably not dissimilar from that on the 'Rose & Crown' Hotel site.)

3.7 The Gold Street Maltings site (Figs 8, 10)

The site had a limited frontage on Audley Road and lay in the area between the Cinema-Maltings site (to the west) and Elm Grove. Permission was obtained for very limited investigation as deep as, but not below, the top of the natural subsoil.[156]

A single 2 m trench was cut by machine for *c* 48 m from the southern site boundary to within 12 m of the northern boundary. Preliminary work showed that the area had been downgraded before the construction of the (extant) premises, although the effect of this was by no means so severe at it had been on the Cinema-Maltings site. At most-on the Audley Road frontage-the level had only been reduced by *c* 0.80 m. Recent yard surfaces and rubble make-up varying from 0.10 m to 0.20 m deep directly overlay the natural subsoil, which consisted of coombe and some limited mixtures of coombe and sandy gravel. At the cleared level the soilmark was found of the continuation of the ditch excavated on the Cinema-Maltings site.[157] Here, however, it was considerably less truncated, surviving to a width of some 5.60 m.[158] Its southern edge lay 37.50 m from the southern site boundary.

The limitations on excavation to depth allowed only a few centimetres of the exposed fills to be removed. this was nonetheless sufficient to suggest that the ditch had received almost ail its latest filling from the north, and that this material consisted of loam-free mixtures of sandy brown clay and clayey brickearth with some angular and rounded chalk lumps and flecks.[159]

Although the area north of the ditch was cleaned by hand with great care for a distance of over 7.50 m from its northern edge, there was no trace of a bank make-up or of any features likely to have contained frontal revetting. Careful attention to the area near the southern site boundary failed to find any continuation of the linear features sectioned a little north of Audley Road on the Elm Grove site (below, p 77).

3.8 Elm Grove, medieval and later features (Figs 12–14, 38—40)

Several extensive linear features seemed to be medieval field and property boundaries. Series of these were found near the western, eastern, and southern limits of the Elm Grove site, each lying roughly parallel to its modern counterpart. The southern arm of the *magnum fossatum* was also located in soilmark. Unfortunately, the site owners' limits on the extent of excavation prevented any work where the western and the eastern boundary features came into contact with the southern ones and with the *magnum fossatum* itself. Accordingly, it could not be seen if any of them predated that earthwork, nor even which individual features were in contemporary use. The succession of features was not similar enough in each series to relate them without direct stratigraphical links. It could only be seen that the latest feature in both western and eastern series had a clear, though different, relationship to later medieval ploughing; and that the southern one could also be related to that ploughing, but apparently not within the same field.

The western series of boundaries F300-F314 (Figs 13, 40)

The very bottom of a wide ditch (F300 and F301) lay, on a north-south alignment, at the western edge of the main area. Some 23 m of the ditch survived below the ploughing horizon, although it was progressively more truncated to the south until its bottom passed entirely above that level. It may have marked the earliest rear boundary of tenements fronting on the east side of Gold Street.

The ditch probably had a bank along its eastern edge and, although it was too shallow to give any clear indication, may have been recut at least once. A break in its line of *c* 4 m suggests a junction with an east-west track. A concentration of flints in the bottom of F300 for *c* 2 m from its northern butt end could have come from rough metalling on the track; but as there were no flints in the southern butt end of F301, their presence there was probably fortuitous.

A very shallow slot, F304, was probably contemporary with this entrance; its position and alignment suggest that it could have filled the corresponding gap in the ditch's bank. A post-removal pit, F307, may also belong with these features.

F300 and F301 were themselves the recut of an earlier, though slightly less deep ditch (F302) on the same line. This only survived in the entrance through the later ditch, and was too insubstantial to show evidence of any accompanying bank. A number of small, very shallow post-removal pits (F310–F313), convincingly sealed by the fills of F300 and F301, may have been associated with this earlier ditch.

F303, F306, and F308 seemed non-archaeological, and were perhaps caused by the roots of small trees or bushes on the bank. Two post-medieval features were found: F305, a timber-lined well tank, and F314.

The eastern series of boundaries, F315-F318, F320-F322 (Fig 38)

Two successive linear features were found a little over 4 m west of the modern boundary wall. The earlier, F3 15, was a well defined ditch of which progressively less survived from north to south. It had had a bank to the east and may have been recut at least once. The latest fill was sterile enough to suggest that, on its abandonment, the ditch had been at least partially backfilled.

Its successor was a fence which was perhaps renewed at least once before its final removal by trench F318. F316 and F317 probably removed posts ancillary to an early phase of the fence. Both had been infilled before F318 was dug. In Trench V two such trenches were found, F318a and F318b, which had identical fills and were apparently contemporary. They had presumably removed a line of posts to either side of a narrow entrance which was clearly an original

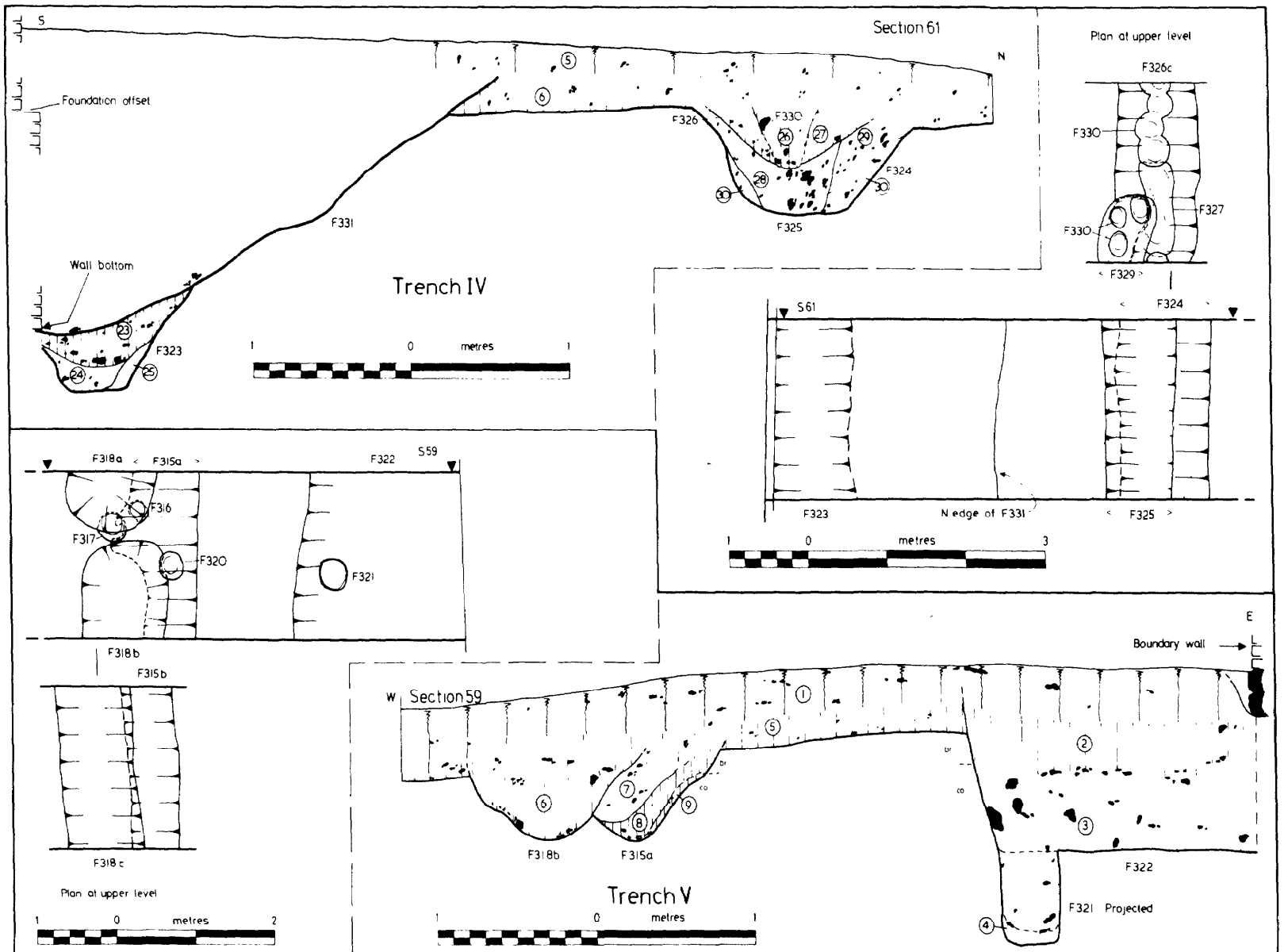


Fig 38 Elm Grove, Trenches *IV, V, plans and sections. For key to sections see p 30*

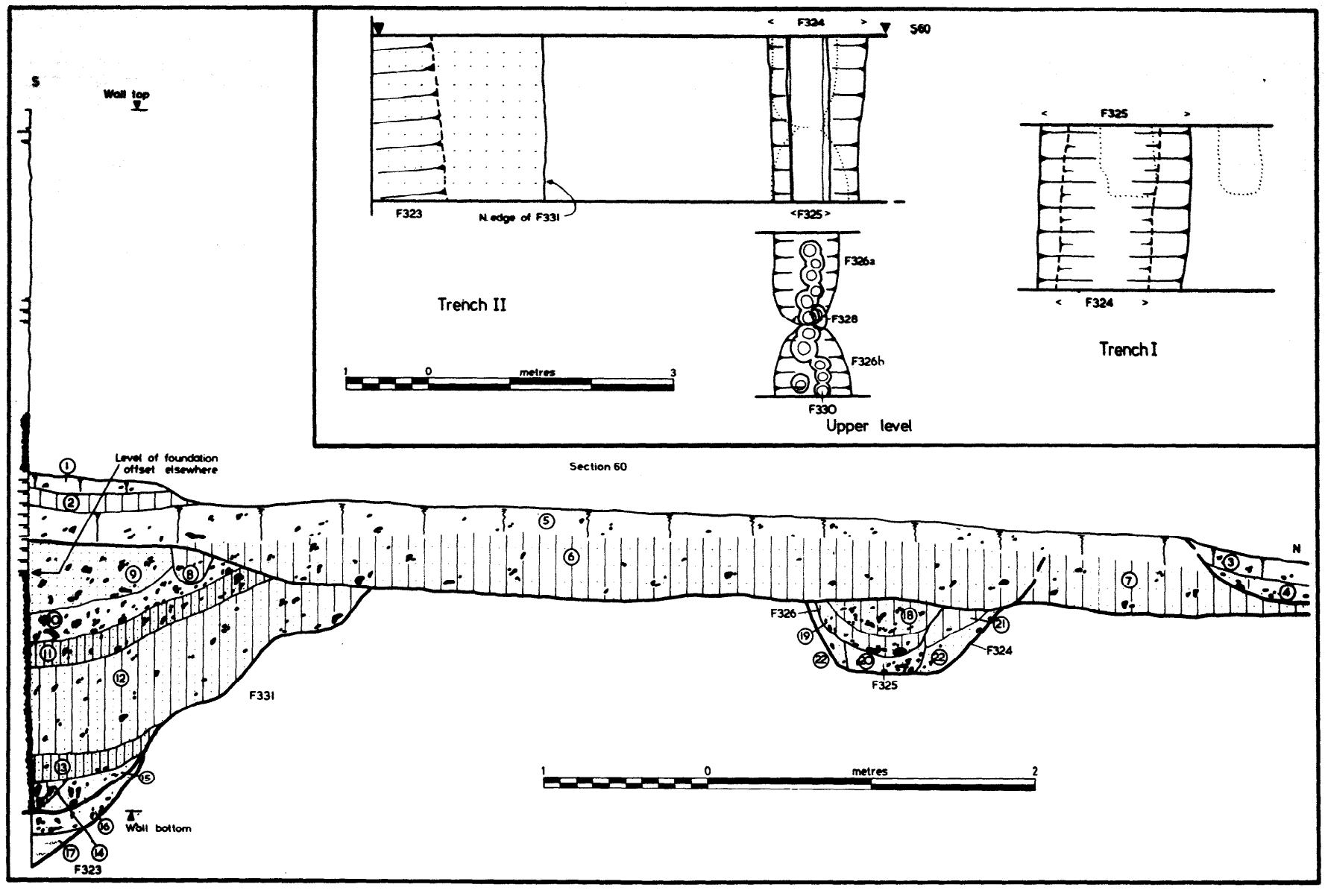


Fig 39 Elm Grove, Trenches I, II, plans and section. For key to section see p 30

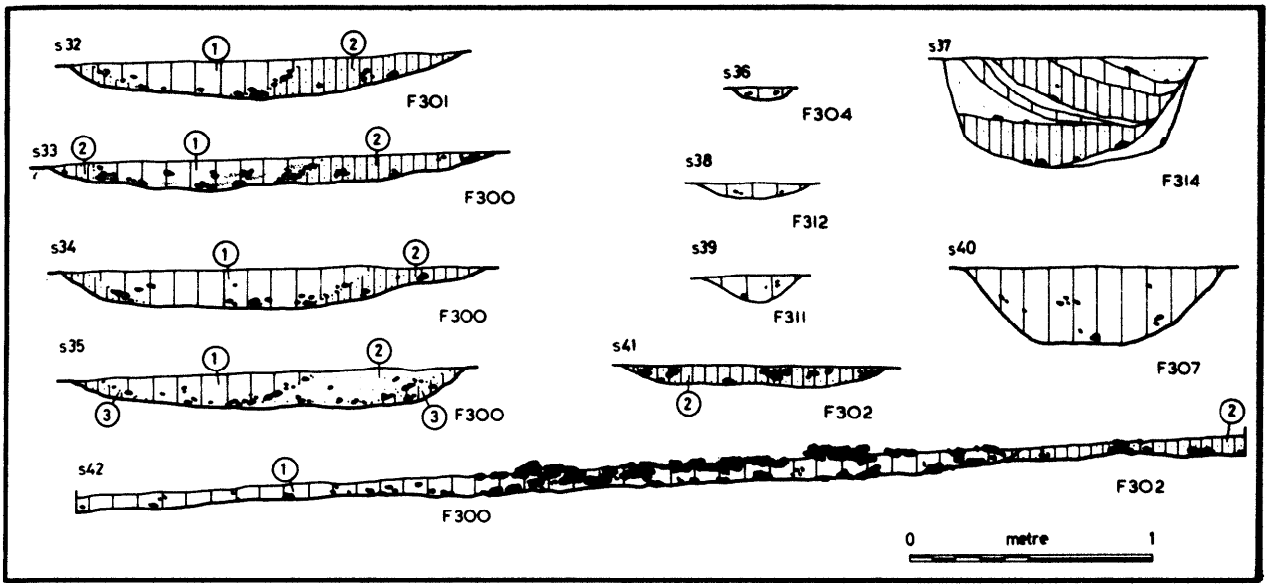


Fig 40 Elm Grove, sections s32-s42. For key see p 30

feature of the fence. This entrance had been temporarily blocked by a single post, later removed by F317.

In the final period of ploughing the cultivated area extended at least as far as the eastern site boundary (as was evident in Trench VI). Immediately west of F318, however, there was the residue of a well developed negative lynchet, so earlier ploughing must have stopped at the line of fence posts eventually removed by F318 (and presumably also at the ditch F315 which they replaced). A large feature of unknown function (F322) and two post-removal cuts (F320 and F321) were all clearly post-medieval.

The southern series

The magnum fossatum *F319* (Fig 12)

The location of Trenches I-IV was by agreement with the site owners, and II-IV were confined to the topmost landscaped level. Trench I, however, was continued for a further 12 m to the north on the understanding that features found beyond the artificial scarp (which separates the two levels of the site) would not be excavated. Accordingly, as on the Gold Street Maltings site, it was only possible to locate the *magnum fossatum* (F319) in soilmark, to record its surviving width of *c* 6.20 m, and to note the extent and appearance of its top fills.

The latest fill of F319 was an extensive brown loam with many small, and a few medium, rounded lumps of chalk and some flint pebbles; this was *c* 4.20 m wide at the cleared surface, and extended to within *c* 0.35 m of the southern edge of the feature. It was not clear if it had been deposited to make up the level for cultivation, or had merely accumulated through prolonged growth of humus in the ditch top. To the north of this loam, the other fills chiefly consisted—from south to north-of a narrow band *(c* 0.20 m wide) of mixed coombe and brickearth; a band *(c* 0.60 m wide) of clean and fairly loosely compacted angular chalk lumps; and a band *(c* 0.85 m wide) of a light brown sandy coombe with only a little inmixed brickearth. All three were loam-free and the interfaces between them blurred, not sharp, in soilmark. To the south of the late loam was a slightly loamy mixture of coombe and brickearth, which excavation would presumably show to be several separable fills,

Features 323-336 (Figs 38, 39)

Immediately north of the southern boundary wall (beyond which is Audley Road), several linear features were found. F324, east-west aligned, was clearly a palisade trench, dug to insert or replace a line of substantial posts. The fence had finally been removed by another, apparently continuous, trench (F325) which was filled with firmly compacted mixtures of coombe, chalk, and brickearth.

Further posts had then been inserted on the same line by F326. This cut was found in Trenches II and IV but not in I, where there were no further features of the series. Since the lines of F324 and F326 coincided so closely, there could also have been one or more intermediate phases of fence-lines of which nothing survived later cuts.

In Trench II there was a sequence similar to that found in V. F326 consisted of two separate but contiguous cuts (F326a and F326b), which may have replaced an earlier fence line with the one whose 'ghost' impressions survived as feature F330. There could have been a narrow entrance through that earlier line at the junction of the two cuts. Certainly there seemed to be an entrance in the new fence line, a little less than 0.80 m wide; a subsequent post had

narrowed it to *c* 0.50 m. This was later removed by F328, and the entrance blocked with a line of four posts set immediately to the south. Finally the entire fence was removed by F330, essentially a chain of post-removal pits. The posts set in F326a did not appear to reach the western edge of Trench II. No continuation of the 'ghost' impressions could be seen; rather, F330 widened considerably as it passed out of the trench.

In Trench IV posts had been set in F326c. Two or more of these were later removed by F327, to be replaced by others set in F329 a little south of the original line. F326c became narrower and slightly less deep towards the eastern edge of the Trench, as if approaching a butt end immediately beyond. Indeed, IV lay only a few metres west of the projected line of the features excavated in V and VI, so a fairly wide entrance may have lain just east of IV (possibly modified by the replacement posts in F329). Eventually, as in Trench II, the fence line was removed by F330, some posts individually and some by a continuous series of post-removal pits. There then seems to have been a lengthy period of ploughing across the line of these features (Fig 38; evidence of this in II was destroyed by modern disturbance). It could not be determined, however, if there had been ploughing to either side of the fence line before its dismantlement.

One further linear feature was found in Trenches II and IV, aligned fractionally north-east to south-west of the successive fences, and a few metres to the south. This was a deep somewhat irregularly-sided ditch (F323). Since the majority of it lay beyond the southern boundary wall (increasingly so westwards) and had been destroyed by the wall's construction trench (F331), very little can be said about this ditch. Nothing datable was found in its surviving fills.

Fig 39 shows that the boundary wall's foundations were almost half as deep as the height of its free-standing part. By comparison, the foundations of the eastern boundary wall (built in 1833, and apparently of contemporary build with the southern wall) were very shallow, even over backfilled feature F322 (s59 in Fig 38). It is likely then that the wall-builders found the ditch F323 to contain loose unconsolidated soils; or else that, as the contemporary boundary, it was still largely unfilled. In either case the need for such substantial wall footings suggests that the ditch's latest use did not predate wall construction by very long. It is likely in fact that F323, or its predecessor on the same line, marked the boundary after the fence line had finally been dismantled by F330.

Dating and discussion

A total of 187 medieval potsherds was found during excavation on Elm Grove. Of these, 18 came from the removal, after machining, of a small residue of ploughed overburden; and 43 were in post-medieval features. The remaining 126 sherds were distributed among features which had all clearly been truncated by later medieval ploughing:

F300/301, fill 1:	62 sherds, of which 2 were of late 10th or early 11th century date (St Neots ware), and 3 of late 11th or 12th century date; the remainder all lie within the 13th and 14th centuries
fill 3:	53 sherds, of which 1 was of late 11th or early 12th century, and 6 of probable 12th century date; the remainder, again, lie within the 13th and earlier 14th centuries
F304:	one probably early 12th century sherd
F307:	one 14th century sherd
F310:	one probably late 12th century and one 13th century sherd
F315, layer 7:	one probably 12th century sherd
F324, layer 31:	four 13th or early 14th century sherds
layer 32:	one 13th century sherd
F326, layer 18:	one 13th century sherd (probably first half)

One possibly 15th century sherd and two others of the later 16th or the 17th century were found in features which postdated the ploughing, together with 61 earlier, clearly residual, sherds. The large amount of 17th century (and later) pottery in the same contexts should indicate the date by which ploughing had ceased.

Recent consideration of the pottery found in 1959 beneath the bank of the *magnum fossatum* shows that none of it need be later than the earlier 13th century, thereby allowing an earlier *terminus post quem* for its construction than the excavators suggested.

The artificial scarp, which separated the upper and lower landscaped levels of Elm Grove, lay immediately south of the *magnum fossatum's* ditch (F319). Trench I showed that it had been formed partly by downgrading the area to the north, partly by raising the ground level to the south with redeposited soil. So it is quite likely that a faint trace of the earthwork could still be seen when the landscaping was done, at some time between 1758 and 1833. Alternatively, the earliest map of Saffron Walden (of 1758; ERO T/M 90) clearly shows two parallel field boundaries, on an east-west alignment, which seem to extend beyond the present Elm Grove boundaries. The more northerly of these lines up exactly with the southern arm of Gold Street (which lay immediately north of the *magnum fossatum's* bank). The other is more or less on the line of the Elm Grove scarp. So it seems that the two boundaries enclosed precisely the strip of land through which the *magnum fossatum* ran. This strongly suggests that, whatever the later history of the bank and ditch themselves, the fields to north and south were still separated in 1758 and, consequently, that there had never been any ploughing across the course of the earthwork. The matter is of some importance, not least because of the observation by Ravetz and Spencer (1961, 13) that, 'While there is plenty of documentary evidence for the existence of the Great Ditch on the west side of the High Street, docu-

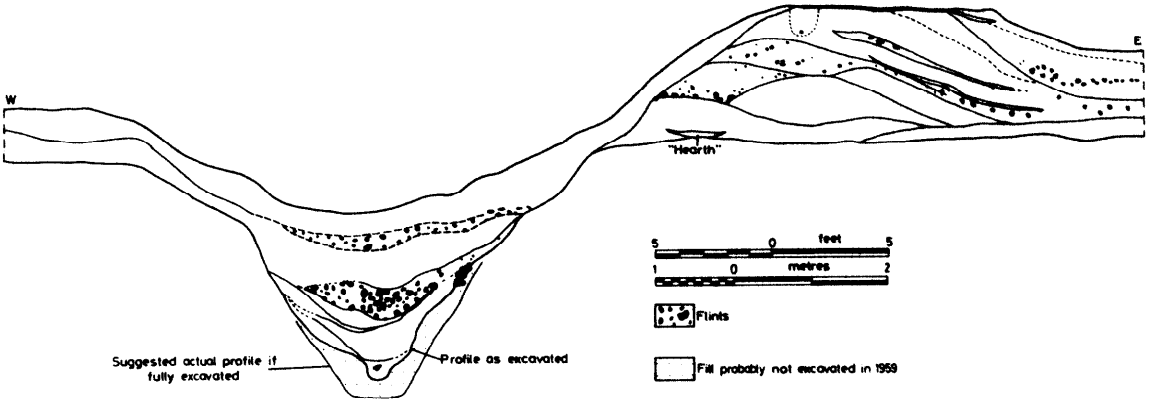


Fig 41 Simplified section of west arm of magnum fosatum, based on Ravetz & Spencer 1961, Fig 3, and site drawings

mentary evidence for the supposed extension on the eastern side is conspicuous by its absence although there are many charters dealing with land to the east of the High Street'.

If the earthwork remained a conspicuous landmark across the area between, say, Gold Street and Fairycroft Road for some centuries, then it is strange that there should be no documentary reference to it. But if it had only survived long enough to give the adjoining fields well established boundaries, and had then been more or less levelled, the earthwork's course would probably have continued as a field in its own right or as a 'green lane'. Accordingly, the absence of documentary references to the *magnum fossatum* east of High Street would be far less surprising.

Trench I could not be continued far enough to the north to locate any archaeological feature forming the more northerly of the two 1758 boundaries. Its line, however, was still followed in 1972 by a hedge across most of Elm Grove, and is so marked on 1:2500 OS sheet TL 5237-5337 (1970).

3.9 The 1959 section across the *magnum fossatum:* a reconsideration

(Fig 41)

For the sake of brevity, discussion is confined to notes on individual statements in Ravetz & Spencer 1961 (indicated by page and line references).

1 *'The ditch happened to be dug at the junction of the two different [subsoil] deposits described ... In profile it is an irregular V, with the east side, dug partly in chalky sand, slightly convex, and the west side, dug in chalky boulder clay, slightly concave'* (p 143, lines 6, 15-17). The descriptions of the so-called natural subsoils exposed in either side (p 143, lines 1-4) clearly suggest that much primary ditch fill was left unexcavated. This is supported by Pl III (p 159) which shows the south face of the excavation trench; fig 3, p 146, *'Section of the ditch and bank',* shows the north face. Fig 41 here is based on the excavators' original site drawing of their main south section, but also illustrates the present writer's rough estimate of the ditch's true profile. The suggestion is further strengthened by the statement that *'The ditch ... varies in depth, in the space of the section dug [*10 feet wide*], from just over 7 [*2.13 m*] to just over 8 feet [*2.44 m*]'* (p 143, lines 14-15). Such a variation would give the ditch's bottom a gradient of 1:10, which seems inexplicable in terms of the prevailing surface topography. Moreover, it is clear from the records of 19th century excavations and from recent observation of contracters' trenches that natural chalk in the area lies no more than 2-3 feet (0.6-0.9 m) at most below the present ground surface. Since the ditch's bottom, as excavated, was some 11 feet (3.35 m) below that level, but no natural chalk was exposed anywhere in the trench, it is very probable, if not certain, that the true profile of the ditch was never established. The excavators seem to confirm this by their remark that *'In the square south of the main section the top layer of chalk [*in the bank*] was over 2 feet [*0.61 m*] thick'* (p 143, lines 27-8). From where were this and other recorded thick layers of chalk obtained, if' not from upcast from the ditch's excavation?

2 *'The bank is of simple construction, without a berm ...'* (p 143, line 20). The excavators may not have taken sufficient account in their text of the effects of weathering on the upper ditch sides. The recent sections elsewhere in Walden (above, p 70) suggest that this would have widened the ditch's top very considerably. For this reason, their claim that there was no berm on the site should perhaps be discounted.

3 *'The filling of the ditch makes it quite clear that at some time the natural silting was thoroughly disturbed'* (p 144, lines 5-6). In subsequent paragraphs the excavators describe *'A clean and compressed layer of decayed turf ... completely sealed by a dump of flints in the middle of the ditch'* (p 144, lines 10-11). These two fills overlay *'a layer of orange gravel... [which] must, however, have been disturbed, for it is not lying now at an angle of rest'* (p 144, lines 8-9). Their explanation is *'that at some time the ditch was almost completely cleaned out, and that the turf and stones were dumped in very soon*

afterwards' (p 144, lines 17-18). The whole sequence, however, was clearly paralleled on both the Cinema-Maltings and the 'Rose & Crown' Hotel sites (Fig 36). Fig 3 and pl III seem to contradict the excavators' belief that the orange gravel was not at an angle of rest. It may have come from a collapse of the ditch's upper eastern edge (see p 143, lines 1-2: *'Below the humus is a layer, over one foot* [0.31 m] *thick, of bright orange gravel');* while the turf and almost matrix-free flints (p 144, lines 22-4) probably represent the collapse of some form of capping and/or frontal revetting of the bank.

4 The two-pronged fork said to have been found among the flints (p 144, line 29) may need to be excluded from any attempt to date their introduction into the ditch. The excavators suggest that it was of 19th century date, but do not illustrate it. Such forks are perhaps more typical of the 17th and 18th centuries. It seems unlikely, however, that the object *'could have worked its way down from above'* (p 144, line 30). It may still suggest a rather late date for the deposition of the flints, or else the fork may have lain in an intrusive feature not seen during excavation.

Section 4 The medieval finds

4.1 The medieval pottery

(Figs 42-44)

by CM Cunningham, with a contribution by J S F Walker

Two main groups of pottery are considered. The greater part (Figs 42-3) comes from the 1876 excavation in the cemetery area within the *magnum fossatum* (Smith 1884; SAFWM 1911.11.1-17: SAFWM 1979.83), with some isolated finds made in the same area during redevelopment in 1936-7 (SAFWM 1979.84).[160] It also includes a few sherds found in Castle Meadows in 1912 (SAFWM 1912.66-67).[161] This pottery, previously unpublished but mentioned by Ravetz and Spencer (1961, 13, 15), is deposited in Saffron Walden Museum, but with no record of individual sherds' provenance, which limits the usefulness of its study. Only rims, and some bases and other sherds of unusual interest, seem to have been retained. The second group (Fig 44) comprises the medieval pottery found during the excavations of 1972-8, although the material from the Abbey Lane excavation is dealt with separately by Martin Petchey, p 92.

The fabrics

Four main fabrics are present: A, handmade; B, St Neots ware; C, Thetford-type ware; and D, local early medieval wares, which are by far the most numerous.

A Handmade pottery

Two fragments of sand-tempered Anglo-Saxon pottery were examined in thin section by J S F Walker, who concluded as follows:

Cinema-Maltings 1973, Fl: 'The fabric of this sherd is very similar to that of a sherd found at Orton Hall Farm, Peterborough (Mackreth 1978). It appears to belong to a group of identical Anglo-Saxon fabrics found at Peterborough, Kirby Bellars (Leics), Agarsby and Howell (Lincs), and Osbournby (Lincs) known as Orton-type ware (Walker 1978). This pottery is found in early 5th century contexts at Orton Hall Farm. At present, however, the only indications of a final date for the fabric comes from Kirby Bellars, where it is apparently superseded by early Stamford wares (Hurst 1967-8). Unfortunately, it is not possible to specify a definite source for this pottery.'

Elm Grove 1972-3, F300, fill 2: 'The writer is unable to suggest a specific source for this material, but it may be the product of local glacial drift'.

A full report on these is in microfiche section 4.

One or two vegetable-tempered body sherds were recovered from the 1876 excavation (P J Drury, pers comm). These are now lost, but it seems likely that they were of middle Saxon type (cf Cunningham 1982). Four sherds, of which three are illustrated (Fig 42.1, F43.32, 33) are Maxey-type ware (Addyman & Whitwell 1970, 96). They somewhat resemble St Neots ware in fabric, being fairly soft, shell-filled, and purplish-pink in colour, although they are coil-built. Indeed, the St Neots ware fabric is believed to have developed from Maxey-type wares (Hurst 1976b, 323). Fig 42.1 is a characteristic Maxey-type form (eg Addyman & Whitwell 1970, 99, fig 2) with a pierced lug and presumed flat base, but Fig 43.32 lacks the distinctively flat-topped rim associated with group III pottery from Maxey itself (cf Addyman 1964, fig 14). While no exact source can therefore be suggested for this material, it clearly lies within the tradition of Maxey-type wares. With the exception of a single possible sherd from Southampton (Addyman & Whitwell 1970, 98), Maxey-type ware does not normally occur outside the Lincolnshire/ Northamptonshire area. It has been postulated, however, that the middle Saxon period of Essex was almost aceramic (Drury & Rodwell 1978, 146). Much of the small amount of pottery which does occur in this period seems to derive from often quite distant sources (Drury forthcoming b), and the presence of Orton-type ware, as well as Maxey-type ware, at Saffron Walden (see above) may suggest the importance of contacts with the east Midlands. Maxey-type ware is at present dated to the 7th-9th centuries (Addyman & Whitwell 1970, 100).

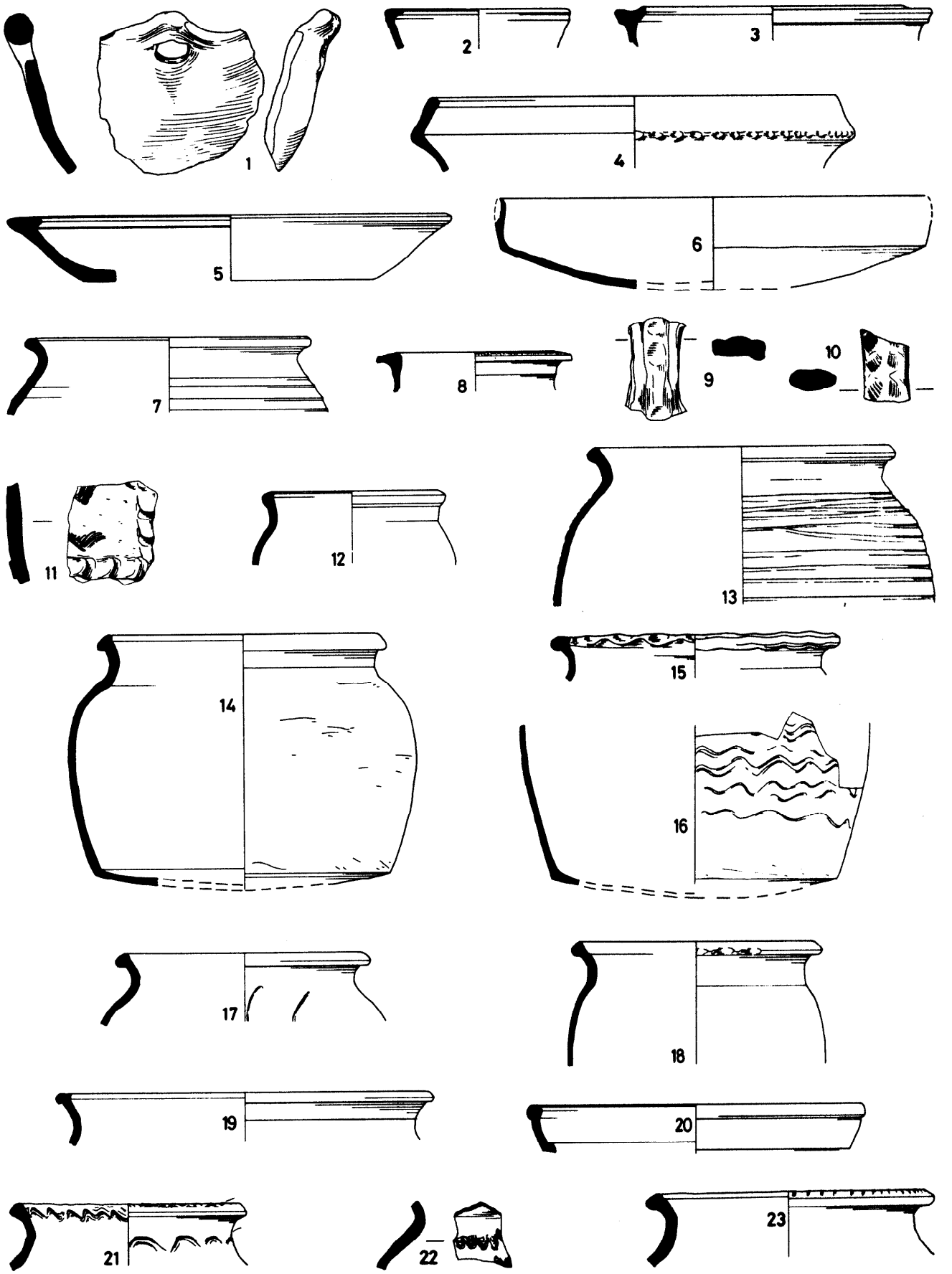


Fig 42 Medieval pottery from the 1876 excavations: I, Maxey-type ware; 2-6, St Neots ware; 7-11, Thetford--type ware; 12-23, local early medieval wares. Scale 1:4

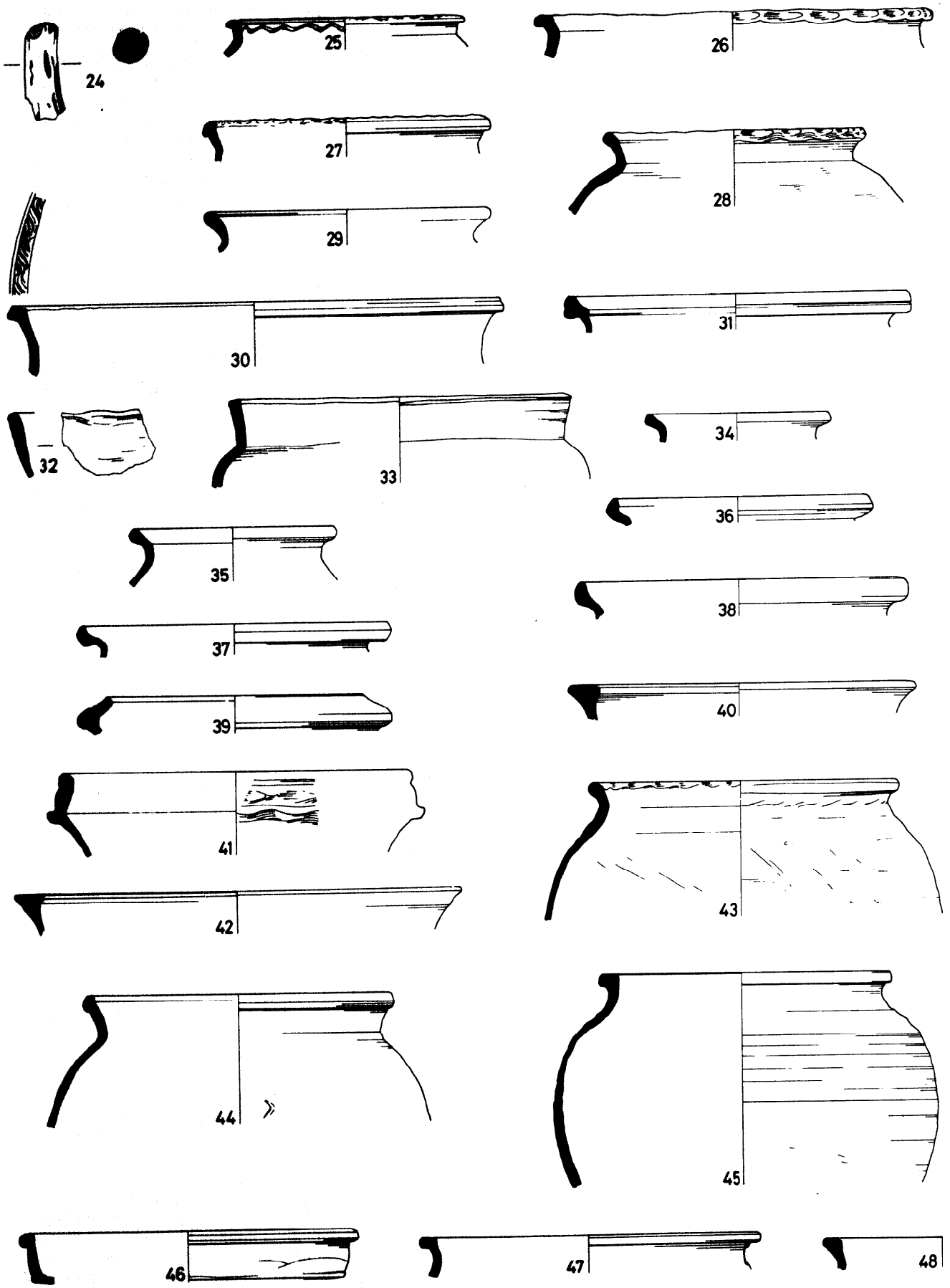


Fig 43 Medieval pottery, 1876 excavation: 24-31, local early medieval wares. Contractors' works 1936-37: 32, 33, Maxey ware; 34-42, St Neots ware; 43-46, local early medieval wares. Castle Meadows 1911: 47, 48, greyware. Scale 1:4

B St Neots ware

St Neots ware generally occurs between the late 9th and early 12th centuries (Hurst 1956, 53; 1976b, 323). It is well represented, both in typical Saxo-Norman cooking pots with hollowed and everted rims (Fig 43.34-38), and in wide, shallow bowls, some carinated, with more diverse rim forms and decoration (Fig 42.4, 5; Fig 43.41, 42). The smooth, fairly soft fabric has a grey core with pinkish surfaces and is filled with finely crushed shell.

A few sherds of sand- and shell-tempered pottery have been found in Walden (Fig 44.63, 78). These are similar to St Neots ware, except that the clay is increasingly tempered with sand as well as shell, which is less finely crushed and present in smaller quantity. Limited shell-tempering also often occurs in the local early medieval wares, but they share no other characteristics with St Neots ware. Local sand- and shell-tempered ware can occur in Essex in the late 10th century (Drury forthcoming b), but continuous development tends to obscure the differences between these and the local early medieval wares (cf Hurst 1976b, 323).

C Thetford-type wares

This second Saxo-Norman pottery type (Hurst 1957, 42-5) does not occur in Walden in the same quantity as St Neots ware, with which it is contemporary. Two types of vessel are represented: cooking pots (Fig 42.7) in a fine, hard, uniformly grey fabric, but not necessarily of the typical Saxo-Norman form; and storage jars (Fig 42.9-11, fragments only), in a coarser, sandier, light grey fabric, often with applied strips and incised decoration. The majority of the Thetford-type wares were recovered during the 1876 excavation, although only a selection has been illustrated. Fragments of cooking pots and storage jars were also found in 1959 in the lower bank of the ***magnum*** *fossatum* and the underlying turf line (Ravetz & Spencer 1961, 12, fig 7), and more recently two body sherds were found in excavations in Abbey Lane (p 92).

D Local early medieval wares

Several distinct types are discernible within this group:

Group I	Thin-walled, without noticeable tempering (eg Fig 42. 12-15) and therefore with smooth surfaces, although roughly made
Group II	Thin-walled, with sand- and shell-tempering (eg Fig 42.16- 18)
Group III	Thin walled, with sand-tempering only (eg Fig 42. 19, 20)

(Groups I to III often have grey cores with brown surfaces.)

Group IV	Thick-walled and sand-tempering, usually with a grey core and brown sandy surfaces (eg Fig 42. 21-23)
Group V	The remaining local early medieval wares, in diverse fabrics present in insufficient quantity to classify

'Early medieval ware' was first defined by Dunning (1959,44-8) and an origin for the type *c* 1000 has been proposed (Hurst 1976b, 342-3). In Essex, however, there is a number of local variations which do not conform to Dunning's definition. Recent work at Rivenhall (Drury forthcoming b) now suggests an extreme date range in central Essex of *c* 950-1150. Clearly, however, many of the forms in fabrics 3 and 4 at Rivenhall (differentiated from the so-called 'Early medieval wares' on rim form alone), and dated to the later 12th and early 13th centuries, also occur in the local early medieval ware from Saffron Walden. The term 'local early medieval wares' therefore includes material from this extended date range. It must be noted, however, that there is a hiatus in the pottery excavated from Rivenhall for much of the 12th century, and so some of the forms discussed below may appear in Essex in the earlier 12th century.

The latest material from the 1876 excavation (apart from Fig 43.31) consists of cooking pots with everted rims and a rounded external bead (Fig 42.12-18, 21-23, Fig 43.28). This is Rivenhall form IV of the mid 12th to 13th centuries. Only Fig 43.31 is more developed, but an earlier 13th century date is still quite likely. This suggests an end to the 1876 material not later than the first half of the 13th century. Barnards Yard also produced rims of the above type (Fig 44.68-69, 80), but also everted rims above an upright neck (Fig 44.73, 84; cf Rivenhall Group VI, early-mid 13th century, ibid), again suggesting a date for the infilling of F1 in the first half of the 13th century (see above, p 66).

No material of later 13th century date is known in Saffron Walden other than that from Elm Grove: Fig 44.87, 92, 94-5 have blocked rims without necks, current at Danbury in the later 13th and early 14th century (Drury & Pratt 1975, 128). There is, however, insufficient evidence for suggesting that these rims appeared in northern Essex later than the rest of the county (*contra* Drury & Petchey 1975, 58). Saffron Walden, however, unlike Rivenhall and Mile End, but like Colchester (Cunningham 1982) has produced a large proportion of thumbed rims (eg Fig 44.54). Although they may be contemporary with similar undecorated forms, they are probably representative of the later 12th century.

Pottery from excavations and recording 1876-1937 (Figs 42-3)

Detailed descriptions of all illustrated material are available in microfiche section 3. All of this pottery is unstratified.

Pottery from the 1972-8 excavations (Fig 44)

All illustrated sherds, unless otherwise stated, are local early medieval wares, Group V (see above), or 13th century developments of them. For full descriptions of illustrated material see microfiche section 3. There is also a small but representative residual scatter of these medieval wares in later contexts, in association with some late and post-medieval pottery.

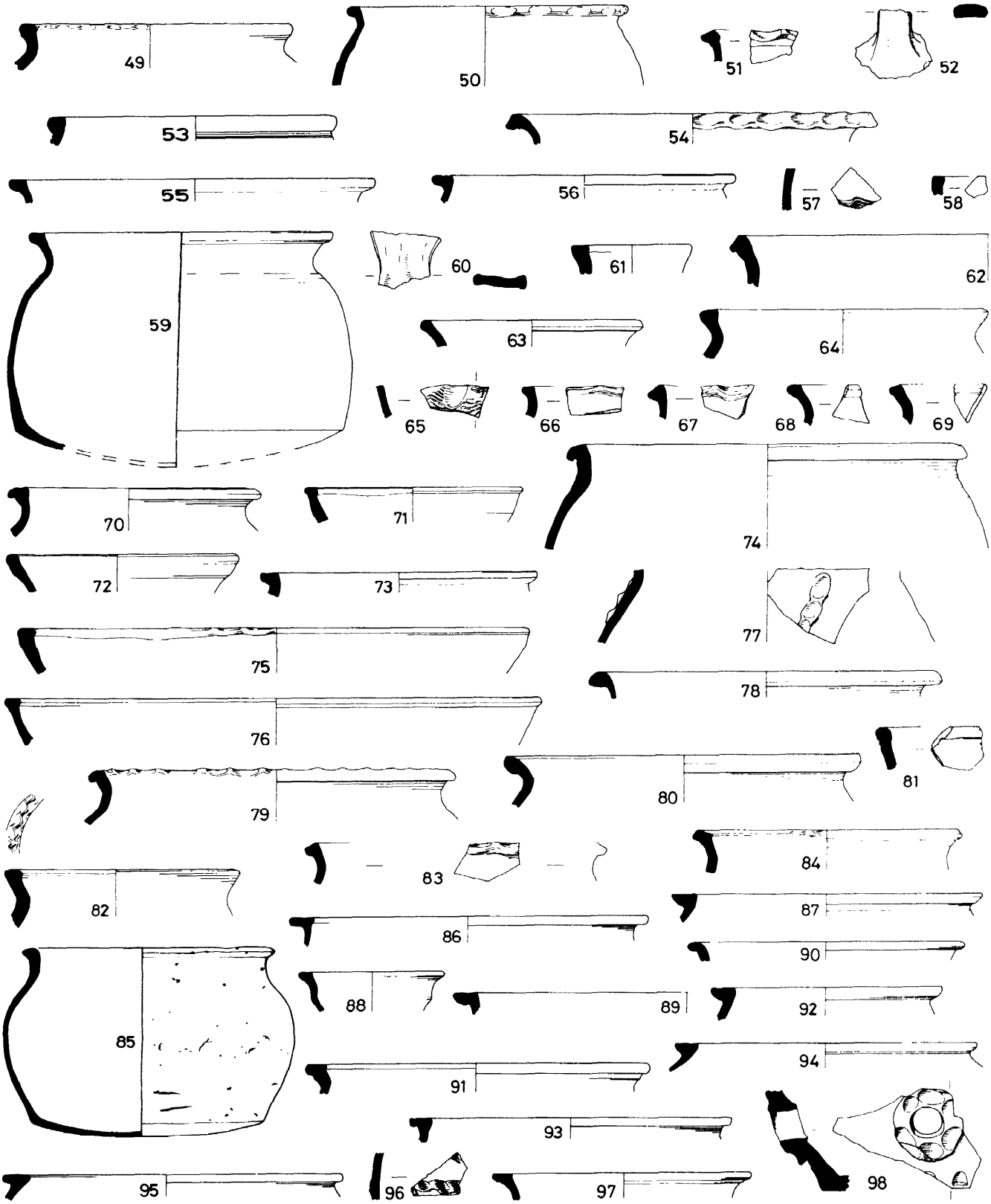


Fig 44 Medieval pottery from excavations 1972-8: 49-53, Castle Meadows; 54-57, 'Rose & Crown' Hotel sue; 58-62, Cinema-Maltings; 63-84, Barnard's Yard; 85, High Street/Abbey Lane; 86-98, Elm Grove. Scale 1:4

Castle Meadows 1973 (SAFWM 1977.194)

Nos 49-53 were found in recent subsoil layers.

The 'Rose & Crown' Hotel site 1972
(SAFWM 1977.189)

54 Fl.III/12. 12th or early 13th century.

Not illustrated, from F1.II/8, three sherds from 12th or early 13th century cooking pots.

Nos 55-57 were residual in post-medieval contexts, and are of later 12th and 13th century date.

The Cinema-Maltings site 1973
(SAFWM 1977.193)

All pottery found in the *magnum fossatum* was of *c* 12th to early 13th century date, with the exception of seven Romano-British sherds, and one of early-middle Saxon Orton-type ware (above, p 80).

Illustrated medieval pottery comprises 58 from F1.II/3, 59-61 from F2, and 62 from a modern pipe trench. Not illustrated: 18 sherds from F1.

Barnard's Yard site 1975 (SAFWM 1977.196)

Nos 63 and 78 are sand- and shell-tempered.

Nos 63-76 came from Fill 5, 77 from Fill 4, 78-80 from Fill 3, 81 from Fill 2, and 82-84 from Fill 1.

For discussion of date, see above, p 83.

High Street/Abbey Lane 1978
(SAFWM 1979.54-57)

85 F1.

Not illustrated: two greyware body sherds from F1, and one body sherd of coarse sandy greyware from F3.

Elm Grove 1972-73 (SAFWM 1977.190-l)

All except 44.88 and 44.98 are from *c* 13th century cooking pots. Fig 44.87, 92 and 94-5 are comparable with Rivenhall form VII (Drury forthcoming c) which appears in the late 13th century.

86-96 F300/301.

97-98 from ploughsoil.

Not illustrated: one hand-made, sand-tempered Saxon sherd from F300, Fill 2 (see above, p 80); two sherds of St Neots ware; 21 sherds from 11th to 12th century cooking pots; 165 sherds of late 12th to 14th century wares; and post-medieval material.

No similar quantity of 13th and 14th century material has been found elsewhere in Saffron Walden. Elm Grove, moreover, was one of the few sites to produce sherds of Hedingham ware, which has a distinctive, fine micaceous fabric, usually light orange or pink buff in colour, with a good quality exterior glaze. The most distinctive Hedingham ware (of which there is as yet no definitive study)[162] is from fine, decorated jugs of *c* 13th century date (cf Drury forthcoming b).

On the Elm Grove site, five such sherds were found in F300, two in F332 and one in F334. Other Hedingham ware from Saffron Walden includes one decorated body sherd from the 1876 excavations and the crucial sherd found below the bank of the ***magnum fossatum*** in 1959 (Ravetz & Spencer 1961, fig 4.9; see n153). The provenance of the cylindrical costrel in Saffron Walden Museum (Dunning 1964, Fig 48.4), which is now known to be Hedingham ware (Drury forthcoming b), is unknown but could well be local. Not enough is yet known about the coarser unglazed grey wares, produced at Sible Hedingham from the 12th century onwards, to allow a close identification, but four sherds (two from F332 and two from ploughsoil) compare very closely with possibly later 12th century pottery from the Hole Farm Kilns.[163] The remaining 13th and 14th century material from Elm Grove consisted of hard, pimply grey and orange wares typical of the area.

4.2 Evidence of industrial activity from the 1876 excavations (Fig 45)

by f Bayley and L Biek

Material preserved in Saffron Walden Museum from the 1876 excavations suggests that the working of both iron and non-ferrous metal, and probably glass working, were undertaken on or near the site.

Iron working

A quantity of slag (AM 785650) consisted mainly of plano-convex smithing hearth bottoms. One piece was rather less vesicular, and could be derived from a smelting furnace, but in the context of the rest of the material and the geographical location of the site this seems most unlikely. It is more probable that it is smithing slag which has remained hotter for longer than normal, resulting in an atypical structure. The cinder (AM 785651) also seems to be a product of iron smithing, its magnetic properties apparently being, in part at least, due to the presence of hammer scale.

Non-ferrous metal working

The fragmentary crucible (AM 785649) illustrated in Fig 45.1 is in a relatively hard grey fabric, containing

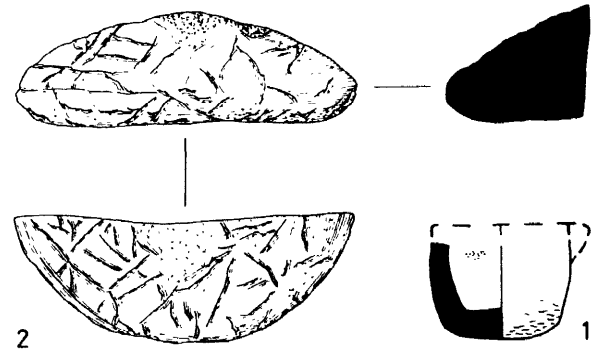


Fig 45 1, crucible used for melting silver; 2, glass 'roundel'. Scale 1:2

some sand-tempering. It is squarish rather than truly circular internally, with an internal width of *c* 20 mm. What might possibly be the base of a pinched-out spout survives, although it is hard to imagine why one should be provided on such a small crucible. There are small areas of deep-red vitreous deposits on the interior surface. 'Milliprobe' (X-ray fluorescence) examination of these was rendered difficult because of the shape of the object, but nonetheless showed the presence of copper; there was no clear result for lead. Small, characteristic, soft brown blobs indicate that the crucible was used for melting silver-from its shape and size probably in making jewellery or other small items, as at Cheddar, in the 10th century (Biek 1979, fig 87, pl XIX), The form is also paralleled at Glastonbury Tor (Rahtz 1970, fig 24.2, 3), from a period centring on the 6th century AD. A post-Roman but pre-Norman date seems likely for this example.

Glass working

Fig 45.2 illustrates a piece of weathered glass, the 'roundel' in the main described correctly a century ago (Smith 1884, 333). It is in the shape of a fragmentary bun (AM 785623), estimated complete diameter approx 85 mm, surviving max dimensions 80 *x* 30 *x* 30 mm deep. It was found 'a short distance from the cemetery' (ibid). The weathered surface, intact almost everywhere, is olive grey and carries a number of impressions on the convex side which appear to be due to straw or grass but which are not detailed enough for further interpretation. The object looks as if it could have been intended for a linen smoother when complete (Newton 1963), but the gob of molten glass was evidently dropped (by accident?) into (a hollow containing) some vegetable matter. While still hot enough it was cut cleanly across with a smooth-bladed tool. Smith (1884, 333) calls this a 'fractured side', but the absence of a percussion bulb (such as was noted on similar objects elsewhere, even 'through' the weathering skin), and other characteristic marks, all indicate a cut. Through small breaks in the surface the unweathered 'black' glass and characteristic weathering layers can be seen. The material is a typical 'forest glass' and would thus not have been made before about AD 1000, or south of the Alps.

4.3 The bronze binding strip from Saffron Walden (Fig 46)

by P f Drury

The late Gerald Dunning intended to supply a note on a fragment of copper alloy binding strip found in

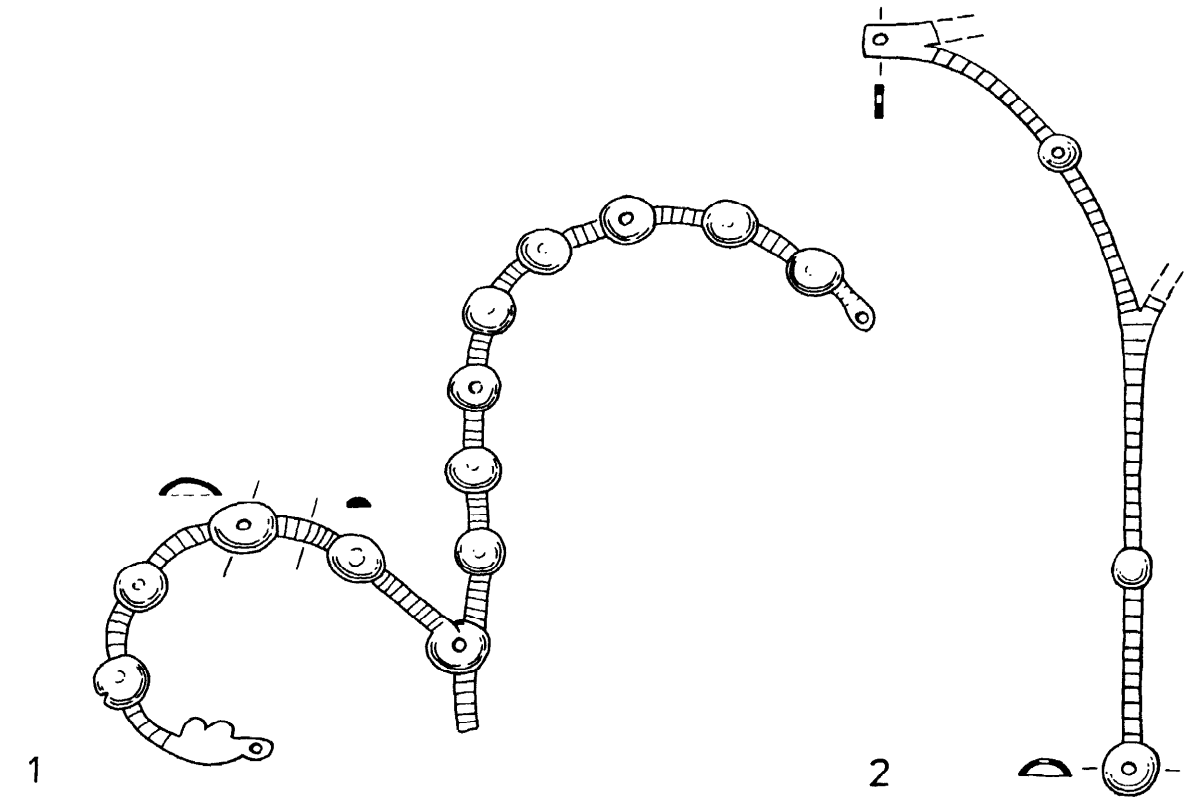


Fig 46 Copper alloy binding strips: I, Lesnes Abbey (after Clapham 1910, fig 39.1); 2, Swan Meadows, Saffron W'alden. Scale 1:2

Swan Meadows, Saffron Walden in 1911, and to compare it with an obscurely published example found in the choir of Lesnes Abbey, Kent (Clapham 1910, 160, fig 39.1). At his death, however, he left only the drawings (Fig 46). The fragment from Saffron Walden (SAFWM 1911:228; Fig 46.2), is wrongly described in *VCH* 3, 196 as 'bronze strapping from a shield'. It was found in association with 13th and 14th century pottery (note on rear of SWM accession card). It is a branching strip decorated with transverse lines interspersed with raised hollow circular bosses, two of which are pierced. One forms a terminal; another terminal is plain but again pierced, doubtless for attachment by small nails. The fragment from Lesnes Abbey (Fig 46.1) is somewhat similar, although decorated with more circular bosses and having one foliate terminal.

These strips seem to have been used to decorate wooden or leather covered surfaces, largely perhaps chests and caskets. Jope and Threlfall (1959) list examples from fourteen English sites (including Walden and Lesnes) and one in Germany: most are of the 12th century but some were probably made in the 13th. The fragment from Lesnes seems to be unique in its foliate terminal; otherwise the two illustrated examples are closely related in their details. Since Jope and Threlfall's paper appeared, the two fragments from Wareham have been published (RCHM 1959; Renn 1960, 60-3).

4.4 The faunal remains

by R M Luff

Of 590 animal bone fragments submitted from S R Bassett's excavations, 455 were identified; those from post-medieval deposits were not subsequently considered. There was no reason to think that any of the medieval material was other than domestic debris. Despite the limitations of such a small sample, it seems probable that *ovts/capra* became progressively more significant during the 12th-14th centuries, although in all phases *bos* remained important. The small number of measurements taken indicated that the withers heights of sheep in the 13th and 14th centuries ranged from 0.533 m to 0.582 m, that is to say within the medieval range.

The contrast between the late Iron Age/Romano-British material (all from Elm Grove) and the medieval material, in so far as *bos* dominates the former to the virtual exclusion of other species, is borne out by studies (in progress) of the material from other Essex sites.

The following tables appear in microfiche section 5 at the end of this volume:

M1 Number and percentage counts of bone fragments
M2 Minimum number of animal bones
M3 Measurements
M4 Withers heights

Section 5 Excavations in Abbey Lane (Figs 47-51)

by M R Petchey

The story of the development of Saffron Walden is a complex one; over the last century, many scholars have contributed to elucidating its problems from H E Smith in 1884 onwards, but their efforts have mainly been concentrated on the medieval town which grew out of the town bailey of the de Mandevilles' castle. The excavations described in this contribution mark a switch in attention back to the Saxo-Norman settlement first described by Smith (1884). In 1876, a cemetery had been excavated in the area now covered by Gibson Close and Gibson Way and bounded to the north by Abbey Lane. The majority of the interments were orientated east-west and were not accompanied by grave goods, suggesting a Christian cemetery. The exception was one female buried with a necklace which included pendants of 10th century Swedish manufacture (Evison 1969a, 336-41; Wilson (1976, 402, n23) considers them 9th century); some Roman graves were also present. As well as the graves a great deal of evidence of domestic occupation was found, including Saxo-Norman pottery, animal bones, spindle whorls, and iron objects.

It therefore seemed likely that one of the nucleii of pre-urban settlement in the polyfocal community of Walden (the other two foci being Brook Walden, now Audley End, and Little Walden) lay in the Abbey Lane area, west of the High Street, and that it declined after the creation of the new town around the present church in the town bailey of the castle. The death blow to the earlier community must have come when the 'Battle Ditches' were constructed through the village site in the 13th century.

In 1975, Uttlesford District Council gave planning permission to the Hanover Housing Association to demolish the derelict former local government offices on the north side of Abbey Lane, between King Edward VI's Almshouses and the lodge of Audley End Park (Fig 8), and to build old people's flats in their place. Because of the importance of the site, potentially overlying part of the Saxo-Norman village, the Archaeology Section, Planning Department, Essex County Council, asked for a condition in the planning consent to ensure archaeological excavation before construction began. In accordance with this condition, the author arranged the excavation described in this contribution in July and August 1976, although trenches C-F were dug later, in July 1977.

The site lies at the foot of the southern slopes of the Slade, a small tributary stream of the Cam. Its western boundary is coterminous with that of Audley End Park.

The chalk on which the whole of Saffron Walden lies was here overlain by reddish clay with flints varying in depth from 0.25 m to the west of trench A to 0.80 m at its east end. Soil formation in an area closely adjacent and on similar substrata has recently been discussed (Limbrey 1975, 182-4, 283; above, p 35).

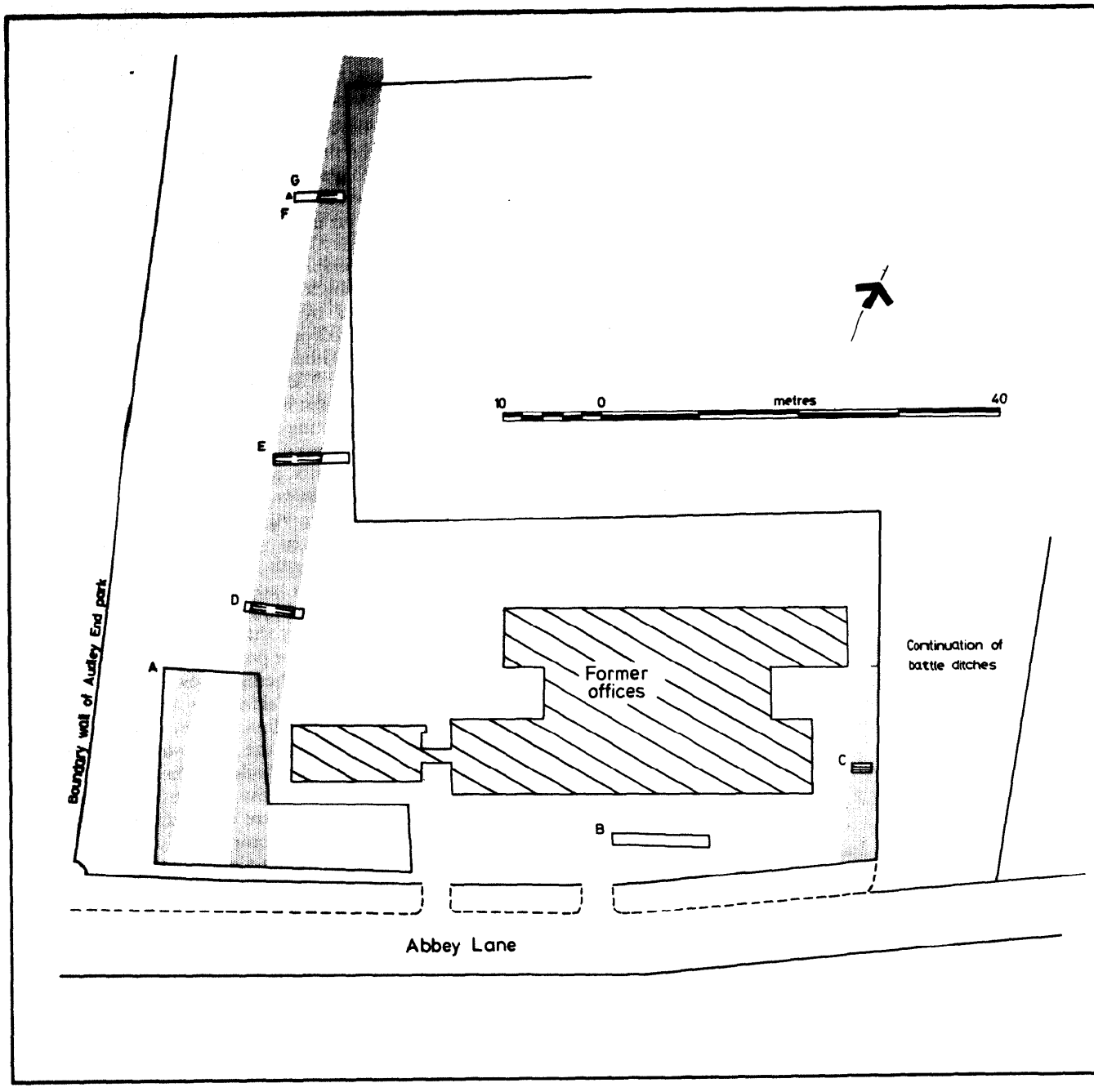


Fig 47 Abbey Lane 1976, site plan

The Anglo-Saxon and earlier ground level had been covered by up to 0.6 m of hill wash, though no clear buried sail horizon was visible. In fact features only became visible at the level of the clay with flints and it was to this horizon that the site was mechanically cleared in Trench A; the other trenches were also dug by machine, Drought conditions prevailed throughout the excavation, and it is possible that some features may have been missed because of this.

The excavations

Trench A (Figs 48, 49)

Trench A was an L-shaped cutting (Fig 48), its shape dictated by the need to clear the largest possible area on the Abbey Lane frontage whilst the offices still stood. Its western edge was curtailed by the discovery

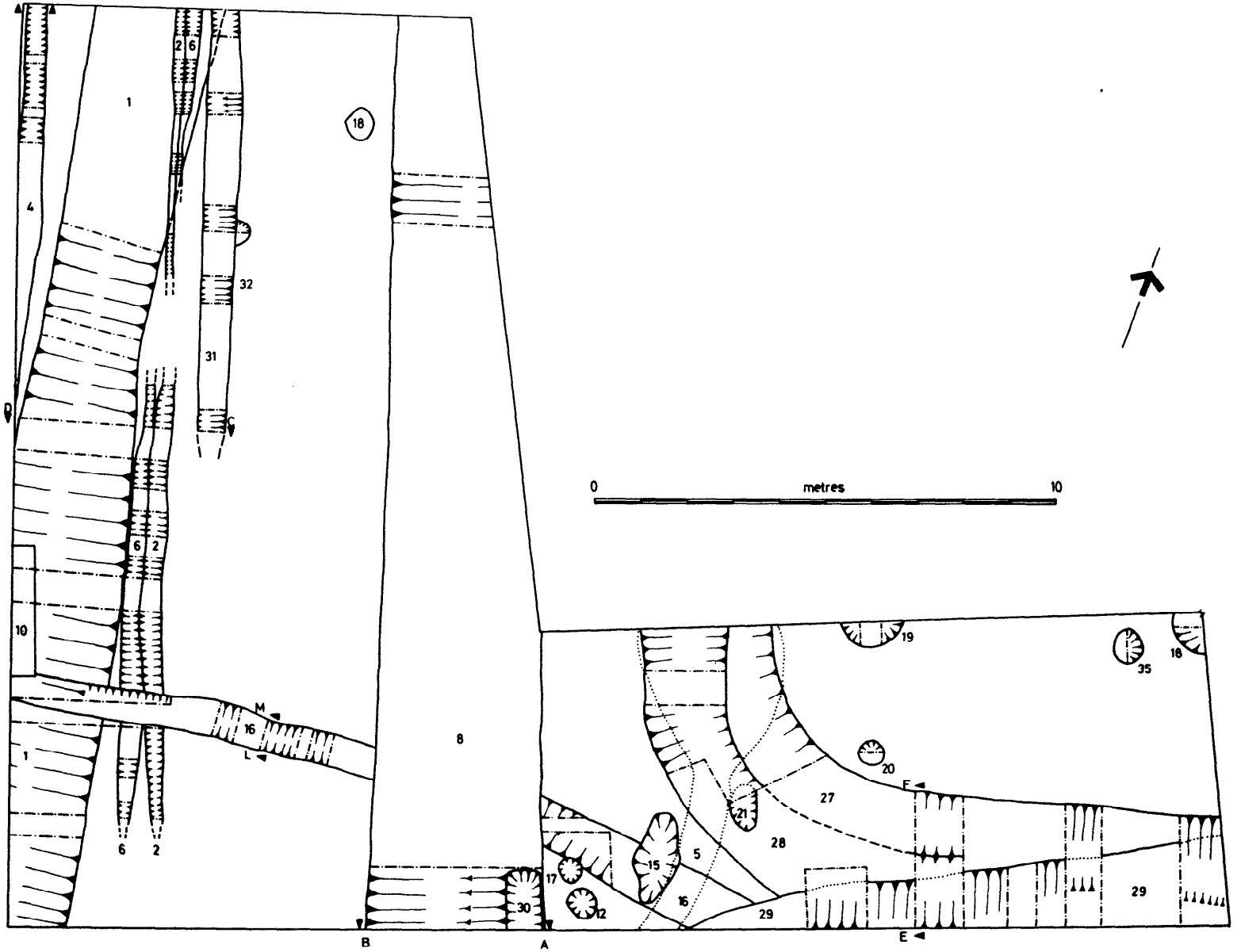


Fig 48 Abbey Lane 1976, plan of Trench A

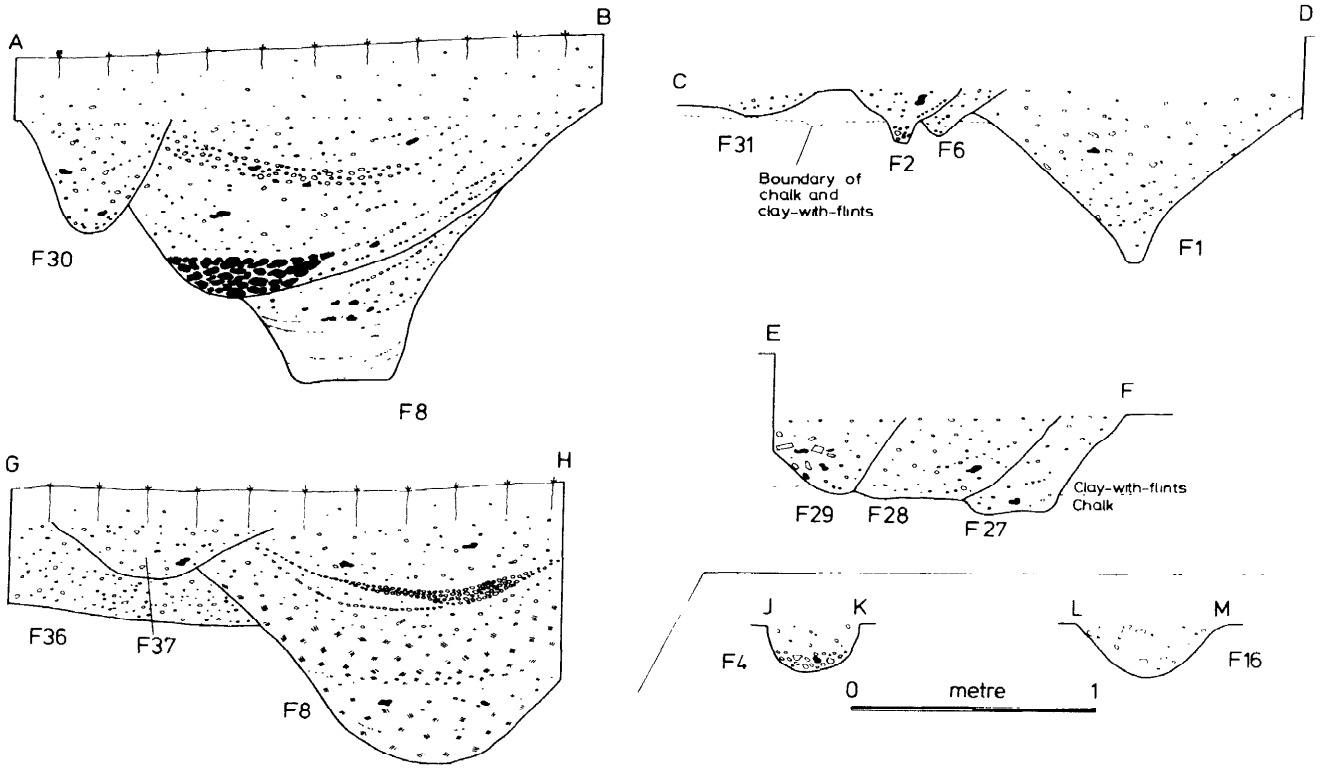


Fig 49 Abbey Lane 1976, sections

of an unknown and unsuspected storm water drain. Three main phases of occupation were indicated.

Period I: Prehistoric and Roman

No features containing only prehistoric or Roman material were found; all such artefacts, which are described in detail with the rest of the finds, are accordingly residual. The scatter of Roman finds accords with the distribution of such material in Saffron Walden along the southern slopes of the Slade, suggesting a farmstead, yet to be located, in the vicinity.

Period 2: Saxo-Norman

The principal period represented on the site was settlement of the 10th to 12th centuries, consisting of a series of enclosure boundaries and associated post-holes. The features definitely attributed to this period are dated either by a stratigraphic relationship, or by the presence of both Saxo-Norman pottery and Rhenish lava quern fragments, and the absence of any finds of later date.

The earliest feature on the site is the boundary ditch, Fl. This ran approximately north-south across the excavation; it showed no sign of butting at the Abbey Lane end. There was a fairly rapid primary silting of clean chalk, followed by a gradual silting of light brown loam which contained, particularly in the upper silts, most of the Saxo-Norman pottery from the site. The upper silts also contained at one point a quantity of lumps of unbaked clay mixed with chalk. This might have been taken for daub, but where a surface survived, there were no marks of wattles; thus it can be assumed that the material was the remnants of either cob or clay lump construction, which are traditional local techniques (Clifton-Taylor 1972, 292).

F1 was superseded, after it had substantially silted, by a series of palisade trenches, F2, F6, and F31. F6 is earlier than F2, but the relationship between these two and F31 is not established; all three cut Fl at its northern end. They were not continuous, each petering out towards the south of the excavation, presumably as the ancient ground level rose.

Cutting across this pattern and postdating it was a shallow ditch or palisade trench, F16, running east-west, slightly tangentially to Abbey Lane, its fill containing a quantity of Saxo-Norman pottery.

The final feature of undoubted medieval date was a large ditch, F8, aligned north-south, and clearly cutting the palisade trench, F16. At its southern end, it had two phases: the first as a V-shaped ditch, which was allowed to silt almost to its full depth before being

recut to a U shape. A curious feature of the recut was a hard packed layer of large flints, associated with the earliest silting of this phase. It may be compared to the similar flint layer at the bottom of the recut of the ditch of the 'Battle Ditches' as revealed (but not recognized) in the 1959 excavations (Ravetz & Spencer 1961). In the subsequent silting of the recut ditch was a tile of 16th-17th century date. The location of sections of F8 was restricted by the future layout of the old people's flats and it is not known how far north this recut continued.

It is clear that the recut of F8 is much later than the original and was open in the post-medieval period. The relationship of F16 to the original F8 is impossible to determine because of this recut, but F16 is considered to be earlier because, when it was silting up, Saxo-Norman pottery was still in the area in sufficient quantity to fall into it, whereas the fill of F8 is notable for its sterility.

A number of other features probably belong to this Saxo-Norman and later phase, but are isolated from the stratigraphic sequence. F4, a palisade trench, is probably another phase of the boundary marked by Fs 1, 2, 6, and 31. Some at least of the postholes 12, 13, 17, 18, 19, 20, and 35 may also belong to this phase, but yielded no diagnostic evidence. Posthole 32 is certainly Saxo-Norman, as it is cut by F31.

Period 3: Post-medieval

The principal features of post-medieval date in Trench A were three successive ditches, Fs 27, 28, and 29. The former two ran north-south towards Abbey Lane before turning east and running parallel to it. The latest, F29, ran more or less parallel to Abbey Lane, and must be a roadside ditch for it, cutting the two earlier ditches. A number of rubbish pits intruded into earlier features, notably F10 which contained recent paint tins.

F5 (indicated on Fig 48 by dots) was a brick-built drain and flint-filled soakaway of mid 19th century date, giving a *terminus ante quem* for the earlier ditches. The only other dating evidence is a coin of 1700 in the fill of F29.

A full list of features and layers in Trench A is contained in Section 9 of the microfiche supplement.

Trench B (Fig 47)

Trench B was a machine cut trench to test the nature of the archaeological levels in that part of the site. The clay with flints was covered with an overburden 1 .00 to 1.2 m thick. Two shallow postholes and a small gully were located, all of which contained pottery of early medieval date. Excavation was not continued as the depth of footings proposed for the new building was only 1 m.

Trench C (Fig 47)

This small trench was machine dug to establish whether the Battle Ditches continued north of Abbey Lane. Despite problems caused by still-functioning services it was possible to locate the lip of a large ditch which it is presumed is indeed the northward continuation of the Battle Ditches mentioned by Lord Braybrooke (1836, 148).

Trenches D, E, and F (Figs 47, 49)

These trenches were excavated by machine to establish the line of the ditch, F8, northwards through the site. In none of these sections was it recut as in Trench A. In Trench F (Section G-H, Fig 49), which approaches the line of the Slade, the lower fills of the ditch were grey waterborne silts, indicating its connection with the Slade. Trench F also located a ditch, F36, cut by F8 and running at a tangent to it. This may be a continuation of Fl, though underground services prevented verification of this connection, F37 was a later intrusive pit.

Discussion

Taking into account the evidence for Saxo-Norman occupation in the immediate vicinity, it is possible to assert that the Saxo-Norman features on the site represent the boundary of a toft of the medieval village, originally demarcated by a ditch, then by a series of fences. Both methods are common in excavated medieval villages. This toft must have been aligned on a precursor of Abbey Lane, which formed its southern boundary; the northern was presumably the Slade.

There is a conspicuous lack of evidence of building in the largest area examined, Trench A, though the quantity of material in the features discovered indicates that occupation was not far distant, perhaps in the region of Trench B. This lack may be due to the location of the trenches but the cob found in Fl provides an alternative suggestion, for, except under favourable circumstances which did not prevail in Saffron Walden, cob buildings leave little or no archaeological trace.

Cob remained a local vernacular building material for many years and a number of cob-built cottages survive in north-west Essex. It is therefore likely that there is in Saffron Walden an addition to the list of medieval cob villages (Beresford & Hurst 1971, 91). Further evidence in support of this assertion comes from the report of the 1876 excavations. The large quantity of what H E Smith described as 'daub' may also have been cob,

It is difficult to draw any conclusions concerning the economy of the village, or of the area of it in or near the excavations. The animal bones do not constitute a sufficiently large sample for any conclusions to be drawn from them; nor can the concentration of bronze objects and glass in F4 be used to argue the presence of a richer than average household.

F16 represents a radical change in the land use pattern. Its fill contains Saxo-Norman pottery, so, although later than the Saxo-Norman occupation, it was silting up at a time when levels containing such pottery were still extant. Cutting across the toft boundaries, and tangential to Abbey Lane, F16 must

represent a re-enclosure after the abandonment of domestic occupation on the site in favour of the new

It remains to discuss the large north-south ditch, F8. A number of possibilities suggest themselves. The similarity of size and fill of F8 and the 1959 Battle Ditch section, together with its parallel alignment, makes it attractive to speculate that F8 might be connected with the 13th century town enclosure that the Battle Ditches represent. The preserved section ends on the southern side of Abbey Lane, and the present excavations have confirmed Lord Braybrooke's observation that they continue to the north of it; the gap is presumed to be the western entrance to the town. In this first hypothesis, F8 might become part of a barbican for this entrance. Our knowledge of the earthern defences of small towns is limited, as Barley recently pointed out (1976, 60), but it would be at present without precedent for a fairly simple earthen bank circuit to have such a complex entrance as this hypothesis would suggest, and so it must be considered unlikely that F8 is connected with the Battle Ditches.

It has been argued that F8 is nothing more than the eastern boundary of Holywell Field, the open field which lay between the town and the Abbey (Cromarty 1966, map 3). This field was enclosed to form the park of Audley End House in the 16th century; the present park boundary runs along the west of the excavation site and until cogent reasons can be produced for the change of alignment at the enclosure, the present line must be supposed to be the eastern boundary of Holywell Field.

Most of the deserted village's site became incorporated in a field called *Lotegoryshale,* and it is known that this was subdivided by a number of ditches (Ravetz & Spencer 1961), of which the Battle Ditches were but one. It is simplest to suppose that F8 is one of these ditches, though rather too large to demarcate the closes in which the Saffron crocus was grown and which surrounded the town (Cromarty 1966).

The excavated material

All the material is from Trench A, unless otherwise stated. The report on the worked flints from Walden, by E Healey, with a contribution by A Clydesdale (Section 2.3), includes those from this site.

Pottery (Fig 50)

The pottery from the excavation, not a large sample, fell into a number of recognizable groups.

Flint-gritted ware

Three sherds of coarse handmade flint-gritted ware were found. In Essex such sherds are usually taken to be of prehistoric date (Jones 1969). All were residual in later features.

Fig 50.1: Rim sherd, handmade in black fabric with large flint inclusions; probably early Iron Age (L3).

Roman pottery

Two small sherds of samian and two or three coarse ware sherds of Roman date were found, all in residual contexts.

Grass-tempered ware

There were a number of body sherds of vessels in a handmade grass-tempered fabric. Undecorated, they could date from as late as the 11th century, or as early as the 5th (Dunning *et al* 1959). The context of these small sherds, scattered in the lowest part of the topsoil and in three features of Saxo-Norman date, suggest that they were residual from a Middle Saxon occupation site close by.

Thetford ware

Two body sherds of Thetford ware were found at the bottom of the first cut of F8.

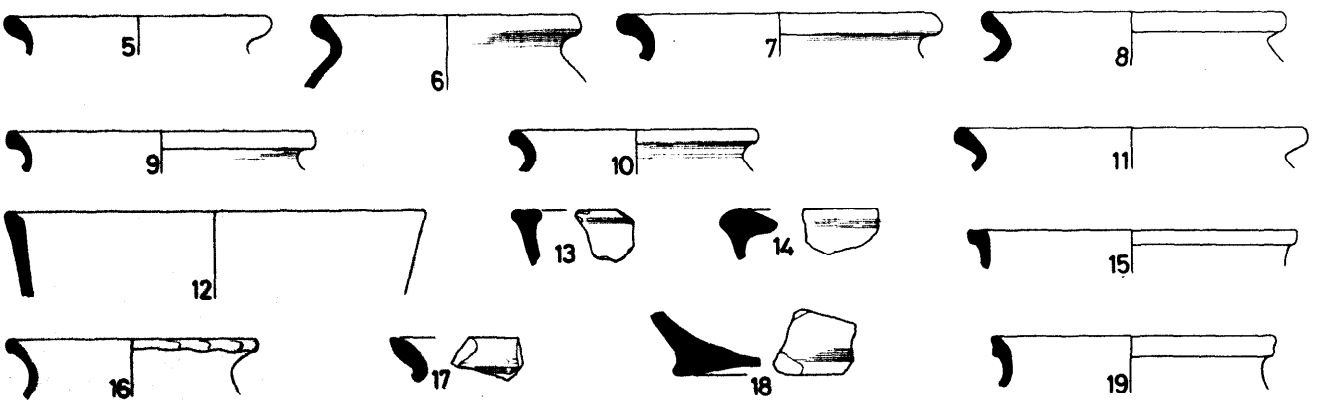


Fig 50 Abbey Lane 1976, pottery. Scale 1:4

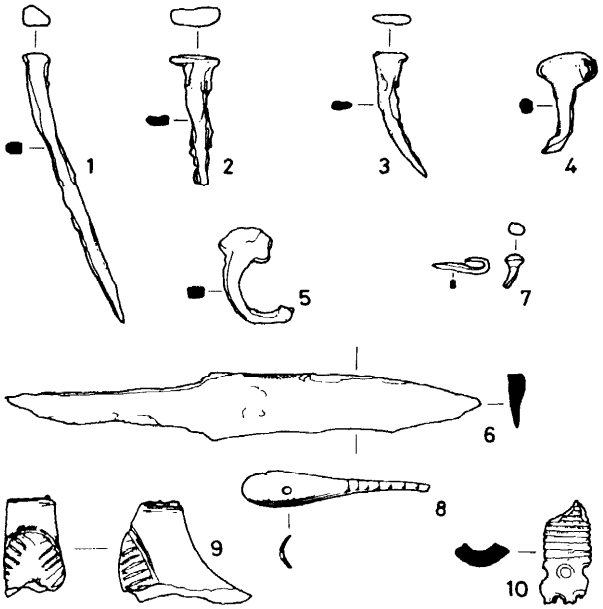


Fig 51 Abbey Lane 1976: 1-6, iron objects; 7-8, bronze objects; 9-10. bone objects. Scale 1:2

St Neots ware

The great majority of the pottery found on the site was of shell-gritted St Neots ware. The three forms identified are the ubiquitous cooking pot with rolled everted rim, the hammerhead rimmed bowl, and the upright-rimmed bowl. The majority of this fabric came from Fl, principally its upper levels, as well as F2 and F16.

Cooking pots

Fig 50.2: Grey fabric; purple/buff/grey surfaces (A3).
Fig 50.3: Black fabric and surfaces (F1).
Fig 50.4 (F15), 5(F1), 6(F16), 7(Fl), 8(F16), 9 and l0(Fl), and ll(F12): As No 2.

Upright-rimmed bowl

Fig 50.12: Black fabric, grey/buff surface (Fl).

Hammer head bowls

Fig 50.13(Fl) and 14(F16): As No 2.

Later medieval wares

Many fragments of unglazed pottery in sandy quartzite-gritted fabrics of the 12th and 13th centuries from the base of the topsoil. Some sherds also came from the later silting of the Saxo-Norman features.
Fig 50.15: Cooking pot, in buff, sandy quartzite gritted fabric with black surfaces (Fl).
Fig 50.16: Cooking pot, thumb pressed rim in a grey sandy fabric with red surfaces (Trench B L4).
Fig 50.17: Rim of ? cooking pot in hard grey fabric with black surfaces (L30).
Fig 50.18: Base of vessel with unusual footring; coarse, grey fabric with flint and quartzite inclusions (F1).
Fig 50.19: Cooking pot in a sandy buff/pink fabric with blackened surfaces (F1).

General comments

The quantity of pottery recovered from the excavations is insufficiently large for any general conclusions to be based upon it. However, the pattern of forms and fabrics is similar to that from other Saxo-Norman village sites in the area, such as Broadfield (Klingelhofer 1974), Therfield (Biddle 1964), or Ashwell (Hurst & Hurst 1967).

Iron objects (Fig 51)

Nails

Three classes of nail were noticed from the excavations. Type 1 was square-sectioned with a slightly larger square-sectioned head and distinguished by its length, up to 100 mm: Fig 51.1 (F1). Type 2 had the more common rectangular section: Fig 51.2 (F4) and 3 (F4). Type 3 were horseshoe nails of fiddlekey type: Fig 51.4 (F1) and 5 (F4).

Knife

Fig 51.6: Knife of standard form, blade and tang together 140 mm long (F1).

Bronze objects (Fig 51)

Fig 51.7: (?) Hook and eye, found together (F4).
Fig 51.8: Small bronze spoon (?) (F4).
This enigmatic object has in its elongated bowl the form of the early medieval spoon (eg Ward-Perkins 1939; 1940, 127-8). Though both the hole in the bowl and the object's small size would seem to argue against its being a spoon, it is difficult to ascribe to it an alternative function. For part of a book cover, for example, the hole is in quite the wrong place for a rivet. The tentative conclusion must be drawn, therefore, that this object is indeed a small spoon. It is after all no smaller than the smaller of the two bowls of a double spoon from Ribe, Denmark (Ward-Perkins 1939, pl LXII), which is 13th century in date.

Bone objects (Fig 51)

Fig 51.9: Carved on what is probably the femur of a sheep are a number of diagonal slashes contained within an oval encircling the corner of the bone. Its use is unknown, possibly a handle or a workpiece (A2).
Fig 51.10: Fragment of carved bone. The decoration is in two zones, one containing concentric loops, the other circular holes pierced through the bone. Its use is unknown, but again it could be a handle (Fl).

Glass

by L Biek

Under the microscope, some fragments from F4 appeared to be of potash glass with an excess of lime, ie 'Wealden' or 'forest' glass, suggesting a medieval but not pre-Norman date. The vessel was probably originally colourless.

Tile and brick

by M C Wadhams

From F1 came a number of fragments of brick and tile, almost all attributable to the Roman period. Though some slight doubt hangs over some fragments, the presumed early date of this feature suggests that all are in fact Roman.

The base of the topsoil (layer 30) produced a number of fragments of early brick and tile of Roman and medieval date, though no date more precise than pre-1500 could be arrived at, save for one tile in which the sanding of one surface strongly indicated a pre-1400 date.

The upper silting of F8 produced two fragments of tile of 16th or 17th century date.

Faunal remains

by R M Luff

Of the 915 animal bone fragments recovered, 315 were identifiable. All the bone of *equus, bos, ovis/capra,* and *sus* had been butchered, probably on or near the site since all bones, including skulls, were represented.

Pathological features were confined to two adult mandibles (1 *bos* and 1 *ovis/capra,* from F1, Period 2) lacking the presence of a second premolar.

The following tables appear in microfiche section 8 at the end of this volume:

M5 Number of bone fragments by species and period, and minimum number of animals by period

M6 Measurements

Charcoal

Identified by C Cartwright

F1	*Quercus* Sp. (oak); *Corylus* Sp. (hazel)
F15; L3	*Quercus* Sp.
F16; L30	*Corylus* sp.

Acknowledgements

I wish to thank the Hanover Housing Association and their architects, Basil and David Hatcher, for permission to excavate and for help in the course of excavation, as well as the Audley End Estate and its agents Carter Jonas from whom ownership passed in the course of the excavation.

Finance was provided by the Department of the Environment and Essex County Council.

Fig 50.2-19, and Fig 51 are the work of John Hurr, and Fig 50.1 of Christine Couchman.

Thanks go to the specialists who provided reports: L Biek, C Cartwright, A Clydesdale, R M Luff, and M C Wadhams; but my greatest debt is to D G Buckley who not only provided invaluable advice at every stage of excavation and writing up, but also drew Figs 47-49. I also acknowledge help from John Cherry of the British Museum on whose advice the note on the probable bronze spoon (Fig 51.8) is based.

The finds are deposited in Saffron Walden Museum: SAFWM 1976:39, 1976:40, and 1976:41.

Section 6 Walden Abbey into Audley End

by PJ Drury

Of the abbey of Walden all truces have long since been obliterated: nor can the site of the buildings be pointed out with any confidence . . . (Braybrooke 1836, 66).

The site of the Benedictine abbey of Saint Mary and Saint James of Walden has long been known to lie close to Audley End House, but no account of the evidence for its siting and layout has previously been published. In 1916, Audley End was thought by the RCHM (1, 236) to stand 'near' the site of the abbey; the Ordnance Survey formerly marked the abbey site 150 m *(c* 500 ft) to the east of the house. However, maintenance work undertaken by the then Ministry of Public Building and Works in 1950, coupled with limited archaeological investigation, showed that the inner ('little') court of the early 17th century house, three sides of which survive and form the basis of the present house, coincides with the abbey cloister.[164] Structural remains of the abbey, and Lord Audeley's house which succeeded it, have also been recorded to the east of the present north wing of Audley End, under the floors of the Tapestry Room and the Dining Parlour, and externally to the west of the latter room. Other evidence, particularly finds of reused building material, has been noted from the 19th century onwards, and much survives at the house. Furthermore, a map in the Braybrooke archives at Audley End sheds valuable light not only on the abbey, but also on the residence into which Sir Thomas Audeley converted it *c* 1538-44. Audley End must now be seen as an example of structural continuity, not only between the abbey and its immediate successor, as is common, but also between the abbey and the Earl of Suffolk's house, apparently begun after 1603. Throughout this section, Sir Thomas Audeley's house is referred to as *Audley End I* and the Earl of Suffolk's house as *Audley End II.*

The limited enquiry into the surviving remains of Walden Abbey and Audley End I which is the subject of this contribution has led, in conjunction with the Inspectorate of Ancient Monuments, to detailed structural analysis of Audley End as it now exists, coupled with documentary research. Our aim has been the elucidation of the layout and design of the Jacobean house, and its evolution to 1745, when the 10th Earl of Suffolk died in possession of it. This work is still in progress; a preliminary report on the results has appeared (Drury 1980b).

The early development of the abbey, as recorded in the Book of the Foundation of Walden Abbey

The house was founded as a priory between 1139 and 1143[58] and advanced to the status of an abbey by Richard I in 1190. The Book of the Foundation of the Abbey (Collar & Emson 1938), although known to contain chronological inaccuracies, provides an account of the early development of the house which is likely to be correct in general terms, particularly for the later part of the period (*c* 1140-1203) with which it deals. For details of the surviving copies of the Book, see Appendix, p 105; quotations are taken from the translation published by Collar and Emson.

The Book asserts (I.iv) that the monastery was originally to be sited at the intersection of four main roads, and in the angle of the Cam and the Slade, presumably the south-east angle between them; and that a cemetery was consecrated on that site by the Bishops of London, Norwich, and Ely in 1136 (in fact probably later). However, the first prior, William, erected a small dwelling for two or three monks, not in the consecrated area, but 'near their own mill . . . between the stream and the public road, in a place of small extent and contracted, with a chapel and some poor and small houses . . . but presently . . . he had gone higher to the cemetery towards the east, near by the angle of the stream, which made a small nook there; but neither there could they have buildings such as were fitting' (I.viii). In Book I, ch xiii, the move is described thus: 'There was a low-lying habitation between the stream and the public way in which the monks at first dwelt, but afterwards a more elevated one in the place consecrated by the Bishops, consisting namely of a wooden chapel of a humble nature with a cloister and outbuildings, a hall with a chamber, a bakery, a stable, with very small granaries, a garden, a shrubbery; a very small pond, a ditch all around the cemetery, new walls to the monastery, of stone indeed, but neither high nor broad, belonging to the presbytery, and wings on both sides with one altar, and besides this a small house, with a little barn nearby the clearing, and given to us as above'. In 1164 Prior William was interred 'in the common cemetery where they thought the chapter house would be erected at a subsequent date' (I.xiii).

The second prior, Reginald, who took office in 1166, 'made two ponds where there had been none before . . . he removed to a distance the road used by certain persons who wished to pass through our enclosure, and enclosing a considerable space of ground on the south side he enlarged the place' (I.xvi). Subsquently, he removed all the buildings which had been erected on the lower ground near the pond, except the mill and bakery, to much higher ground, namely to the south side of the church, and there built a new cloister and chapter more suitably constructed, with other buildings.. ' (I-xvii). Later (II.i) it was said that the brethren 'had raised a tower beyond the choir upon arches, with a wooden structure placed above, raised to a height and fitted with a bell'. The presbytery was also whitewashed and the roof covered with lead. Subsequently 'we gave portions of our more distant lands to those who had possessed land on our south side before our outer door up to that time, and where our granges now remain situated, namely on the eastern side of our church' (II.iii).

For some time previous to her death *c* 1190, Alice of Essex 'dwelt with her attendants, with a becoming and sufficient state, in our houses and her own which she had erected for herself on the south side of the church'. She was buried in the Chapel of the Blessed Mary (II.xv).

Beatrice de Say 'by whose unfailing benefactions the foundations of the church, cloisters, and outbuildings were set on a wider base, [and] walls were erected with their roofs placed upon them', died *c* 1200-4 and was buried in the chapter house (IV.ix). That these buildings were still incomplete after 1190 is however clear from III.viii: 'At this date the abbey had a decent church though not a perfect one with an excellent cloister and outbuildings, at that time to a great extent unfinished'. Also from V.ii: Geoffrey Fitz-Piers (died *c* 1210-14) 'will apply himself to bringing your church to completion which is now to a great extent unfinished'.

It is clear from the foregoing that in the final stage of replanning {Fig 52, site 3), the cloister lay to the south of the monastic church, a fact confirmed by the structural evidence discussed below. Thanks to the benefactions of Beatrice de Say, it seems likely that the originally contemplated layout was enlarged before work had proceeded very far. Although the main buildings, at least, of this layout were roofed by the time of Beatrice's death and the end of the narrative of the Book *c* 1204, the other references make it clear that they were far from complete, and indeed were probably not completed until the middle of the 13th century (below, p 98). Despite the inclusion of the church in the list of buildings whose foundations were set on a wider base (IV.ix), it seems probable that the central tower and choir which had earlier been constructed by the brethren were retained, the nave only being affected.

Earlier, the cloister had lain to the north, 'near the pond', presumably the large pond, latterly Place Pond, shown on an 18th century copy of a *c* late 16th century estate map (PI 18).[165] There is no suggestion that the church site itself was moved. The estate map shows a walled enclosure and some buildings to the

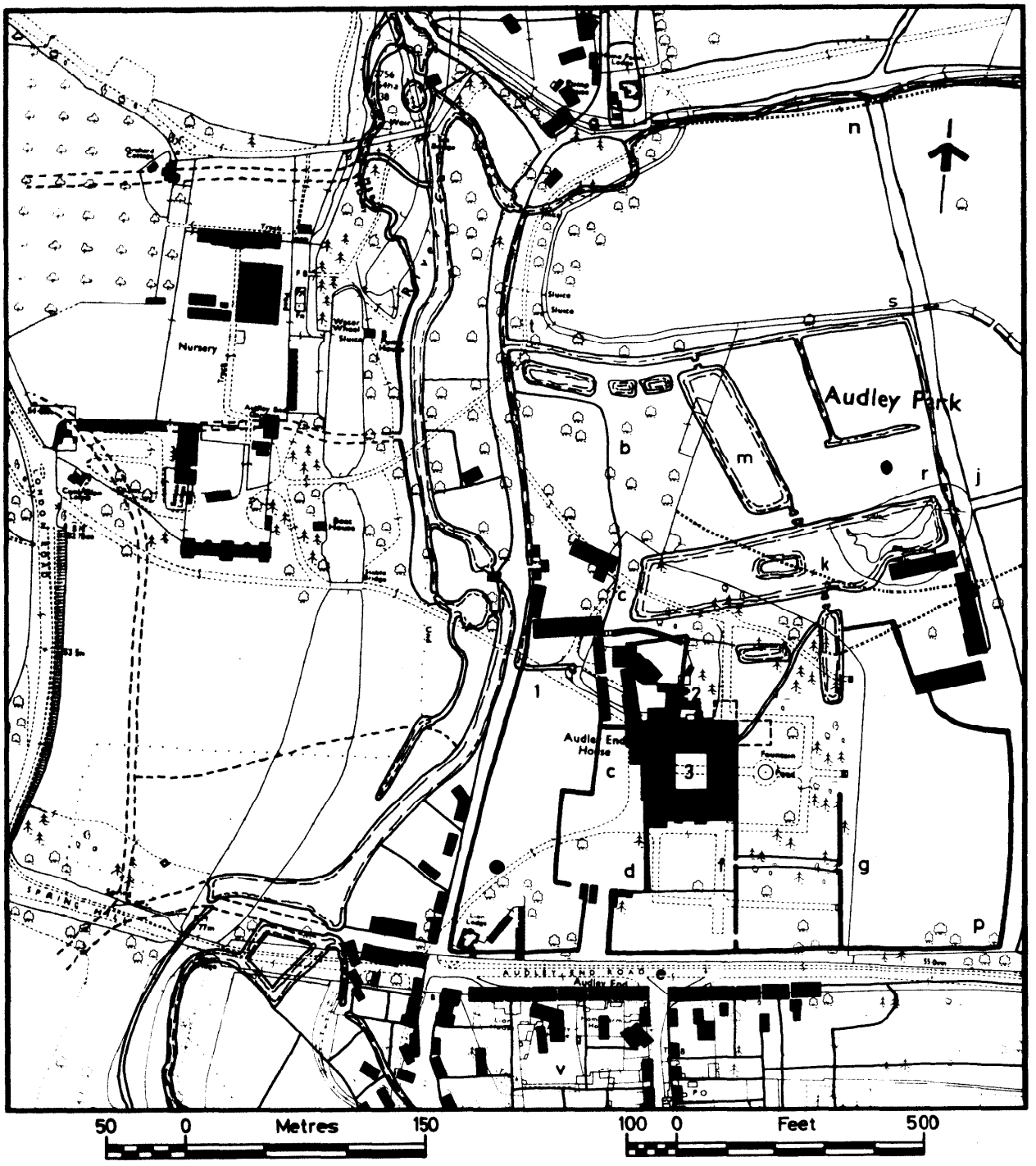


Fig 52 Audley End: the buildings and layout of Audley End I, derived from the estate map illustrated in Pl 18, superimposed (in red) on the modern Ordance Survey 1:2500 map of the area. Reproduced with the consent of H M S O, Crown Copyright reserved

north of the north range of Audley End I, and it is possible that these reflect in a very distant sense the position of the early cloister. Thus site 2 on Fig 52 was the site supposedly consecrated *c* 1140, the first monastic buildings being constructed to the west of it, near the mill, between the public road and the stream (site 1). A mill is shown north-west of the early site of the cloister on the estate map, but by that time the north-south road ran immediately alongside the river; earlier it seems to have lain further east, sections of this course (Fig 52, a-e) appearing as relict features on the estate map. It is clear that all three sites were practically adjacent to one another; as known sites of 12th century, shortlived monastic settlements sites 1 and 2 are of the utmost archaeological importance.

It seems probable that the description of the improvements to the precinct undertaken by Prior Reginald (I.xvi, quoted above) conflates several distinct alterations, viz: 1, the obliteration of a westward extension of the road from Abbey Lane, shown on the estate map (Fig 52,j) and the creation of Place Pond (k) on its line and another large pond to the north (m); 2, the diversion of the main north-south road, marked on the estate map by relict features (Fig 52,a-e), westwards to run along the east bank of the river Cam; 3, the diversion of the western end of what is now Audley End Road, southwards from a line marked by the relict hedges between f and g on the transcript of the estate map, to its present line (see also Fig 4) and the enclosure of the land between the priory and the new road. The original description of the siting of the abbey 'at the intersection of four main roads' is thus explicable, since it was surrounded by four roads-the three diverted by Reginald, and that to the east (Fig 52, n-p) of great antiquity (above, p 7). The second phrase of the description, 'in the angle of two streams' , suggests that the King's Slade followed a more southerly course before the construction of the ponds; the course (r-s-t) shown on the estate map (which inexplicably omits the section east of the north-south road n-p) looks like an artificial diversion. (Also see Section 1.5(e), p 21).

Documentary evidence for the later development of the abbey and Audley End I

by PJ Drury and S Welch

Documentary references to the fabric of the abbey after the close of the account given in the Book of the Foundation are few, and will be given here; for a good general history of the house, see *VCH* 3, 110-15.

From the 12th to the early 15th centuries, it was the burial place of many of its patrons, amongst them Humphrey de Bohun, 4th Earl of Essex, interred in 1258 on the north side of the Chapel of the Blessed Mary of Walden *ad gradus altare;* also William de Bohun, 1st Earl of Northampton, in 1360, and his son Humphrey, 7th Earl of Essex, in 1373. The last members of the family to be buried at Walden were Humphrey and Joan, the children of Thomas Duke of Gloucester and his wife Eleanor de Bohun, in 1399 and 1400; and Joan Countess of Hereford, widow of the last earl, in 1419 (Dugdale 1823, iv, 141). Of the tombs, the only survival is a 17th century copy of the inscription from that of John de Rhodes (died 1381), a knight of the Black Prince's company (BM Harl MS 1537).

In the year 1237, Edmund Archbishop of Canterbury granted indulgences in aid of the fabric, the conventual church being dedicated in 1258. In the same year, the Bishop of Ely consecrated the chapel in the infirmary (BM Cotton MS Titus D XX). At some date between his succession in 1335 and his death in 1361, a new cloister was constructed by Humphrey de Bohun, the 6th Earl, a great patron of religion who was also responsible for rebuilding the church of the Austin Friars, London, in 1354 (Dugdale 1823, iv, 140).

In 1365 an unusual tempest of wind caused great damage to the abbey buildings, especially the church, and application was made to the Bishop of London to award the abbey a portion of the vicarage of Walden in order that they might apply the profits to the task of repair (Newcourt 1710, ii, 623). It seems likely that it was the results of this natural disaster that prompted Joan, Countess of Hereford (d 1419) in her gifts to the abbey of a new belfry, the adornment of the nave with sculptures, and the covering of its roof with lead, following her husband's death in 1373 (Dugdale 1823, **iv,** 134). There are references to burial in the Lady Chapel in wills of 1421 and 1427 (ERO T/A 358).

The convent surrendered the abbey and its possessions to the King on 22nd March 1538, the whole being granted on 27th March to Sir Thomas Audeley in fee *(VCH* 3, 111-12). No inventory can be traced. The estate map (PI 18) clearly shows that *c* 1538-44 he converted the abbey buildings into a residence, rather than building *de novo.* After Audeley's death, the estate descended in due course to Thomas Howard, created Earl of Suffolk in 1603, in which year he is believed to have begun the building of Audley End II. Unfortunately there are no surviving records of the work, but it is now clear that there were two principal campaigns, both of which are likely to have been undertaken between 1603 and 1616. Winstanley's engravings of *c* 1676 show that all visible trace of the abbey and Audley End I was eliminated, although as will be seen their influence remained in the plan. The subsequent history of Audley End is well known, being recounted by Braybrooke (1836) and Addison (1953): for its architectural history *c* 1605-1745 see also Drury 1980b.

Archaeological and structural evidence (Fig 54)

Drainage trenches dug around the south-east corner of the north wing in 1950 revealed part of the north-east angle of the monastic cloister. Four exploratory trenches were subsequently opened in the area (1-4 on Fig 54). [166] From these it is clear that the south wall of

the north wing of the present house rises directly from the base of the south wall of the medieval church, whose floor level was probably about a metre below that of Audley End II. The north-east corner of the cloister walk, and two complete bays along the north wall, were revealed; each bay was *c* 12ft 3ins (3.73 m) wide. The details of the corner shaft (P1 19) and wall shafts W and V, dividing the bays (Pls 20 and 21 respectively) were unfortunately not drawn in detail, but from the photographs it is clear that they are consistent with the 1335-61 date bracket suggested by the documentary evidence (above, p 97). The high standard of workmanship of the presumably vaulted cloister walk is also apparent. Immediately to the west of the corner shaft, the jamb of a blocked doorway opening into the church is visible, above a finely tooled threshold which extends almost to the later steps X (P1 19 and plan, Fig 54). An exploratory trench to the south (2) located the foundation of the north-east corner of the cloister walk, and showed that the dimension from the face of the cloister walls to the centre line of cloister walk wall was equal to the bay width of 12ft 3ins (3.73 m). Eight bays of this width almost exactly fill the space between the north-east corner of the cloister and the east wall of the hall of Audley End II, and since the original inner court of the mansion was square[167] the distance between the north and south wings is the same. The probable layout of the cloister is tentatively drawn on the plan, Fig 54.

Furthermore, excavations (Drury 1981; 1982) in the east end of the south wing of Audley End were undertaken by the writer in June 1979 in advance of floor repairs. Examination of the north wall of the wing showed that the Jacobean brickwork rested on two sections of flint rubble walling, A378 and A379. The former projected inwards from the wall face, and may be part of the core of a wall shaft; the latter was brought to a smooth internal face which retained some plaster. From this it is clear that the wall is founded on the remains of a substantial medieval wall on the line predicted for the south wall of the cloister.

It is thus clear that the north, east, and south sides of the inner court of Audley End II certainly incorporated, and the west side probably incorporates, the lower parts of the walls surrounding the monastic cloister. Such structural continuity strongly implies that the cloister ranges remained more or less intact in the intervening period, and the representation of Audley End I on the estate map (P1 18) confirms this. The east side of the cloister walk appears in elevation; the fact that five rather than six bays are shown is probably due purely to cartographic error, since the number of gablets shown above the cloister walk varies considerably for each range. These probably indicate the addition of a gallery above the cloister to facilitate access to the first floor rooms of Audley End I.

There is little structural evidence for the form of the monastic church, which on documentary evidence lay to the north of the (final) cloister. The estate map shows the north range of Audley End I dominating the others, as would be expected, and extending westwards beyond the west range. But its fenestration and general appearance was by that time wholly domestic, although much of the basic structure probably survived. Trench 3 revealed a large mass of rubble masonry which should lie in the vicinity of the north-east pier of the crossing, although no reconstruction of the outline of the church is possible on present evidence. The remainder of Trench 3 seems to have produced only much rubble and part of a brick drain, despite the fact that it partly overlay the Great Cellar of Audley End II (Fig 54).

From the Book of the Foundation (above, p 95) we know that before 1164 there was a 'wooden chapel', presumably the nave, since there were stone walls to the presbytery (although neither high nor broad) and two transepts ('wings on both sides with an altar') were also in existence; in other words a cruciform church was in course of erection. Later in the 12th century the brethren raised 'a tower beyond the choir on arches'-the central tower-with a wooden steeple above in which the bells were hung. There is no reason to believe that these structures failed to survive either the subsequent removal of the cloister to the south, or the later replanning of the claustral buildings, and probably the nave, on a larger scale (above, p 95). These new buildings were incomplete in the early years of the 13th century and the fact that the church was not dedicated until 1258 (indulgences having been granted in 1237) suggests that completion may have taken a further half century to achieve. The alternative explanation, that substantial rebuilding took place not long after the original construction, seems less likely. A seal of the abbey (illustrated in Braybrooke 1836, 71) shows what seems to be a conventionalized representation of the abbey church, with a central tower and transepts. The conversion of the church to secular use in Audley End I clearly involved the demolition of the central tower and north transept, the presbytery, and the Lady Chapel. This was clearly in existence before 1200 (above, p 95) but its presence at such an early date is probably due to the dedication of the house to St Mary jointly with St James.

A little of the interior of the church was revealed in Trench 1, where a plain glazed tile floor was found about a metre below ground level. The tiles are almost certainly of our Group IV, *c* 14th century (p 103), although it is impossible to say whether they represent part of the paving of the church *in situ* or a relaying as part of Audley End I; their relationship to the surrounding walls is nor clear from the photographs (see also below, p 104). Of those surrounding walls, it is clear that the north cloister wall, and the east cloister wall with its northward extension, are basically medieval structures incorporated into Audley End I and II and somewhat rebuilt on both occasions; a minor wall running eastwards from the north-south wall correlates with one shown on published plans of the east wing of Audley End II (Winstanley 1676; Braybrooke 1836).

The two flights of steps U and X cannot relate to the abbey, since they block the door into the church; equally, as P1 22 shows, they rise from much too low a

level to relate to Audley End II. They seem, therefore, to be associated with Audley End I, as does Wall T through which flight U rises, especially since it does not appear even on the earliest plan of Audley End II (Summerson 1966, p1 93); indeed, it would block the north-east staircase. The reason for the changes in level within Audley End I is uncertain, but perhaps the location of the cellars of Audley End II in this area provides a clue. The lowest step of flight U is of interest; the top of the riser is moulded, and the north end takes the form of a roughly hewn block, which seems to have been intended for building into a flanking wall. This stone seems to be reused from a monastic stair, perhaps the night stair, which would have lain close by, in the south transept.

Trench 4, presumably cut to locate the south-east crossing pier, in fact revealed a brick foundation, which was clearly part of one of the bay windows on the east elevation of Audley End II (Fig 54).

If the normal arrangement of Benedictine houses was followed (for which see Knowles 1963, 185-6), the eastern range should have been of two storeys, continuing southwards from the south wall of the transept. The entire length of the first floor would have been occupied by the dorter, from which the reredorter would have opened at or near its southern end. The ground floor would have been taken up with, from north to south, the passage to the monk's cemetery, the Chapter House, the day stair from the dorter above, the parlour, and the dorter undercroft, which generally included the muniment room and the warming house. The sole archaeological evidence for the east range is provided by a plan (AEd 19) in the Braybrooke archives of an irregular but rectilinear hole six feet deep 'filled with large flint stones, found in making the flower garden in 1832'. This must either be a foundation, or a robbed wall trench; when plotted on Fig 54 it is clear that it must define, in general terms, the east wall of the east range, and, in all probability, the north wall of the reredorter. Confirmation of the siting of the latter is provided by the open culvert shown approaching the north-east corner of Audley End I in P1 18.

Braybrooke (1836, 66) notes that before part of the eastern lawn was converted to a flower garden, 'extensive foundations were to be distinguished during a dry season; but they did not correspond with the only plan of the abbey now extant' (presumably the estate map, P1 18). The lawn was said, not surprisingly, to be a mass of building material to a depth of 6-8 feet, although he does not mention the discoveries recorded on the 1832 plan. During excavations connected with the construction of the new garden, many burials were found 'nearer to the sunk fence' about two feet deep, wooden coffins being evidenced by their iron nails; 'upwards of thirty years before' two lead coffins had been found in the same area (W on Fig 52). This was probably the monks' cemetery, which, as Knowles (1963, 185) observes, usually lay east of the church. Considerable numbers of human bones and skulls found mixed with rubbish 'close to the north-western extremity of the flower garden' (Y on Fig 52) should represent disturbance of burials in and to the north of the monastic presbytery. Two circular bronze brooches, with bronze swivel pins, of 13th-14th century date, were found 'in the garden' in 1887, with human bones,[168] and these are likely to be from the same area, since they are more likely to have been associated with lay than monastic burials. A lay cemetery north of the church would also account, with the buildings known to have lain in that area at various dates, for the 'foundations and bones.. . dug up near the great pond by the bowling green', noted by Morant and thought by him (1768, ii, 548) to indicate the site of the abbey.

Information is equally scanty concerning the south and west ranges, generally occupied by the frater (with or without an undercroft) and the cellarer's store room respectively, the latter with guest accommodation above. In the 1979 excavations, the robbed remains of a rubble wall, A373, with a foundation offset on the west *c* 0.35 m wide, was found, approximately continuing the line of east cloister wall. This seems likely to represent the division between the east and south ranges; since it was overlain by the foundations of a wall of Audley End II it must belong to the abbey or Audley End I, most probably the former. At the south-west corner of the house, further structural evidence of the abbey was revealed during repairs to the floors in 1951 and external works in 1952. [169] The internal features largely remain accessible through trapdoors in the floors.

The plinth of the west wall of the west range was originally faced with ashlar, with two splayed offsets of unequal depth (P1 23); the northern part of the section uncovered, north of the later wall O, had been robbed of its facing. The northern jamb of the recessed doorway, M, was located, but not the southern, which must have been robbed to a much lower level. So far as can be seen from the photographs, the workmanship and style of this wall and the bases located within the range are similar, and it thus seems reasonable to assume that all form part of the same structure. If so, the Ketton limestone bases A, E, and G, which protrude from flint rubble foundations of various dates, should be bases of engaged columns. Yet if this is the case, the external wall of the range would be in the order of 6 ft (1.7 m) thick at this point, which probably implies complex architectural detailing of the elevation.

A second line of columns 17 ft 3 ins (5.25 m) to the east is represented by fragments of bases B and H *in situ,* and clearly both this line and those engaged in the west wall supported a vault over the undercroft. It seems reasonable to assume that bases G and H were engaged in wall R, on the line of the extant wall of Audley End II, especially since the view of Audley End I shows the south end of the west range projecting slightly beyond the south side of the south range. Further, the former existence of columns C, D, and F can be inferred from the layout of those attested by surviving fragments. Yet the layout thus established does not relate easily to the putative south-west corner of the cloister, particularly if, as seems likely, bases B, D, F, and H lay on the north-south axis of the vaulted space.

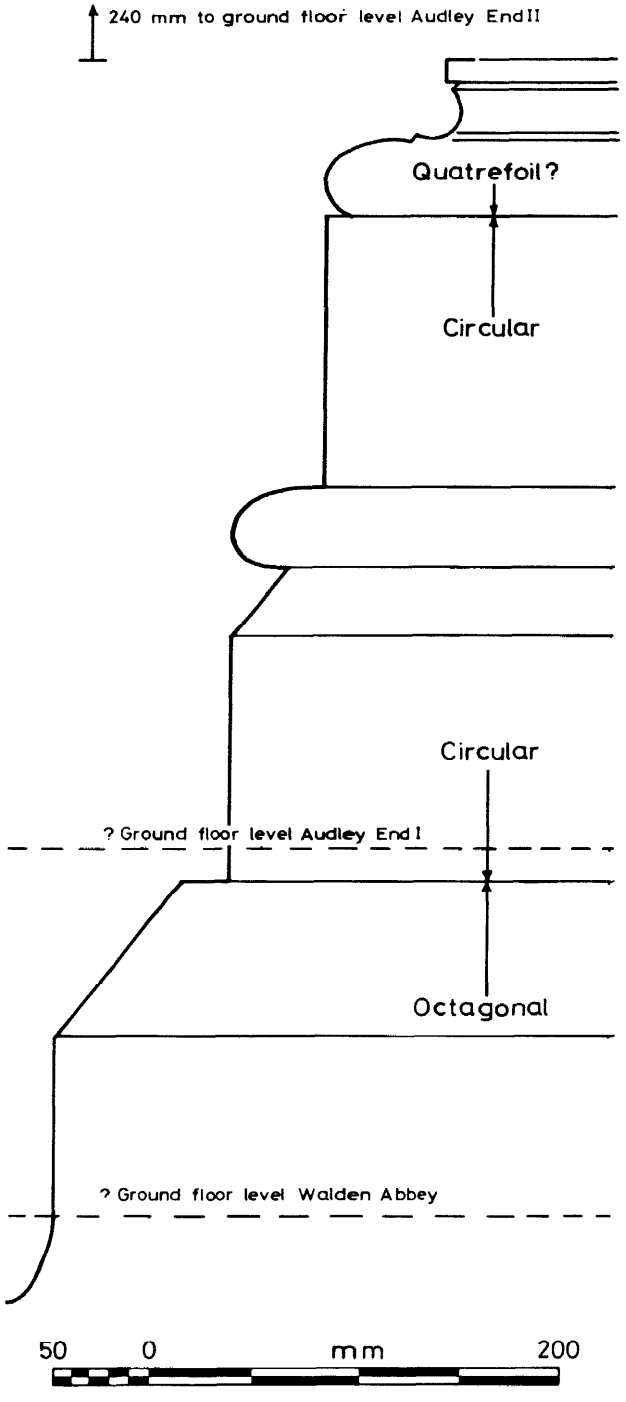


Fig 53 Walden Abbey: details of bases in situ *beneath the southern end of the west range of Audley end. Scale 1:4. Relative floor levels are also indicated*

The answer may lie in the fact that whilst the cloister seems to belong to the mid 14th century, the remains of the undercroft described here are probably about a century earlier in date. A composite profile of the best preserved bases, A and B on Fig 54, is drawn as Fig 53. Base B is shown in P1 24; the column seems to have been of quatrefoil section, but the part which survives to this level is too damaged to permit a detailed reconstruction. The profile of the base is similar to that of part of the north arcade of North Ockenden Church, Essex (RCHM4, 183), *c* 1240, and a date around the middle of the 13th century seems to be indicated.

The foundations in which the remains of the bases are embedded are largely built of flint, but incorporate some clunch, Ketton, and other worked stone, and occasional brick and tile fragments. The visible offsets of wall AA indicate that it relates to a level much above the primary monastic floor, but the same is not true of wall L, the construction of which involved the cutting away of parts of bases A and B. It seems probable that either these walls relate to different phases of alteration, or in the course of a single phase of alteration the floor level of the rooms south of wall L was made up to a greater extent than those to the north.

Externally, wall O was found to abut the earlier foundation (P1 23), and presumably relates to a widening of the western range, since the estate map view of Audley End I shows a break in the west elevation, the northern part of the range being wider than the southern. The extent of this projection is difficult to assess from the map, but the subsidence of the west pillars of the porches suggests that they do not overlie a solid foundation. The foundation of the rebuilt west wall of the west range should therefore lie beyond them, unless it was totally robbed before the porches were contemplated.

The secondary walls in this area incorporate no datable features, nor is there any clear sequence between any sections of them. There is no overiding reason, however, why they should not all be part of one scheme, and one which moreover clearly involved the destruction of the vault over the monastic undercroft. Whilst it is possible that some or all of this work relates to a late phase in the development of the abbey, it seems more likely that it is associated with its conversion to a residence, Audley End I, *c* 1538-44.

The section of the west range south of the offset probably retained in rebuilt form the late monastic outer walls, S and R, domestic windows being introduced. The elevation shows a relatively low roof above two storeys, the upper (part attic?) being lit by three small square windows and the lower by three taller ones, presumably arranged so that there were two lights to the large chamber and one to the smaller chamber on each floor. To the north, the wall K suggests a passage adjacent to the east wall of the range, but no other details of the internal layout are known. The recess in wall L was designed as such, and is not a blocked doorway; its eastern jamb is partly in clunch.

The passage which connected the monastery to the

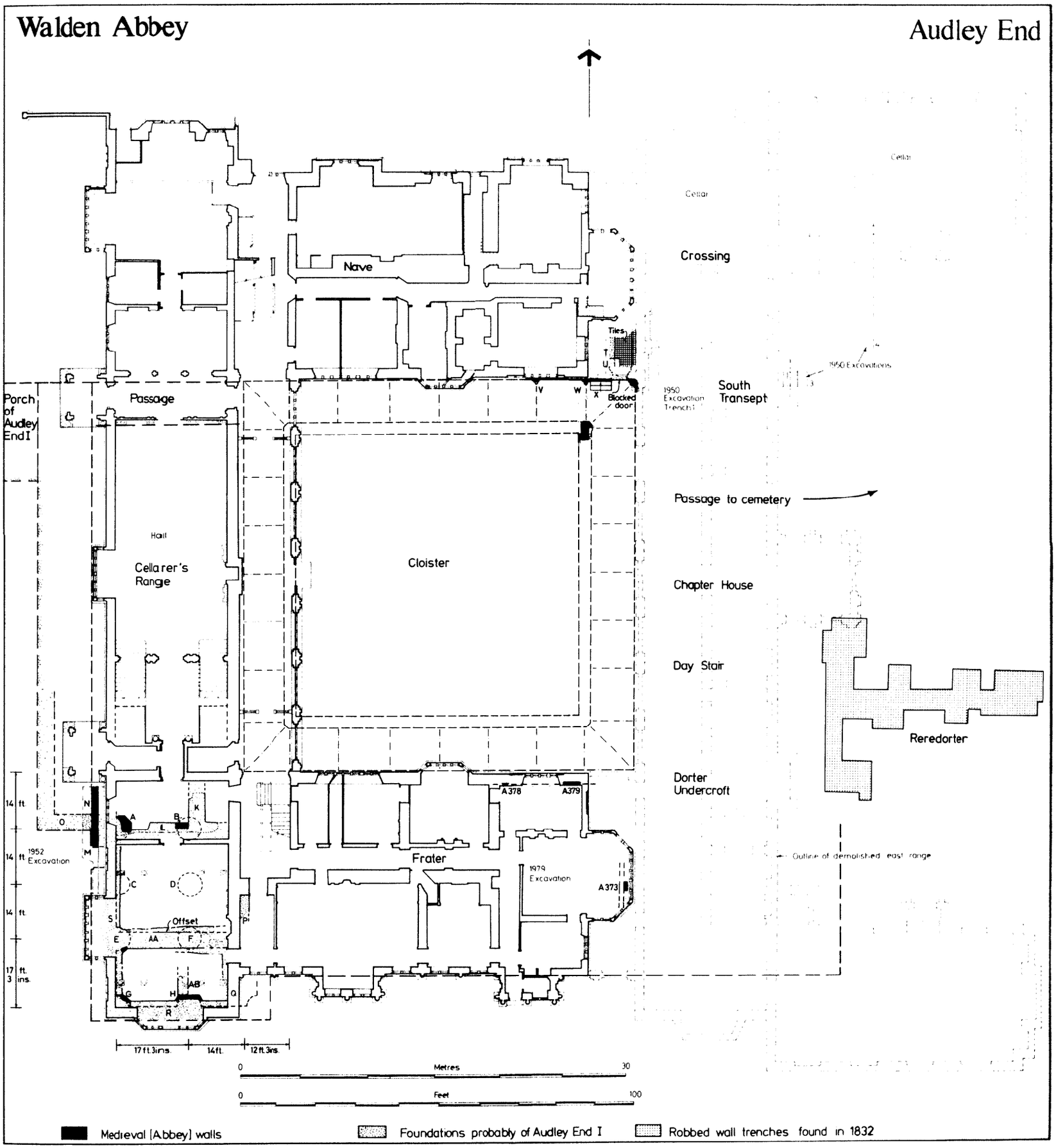


Fig 54 Audley End: the architectural and archaeological evidence for surviving pre-1603 structure, superimposed on a modern plan of the house, to which has been added the outline of the demolished east range of the inner court (after Braybrooke 1836)

outside world normally passed through the west range immediately south of the nave, and the presence of a large porch in this position on the estate map elevation of Audley End I indicates that its main entrance remained in this position, as indeed does the main entrance to Audley End II.

Loose finds

Stone

A finial in Barnack Stone, illustrated by Braybrooke (1836, 57) and found during the making of the flower garden in 1832 *(ibid,* and above, p 99), survives at the house. Braybrooke (1836, 65) also refers to a broken piece of a flat gravestone dug up 'some years ago' near the gates of the office yard, on which the word VERA, inscribed in 'Longobardic' letters, survived, but this is no longer extant. In addition, there is a collection of stonework recovered during repairs to the hall *c* 1962, from the gardens, and presumably during the 1950 excavations. This was considerably supplemented by material recovered from 18th century levels encountered in the 1979 excavations.

Comprehensive publication of this material, none of which can be associated with a specific part of the abbey structure, is not justifiable here; it is described and illustrated in Drury 1981. It includes material related to all stages of the development of the house, beginning with mid-late 12th century chevron ornament in Barnack stone, and including mouldings and ornament of the 13th, 14th, and 15th/16th centuries, in a variety of stone including Purbeck marble, Ketton, Barnack, Reigate, and clunch. The latter seems to have been the predominant freestone used during and after the 13th century, especially for internal work. The 1979 excavation yielded fragments of Collyweston stone 'slates' which probably derive from the abbey; Walden seems at present to lie at the limit of their distribution southwards.

Ceramic building materials

Medieval brick

1 Fragment of brick 120 x 40 mm in section, originally more than 130 mm long, apparently made in a sanded form in the usual way. The fabric is red, contains a little sand, and is poorly mixed; the core is grey to black and streaky, and seems to show traces of the inclusion of vegetable material; upper struck surface pimply, DOE collection, Audley End. It appears to be a 13th or 14th century brick, cf Coggeshall (Gardner 1955), but it may possibly be kiln furniture associated with tile manufacture, cf Danbury, Class 7 (Drury & Pratt 1975, 123).

2 Fragment of a brick 110 x 41 mm in section, in a hard red sandy fabric, moulded in a sanded form, and with a slight kiln glaze on the base and one edge. It was noticeably thinner than, and in a different fabric from, the bricks used in Audley End II (*c* 215–20 X 100-15 x 55 mm), and presumably indicates the use of Flemish-size bricks either in late alterations to the abbey, or in Audley End I. 1979 excavation (from an 18th century level).

Roof tiles

In the 1979 excavation, fragments of pegtile were ubiquitous and undatable, but five fragments of roof tile, 15–17 mm thick, in a fine orange-red sandy fabric with a thick grey core, included one with part of an upstanding nib. If this was central, a width of *c* 190 mm is indicated. On the evidence of other sites in Essex such large nibbed tiles should belong in the mid-late 13th century (Drury 1977, 90-l); these fragments were all residual in 18th century contexts.

Floor tiles

Group I Line-impressed mosaic: principal group

Fig 55.1 Panel of line-impressed mosaic paving drawn by Compton (f 123 r). Some of the tiles were clearly worn to such an extent that the stamped designs had all but disappeared. The juxtaposition of designs, and the inconsistent wear (particularly of the right hand segments), suggests that the panel was the result of relaying or antiquarian reconstruction.

55.2 Line-impressed five-foil; Compton, f 48 v.

55.3 Segment of a circular surround to a five-foil, 35 mm thick, in an orange fabric containing some grog lumps and sand; buff exterior. The surface is covered with a mottled dark green glaze. There are three tapered stab holes in the base penetrating almost to the top surface. The base retains sand from the moulding table, and the edges are knife-trimmed and undercut. One edge is the result of scoring and snapping after firing. Found under the floor of the Howard Sitting Room (first floor, north wing), Audley End, 1978, DoE collection.

55.4 Segment from a large roundel, with line-impressed rosette stamp; 36 mm thick. The fabric is pink with greyish patches, poorly mixed (having occasional voids) and contains little sand. The base retains sand from the moulding table, and the edges are knife-trimmed and undercut; one certain stab hole is visible in the base. The upper surface is covered with a thick cream slip, and a slightly brownish lead glaze. DoE collection, Audley End.

55.5 Quatrefoil; Compton, f 49 r.

55.6 Segment of a circle intended to take an inset five-foil, decorated by the multiple impressions of a single stamp, as the varying degree of overlap of the impressions demonstrates, Compton, f 47 v; cf 55.3 above.

55.7 Fabric as 55.3; medium green glaze over slightly reddish surface; 29 mm thick. Central line lightly scored before firing. DoE collection, Audley End.

55.8 Fabric and finish as 55.7; cut to shape and additional line lightly scored on surface before firing. DoE collection, Audley End.

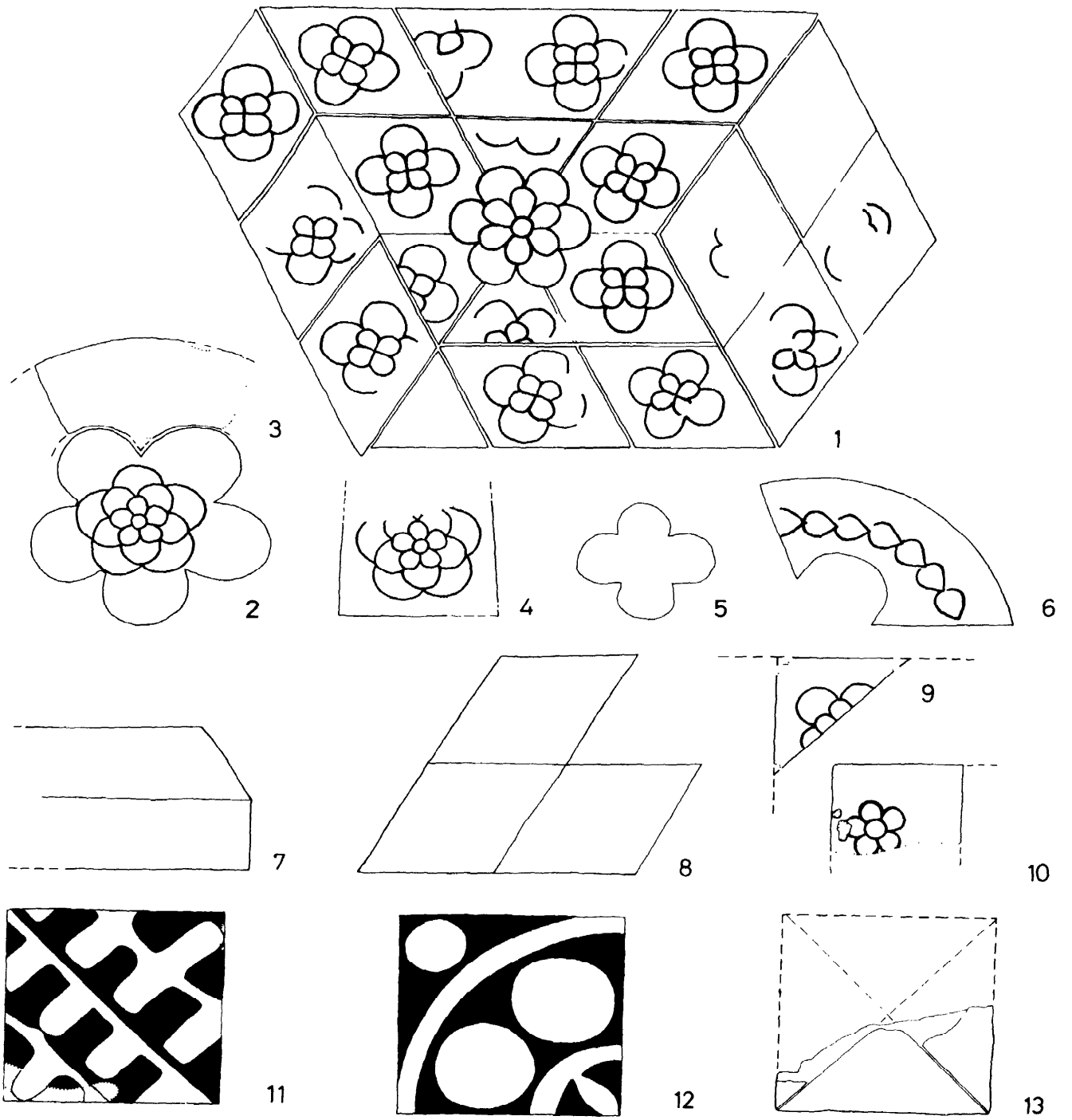


Fig 55 Walden Abbey: mosaic elements and other decorated floor tiles. Scale 1:3

55.9 Fabric and finish as 55.4, scored and snapped after firing. Found in clearing Place Pond. DoE collection, Audley End.

Group II Line-impressed mosaic: Essex group

Fig 55.10 Fragment probably from a tile *c* 130 mm square, scored on one centre line before firing and probably originally bearing four impressions of the same stamp. It is 20 mm thick, in a hard red sandy fabric with undercut edges and sand adhering to the base. The surface bears a lustrous and totally unworn very deep brown glaze, to which patches of the surface of the adjacent tile in the kiln became fused during firing. The fragment was presumably discarded during the laying of a floor. Found under the floor of the Great Drawing Room (ground floor, south wing) of Audley End, 1978. DoE collection, Audley End.

Group III 'Westminster Tiler' tiles

Fig 55.11 Vair design: orange, poorly mixed fabric, greyish patches; decorated by the slip over impression technique (Drury & Pratt 1975, 140), cream/brown glazed finish, 26 mm thick, slightly splayed edges. For the distribution of this design, see Ward-Perkins 1940, 246, no 56, to which Stratford Langthorne abbey, Essex (Passmore Edwards Museum 4053) should be added. DoE collection, Audley End.

55.12 Simple four-tile pattern, fabric and technique as 55.11, very worn. The pattern is also known from Waltham abbey, Essex (unpub). DoE collection, Audley End.

55.13 Diagonally divided tile, used complete, perhaps to create a pseudo-mosaic effect; fabric and finish similar to 55.11, but bearing a plain glaze on a reduced greyish surface. 1979 excavations, 18th century level.

Eleven other fragments of 'Westminster Tiler' tiles survive, but save for one dark green glazed fragment all trace of the surfaces has been worn away (DoE collection, Audley End; 9 from 1979 excavations, 18th century levels). Other tiles probably of this group are built into the filling of an opening in the north side of the first phase (probably related to Audley End I) of the S boundary wall of the park, east of the Lion gate.

Group IV Plain Flemish tiles

Plain tiles, 123-125 mm square, 23-27 mm thick, in a hard red fabric containing some voids, sandy bases, slightly splayed edges. Three have a flaking, thick cream slip covered with plain glaze, and one a deep brownish-green glaze over the body. Five nail holes are visible through the glaze, but their equivalents on the cream tiles are largely filled with slip. Two other examples of this group are present, both with their surfaces worn away. DoE collection, Audley End; also two (one brown, one cream) from 1979 excavations (18th century level).

A late medieval decorated tile from the Braybrooke collection at Audley End, and almost certainly derived from the abbey, and two plain fragments from the 1979 excavations (18th century levels) will be published in the report on the excavation of the medieval tile kiln at Radwinter, where they were probably manufactured (Drury forthcoming a).

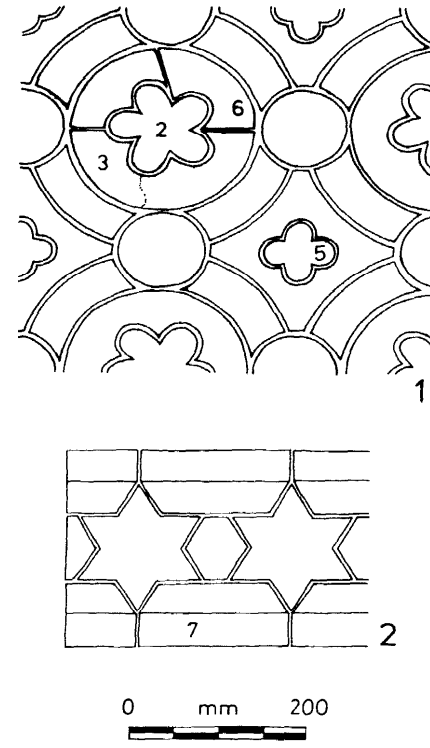


Fig 56 Walden Abbey: tile mosaic patterns indicated bv the surviving fragments

Discussion

On the evidence of fabric and design details, the Group I line-impressed tiles belong to the large series most recently discussed by Keen (1980, 212-16), and the single Group II tile to the 'Essex' series which seems to be derived from it (Drury & Norton forthcoming). Walden, with Meesden (Keen 1970) and Tilty, lies near the south-eastern limit of the extensive distribution of the principal group (Keen 1980, fig 29), and towards the north-western limit of the distribution of the Essex group. Dating evidence for the principal group so far concentrates in the first quarter of the 14th century (Keen 1980, 216) but a longer production period is probable, especially for the Essex group whose appearance in small quantity at Walden *mighr* be due to its being manufactured after production of principal group tiles had ceased. The principal group fragments present at Walden indicate that a number of different patterns were employed; most find parallels in the surviving (probably relaid) pavement at Meesden, Herts (Keen 1970). Fig 55.4 is

tapered and seems to be the equivalent of the tiles of the fifth band of an otherwise unique roundel there, although it is decorated rather than plain; the stamp is the same as that used on our Fig 55.2.

Shapes 2, 3, and 5 are from a pattern (Fig 56.1) of the same type as that forming a border to the Meesden roundel (our Fig 55.2 is the same as Keen 1970, fig II.6), and which also occurs at Denny Abbey, Cambs, and Icklingham, Suffolk (Keen 1980, fig 25; Keen & Thackray 1974, fig 47; in both cases pattern 1, shapes 1 and 6 respectively). Shape 6 (Fig 55) is clearly part of the same pattern (Fig 56.1), representing part of shape 2 in Keen & Thackray 1974, fig 47, pattern 1. The fragment from Walden seems to have been pre-cut for an abuttal to an obstruction, and uniquely is decorated rather than a plain colour. The stamp was used in a wholly different fashion on shape 4 at Meesden (Keen 1970, fig 11.4). Fig 55.7 represents a simplified version of the two shapes which flank the pattern to the north and south of the altar base at Meesden (Keen 1970, fig I) and is so drawn in Fig 56.2; very similar patterns occur at Icklingham (Keen & Thackray 1974, fig 49, pattern 6) and Denny (Keen 1980, pattern 3). Fig 55.8, and the pavement fragment 55.1, whilst lacking immediate parallels, fall within a group of patterns based essentially on the lozenge, for example patterns 2 and 3 at Icklingham (Keen & Thackray 1974, fig 48). The common stamp on Fig 55.1,9 appears on a different element at Meesden (Keen 1970, fig II.5), as does the central stamp (ibid, fig 11.2,7, and 12); the latter also occurs at Icklingham (Keen & Thackray 1974, fig 44.1). Mention should also be made of stamps apparently identical to those recorded at Meesden on tile shapes 5 and 11 (Keen 1970, fig II) on a tile fragment built into the north wall of Audley End House, below the floor of the Howard Sitting Room, in the west return into the bay.

The Essex group of line-impressed mosaic pavements is as yet best known from recent excavations at Chelmsford Dominican Priory. There, square quarries bearing multiple impressions of rosette stamps outnumber true mosaic elements. The stamp found at Walden is well represented at Chelmsford (for an illustrated example on a tile almost identical to Fig 55.10, see Drury 1974, fig 14.43); and also occurs at Dunmow Priory (BM 1440; Eames 1980, 326), Tilty Abbey (Steer 1950, fig IV), and Little Easton church (unpub).

Group III floor tiles, in the distinctive fabric of the 'Westminster Tiler', have a wide distribution (Keen 1973, 92–3, to which many sites in the south-western half of Essex can now be added), and seem to belong to the end of the 13th and the first half of the 14th centuries (Drury 1977, 111-12; Eames 1980, 208). [170] Their appearance at Walden thus causes no surprise.

The nail holes and the flaking slip of the group IV tiles leave no doubt as to their Flemish origin, or at least their manufacture by Flemish craftsmen. Examples of the relatively small size of those at Walden seem to belong to the late 14th or early 15th century, rather than to the middle of the 15th century and later when larger sizes seem to have been the norm (Drury & Norton forthcoming).

Finally, it has been noted (p 98) that tiles almost certainly of Group II remained in use in the north wing of Audley End I, although whether these were relaid or an in situ survival from Walden Abbey is unknown. Further evidence for the extensive reuse or retention of medieval floor tiles in Audley End I comes from the structure of Audley End II. Very large numbers of such tiles, mostly of groups III and IV but including a few of group I, and some probably Flemish tiles larger than group IV, were used where a narrow course was wanted in the brick and ashlar walls, especially under floor, ceiling, and roof joists, and are visible in roof and floor voids of the surviving building. Such use implies their ordered large-scale recovery from Audley End I and, therefore, the probability that they covered the floors of many rooms of that house at the time of its demolition.

Conclusions

The salient point to emerge from this study is the remarkable structural continuitv between Walden Abbey and Audley End I, and indeed between the abbey and the inner court of Audley End II. The cloister, established south of the church in the late 12th century, and rebuilt in the middle of the 14th, thereafter seems to have remained largely intact when the abbey was converted to a residence by Lord Audeley, save for the addition of an upper gallery to give access to the rooms on the first floor. The plan of the cloister,/courtyard was followed exactly by the inner court of Audley End II, and although externally there is no sign of earlier work above ground level, the extent to which the lower parts of some standing walls of Audley End II are refaced earlier work must remain a matter of conjecture. At Leez Priory (RCHM 2, 158-61), the house built by Lord Rich in 1536 similarly adhered to the former monastic plan. The monastic buildings are said by the RCHM to have been 'razed' and only their foundations reused, since all the surviving structures are brick-faced and seemingly new work of *c* 1536 onwards, Yet it is clear on inspection that the cores of monastic walls survive to first floor height in the stubs of the walls of the former west range, on the south side of the inner gatehouse. The earlier walls were merely refaced, doubtless in the interests of economy.

An equally remarkable element of continuity at Walden is to be found in the siting of the main entrance (p 101 above), which occupies virtually the same position in Audley End II as it seems to have done in Audley End I and Walden Abbey, leading now into the passage behind the hall screen. Further, in view of the essentially medieval layout of' the hall of Audley End II, one is tempted to ask whether it reflects the planning of Audley End I. When monastic houses were converted to dwellings the nave of the church often became the great hall, for example at Leez Priory (RCHM 2, 159), but it seems likely that at Audley End the northern part of the west range was rebuilt as the hall, since on the estate map elevation (Pl 18) it is the only range lacking a scatter of

chimneys along the ridge. Further, the fenestration of the west gable of the former nave, the north range, suggests its division into two storeys plus an attic. At first sight, the fenestration of the west range seems to imply its division into two storeys, and thus militates against its being the hall, but at Hatfield House (*c* 1607-12) the hall has such fenestration apparently as an original feature.

The creation of Audley End I within the framework of Walden Abbey was probably undertaken largely for reasons of economy and speed, as much structurally sound work as possible was doubtless retained. Similarly, the creation of Audley End II on a scale large even for a 'prodidgy house' at once suggests economy as the main motive for the observed reuse of earlier foundations. Another influence was probably the need for phased rebuilding, since it seems most unlikely, for reasons of convenience, that the entire house would have been demolished at the outset. Indeed, there is some evidence to suggest that the west (hall) range was rebuilt first, and that reconstruction then proceeded in a clockwise direction around the inner court, the great (outer) court being added later (Drury 1980b, 16). One point is clear; the layout of Audley End II was in part, at least, the result of working within substantial constraints imposed by a decision to reuse parts of the pre-existing structure, and perhaps by the influence of the form of the earlier house on the requirements of the client.

Furthermore, the architect's own preference was probably significant. Vertue (1932 edn, 49) attributes to Bernard Janssen both Audley End and Northumberland House, London, built 1605–9 by the first Earl of Suffolk's uncle, Henry Howard, Earl of Northampton. The Smythson plan of the latter (Girouard 1962, 74) shows it to have been, originally, a quadrangular building with a hall in the traditional manner, dominating the south range. The house was erected on the site of several small tenements and gardens, including part of what had earlier been the site of the convent of St Mary of Rouncivalle, but it is clear that, unlike Audley End, these earlier structures had no direct influence on the plan of Northumberland House (Survey of London 1937, 10).

The similarity between Audley End II and Northumberland House is emphasized by the probability, now emerging from detailed study of. Audley End, that Janssen was responsible only for the inner court. John Thorpe's plan of Audley End, published by Summerson (1966, p193), now seems to represent a survey of the inner court and a draft scheme for adding the outer court, the details of which were altered before execution. Pevsner (1965, 63) has noted that the ornate porches, absent from the Thorpe plan, 'look like the contribution of quite another taste and hand', and Winstanley's engravings (1676) show that the porches and the outer court are related stylistically, and both are distant in proportion and detail from the austere style of the ranges around the inner court. The porches indeed show structural evidence of being added to a pre-existing hall, with some disruption of the string courses of the latter. More detailed consideration of the evolution of the design of Audley End II within the 1603–16 building period would be out of place here; for a preliminary study, see Drury 1980b.

Appendix: Surviving copies of the Book of the Foundation of Walden Abbey

by S Welch

There are two surviving copies of the Book of Foundation, the original, which was sometime in the possession of Richard Glover (1544—88), now being untraced (Davis 1958, 113). One copy was made in 1595 by Lord William Howard of Naworth, the younger brother of Thomas Howard, Earl of Suffolk, the former having been born at Audley End in 1563 (Collar & Emson 1938, 1). It was there that he married Lady Elizabeth Dacre in 1577, and in 1603 he moved to Naworth Castle in Cumberland, where he built up a considerable library of books and manuscripts (Ornsby 1878). On Lord William's death in 1640 his collection was inherited by Thomas Howard, Earl of Arundel, and subsequently passed to his grandson Henry, Duke of Norfolk. During the 1670s the Arundel manuscripts were divided between the Royal Society and the College of Arms. In 1831, the Royal Society manuscripts were transferred to the British Museum, where William Howard's copy is preserved as Arundel MS 29.

The second 16th century copy, also now in the British Museum (Cotton MS Vesp E vi, fas 25–70), is probably older than Arundel MS 29 (Collar & Emson 1938). Both are defective in that the first five and part of the sixth chapters of Book one, whose titles appear at the beginning of the manuscript, are missing (Dugdale 1823, iv, 137n). Cotton was himself a personal friend of William Howard, and his son Thomas married one of Lord William's daughters *(DNB)*.

The British Museum also holds the very fine cartulary of Walden Abbey (Harl MS 3697), a short chronicle (Cotton MS Titus D XX), and a roll of the founders (Harl MS 294/72).

Section 7 Appendices

7.1 Entries relating to Walden and Manhall in *DBii,* and a note on Manhall

Walden

fo 62/62b: *WALEDANA,* which was held by Ansgar as a manor and as 19½ hides in TRE, is held by G[eoffrey] in demesne. Then and afterwards 8 ploughs on the demesne; now 10. Then as now (semper) 22 ploughs belonging to the men. Then and afterwards 16 villeins; now 46. Then and afterwards 17 bordars; now 40. Then and afterwards 16 serfs; now 20. Then and afterwards woodland for 1,000 swine; now for 800. And [there are] 80 acres of meadow. Then as now 1 mill. To this manor there used to belong TRE 13 sokemen—[there are] now 14—holding 6 hides; then and afterwards [they had] woodland for 50 swine; now for 30; [there are] 20 acres of meadow, [and] the third part of a mill. Then 6 rounceys, 11 beasts, 200 sheep, 110 swine, 40 goats [and] 4 hives of bees; now 9 rounceys, 10 beasts, 243 sheep, 100 swine, 20 goats [and] 30 hives of bees. Then and afterwards it was worth 36 pounds; it is now worth 50 pounds.

Of this manor Odo holds 1 hide and 1 virgate, and Renald' 1 hide less 12 acres; and [there are] 2 ploughs and 13 bordars; and [this] is worth 50 shillings in the above valuation.

Manhall

fo 35: *MONEHALA,* which was held by Siward as 1 hide, is held of Count [Alan of Bretagne] by the same H[arvey de Ispania]. Always 2 villeins. Then 1 serf; now none. Now 1 bordar. Always half a plough. There are 7 acres of meadow, and two thirds of a mill. It is worth 20 shillings.

fo 62b: In *MUNEHALA* a certain Englishman holds of G[eoffrey] 3 virgates which were held by a freeman TRE; and TRW he became *(effectus est)* Geoffrey's man of his own accord; and the men of Geoffrey say that afterwards the King granted [it] to Geoffrey in exchange, but neither the man himself nor the Hundred [court] bears witness in favour of Geoffrey *(testimonium Goisfrido perhibent).* In that land was then 1 plough, now 1 half. Then as now 3 bordars; and there are 7 acres of meadow. It is worth 10 shillings.

The area of the Domesday manor of Manhall is now contained in the parishes of Great and Little Chesterford, but the part held TRE by an Englishman seems, for a time, to have been a submanor of Walden. In 1259 Richard, Earl of Gloucester, was permitted *aedificare unum castrum apud manerium suum de Manhall in cum Essexiae* (Pat 44 Henry III, Rot 15); for which see note in *Medieval Archaeol,* **12,** 1968, 188. The location of the manor house should be the moated site at TL 537429 (and not where shown in Cromarty 1966, map 6). The Chesterford Park Archaeological Society has excavated on the site in recent years (notes in *Medieval Archaeol,* **15,** 1971, 161, and **16,** 1972, 193-4). The writer was given an opportunity to examine some of the Society's finds, amongst which was a very considerable amount of 10th, 11th, and 12th century pottery and some bronze objects. The latter included a brooch or clasp with an apparently zoomorphic decoration in gilt inlay. The piece was heavily corroded and could not be examined in detail, but was probably of pre-Conquest date.

7.2 Notes on some of the medieval roads in Walden parish (Figs 2, 4)

For some 1.3 km west of Bury Hill the Madgate and King's Slades follow more or less parallel courses through a wide but moderately steepsided valley to join the north flowing River Cam. The lower course of another tributary, the Fulfen Slade (above, n7), lies in a predominantly north-south valley, but turns sharply west to join the Cam *c* 0.6 km south of the others' confluence with it. In the angle enclosed by these two tributary valleys the ground has a shallow gradient to the north and west, in marked contrast to the valley sides elsewhere. This slope is so gentle that it forms a roughly triangular plateau, with Audley End House and village (on the site of Walden abbey) at its well drained north-western limit.

The plateau seems the ideal point of entry to the Cam valley for most routes from the boulder clay uplands beyond Walden; and a study of the medieval road pattern in the parish suggests that routes from the east and south-east (which now converge on the present town) were formerly aligned to cross it. On the whole these roads lie on or beyond the limits of Walden's relict field system and do not conform to its alignment. The earliest of them very probably developed at a time when outlying fields had gone out of cultivation, and so were largely unrestrained by the former rectilinear pattern. These roads form the basic framework for the later reclamation of land for settlement and cultivation over much of the upland areas of the parish and its neighbours. (In some places, however, the earlier alignment was re-established, though not necessarily the earlier divisions, as the limits of cultivation were pushed back by piecemeal extension of the surviving system.) Once the planned settlements were laid out on Bury Hill and over the area south of it, the road pattern in their vicinity altered and was extended accordingly, with some of the earlier roads all but disappearing. This is equally true of the area around Walden abbey, where a separate focus of settlement was developing in the late medieval period.

The road to the Cam valley from Thaxted formerly crossed the uplands, through Wimbish parish as far as Thunderley (TL 560359; a DMV), on its present route the A130—which now approaches Saffron Walden via a minor tributary valley (Farmadine,

formerly *Farenden(ne),* 'bracken valley', OE *fearn, denu:* Reaney 1935, 541). From Thunderley it followed the Fulfen Slade to The Roos (TL 548361), and from there ran on the line of the present Saffron Walden to Debden road (unclassified) for *c* 1.2 km to Claypits Plantation (TL 539368), where the modern road turns north. The earlier road continued north-west, at first as Seven Devils Lane, for a further 2 km, meeting another road on the plateau. The two then ran west to the Cam (f-g on Fig 52). The entire route is shown on the 1758 map (ERO T/M 123); and the lengths which are no longer roads still exist as a green way (from Thunderley to The Roos) and a footpath (from Claypits Plantation westwards).

The chief later medieval thoroughfare along the east bank of the Cam, some 500 m west of its Roman predecessor, originally ran immediately west of the second and third sites of Walden abbey. It was later diverted from that line, and then shut off altogether (above, p 22). The road's course, however, can still be traced through the parish, either on the ground or from early maps of the area.

It is followed by the present A130 as far south as TL 52124012. From there it survives as a trackway through North End Farm (TL 521397) to Duck Street (TL 523387), where it was joined by a road from the east (no longer visible on the ground but shown on the 1758 and 1843 maps). Beyond Duck Street the line is lost in the grounds of Audley Park; but it re-emerges to the south as the main north-south street (called Oziers Lane in 1758: ERO T/M 123) through Audley End village, a remnant of *Brookwalden.* It can be seen as a farm track south of Abbey Farm (TL 525377) as far as a junction at TL 52503726 with the unclassified Saffron Walden-Wendens Ambo road, which follows it for *c* 400 m to TL 52343693. From there its course is lost on the ground, but is shown on the 1758 map continuing to a ford near Uttlesford Bridge (TL 520326) just by Walden's southern parish boundary. This is the ford after which the Hundred is named *(Udel's* ford: Reaney 1935, 516).

7.3 *Lotegoyshale*

This is the name (OE) of a field referred to in two Walden charters of 1304 and 1331 (above, n68). It was not noticed by Reaney (1935); but Mawer *et al* (1929, 111) record a lost Lotegoreshale (1293, a road) in Arkesden, *c* 4.5 miles (7 km) west of Walden *(Ancient Deeds,* ii, C.2468; the corrigendum in Reaney 1935, 1v, line 4 is itself incorrect). It is unlikely that there is any connection between these two occurrences of the name, despite their relative nearness to each other in the district.

The acre of land 'in the field called *Lotegoyshale' (in campo dicto Lotegoyshale;* 1304 charter) can be quite closely identified on the ground from its abuttals, which place it within the area enclosed by the earlier 13th century *magnum fossatum,* near its south-west corner (Ravetz & Spencer 1961, 10, 12-13, esp fig 8). The 1331 charter concerns another piece of land in the same area, which lies *juxta* (by) *Lotegoryshale* and immediately south of Abbey Lane. This seems to suggest that the northern boundary of *Lotegoryshale* lies between the plots dealt with by these two charters.

The full extent of the field, however, is not clear. By 1304 the name *Lotegoyshale* may have been confined to an area within the relatively new earthwork circuit, but its OE form makes it very likely that it formerly belonged to a rather larger area (ie before the earthwork's contruction)—a point which its probable etymology makes almost certain. Otherwise the name would be rather uncomfortably restricted to an area largely coincident with the early cemetery (above, pp 9-11).

Dr Margaret Gelling has recently (1978, 171) discussed other placenames which also derive from OE *lutegareshealh.* She concludes that, with five examples, the name seems likely to be 'an appellative, not an *ad hoc* description of a single place', ie a technical term; and that Tengstrand's etymology 'hollow with a trapping-spear' (referring to some sort of animal trap) is convincing.

I am very grateful to Dr Gelling for further discussion of the name, with particular reference to this new example at Walden. She notes that 'the Saffron Walden Lotegoryshale is on the side of a typical *halh*—a small valley opening at right-angles from a larger one. So whatever the nature of the thing called a *lútegár,* the hollow is here a natural feature, not something constructed for the purpose' (pers comm). The small valley (now dry) lies on the south side of the valley of the Madgate and King's Slades, at *c* TL 535370, and the hollow is probably on its lower eastern side at TL 53573810, just a little beyond the south-west corner of the *magnum fossatum* and the known limits of the early cemetery.

7.4 Evidence of masonry structures presumed to be medieval in Walden

(Fig 10)

The foundations of several very substantial masonry structures, found in contractors' trenches in the late 19th and early 20th centuries, were recorded by Guy Maynard (SWM slips).

(i) In Lower Square, to the rear of 33-35 Castle Street: information from a bricklayer about a trench dug in *c* 1895 which cut 'a massive wall foundation of flint and mortar, several feet thick'; in it there was 'no trace of brick or tile work'. (ii) To the rear of 8-10 Market Hill (the back yard of the 'King's Arms' public house): a sewer trench dug in 1912 located 'a very ancient building built of flint rubble and chalk clunch blocks' in whose floor deposits was found 'a virtually homogeneous group of fragments of sand-tempered flat-based pottery, lumpy, poorly made, 12th or possibly 13th century'. (iii) In the garden of 'Park Side' (33-35 High Street): a foundation 'several feet thick' of flint and pebble in mortar, running on a north-south line, roughly parallel to High Street. (iv) Masonry foundations behind 2 Abbey Lane: no details given. Besides these a sketch map by Maynard (also in

Saffron Walden Museum) records two other sites on which masonry footings had been seen before his day: beneath or behind 35 Church Street, to which Braybrooke may refer (1836, 154) in his mention of 'the foundations of walls, dug up lately in Church Street', and on the sire of 103 Castle Street.

No curator of Walden Museum after Maynard, until recent years, seems to have taken any interest in the town's archaeology to the extent of observing contractors' works or recording accidental discoveries there. (For instance, no serious attempt was made to arrange for excavation on the site of the present Gibson Housing Estate, even though it included the whole area of investigation of the later Romano-British and Anglo-Saxon cemetery in 1830 and 1876. A few unstratified sherds were collected from foundation and sewer trenches, but there is no record of even an attempt to observe the works, draw sketch sections, etc.)

It seems very probable that quite a number of the town's cellars, cut into natural chalk, are still lined with flint walls which formed the foundations of medieval masonry structures. One good example is the cellars of Cam bridge House, 16 High Street. Unfortunately, an attempt by SWARC to examine all cellars in the areas of medieval frontage development had to be abandoned in its infancy, when more than half the householders in a large sample area of the town refused to grant access.

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Notes

1 First reference to *Saffron* Walden occurs in 1582 as *Saffornewalden* (Reaney 1935, 537).

2 *le Berihell*, 1382 (Court Rolls); *le Buryhill*, 1456 (Min Acct) Reaney 1935, 537; also below, p 5.

3 eg site B (Couchman 1976, 165–6).

4 I am most grateful to Dr Margaret Gelling for the opportunity to discuss a number of local placenames with her. OE *weala-denu*, 'valley of the Britons or of the serfs', *wealh*, *denu* (Reaney 1935, 537).

5 Flints have previously been recorded from the following sites within Walden parish: *On Windmill Hill near The Vineyard (TL 531391)*: 'finely chipped flint knife of laurel leaf form found in light loam' (W M Tuke collection, SWM); also 'flake implements' (E Taylor collection, SWM). *Around Grimsditch Wood (TL 548404:* Maynard, SWM). *Near the Fulfen (TL 529376:* Maynard, SWM). *Between Newport Road and The Roos*: in the area of Hunter's Well (TL 539362?) *On Bury Hill (TL 542387:* Maynard, SWM). Flints from the 1972–6 excavations are considered on p 35.

6 Apparently part of a Stort-Cam valley route from the Thames to the Fenland Basin, crossing the Icknield Way some six miles north of Walden.

7 cf placenames *Fulefen* and *Fulvan* in this area, from OE *ful*, foul + *fenn*, marsh. A lake or series of lakes in this part of the Cam valley, and not the subsequent marshlands, probably caused the original detour.

8 Especially on a wide north-facing spur between two tributaries of the King's Slade, the eastern of which is incised into the bottom of a very considerable valley by which the late medieval and modern roads from the Chelmer valley both enter Saffron Walden. The linear features described below lay along the slope.

9 Found in 1882 'On the N side of West Road' (Maynard, SWM).

10 It was cut into the chalk, four feet (1.2 m) wide at the top and one foot (0.3 m) wide at the bottom, 'not of the same level everywhere but generally breast high for an ordinary man', and was traced along Mount Pleasant Road from the corner of Debden Road as far as South View House. The trench appeared to have been backfilled almost immediately (Maynard, SWM).

11 In front of the main door of South View House, on Mount Pleasant Road. Another skeleton was discovered 'in a garden close by, in making a tennis court' (Maynard, SWM).

12 'In Mr Dix's new nurseries in Mount Pleasant Road'; it has not been possible to locate this site, though it may lie in the grounds of The Friends' School (Essex Review, 6, 1897, 123, and photographs in *The Herts & Essex Observer* for 15 February, 1896).

13 Maynard, SWM: at TL 53623855. Maynard's sketch section is poor; all the ditches appear to have been equally shallow. Widths of the features at their tops: nine paces, five paces, six-and-a-half paces respectively, east to west. The most easterly 'ditch' may have been five feet (1.5 m) deep at maximum (not clear).

14 At TL 53663851, in the passage to Brewery Yard, between 15 and 17 High Street. Again, a poor sketch with insufficient measurements. The most easterly ditch (fill of 'black soil with chalk lumps') is shown two-and-a-half paces wide at the top; the middle ditch is very shallow; and the most westerly was incompletely sectioned, with only the upper portion of its east side revealed. Within the cut it achieved a depth of over five feet (1.5 m) within a horizontal distance of six paces. This is obviously unsatisfactory; it certainly seems to be a different ditch from those recorded under the southern arm of Myddylton Place, but could be the more southerly of two seen beneath High Street (below, p 19).

15 The following corrections and additions are necessary to the *VCH* Gazetteer (3, 1963, 195-6). (a) For a reconsideration of the artefacts from the 1876 excavation see Sections 2.4 and 2.5. (b) The 'part of a stone mortarium' found in Hunter's Well Field (196, line 5) was of 'very hard limestone conglomerate' (Maynard, SWM) and is more likely to be medieval than Roman. (c) The grid reference for the finds 'Near Water-works' should read 539376. (d) The Romano-British pottery found in Swan Meadows, including samian ware (SAFWM 1911: 194), was from beneath the peat layer; later finds, including several scalloped horseshoes, probably of medieval date (but see Fox 1923, 108), were found in it, as was a fragment of copper alloy binding strip described in Section 4.3.

16 These items, brought to the writer's attention by Dr W J Rodwell, are discussed on p 47.

17 '. . .a number of round holes in the chalk. of which the smaller are generally filled with black burnt earth and fragments of pottery' (unpublished letter of 19 April, 1876 from G S Gibson to Prof Rolleston, Ashmolean Museum, Oxford).

18 'The part which is now being excavated is less regular and appears to be of an earlier period, some of the bodies lying under others, and in various directions' (letter from Gibson to Rolleston, 25 April, 1876). With reference to the same burials: 'To the southward, the skeletons mostly were found in isolated spots, with or without a grave. At the extreme southern corner, still greater want of order, in fact absolute confusion, was apparent' (Smith 1884, 314).

19 At the west end of Borough Lane, near its junction with London Road. About 12 skeletons were laid closely together in very shallow graves, probably on a generally east-west alignment. A small bronze coin of (?) Claudius II was recovered from disturbed earth near one of the skeletons (Maynard, SWM). These may, however, have been medieval plague victims.

20 The eastern boundary of the park lies only some 100 m west of the site of the 1876 excavations. It was part of Henry VIII's grant to Sir Thomas Audeley in 1538 after the dissolution of Walden abbey.

21 Information from Mr Barri Hooper.

22 Air Ministry photograph 4040/CPE/UK/2169/24 June 1947, approximately between TL 527418 and TL 515426.

23 This is a minimum estimate, based on the published accounts.

24 It is clear from the account of the 1876 excavations that no Pagan Saxon burials were found (Smith 1884, 333).

25 Dr Gelling informs me that Reaney's account of this instance of the placename still seems valid.

26 A separate paper on this is near completion (Bassett forthcoming).

27 By Mr K Annable and later by Miss V I Evison. Only five of the graves have been published (Evison 1969b).

28 The predominance of rim sherds in the whole collection suggests that much undecorated handmade pottery may have been overlooked or discarded by the excavator.

29 In the Ashmolean Museum, Oxford, to which thanks are due, particularly to Mr P D C Brown of the Dept of Antiquities. In an unpublished letter Gibson described the plan as 'a rough tracing of the ground where most of the bodies have been found'. It includes neither the secondary area shown in Smith 1884, pl I, nor the south part of the main area (which seems to have been excavated subsequently). The plan was

drawn originally at a reduced scale of approximately 1:60.

30 A note on the sketch plan about this feature reads 'irregular burials not fully explored'. Gibson's own account was of 'a curious series of excavations in the chalk' (letter of 25 April 1876) and of 'the presence of a number of round holes in the chalk. . .of which. . . the larger may have been part of the hut dwellings of the early inhabitants. The burials seem to have taken place subsequently' (letter of 19 April, 1876).

31 I am very grateful to Paul Drury for these observations. _

32 But only about 75 are shown on Smith's plan (1884, pl I).

33 In Saffron Walden Museum. The location of its grave, wrongly said by Smith to be 'marked E on plan' (1884, 316), is shown by Gibson's sketch plan (Fig 5).

34 It is now clear that other material was sent to the Ashmolean Museum, Oxford, and not published. This cannot now be traced.

35 Its name in *DBii,* fo 62/62b.

36 The origins and topographical development of the Walden land unit will be discussed in a separate paper (Bassett forthcoming). There was a chapel at St Aylotts (TL 570399) in the 15th century (Braybrooke 1836, 168; Benton 1922) and probably earlier.

37 During construction of the present Gibson Housing Estate in 1935 (over a large area which included the 1830 and 1876 areas of investigaion) a few sherds were collected from builders' trenches. These were Romano-British and Saxo-Norman and later (up to the end of the 12th century) in date.

38 The suggestion of a previously unsuspected settlement on the scale of importance of Domesday *Waledana,* incorporating a church and possibly an early Norman castle (below, pp 22-3), is hardly unprecedented. The site of Saxon Thetford, for instance, was unknown until 1947 (Davison 1967, 189).

39 '. . . he determined co fulfil the purpose of his heart rather at Walden, which he desired to honour writh a monastery, and had already distinguished with a castle, than elsewhere.'

40 *Cartularium Monasterii S Johannis Baptiste de Colecestria,* ed S A Moore 1897, I, 22; *Reg* II, 1956, 661. Also *Reg* II, 1956, 688. The Mandeville manors of Sawbridgeworth and Great Waltham were confiscated at the same time.

41 When he paid £133 6s 8d of the total relief of £866 13s 4d still owed by him in 1129 *(Pipe Roll* 31 Henry I, 55 and *passim).*

42 In any event Geoffrey must have received back the manor of Walden and its church before the foundation of his monastery there.

43 eg the keep of Orford Castle, Suffolk, and probably much of the rest of it (judging by the pattern of annual expenditure there in the period 1165-73), seem to have been constructed in the two years 1165-7 (Brown, 1964, 3-4).

44 *Gesta Stephani,* 110. Reginald fitz Count was a signatory of a grant by Stephen to Walden priory of a fair (B M Harl MS 3697, fo 30, printed in *Reg* III, 1968, 914, where it is suggested that he succeeded Turgis d'Avranches). The compilers of *Reg* III suggest a date probably between 1145 and 1154 for this grant.

45 cf the purchase of 100 picks for demolition of the flint rubble keep at Benington *(Pipe Roll 23* Henry II, 144). 'It is perhaps too readily assumed that stone keeps could not be demolished' (Thompson 1960, 90 n40).

46 The present bailey seems to belong to this refortification.

47 It is clear from the late 14th century manorial court rolls that the bounds of the *manerium* were those of the earlier castle bailey proper.

48 While acknowledging the most valuable research on these documents by Mrs Cromarty (1967), I must take issue with some of her conclusions about the layout of the *manerium* after 138l_ Her tentative translation of *mota* as 'ditch or dry moat' seems entirely acceptable, but the commonly used phrases *infra motam* and *extra motam* must refer to areas within and outside the castle bailey proper and not, as she suggests, to the two parts of the bailey separated by a masonry crosswall. The *turris* should refer to the 12th century keep, not to a mural tower; and the hall *infra motam* to the masonry structure to the west of the keep and not to the keep itself.

49 Maynard in 1911 excavated in front of the Saffron Walden Museum (in the castle bailey, west of the keep) to investigate scorch marks visible in the awns. He exposed the footings of at least one wall (3 feet (0.91 m) wide and 2 feet (0.61 m) deep, and composed of large flints set in yellowish sandy mortar) and one wider (wall-removal?) trench, apparently filled with gravel. He interpreted these as remains of the masonry hall, but his is unsubstantiated (Maynard, SWM; also below, p 61).

50 perhaps immediately east of it. The position of he gatehouse *c* 1400 has been fixed approximately from the Walden court rolls by Cromarty (1967). Although her sources postdate the licence to crenellate of 1347, it is likely that this was the original 12th century gatehouse or was on its site. No northern arm of the chalk rampart is known; but there has been no excavation to the north or north-west of the keep, and any superficial indication of it would almost certainly have been obliterated in the construction of the museum buildings there.

51 Maynard, SWM, slip 1913-10/27 contains a lengthy description of the ditch sections.

52 Several ditches of varying size were located along Common Hill between Church Street (to the north) and Hill Street. The one most likely to be relevant here was at TL 53973862 and was recorded as 27 feet (8.23 m) wide at its top (though another possible candidate was at TL

53983858). The possibility that at least some of these features are prehistoric is discussed above (p 5).

53 Though its relationship to the *magnum fossatum,* constructed in the earlier 13th century, is not known. The back boundary line may only mirror the northern arm of the latter.

54 The pond was partly infilled to provide a road for motor traffic in the early 1920s. Formerly there was no connection between this street and Park Lane (once Fullers Lane). The area east of Freshwell Street was formerly called Hogs Green.

55 The track is called Church Lane in the Survey of Walden of *c* 1600 (ERO D/DBy M38). A continuation of its line east of the church coincides with a western entrance, through the inner earthwork defences, into the castle bailey proper; but it is not certain that this entrance was an original feature, although it can be shown to have been in existence by 1382.

56 During dismantling of a 16th century timber-framed building on High Street, just west of the church. It had been used as a support for a ground till, and was 12 x 8 x 24 in high (approx 300 x 200 x 600 mm). The only unmutilated side had edge rolls and was ornamented with 'a double series of roughly executed concentric semicircles set back to back, with a pellet in the middle of each of the diamond-shaped compartments between them' (Benton 1937, 327). Clapham agreed that the decoration was probably 12th century (ibid, 328).

57 I am indebted to Dr W J Rodwell for the following personal communication: 'They cannot be dated by themselves-there are two probabilities. First, they may be freestanding nook shafts from Norman windows of elaborate form (or they could come from a small doorway; cf Hadstock south doorway, *c* 1190-1200). Secondly, they could be derived from 13th century cluster columns, as used for example in an aisle arcade. They are probably of 12th or 13th century date and were fairly certainly associated with a church of some architectural grandeur.'

58 The date (1136) given by the *Liber de fundatione Coenobii de Walden* (Book of the Foundation of Walden Abbey) is almost certainly wrong. In the foundation charter (BM Harl MS 3697, fo 18, cert 1; Dugdale 1823, num 3) Geoffrey styles himself *comes Essexe* (earl of Essex), but his creation was not earlier than December 1139 (probably December 1140). He was probably arrested at the end of 1143, and is unlikely to have founded the priory after then. Of course the charter may not have been granted until the monastery had been built, perhaps years after the initial foundation. Professor R H C Davis comments in a personal communication: 'The foundation charter of Walden abbey is indeed odd, and it may be that the document is really to be dated *after* Earl Geoffrey's death in 1144. If the names of the bishops who consecrated the cemetery are correct, that consecration is to be dated not '1136' (as stated in the *Liber)* but 1146-50.'

59 Only surviving in two late 16th century transcripts, BM Arundel MS 29 and BM Cott MS Vespasian E vi fos 25-70 (see p 105 below). It is printed in part in Dugdale 1823. An English translation by C H Emson is in Essex *Review,* **45-7,** 1936-8, from which all quotations used in this report are taken. The *Liber* ends with an account of the death of Abbot Reginald on 5 February, 1203.

60 eg of the three bishops at the consecration ceremony, one (William of Norwich) did not obtain his see until 1146, two years after Geoffrey's death.

61 It appears to have been written to defend the efforts of its first two priors to improve the house's situation, holdings, and status.

62 The eventual abandonment of the earlier, eastern route may have largely contributed to the decline of a settlement on or beside it at Shortgrove (area centred on TL 526354), where there are house platforms etc in the park. The two Domesday manors of Shortgrove *(Sortegrava, Scortegrava),* each of 1 hide and 30 acres and held by a free man TRE *(DBii,* fos 28, 68), were clearly subdivisions of a former estate (as Round suggested, *VCH* 1, 463 n5) of which this may have been the main settlement. A gold armlet of chainwork, probably Romano-British, was found in the area in 1761 (Way 1849, 60).

63 For the two in use in the Roman period, see above, p 7. For the other two, see Section 7.2, pp 106-7.

64 The writer is conducting research excavations there *(Medieval Archaeol,* **18,** 1974, 196; **21,** 1977, 235; **22,** 1978, 169 and fig 9).

65 After Bisham, Berks (12) and Belchamp, Essex (11). Waltham was the manor immediately adjacent to High Easter, and it is clear that the castle was built as close as possible to their common boundary. (Waltham, which now consists of the two parishes of Great and Little Waltham, should not be confused with Waltham Abbey in west Essex.)

66 For the early history of Newport, see Bassett forthcoming.

67 When the Mandeville inheritance passed to Maud, wife of Henry de Bohun (d 1220). On her death in 1236 it passed to her son Humphrey (d 1275) who thereby became 7th Earl of Essex.

68 Its earliest documentary reference is of 1304, in a charter concerning an acre of land 'in the town of Walden in the field called *Lotegoryshale* (below, Section 7.3, p 107) between land on the north side which formerly belonged to John Le Cloer and the great ditch *(magnum fossatum)* on the south, whose eastern head abuts the messuage which belonged to Rodger Ordgor and whose western head abuts the great ditch'. The next references are of 1331, again in charters; in one, a piece of land is said to lie *juxta* (by) *Lotegoryshale* with one head abutting super *Magnum Fossatum*

domini comitis Hereford (on the Great Ditch of the lord Earl of Hereford). Later references of the 14th and 15th centuries continue to ascribe ownership of the earthwork to the lord of the manor. (All these charters belong to a collection of 14th century and later documents relating to landholding in Walden in the possession of St Mary's church.)

Since the later 15th century, the earthwork has been variously called the *Bessel, Besle, Paille, Peddle, Paigle, Pell, Repell,* and *Battle Ditches* (Reaney 1935, 539). There is, however, no known documentary reference to the *magnum fossatum* except to the length surviving around the south-west quarter of the town (Ravetz & Spencer 1961, 13; below, pp 79-80).

69 '. . . the west bank formerly extended to a wet ditch at the end of the almshouse meadow, where ridges might be seen some years ago, but the ground is now levelled.'

70 ie between production of the 1758 map and the Tithe Award map.

71 Formerly Market End Street, then Market Lane.

72 When first recorded, in 1299, there were 57 burgesses in Walden (PRO IPM 27 Edward I *m* 8).

73 'They did not achieve even the vestiges of incorporation until 1514 and full control of the market until 1549' (Cromarty 1967, n180).

74 Lengths of the bailey ditch were apparently leased out to dyers and used for setting up vats. The subject is dealt with in detail in Cromarty 1967.

75 Newport lies *c* 2.5 miles (4.0 km) to the south-west of Walden and Great Chesterford *c* 3 miles (4.8 km) to the north-west.

76 Warm thanks are extended to the former site owners, Saffron Walden Housing Association, for permission to excavate; and to Mr R M T Tyler ARIBA of Bird and Tyler Associates. agents for the site owners, for his full cooperation and understanding throughout the excavation.

77 The land between Audley Road and Hill Street is divided into three terraces. The lowest of these extends north to Hill Street, and is now separately enclosed as the gardens of the former Borough Council Offices (Jubilee Gardens). The sharp rise from these to the lower of the two levels on the Elm Grove site has occasionally been taken to suggest that the *magnum fossatum* had a northern return on this line (eg RCHM 1916, 259).

78 These are discussed below, p 74-9.

79 Excavations at Little Waltham, Essex, by P J Drury (1978b, esp p 6) showed that the soilmarks of prehistoric and some later features could not be seen until freshly exposed brickearth had weathered subaerially for some while in damp conditions. This caused their humic acid content to darken, and so created zonal colour changes in the soil. Previously, the only indication of the whereabouts of such features had been concentrations of artefacts, fired clay, charcoal flecks, etc.

80 Contractors' permission for such a cut could not be obtained, since it would have interfered seriously with the proposed scheme of redevelopment. Wherever possible, however, the sections across individual features, or groups of features, of category 3 were extended beyond their apparent edges (Limbrey 1975, fig 29).

81 The report on the flintwork from Elm Grove was substantially completed in 1976. It was later revised for publication to include the flintwork from other excavated sites in the town and Amanda Clydesdale's report on the flintwork from Abbey Lane.

82 Warm thanks are extended to Audley End Estates, the site owners, and to the Trustees of Saffron Walden Museum for permission to excavate, and to the former Borough of Saffron Walden, who financed the work. For site B on Fig 10 (observation of the edge of the inner bailey ditch), see Couchman 1976, 165-6.

83 On Pl 9, the basement plan is wholly the result of careful survey; while the first floor plan is worked up from the basement plan, with true features measured in, but the shape of the surviving rubble cores largely sketched. True features in the section (P1 10) were similarly measured, but the shape of the robbed rubble corework was sketched between fairly sparse measured points. The plan differs substantially from the sketch plan published by RCHM (1916, 234); the latter was the best that could be done at a time when the building was heavily overgrown and covered with ivy.

84 Braybrooke (1836, 154-5) provides what purports to be a transcript of this, but which in fact seems to be a conflation of Gough's description with other notes, perhaps Braybrooke's own.

85 Of which blocks remain in *situ* at the north-west and south-west corners. A few pieces of clunch also survive as voussoirs in the arched recesses, and in the lining of the stair and wall shaft. Thirteen small undressed fragments of clunch were found in the excavation; from Period I: layers 6, 61 (2 frags), 64; from Period II: 125 (2 frags), 126 (6 frags); from post Period II: 191.

86 At first sight, the keep at Richmond, Yorks, built *c* 1146-71 over an earlier gatehouse, seems to provide a parallel, but the pier in the basement, the vault it supports, and the column above are all early 14th century insertions (for description and drawings, Clark 1886, 44-5).

87 Its position and orientation suggest that it could perhaps have housed a chapel.

88 Eddy and Buckley (1979) provide evidence for post-medieval use of the forebuilding. However, a malt oven or similar feature seems more consistent with the scale of burning which they report than does a lime kiln.

89 Thought by RCHM (1916, 234) to mark the course of a wall dividing the bailey into two wards.

90 The cutting made in the 1820s for the road now

called Castle Hill probably caused a considerable modification of the surface topography, so that the obvious scarp to the east of the keep, unlike that to the south and west, does not indicate the limit of the bailey there.

91 None was found in any medieval context; below, p 85.

92 The earliest date by which documentary evidence suggests that the castle had been constructed; see above, p 15.

93 When £9 12s 4d was collected to pay for the throwing down of Mandeville castles in Essex *(Pipe Roll* 4 Henry II, 132; and above, p 000).

94 When permission was given to William de Mandeville to refortify Pleshey (PRO Duchy of Lancaster Misc 10/ 12).

95 Many fragments of Romano-British rooftile and brick were found in other medieval contexts: layers 5, 9, 50, 64, 71, 73, 74, 78-91, 115, 117, 118, 126, 139.

96 Early representations of the wheelbarrow in western Europe are of the 12th century and *c* 1200 (Leighton 1972, 89).

97 What survived of this postglacial deposit was nowhere more than 0.35 m deep.

98 Each post was *c* 0.15 m in diameter; see Fig 29.

99 Compare internal ground level in 1761 (P1 5) with its present level (P1 10). It is known that the work started at a level higher than the surviving top of the central pier F6, and very probably above the highest surviving course of facing flints on the internal face of Wall II, ie *c* 1.20 m above the wall base. Only an abridged, secondhand account of the excavation is known, given by Maynard, whose father may have been involved (Maynard 1886).

100 Because 12 was sealed below the lowest levels of the mound-which was demonstrably primary-they must have been laid down only a short while after wall construction had begun (but not before, since 12 overlay the backfill of F3). If it is not accepted, however, that 11 and 12 were contemporary, then chalk rampart F20 (below, p 59) may have been a much later addition to the Period la earthworks.

101 Each separately numbered spread consisted of trails and small patches of both types of mortar in varying proportions. The presence of these interleaving mortars suggested strongly that at least part of the mound had been raised *pari passu* with the keep, as at Ascot Doilly (Jope & Threlfall 1959).

102 By the deposition of 76-94 and of other material subsequently removed by post-medieval landscaping. Although Period IV feature F74 removed much of the mound make-up from the area in which 54 had overlapped the levels laid south of Wall II, sufficient of all these remained for the stratigraphical relationship to be established with certainty. 48, 50, and 53 tailed out to the north no more than *c* 0.80 m north of the south-eastern corner of the buttress, and all were overlain there by 54.

103 Layer 60 survived only where it had sunk into the top of F10, but it and layer 95 were probably the same, or else 95 was derived from 60's displacement westwards.

104 From which 128 may have been at least partially derived in Period Ic; below, p 60.

105 It was noticeable that no flint was found in any medieval context with mortar still adhering to it. Although layers such as 127 seemed obviously derived from wall demolition, their mortar content was always loose and decayed. Such debris may well have been softened *in situ* by percolation through acidic deposits (such as 128).

106 Although it seems likely that they were coated with compacted clay with flints or marl; above, p 59. There is no reason to think that the Period Ia mortar 68 coated the western side of the chalk rampart.

107 One was thick enough to be numbered separately as 136; the part of 128 which directly overlay it is 137.

108 See above, p 57, where it is suggested that both could conceivably have formed part of the bank proper rather than have been deposited during its reduction. The question cannot be resolved from the available evidence.

109 F35 seems to have been a cut made primarily to gain access to that wall's footings and to the lowest ashlar courses of the spiral stair. It probably removed no more than the facing flints and perhaps a little of the core of the inner face of Wall II proper, and may have been mainly cut through stratified deposits against that wall.

110 Fourteen sherds of glazed earthenware of 16th and 17th century date and a single sherd of 18th century stoneware, but no other artefacts, were found in 211, which immediately overlay the Period II turf-line 210. Muilman (1769) reported that 'the keep and other earthworks remain'; their fate later in the century has been discussed on p 50.

111 Features included: Trench A-two palisade-removal (?) cuts (F72, F73), a series of postpits with 'ghost' impressions and post-removal pits (Fs 27-32, F46, F49, F51, F70, F71, and whichever of Fs 41, 43, 47, 48, and 50 do not belong to Period III), a large, peculiarly shaped feature which may have been dug during the 1881 excavation (F74), and, within the keep, a single and a double post-removal pit (F68, F69); Trench B-a length of palisade-removal trench (F56), a limited but deliberate rubble spread (F65), five postpits with 'ghost' impressions (F57, F58, F60, F61, F63), and four post-removal pits (F59, F62, F64, F66); Trench C-a postpit with a 'ghost' impression (F67); Trench D-a shallow amorphous cut of unknown function (F79).

112 Parallel to and 3 m north of the northern limit of the Tennis Courts (as shown on 1:2500 OS sheet TL 5237-5337, 1970).

113 ERO T/M 90. It is not known if the street plan

and property boundaries shown on that map reflect (i) the original line of the bailey defences; (ii) a modification of an arrangement east of the keep which included the eastern arm of the ditch seen by Maynard under Market Hill and sectioned in 1975 on the Barnard's Yard site; (iii) a line of defences which may have been modified or newly laid out after 1347; or (iv) some subsequent but unknown arrangement resulting from the unrestricted development of boundaries once these various defences no longer limited their formation .

114 One week's work was allowed, between acquisition of the site by the developer and the start of building operations. Warm thanks are extended to the developer, Mr J A Parry-Williams, for permission to excavate; to Messrs A F Pettitt & Son, the building contractors, for their very active assistance and for the loan of items of equipment; and to the Department of the Environment for its immediate provision of an extra grant for this work.

115 By a Ford Excavator with a 2 m toothless back bucket. This method of excavation was dictated by the time available for the work. Accordingly the drawn section shows many late layers which were not excavated separately (although machine work in ditch F2 was usually skilful enough to allow its upper fills to be removed individually). It is certain, however, that artefacts were not found, despite sorting of the spoil by hand, which would have been recovered otherwise.

116 The drawn section, Fig 31, was laid out along it.

117 Once it was apparent that the feature was likely to be deep, permission was obtained for the trench to be extended to the north-west, ie along the line of the ditch. Its full width was exposed in soilmark and planned for a further 3 m. Soil was then removed by machine to create a horizontal level across its fills some 2 m below the modern ground surface, so avoiding the need to shore the sides of the original trench.

118 There was no opportunity to extend the trench across the area where such a bank would have lain, but it was obvious that none of it would have survived the landscaping.

119 The majority of 2 was excavated mechanically, but the lowest 15-20 mm was removed by hand. Any initial weathering product should have been best preserved against the north-eastern edge, where 2 was very thin.

120 Towards the south-east the chalk spreads had an increasingly loamy chalk matrix, presumably derived from weathering of the ditch edge on that side, and were separately numbered as 4, 6, 9, 12, 13.

121 The only sherd recovered from the ditch was located in 5: an unabraded body sherd with a hard sandy fabric, dark grey interior, and reddish-brown exterior surfaces; 12th to early 13th century (SAFWM 1977: 192).

122 Suggested by the angle of rest and location, relative to the slope on which they had fallen, of a number of large flint nodules in the area where 11 and 12 were inseparable.

123 The uppermost part of 11; this is well illustrated in Fig 31 by the uneven configuration of that layer's surface immediately south-west of the turf-line.

124 ie Period Ic on that site.

125 Presumably from the lowest levels of bank makeup, which were probably formed of re-deposited topsoil, subsoil, and clay with flints.

126 But it is not known if this was primary on the surface of 21 and 23, or a much later deposit; below, p 63.

127 This was presumably the road shown on the 1758 map (Fig 9), which was replaced in the 1820s by the new Castle Hill Road.

128 On the basis of at least six reliable sightings, of which the most easterly was in Castle Court (immediately south of 68-72 Castle Street) where the alignment of the inner edge was north-west to south-east.

129 In a sewer trench north-south along that road between Cates Corner and the eastern end of Church Street. The depth of the trench where it cut through this ditch was not specified, but elsewhere was 5ft 6ins *(c* 1.70 m). The ditch itself was of an unknown depth; Maynard's measurement of its width (27 ft, *c* 8.2 m) was taken along an oblique section and so was considerably greater than a measurement at right-angles to its course.

130 Calculation based on Maynard's measurements and sketch plans. A similarly wide feature was shown some 43 m to the south of the ditch, on an east-west alignment; Maynard, however, did not call this feature a ditch, unlike the other. Its location was well to the south of the projected line of the ditch found in Barnard's Yard, under Market Hill, etc.

131 'Too late to see the section...saw stuff left over and was told by [the] men' is written on the sketch, where the northern edge of the feature is said to be '6 paces' north of the frontage of 109 Castle Street.

132 In fact, '? outer ditch of castle', and presumably therefore on a line roughly concentric with that of the perimeter ditch which he had observed along Castle Street and through Castle Court.

133 Of the Archaeology Section of Essex County Council. Warm thanks are extended to Messrs Rooke & Sons (Builders) of Saffron Walden for permission to excavate.

134 ie there was no evidence that the ditch underlay the earlier course of High Street.

135 The High Street frontage was not demolished; the buildings have been converted to town houses.

136 The vertical northern edge of this downgrading cut lay some 5.50 m south of the northern site boundary in that area, and extended from the structures on High Street to the east end of the site. A number of large unfilled cellars in the area restricted the location of excavation trenches.

137 Although Trench III was extended for 4.60 m beyond its southern edge, there was no trace of the second (possibly linear) feature which Maynard may have seen under the west entrance and at the south end of Market Hill (p 19).

138 Directed for Essex County Council by Mr Petchey. The writer did not see the excavation in this trench, but is grateful to Mr Petchey for access to his site records. It was agreed that the pottery from the site should be published with that from the other SWARC excavations in the town.

139 Mr Petchey's funds were insufficient for any further excavation.

140 Warm thanks are extended to Boots Stores Limited for permission to excavate.

141 Which may not have been regularized on its present line until the 1820s; the road is not shown on the 1758 map of the town (ERO T/M 90; here as Fig 9).

142 On the Cinema-Maltings site it had been between *c* 1.70 m and 2.0 m wide.

143 1/18 may represent an earlier partial collapse of them.

144 Ravetz & Spencer 1961, 144: 'They lie in a layer up to 18 in *[c* 0.46 m] thick, centrally above the bottom of the ditch' and 'are very loose indeed, with only a little soil between them'. The published section (1961, 146) shows them about 13 in *(c* 0.33 m) deep at most.

145 Ravetz & Spencer 1961, 144: 'We must believe, then, that at some time the ditch was almost completely cleaned out, and that the turf and stones were dumped in very soon afterwards'; see Section 3.9 for a reconsideration of this excavation's results.

146 Warm thanks are extended to Messrs Rowden Building Limited of Sawbridgeworth and to their Agents, Messrs Edwin Watson & Son, for permission to excavate.

147 No more of the frontage could be examined since the developers stipulated that spoil was to be heaped along it.

148 Maynard's observation of sewer trenches in 1912 showed that the ditch did not extend beneath High Street.

149 Although no mortar or fragments of brick or masonry were found in either feature, their very size tends to suggest a wall rather than posts.

150 ie before the eradication of the westward slope caused by incision of the early, wider High Street. Furthermore, there had been no sinkage of the malthouse floor screed into the tops of F2 and F6. F2 contained one small 17th century rim sherd.

151 F3 contained a large fragment of 18th century or later brick, and F4 a body sherd of 17th or 18th century earthenware.

152 Its eastern butt end there was marked by Cucking Stool Pond, now below Margaret Way.

153 Only two certainly 13th century sherds were recovered in 1959 from 'the old land surface sealed by the bank and the lowest layers of the bank' including the old turf-line (Ravetz & Spencer 1961, 147). Of these, fig 4.9 is clearly Hedingham ware. A date of *c 1250-c* 1300 is given (ibid, 148) but on present evidence it is impossible to be more specific than early 13th to late 14th century. Most of the rest of the pottery-apart from a few Romano-British, St Neots, and Thetford sherds-was thought to belong to the period 1050-1150. Again, this is now too precise a date bracket; for a discussion of the dating of early medieval ware, see p 83.

154 From fills III/3, 6, 11, 12; IV/28; and V/5 (two sherds).

155 The only other recorded sighting was by Maynard at the south end of Fairycroft Road, where he noted that it had 'a wide, flat bottom' (SWM). As his sketch has not survived, its precise width is unknown.

156 Warm thanks are extended to the Saffron Walden & District Housing Association Limited and to their Agents, Messrs Jennings, for permission to excavate.

157 But no continuation of F6.

158 cf the Cinema-Maltings site where it was only 3.70 m wide at most.

159 Similar to the latest surviving fills on the Cinema-Maltings site.

160 Fig 43. 32, 33, 37, 39-42 are from housing redevelopment within the south-western angle of the *magnum fossatum* (above, p 13); 34-36, 38 are from the demolition of 12 Debden Road.

161 Description on the box lid: 'Ancient pottery found in the meadow opposite the Museum, Saffron Walden, 1912 AD, in cutting sections to trace the ancient foundations shown up by the great drought of 1911 AD.'

162 Notes in *Medieval Archaeol,* 3, 1959, 325; **16,** 1972, 205.

163 I am grateful to Mrs Elizabeth Sellers for permission to examine material from her excavations at Hole Farm, Sible Hedingham, Essex.

164 Recorded in DoE 1958. I am grateful to the Department of the Environment, and especially J Allen, I R Gow, and P R Walker for making available the information on which this contribution is based, to the staff at Audley End for their assistance, and to Laurence Keen for his comments on the section dealing with the floor tiles.

165 Now in the Braybrooke scrapbook at Audley End; the original is lost. It shows Audley End I, and thus should predate *c* 1603-5; its style, allowing for the copying, is consistent with a late 16th-early 17th century date. The early 19th century list of the scrapbook's contents (ERO, D/DBy F41) describes it as being 'copied from an old mutilated plan'.

166 Recorded on Ministry of Works Plan 559/36, Feb 1951, and photos A 1054/1-10, December 1950.

167 A gallery alongside the east wall of the hall was added by the Countess of Portsmouth *c* 1753, to restore communication between the north and

south wings disrupted by the demolition of the long gallery range. It was rebuilt in its present form by Sir John Griffin Griffin *c* 1763 (Williams 1966, 27) and glazed *c* 1863.

168 Information from Miss M D Cra'ster, University Museum of Archaeology and Ethnography, Cambridge, where the objects are deposited as part of the Braybrooke collection (Accn no 48: 1710A/B).

169 Recorded on Ministry of Works Plan 559/53, Feb 1951.

170 The eleventh line of the first paragraph following the heading on p 111 of Drury 1977 should read 'surfaces are so uneven that they would not have been scraped, but the fabric...'. This (and many other errors) were outside the control of the writer, who was also *not* responsible for the preparation of the drawings accompanying that paper in the form in which they appear.

Bibliography

Primary sources (published)

Ancient Deeds, ii *A descriptive catalogue of Ancient Deeds in the Public Record Office*, ii, HMSO, 1894

DBii Little Domesday Book, in *VCH* **1**, 1903, 427–578

Gesta Stephani Gesta Stephani, Regis Anglorum et Ducis Normannorum, ed R C Sewell, Engl Hist Soc, 1846

Henry Hunt Henrici Archdiaconi Huntendunensis Historia Anglorum, ed T Arnold, Rolls Ser, **74**, 1879

Liber Liber de fundatione Coenobii de Walden, transcribed and translated by C H Emson, in *Essex Rev*, **45**, **46**, **47**, 1936–38

Orderic Vitalis Orderic Vitalis, *Historiae Ecclesiasticae libra-tredecim*, ed A le Prevost, Paris, 1838–55

Pipe Roll 31 Henry I *The Pipe Roll of 31 Henry I*, HMSO, 1929 (facsimile reproduction of Record Commission's limited edition of 1833)

Pipe Roll 4 Henry II *The Great Rolls of the Pipe for the second, third, and fourth years of the reign of King Henry the Second, AD 1155, 1156, 1157, 1158*, ed J Hunter, Record Commission, London 1844.

Pipe Roll 23 Henry II *The Great Roll of the Pipe for the twenty-third year of the reign of King Henry the Second, AD 1176–1177*, Pipe Roll Soc, **26**, 1905

Reg Regesta Regum Anglo-Normannorum, ed H W C Davis *et al*, 3 vols, 1913–68

W Newburgh William of Newburgh's *Historia Rerum Anglicarum*, ed R Howlett, Rolls Ser, **82**, 1884

Primary sources (unpublished)

Collar, SWM Collected manuscript notes in Saffron Walden Museum

Compton Lord Alwyne Compton, volume of tile tracings, late 19th century, in the library of the Society of Antiquaries of London

Maynard, SWM Guy Maynard, notes and sketches in Saffron Walden Museum

Registrum Registrum de Walden (BM Harl MS 3697), typescript copy by C H Emson in ERO: T/A 29 (a cartulary dated 1387 but including charters from the mid 12th century onwards)

Secondary sources

Addison, W, 1953 *Audley End*

Addyman, P V, 1964 A dark-age settlement at Maxey, Northants, *Medieval Archaeol*, **8**, 20–73

Addyman, P V & Whitwell, J B, 1970 Some middle Saxon pottery types in Lincolnshire, *Antiq J*, **50**, 96–102

Alexander, J, 1972 Note on excavations at Grantchester, *Medieval Archaeol*, **16**, 148

Alexander, J, Ozanne, P C, & Ozanne, A, 1960 Report on the investigation of a round barrow on Arreton Down, Isle of Wight, *Proc Prehist Soc*, **26**, 263–302

Barley, M W (ed), 1976 *The plans and topography of medieval towns in England and Wales*, CBA Res Rep, **14**

Bassett, S R, forthcoming Great Chesterford and its district: aspects of the transition from Roman to Anglo-Saxon

Bassett, S R, & Drury P J, 1976 Braintree: the medieval town and its origins, in Drury 1976, 128–35

Benton, G M, 1922 St Aylet (St Aylotts, Saffron Walden), *Trans Essex Archaeol Soc*, n ser, **16**, 212–14

——, 1937 A 12th century cross-shaft discovered at Saffron Walden, *ibid*, n ser, **21**, 327–8

Beresford, M W, 1967 *New towns of the Middle Ages*

Beresford, M W, & Hurst, J G (eds), 1971 *Deserted medieval villages*

Biddle, M, 1964 Excavation of a motte and bailey castle at Therfield, Herts, *J Brit Archaeol Ass*, 3 ser, **27**, 53–91

Biek, L, 1979 Metalworking residues, in *The Saxon and medieval palaces at Cheddar* (P A Rahtz), Brit Archaeol Rep, **65**, 252–8

Boessneck, J, & von den Driesch, A, 1974 Kritische Anmerkungen zur Widerristhohenberechnung aus Langenmassen vor-und frühgeschichtlicher Tierknochen, *Saugetierkundliche Mitteilungen*, **22.4**, 325–48

Bowen, H C, & Fowler, P J, 1978 *Early land allotment in the British Isles*, Brit Archaeol Rep, **48**

Bradley, R, 1970 The excavation of a Beaker settlement at Belle Tout, East Sussex, England, *Proc Prehist Soc*, **36**, 312–79

Brailsford, J W (comp) 1962 *Hod Hill*, **1**, Brit Mus

Braybrooke, Richard Lord, 1836 *The history of Audley End and Saffron Walden*

Brodribb, A C C, Hands, A R, & Walker, D R, 1971, 1973 *Excavations at Shakenoak*, **1**, **4**

Brown, R A, 1964 *Orford Castle, Suffolk*, MPBW Official Guide, HMSO

——, 1969 *Rochester Castle*, Kent, MPBW Official Guide, HMSO

Buckley, D G (ed), 1980 *Archaeology in Essex to AD 1500*, CBA Res Rep, **34**

Clapham, A W, 1910 Report on explorations at Lesnes Abbey, Kent, *Proc Woolwich Antiq Soc*, **15**, 83–173

Clark, G T, 1886 Richmond Castle, *Yorkshire Archaeol J*, **9**, 33–54

Clark, J G D, 1933 Report on an early Bronze Age site in the south-eastern Fens, *Antiq J*, **13**, 266–96

——, 1934 Derivative forms of the *petit tranchet* in Britain, *Archaeol J*, **91**, 34–58

——, 1954 *Star Carr*

Clark, J G D, Higgs, E S, & Longworth, I H, 1960 Excavations at the Neolithic site at Hurst Fen, Mildenhall, Suffolk, 1954, 1957, and 1958, *Proc Prehist Soc*, **26**, 202–45

Clifton-Taylor, A, 1972 *The pattern of English building*

Collar, H, & Emson, C H, 1938 The Book of the Foundation of Walden Abbey, reprinted (with continuous pagination) from *Essex Rev*, **45–7** (1936–8)

Colvin, H M, 1978 *A biographical dictionary of British architects, 1600–1840*

Couchman, C (ed), 1976 Work undertaken by Essex County Council Archaeology Section 1974–76, *Essex Archaeol Hist*, **8**, 144–83

——, 1980 The Bronze Age, in Buckley 1980, 40–6

Cranmer-Byng, J L, 1952 *Essex prepares for invasion, 1796–1805*, reprinted (with continuous pagination) from *Essex Rev*, **60–1** (1951–2)

Cromarty, D, 1966 *The fields of Saffron Walden in 1400*, Essex Record Office

——, 1967 Chepyng Walden 1381–1420: A study from the Court Rolls, *Essex J*, 2, 104–113; 122–139; 181–186

Cunliffe, B W, 1968 Early pre-Roman Iron Age communities in eastern England, *Antiq J*, **48**, 175–91

——, 1974 *Iron Age communities in Britain*

——, 1978 Settlement and population in the British Iron Age: some facts, figures and fantasies, in Cunliffe & Rowley 1978, 3–24

Cunliffe, B W, & Rowley, R T (eds), 1978 *Lowland Iron Age*

communities in Europe, Brit Archaeol Rep, **S48**
Cunningham, C M, 1982 Medieval, and post-medieval pottery, in Aspects of the origins and development of Colchester Castle (P J Drury), *Archaeol J*, **139**, forthcoming
Davey, N, 1961 *A history of building materials*
——, 1964 A pre-Conquest church and baptistery at Potterne, *Wiltshire Archaeol Natur Hist Mag*, **59**, 116–23
Davis, G R C, 1958 *Medieval cartularies of Great Britain*
Davis, R C H, 1964 Geoffrey de Mandeville reconsidered, *Engl Hist Rev*, **79**, 299–307
Davison, B K, 1967 The Late Saxon town of Thetford: an interim report on the 1964–6 excavations, *Medieval Archaeol*, **11**, 189–208
Dodgson, J McN, 1973 Place-names from *hām* distinguished from *hamm* names, in relation to the settlement of Kent, Surrey and Sussex, in *Anglo-Saxon England*, **2**, 1–30
DoE, 1958 *Audley End, Essex*, Official Guide, HMSO
Down, A, & Rule, M, 1971 *Chichester excavations*, **1**
Drewett, P, 1977 The excavation of a Neolithic causewayed enclosure on Offham Hill, East Sussex, 1976, *Proc Prehist Soc*, **43**, 201–42
Drury, P J, 1974 Chelmsford Dominican Priory: the excavation of the reredorter, 1973, *Essex Archaeol Hist*, **6**, 40–81
—— (ed), 1976 Braintree: excavations and research, 1971–76, *ibid*, **8**, 1–143
——, 1977 The brick and tile, in *Pleshey Castle, Essex (12th–16th century): excavations in the bailey 1959–63* (F W Williams), Brit Archaeol Rep, **42**, 92–124
——, 1978a Little Waltham and pre-Belgic Iron Age settlement in Essex, in Cunliffe & Rowley 1978, 43–76
——, 1978b *Excavations at Little Waltham 1970–71*, CBA Res Rep, **26**, Chelmsford Excavation Committee Rep 1
——, 1979 The floor tiles, in Excavations at St Michael's Church, Latchingdon, 1976 (C Couchman), *Essex Archaeol Hist*, **11**, 24
——, 1980a The later Iron Age and Roman landscapes, in Drury & Rodwell 1980, 59–64
——, 1980b 'No other palace in the kingdom will compare with it': the evolution of Audley End, 1605–1745, *Architect Hist*, **23**, 1–39
——, 1981 *Excavations in the east end of the South wing of Audley End House, 1979* (Level III report available from National Monuments Record)
——, 1982 A mid-eighteenth century floor at Audley End, *Post-Medieval Archaeol*, **16**
——, forthcoming a A late 14th century–early 15th century tile kiln at Radwinter, Essex, and its products
——, forthcoming b The later Saxon, medieval, and post-medieval pottery, in Rodwell & Rodwell forthcoming
Drury, P J, & Norton, E C, forthcoming *Medieval floor tiles in Essex, Cambridgeshire and Suffolk*
Drury, P J, & Petchey, M R, 1975 Medieval potteries at Mile End and Great Horkesley, near Colchester, *Essex Archaeol Hist*, **7**, 33–60
Drury, P J, & Pratt, G D, 1975 A late 13th and early 14th century tile factory at Danbury, Essex, *Medieval Archaeol*, **19**, 92–164
Drury, P J, & Rodwell, W J, 1978 Investigations at Asheldham, Essex: an interim report on the church and the historic landscape, *Antiq J*, **58**, 133–51
——, & ——, 1980 Settlement in the later Iron Age and Roman periods, in Buckley 1980, 59–75
Dugdale, W, 1823 *Monasticon Anglicanum* (eds J Caley, H Ellis, & B Bandinel)
Dunning, G C, 1959 Pottery of the late Anglo-Saxon period in England, in Anglo-Saxon pottery: a symposium (G C Dunning, J G Hurst, J N L Myres, & F Tischler), *Medieval Archaeol*, **3**, 31–78
——, 1964 Barrel-shaped and cylindrical costrels on the continent and in England, in *Winchester excavations 1949–1960*, **1** (B W Cunliffe), 127–40
Eames, E S, 1980 *Catalogue of medieval lead-glazed earthenware tiles in the Department of Medieval and Later Antiquities, British Museum*
Eddy, M R, & Buckley, D G, 1979 Saffron Walden Castle, in Annual report of the Essex County Council Archaeology Section 1978 (C R Couchman), *Essex Archaeol Hist*, **11**, 70–2
Evison, V I, 1969a A Viking grave at Sonning, Berks, *Antiq J*, **49**, 330–45
——, 1969b Five Anglo-Saxon inhumation graves containing pots at Great Chesterford, Essex, *Berichten ROB*, **19**, 157–73
Fancett, W J, 1949 *The story of Saffron Walden parish church* (pamphlet)
Fell, C I, 1952 An early Iron Age settlement at Linton, Cambridgeshire, *Proc Cambridge Antiq Soc*, **46**, 31–42
Fox, C, 1923 *The archaeology of the Cambridge region*
Frere, S S, 1972 *Verulamium excavations* **1**, Soc Antiq Res Rep, **28**
Froom, F R, 1976 *Wawcot III: A stratified Mesolithic succession*, Brit Archaeol Rep, **27**
Gardner, J S 1955 Coggeshall Abbey and its early brickwork, *J Brit Archaeol Ass*, 3 ser, **18**, 19–32
Gelling, M, 1978 *Signposts to the past*
Girouard, M, 1962 the Smythson Collection of the Royal Institute of British Architects, *Architect Hist*, **5**, 22–184
Gould, I C, 1906 The Repell Ditches, Saffron Walden, *Trans Essex Archaeol Soc*, n ser, **9**, 224–7
Gover, J E B, Mawer, A, & Stenton, F M, 1938 The place-names of Hertfordshire, *Engl Place-Name Soc*, **15**
Green, H S, 1974 Early Bronze Age burial, territory and population in Milton Keynes, Buckinghamshire, and the Great Ouse Valley, *Archaeol J*, **131**, 75–139
——, 1980 The *flint arrowheads of the British Isles*, Brit Archaeol Rep, **75**
Grimes, W F, 1968 *The excavation of Roman and medieval London*
Grose, F, 1787 *Suplement to the Antiquities of England and Wales*
Hawkes, C F C, & Hull, M R, 1948 *Camulodunum*, Soc Antiq Res Rep, **14**
Healey, E, 1978 The flint, in Drury 1978b, 102–10
Hollister, C W, 1973 The misfortunes of the Mandevilles, *History*, **58**, no 192, 18–28
Huggins, P J, 1978 Excavation of Belgic and Romano-British farm with Middle Saxon cemetery and churches at Nazeingbury, Essex, 1975–6, *Essex Archaeol Hist*, **10**, 29–117
Hull, M R, 1958 *Roman Colchester* Soc Antiq Res Rep, **20**
Hurst, J G, 1956 Saxo-Norman pottery in East Anglia, part 1, *Proc Cambridge Antiq Soc*, **49**, 43–70
——, 1957 Saxo-Norman pottery in East Anglia, part 2, *ibid*, **50**, 29–60
——, 1961 The kitchen area of Northolt Manor, Middlesex, *Medieval Archaeol*, **5**, 211–99
——, 1967–8 Saxon and medieval pottery from Kirby Bellars, *Trans Leicestershire Archaeol Hist Soc*, **43**, 10–18
——, 1976a Wharram Percy, St Martin's Church, in *The archaeological study of churches* (eds P V Addyman & R K Morris), CBA Res Rep, **13**, 36–9
——, 1976b The pottery, in Wilson 1976, 283–348
Hurst, J G, & Hurst, D G, 1967 The excavation of two moated sites at Milton, Hants, and Ashwell, Herts, *J Brit Archaeol Ass*, 3 ser, **30**, 48–86
Isaac, G, 1976 Early stone tools—an adaptive threshold?, in *Problems in economic and social archaeology* (eds G de G Sieveking *et al*), 39–47
Jones, M U, 1969 Saxon pottery from a hut at Mucking, Essex, *Berichten ROB*, **19**, 145–56
Jope, E M, & Threlfall, R I, 1959 The twelfth-century castle at Ascot Doilly, Oxfordshire: its history and excavation, *Antiq J*, **39**, 219–73
Keen, L, 1970 A fourteenth-century tile pavement at Meesden, Hertfordshire, *Hertfordshire Archaeol*, **2**, 75–81
——, 1973 Medieval floor-tiles of the 'Westminster' tiler at Bengeo, *ibid*, **3**, 90–3
——, 1980 The medieval floor-tiles, in Excavations at Denny Abbey (P M Christie & J G Coad), *Archaeol J*, **137**, 212–22
Keen, L, & Thackray, D, 1974 A fourteenth-century mosaic tile pavement with line-impressed decoration from Icklingham, *Proc Suffolk Inst Archaeol*, **33.2**, 153–67
Klingelhofer, E C, 1974 *Broadfield deserted medieval village*, Brit Archaeol Rep, **2**
Knowles, D, 1963 The monastic buildings of England, in *The historian and character*, 179–212
Krumbein, W C, 1941 Measurement and geological significance of shape and roundness of sedimentary petrology, *J Sedimentary Petrology*, **11.2**, 64–72
Leighton, A C, 1972 *Transport and communication in early medieval Europe, AD 500–1100*
Limbrey, S, 1975 *Soil science and archaeology*
Mackreth, D M, 1977 Orton Hall Farm—the Saxon connection,

Durobrivae, **5**, 20–1
——, 1978 Orton Hall Farm, in Todd 1978, 209–23
Mawer, A, Stenton, F M, & Gover, J E B, 1929 The place-names of Sussex, *Engl Place-Name Soc*, **6**
Maynard, G N, 1886 Some account of the castle of Saffron Walden and its possessors, *Trans Essex Fld Club*, **4**, lxxxviii-xci
——, 1916 *A guide to Saffron Walden Museum*
Meaney, A, 1964 *A gazetteer of early Anglo-Saxon burial sites*
Mellars, P, 1974 The Palaeolithic and Mesolithic, in *British Prehistory: a new outline* (ed C Renfrew), 41–92
Monteith, D, 1958 *Saffron Walden and its environs: a study in the development of a landscape*, MA thesis, Univ Leicester
Morant, P, 1768 *History and Antiquities of the County of Essex*
Morris, G, 1921–3 Some Neolithic sites in the upper valley of the Cam, *Essex Natur*, **20**, 49–68
Morris, J, 1974 Review of Myres & Green 1973, *Medieval Archaeol*, **18**, 225–32
Muilman, P, 1769 *A History of Essex by a Gentleman*
Myres, J N L, 1969 *Anglo-Saxon pottery and the settlement of England*
Myres, J N L, & Green, B, 1973 *The Anglo-Saxon cemeteries of Caistor-by-Norwich and Markshall, Norfolk*, Soc Antiq Res Rep, **30**
Neville, R C, 1848 *Sepulchra Exposita*
Newcourt, R, 1710 *Repertorium Ecclesiasticum Parochiale Londinense*
Newton, K C, 1960 *Thaxted in the fourteenth century*
Newton, R G, 1963 The glass, in Excavations at the deserted medieval village of Hangleton, Part 1 (E W Holden), *Sussex Archaeol Coll*, **101**, 164–5
Norden, J, 1840 *Speculi Britanniae Pars: An historical and chorographical description of the County of Essex, 1594*, Camden Soc
Ornsby, G (ed), 1878 Selections from the Household Books of the Lord William Howard of Naworth Castle, *Surtees Soc*, **68**
Pevsner, N, with Radcliffe, E, 1965 *The buildings of England: Essex*, 2 edn
Pitts, M W, 1978a On the shape of waste flakes as an index of technological change in lithic industries, *J Archaeol Sci*, **5**, 17–37
——, 1978b Towards an understanding of flint industries in post-glacial England, *Bull Inst Archaeol Univ London*, **15**, 179–97
Pitts, M W, & Jacobi, R M, 1979 Some aspects of change in flaked stone industries of the Mesolithic and Neolithic in southern Britain, *J Archaeol Sci*, **6**, 163–77
Pollard S H, 1966 Neolithic and Dark Age settlement on High Peak, Sidmouth, Devon, *Proc Devon Archaeol Soc*, **23**, 35–59
Rahtz, P A, 1960 *Pleshey Castle: first interim report, 1960*
——, 1970 Excavations on Glastonbury Tor, Somerset, 1964–6, *Archaeol J*, **127**, 1–81
Rahtz, P A, & Hirst, S, 1976 *Bordesley Abbey, Redditch, Hereford-Worcestershire: first report on excavations 1969–73*, Brit Archaeol Rep, **23**
Ravetz, A, & Spencer, G, 1961 Excavation of the Battle Ditches, Saffron Walden, in *Trans Essex Archaeol Soc, 3 ser*, **1**, 1–19
RCHM, 1916–23 *Essex*, vols 1–4, Royal Commission on Historical Monuments
——, 1925 *London 2* (West), Royal Commission on Historical Monuments
——, 1959 Wareham West Walls, *Medieval Archaeol*, **3**, 120–38
Reaney, P H, 1935 The place-names of Essex, *Engl Place-Name Soc*, **12**
Renn, D F, 1960 The keep of Wareham Castle, *Medieval Archaeol*, **4**, 56–68
——, 1973 *Norman castles in Britain*, 2 edn
Rittenhouse, G, 1943 A visual method of estimating two dimensional sphericity, *J Sedimentary Petrology*, **13.2**, 79–81
Rodwell, W J, 1972 The Roman fort at Great Chesterford, Essex, *Britannia*, **3**, 290–3
——, 1973 The products of kilns II and III, in The Romano-British pottery kilns at Mucking (M U Jones & W J Rodwell), *Essex Archaeol Hist*, **5**, 13–47
——, 1975 Trinovantian towns and their setting, in *The 'small towns' of Roman Britain* (eds W J Rodwell & R T Rowley), Brit Archaeol Rep, **15**, 85–101
——, 1976 Coinage, oppida and the rise of Belgic power in south-eastern Britain, in *Oppida in barbarian Europe* (eds B W Cunliffe & R T Rowley), Brit Archaeol Rep, **52**, 181–367
——, 1978 Relict landscapes in Essex, in Bowen & Fowler 1978, 89–98
——, 1980 First century military occupation, in Drury & Rodwell 1980, 64–5
Rodwell, W J, & Rodwell, K A, forthcoming *Rivenhall: investigations on the villa, church and village, 1950–77*
Rook, A G, 1970a A Belgic and Roman site at Brickwall Hill, Welwyn Garden City, *Hertfordshire Archaeol*, **2**, 23–30
——, 1970b Investigation of a Belgic site at Grubs Barn, Welwyn Garden City, *ibid*, **2**, 31–6
Round, J H, 1892 *Geoffrey de Mandeville: a study of the anarchy*
——, 1903 The Domesday Survey, in *VCH* **1**, 333–578
Saville, A, 1977 Two Mesolithic implement types, *Northamptonshire Archaeol*, **12**, 3–8
Silver, I A, 1963 The ageing of domestic animals, in *Science in archaeology* (eds D Brothwell and E S Higgs), 283–302
Smith, H E, 1884 An ancient cemetery at Saffron Walden, *Trans Essex Archaeol Soc, n ser*, **2**, 311–34
Smith, I F, 1965 *Windmill Hill and Avebury*
Steer, F W, 1950 A short history of Tilty Abbey, *Essex Rev*, **59**, 95–100
——, 1958 The statutes of Saffron Walden almshouses, *Trans Essex Archaeol Soc*, n ser, **25**, 161–221
Steer, K A, & Feacham, R W, 1952 The Roman fort and temporary camp at Oakwood, Selkirkshire, *Proc Soc Antiq Scot*, **86**, 81–105
Summerson, J, 1966 The Book of Architecture of John Thorpe in Sir John Soane's Museum, *Walpole Soc*, **40**
Survey of London, 1937 **18**, *The Strand*
Taylor, C C, 1975 *Fields in the English landscape*
Taylor, C C, & Fowler, P J, 1978 Roman fields into medieval furlongs, in Bowen & Fowler 1978, 159–62
Thompson, A, 1979 St Nicholas-in-the Shambles, *Curr Archaeol*, **65**, 176–9
Thompson, M W, 1960 Recent excavations in the keep of Farnham Castle, Surrey, *Medieval Archaeol*, **4**, 81–94
——, 1961 Motte substructures, *ibid*, **5**, 305–6
Todd, M (ed), 1978 *Studies in the Romano-British villa*
Vertue, J, 1932 *Vertue notebooks 2*, Walpole Soc, **20** (written *c* 1707)
VCH 1, 1903 *The Victoria history of the County of Essex*, **1**
VCH 2, 1911 *The Victoria history of the County of Essex*, **2**
VCH 3, 1963 *The Victoria history of the County of Essex*, **3**
von den Driesch, A, 1976 A guide to the measurement of animal bones from archaeological sites, *Peabody Mus Bull*, Harvard Univ
Wainwright, G J, 1971 The flint, in The Grooved Ware site at Lion Point, Clacton (H Longworth *et al*), in *Prehistoric and Roman studies* (ed G de G Sieveking), *Brit Mus Quart*, **35**, 117–24
——, 1972 The excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk, *Proc Prehist Soc*, **38**, 1–97
——, 1973 Prehistoric and Romano-British settlements at Eaton Heath, Norwich, *Archaeol J*, **130**, 1–43
Walker, J S F, 1978 Anglo-Saxon traded pottery, in Todd 1978, 224–8
Ward-Perkins, J B, 1939 A medieval spoon in the Guildhall Museum, London, *Antiq J*, **19**, 313–16
——, 1940 *London Museum medieval catalogue*, HMSO
Way, A, 1849 Ancient armillae of gold recently found in Buckinghamshire and in northern Britain: with notices of ornaments of gold discovered in the British Islands, *Archaeol J*, **6**, 48–61
Wheeler, R E M, & Wheeler, T V, 1936 *Verulamium, a Belgic and two Roman cities*, Soc Antiq Res Rep, **11**
Whistler, C W, 1908 The battle burials at Cannington Park, *Sagabook*, **5.2**, 237–42
Williams, J D, 1966 *Audley End, the restoration of 1762–1797*
Wilson, D M (ed), 1976 *The archaeology of Anglo-Saxon England*
Wilson, G, 1976 *The old telegraphs*
Winstanley, H, 1676 *Book of the Ground-Platt's Generall and Particular Prospects of all the Parts of his Majesty's Royal Pallace of Audley End*
Wymer, J J, 1962 Excavations at the Maglemosian sites at Thatcham, Berkshire, England, *Proc Prehist Soc*, **27**, 329–61
——, 1977 *Gazetteer of Mesolithic sites in England and Wales*, CBA Res Rep, **20**
Young, C J, 1977 *The Roman pottery of the Oxford region*, Brit Archaeol Rep, **43**

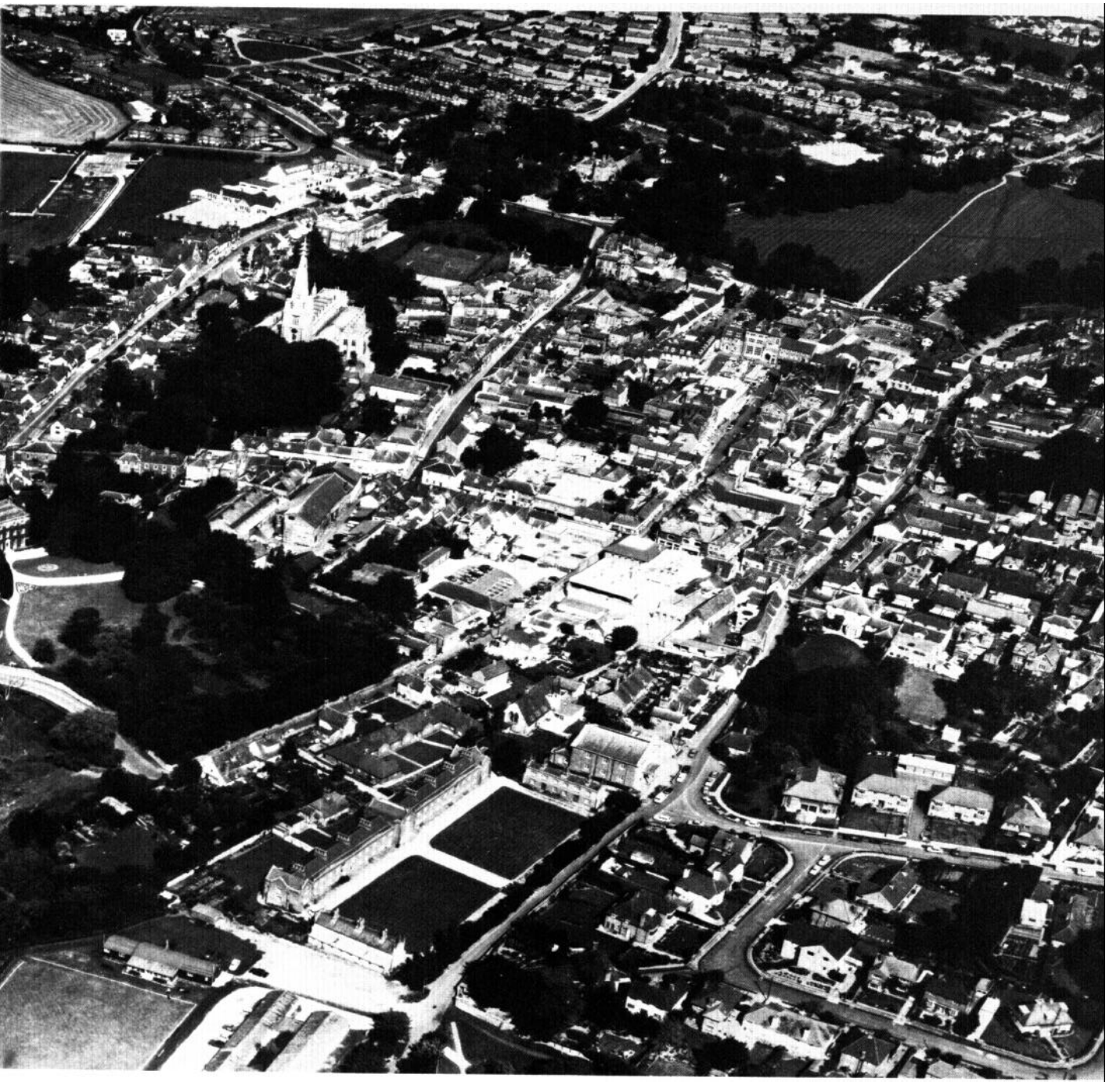


Plate 1 Saffron Walden from the south-west, showing Bury Hill and much of the area of the earlier 13th century planned extension to the south (Figs 8-10)

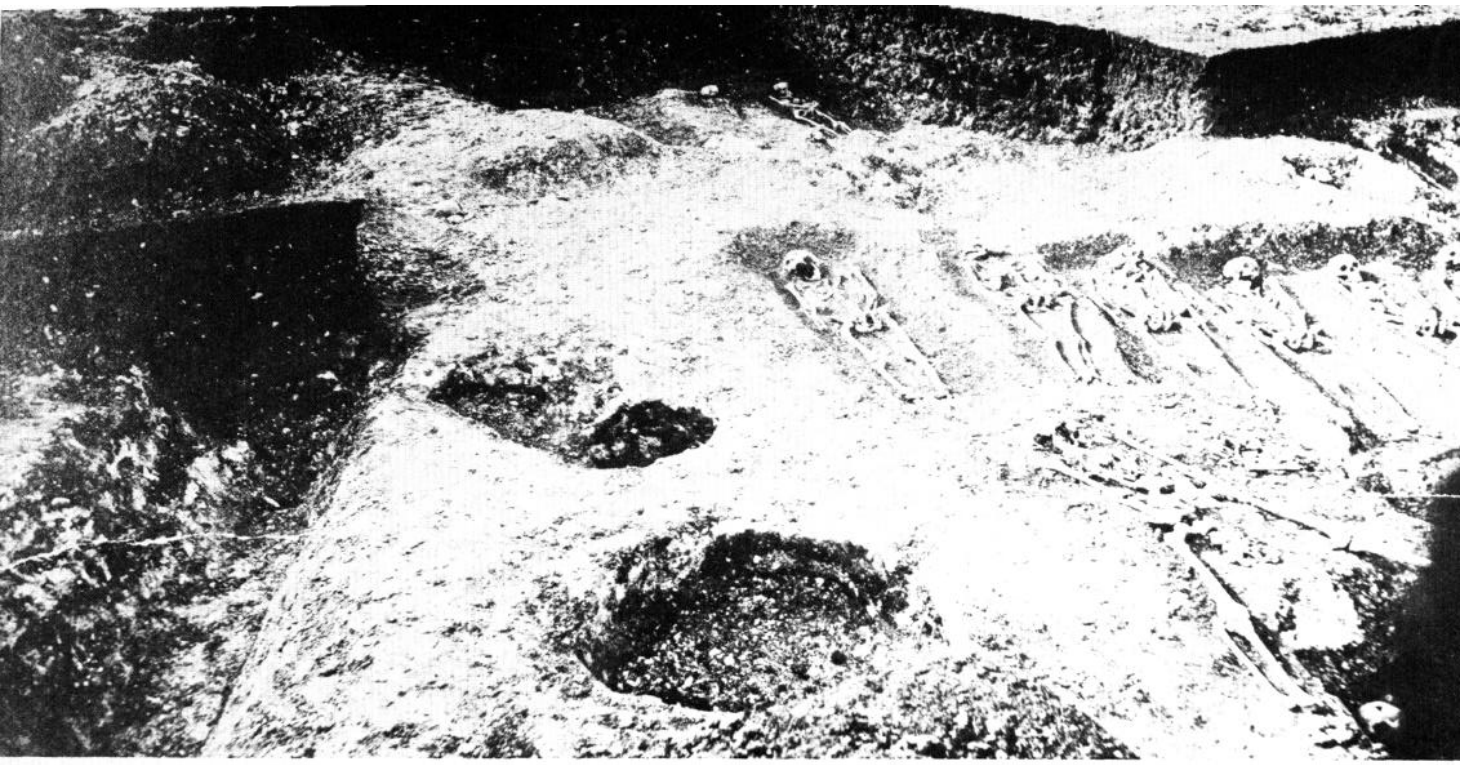


Plate 2 View of the 1876 cemetery excavations, from the east. The possible Roman military ditch is on the left, and many of the graves and other features can be identified on Fig 6. Recently found in Saffron Walden Museum, and reproduced by courtesy of the Trustees

Plate 3 View of the 1876 excavarions, from the north. The exact location is not clear (above, p 13). Recently found in Saffron Walden Museum, and reproduced by courtesy of the Trustees

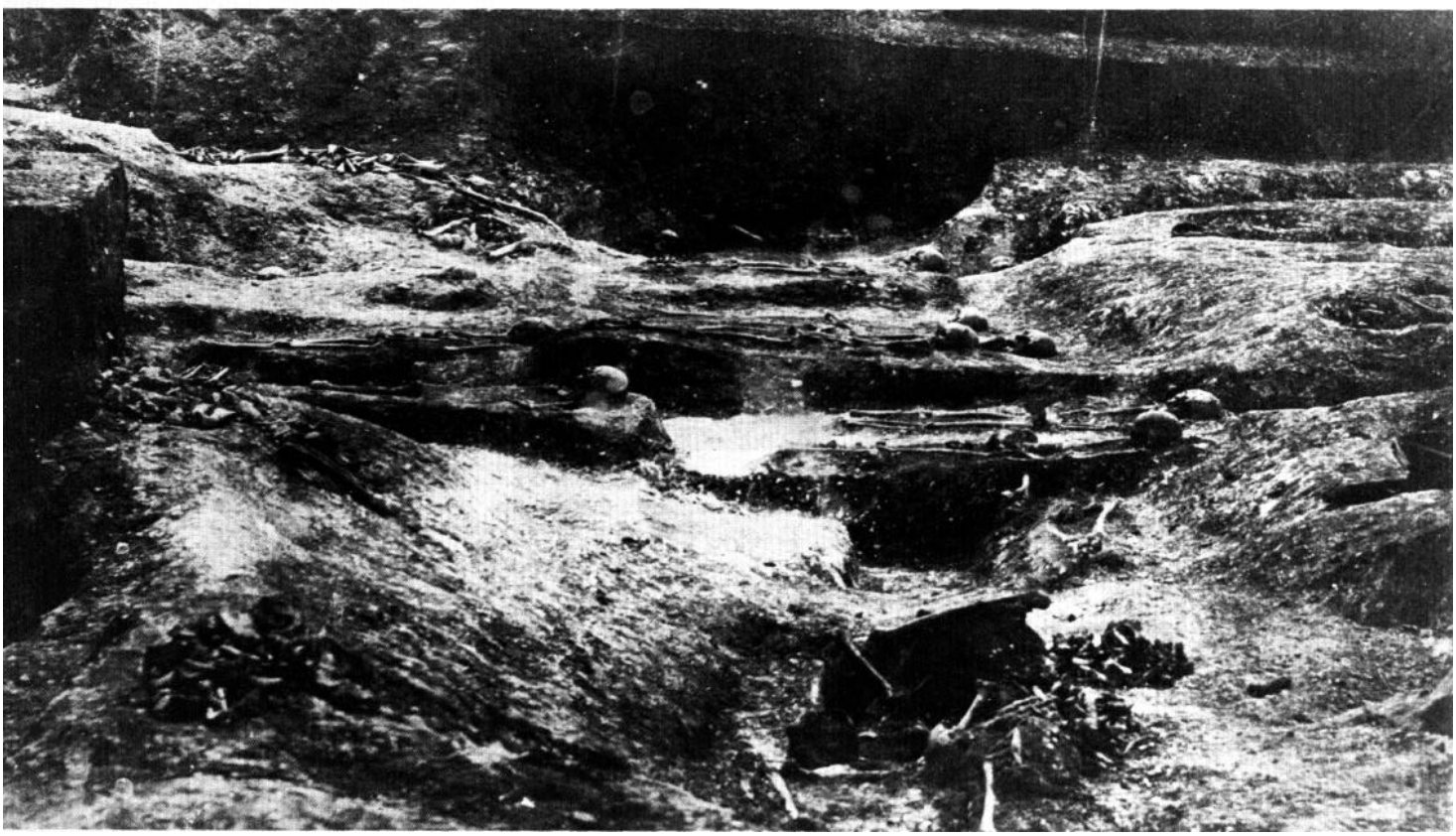


Plate 4 Audley End: vertical view showing Audley End House and its environs (north at top). Roman road D (Figs 3,4) can be seen in cropmark near the bottom right-hand corner, becoming a hollow way as it progresses northwards; it appears again just north-east of the House. Reproduced by kind permission of Meridian Airmaps Ltd

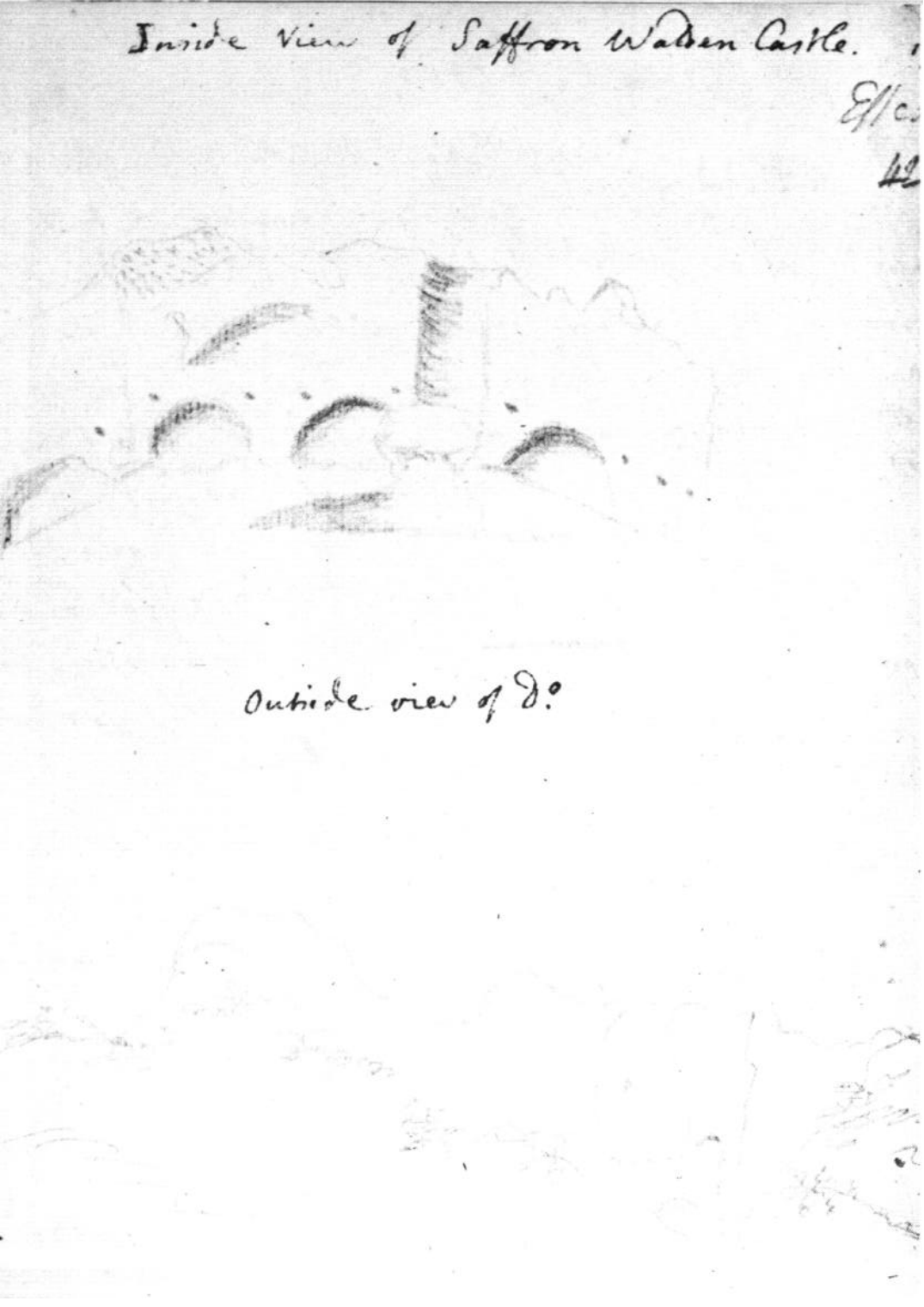
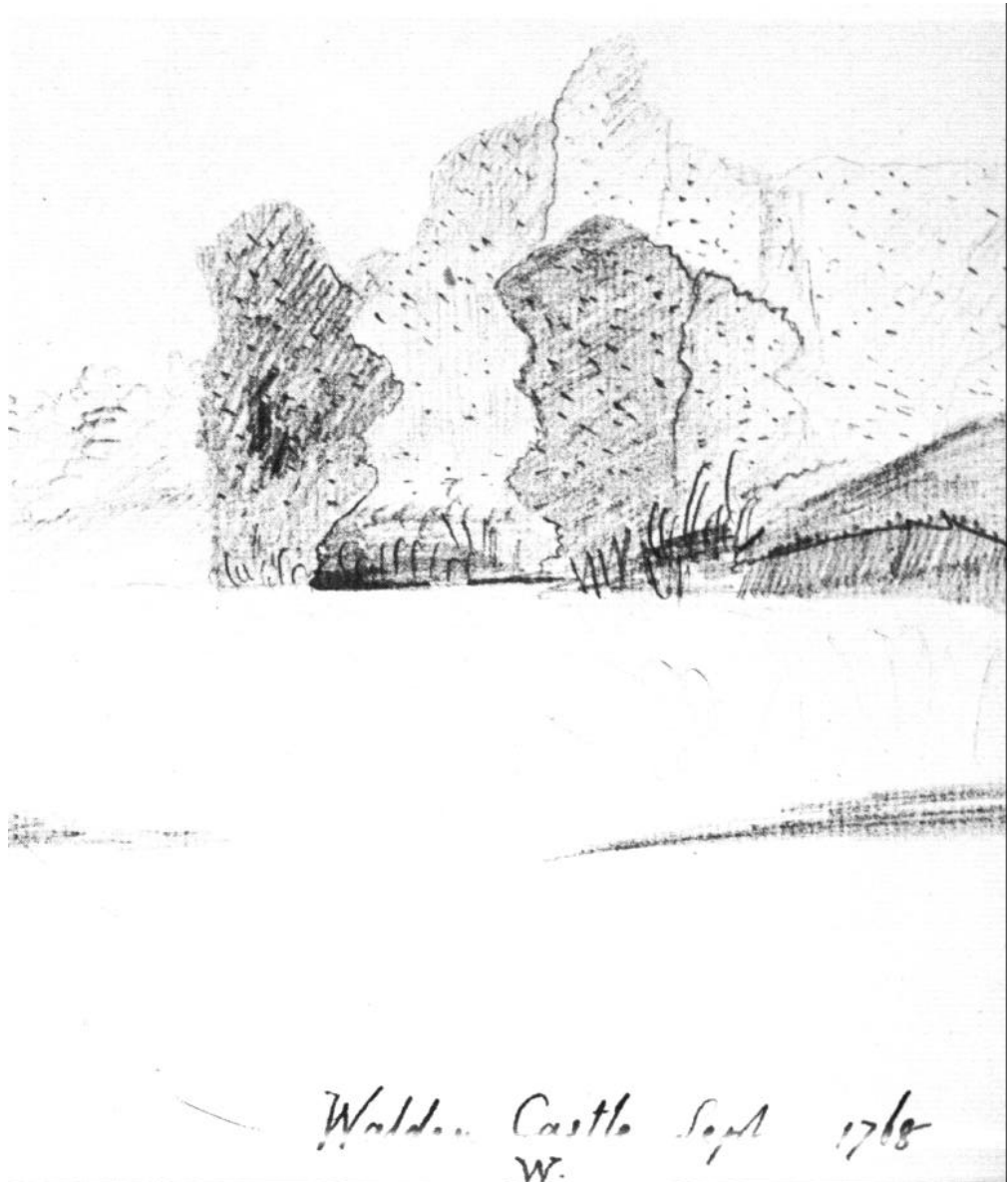
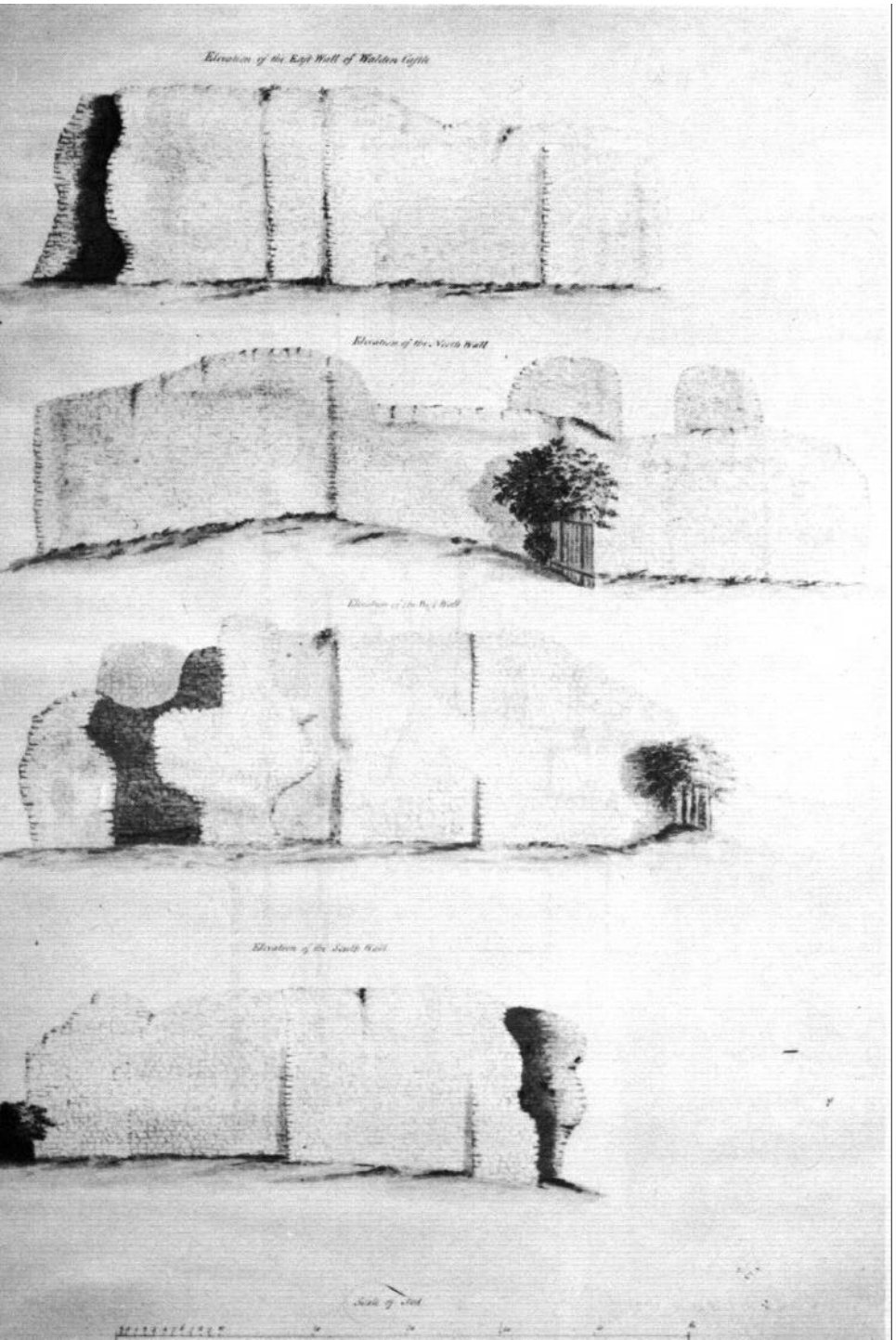


Plate 5 Richard Gough: sketches of the interior and exterior of the keep of Walden Castle, 1761 (Bodl MS Top gen e18, f120v). Reproduced by permission of the Bodleian Library, Oxford

Plate 6 Richard Gough: sketch of Walden Castle keep from the west, September 1768 (Bodl MS Top gen e18, f123v). Reproduced by permission of the Bodleian Library, Oxford





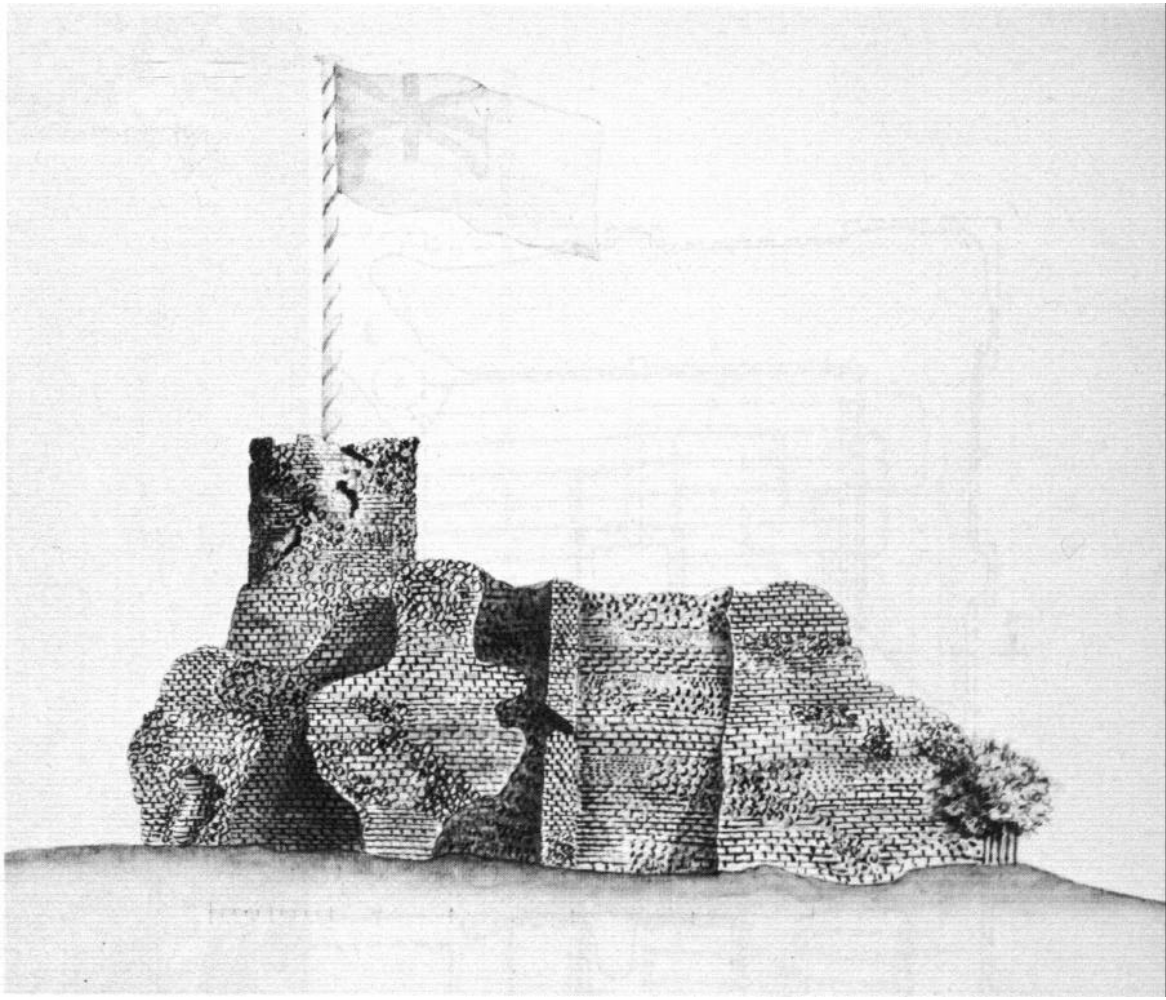


Plate 8 J Wallis, probably after Placido Columbani: record drawing of a turret and flagpole added to the keep of Walden Castle in 1796, c 17961809 (Audley End scrapbook, p 92). Crown copyright reserved

Plate 7 J Wallis, probably after Placido Columbani: elevations of the exterior of Walden Castle keep, c 17961809 (Audley End scrapbook, p 93). Crown copyright reserved

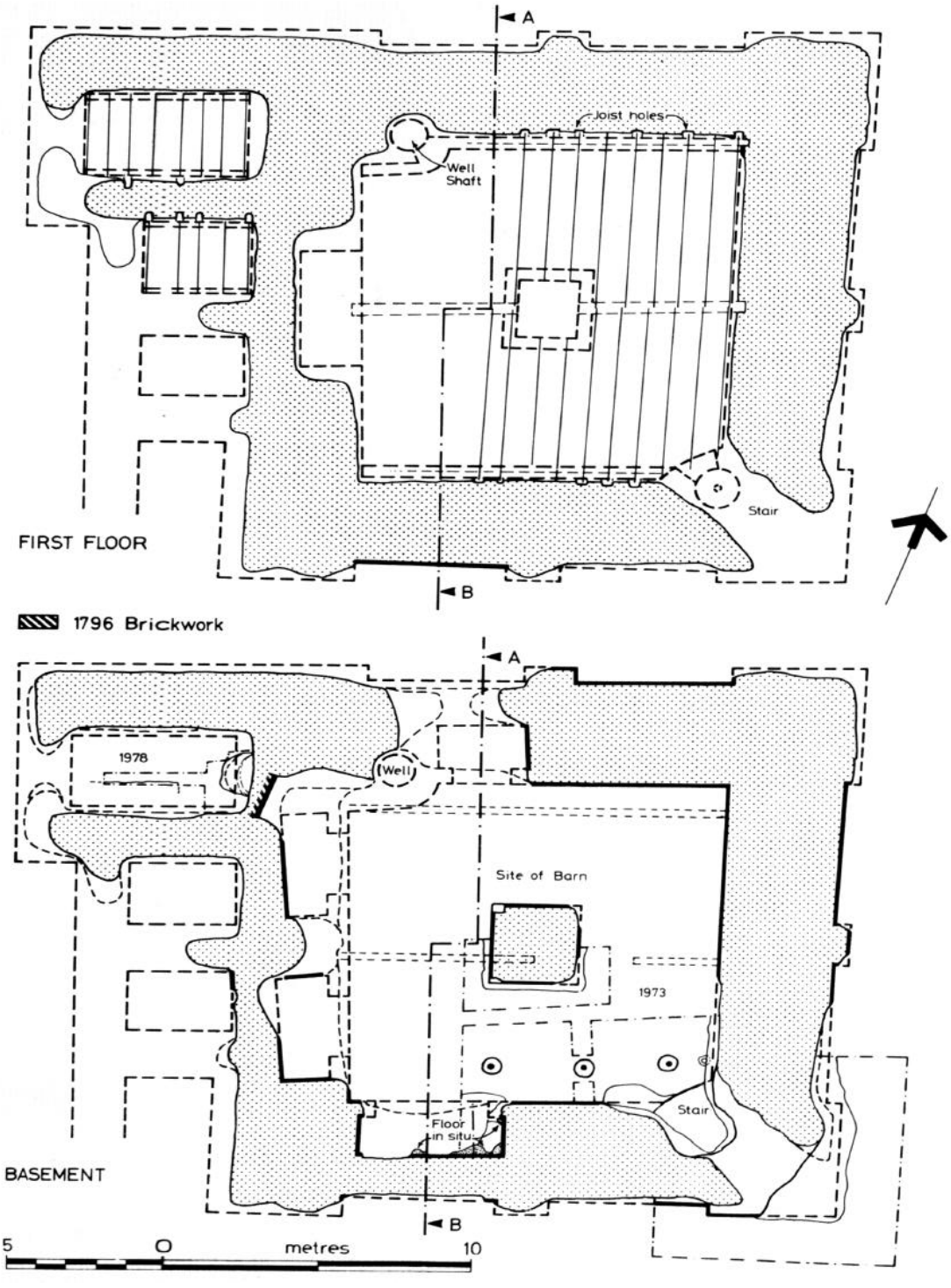


Plate 9 Walden Castle, plans as existing in 1980

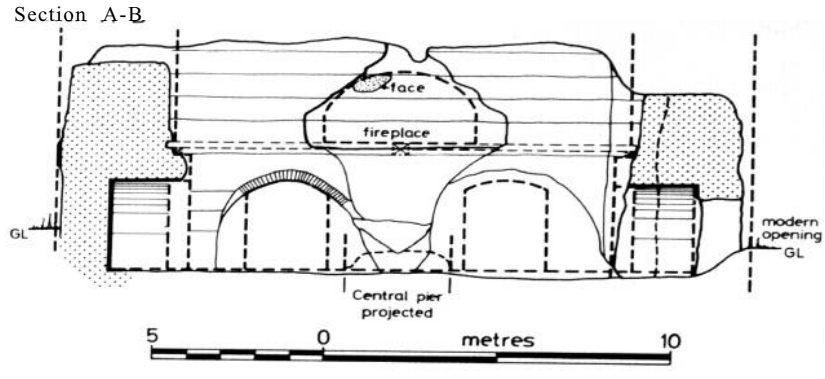


Plate 10 Walden Castle, section A-B; for line of section, see Pl 9. The turret built in I796 has been omitted

Plate 11 Castle Meadows, Saffron Walden (site A). Trench A: section A5-A6 and part of the keep's construction cut (F3), from the south (Figs 25, 27)

Plate I2 Castle Meadows, Saffron Walden (site A). Trench A: vertical view of robbed features at the south-east corner *of the keep; circular staircase (to left) and south-east clasping buttress (Fig 25)*

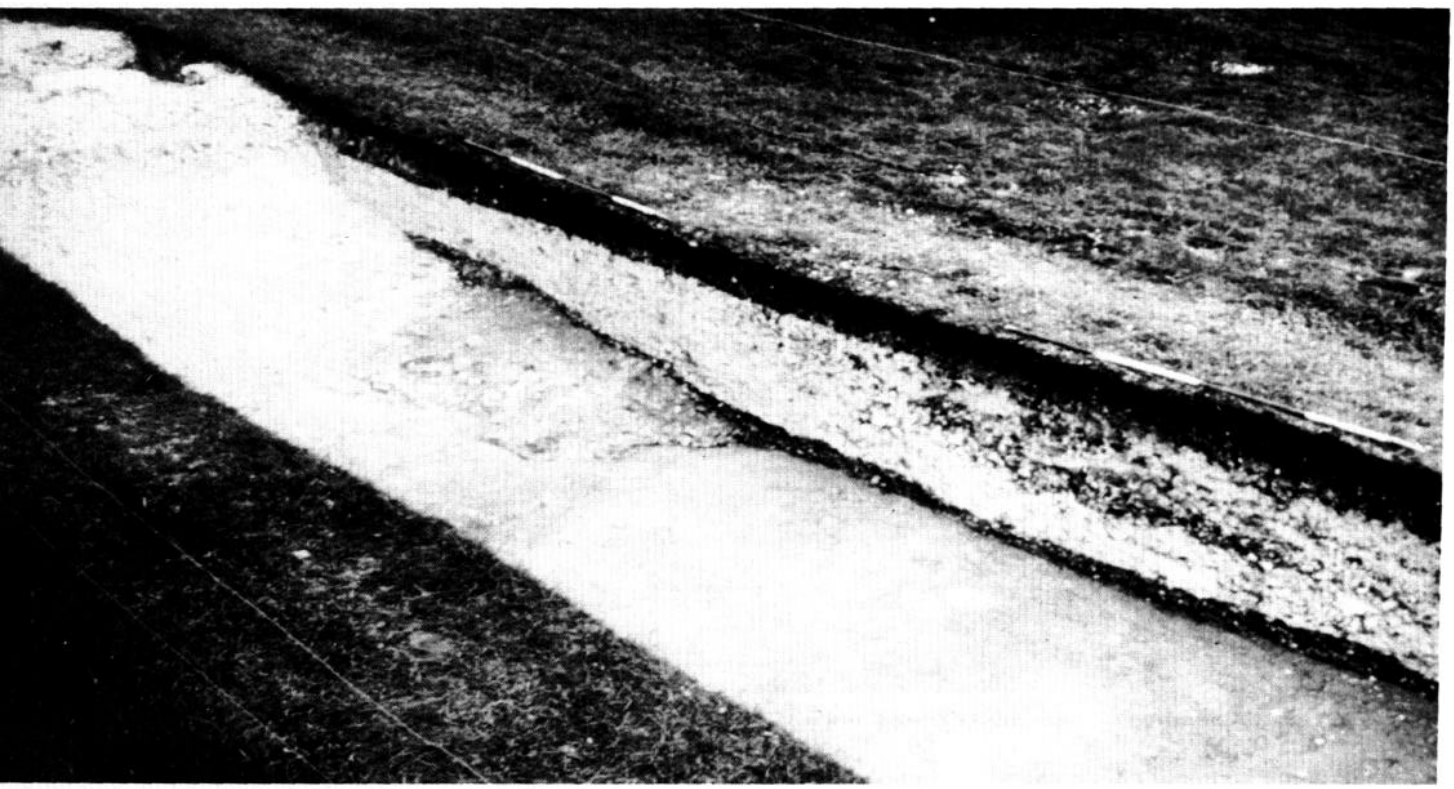


Plate 13 Castle Meadows, Saffron Walden (site A). Trench B: chalk rampart (F20),flint and mortar debris (125-6), and extensive mortar spread (I I), from the north (Figs 28, 30)

Plate 14 Castle Hill House, Saffron Walden (site C). Earlier 12th century ditch (F2), from the north (Fig 31)

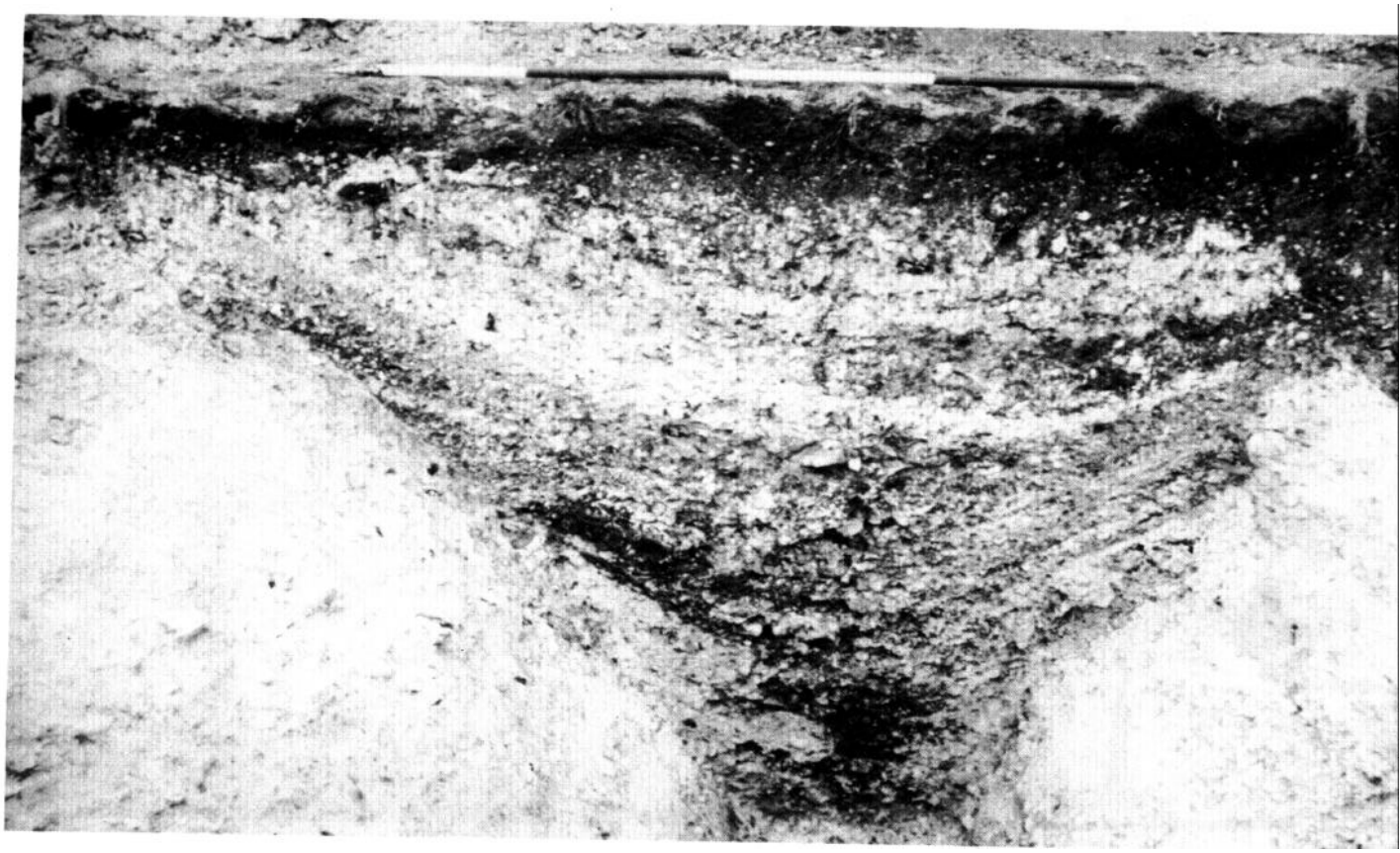


Plate 15 'Rose & Crown' Hotel (site F). Section I across earlier 13th century magnum fossatum, *from the south (Fig 36)*

Plate 16 Cinema-Maltings (site G). Section V across earlier 13th century magnum fossatum, from the west (Fig 36)

Plate 17 Cinema-Maltings (site 6). The site after excavation of Sections I-V across the earlier 13th century magnum fossatum, from the north-west (Fig 37)

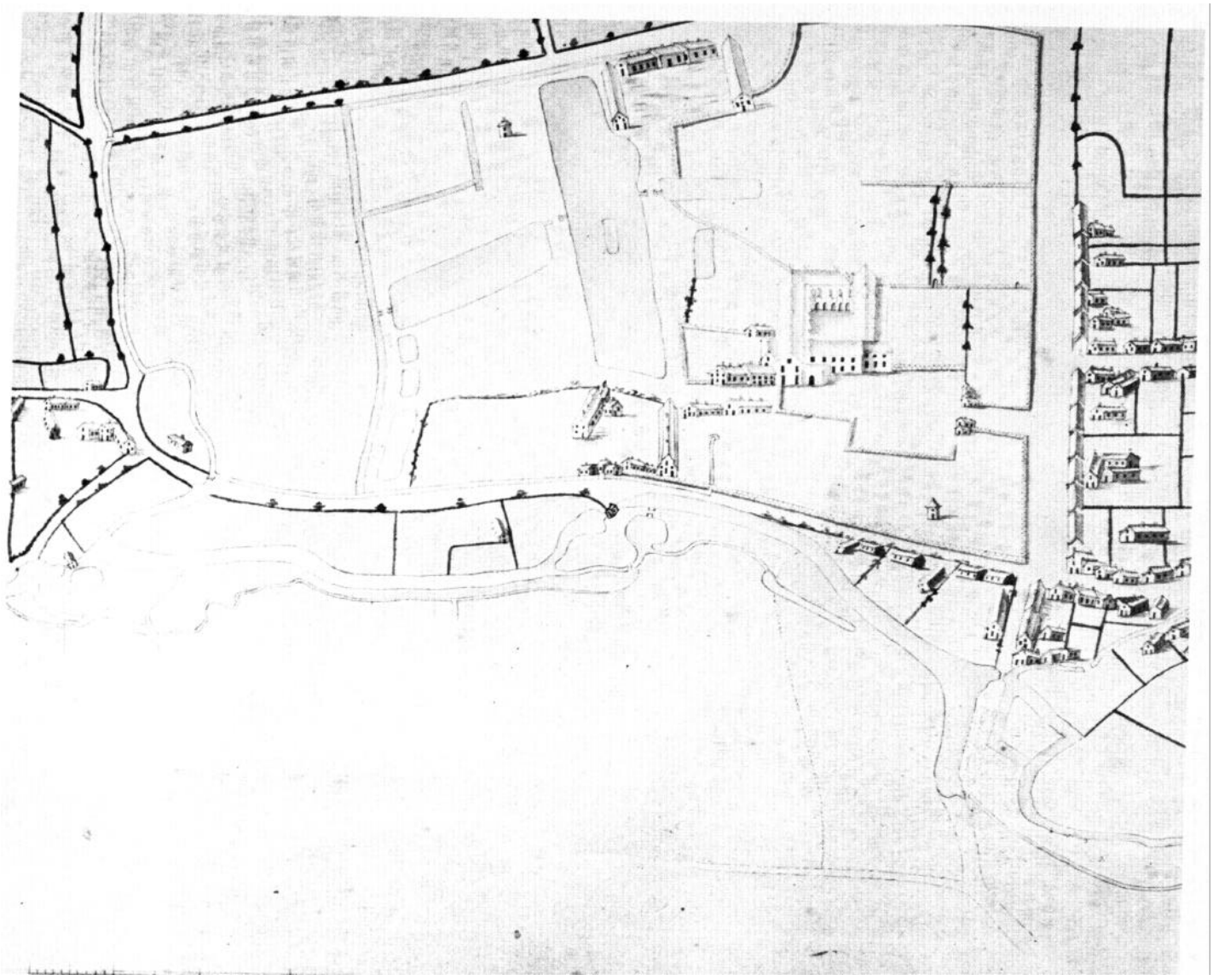


Plate 18 Plan of part of the Audley End Estate; an 18th century copy in the Audley End scrapbook of a lost pre-1603 original. Crown copyright reserved

Plate 19 Walden abbey: the north east corner of monastic cloister walk, from the south-east. Beyond, in the north wall of the cloister, the jamb and cill of the blocked doorway leading from the cloister into the church are visible. crown copyright reserved

Plate 20 Walden Abbey: wall shaft W in the north wall of the cloister. Crown copyright reserved

Plate 21 Walden Abbey: wall shaft V on the north wall of the cloister. Crown copyright reserved

Plate 22 Walden Abbey: general view of Trench I, 1950, from the north-east. Crown copyright reseved

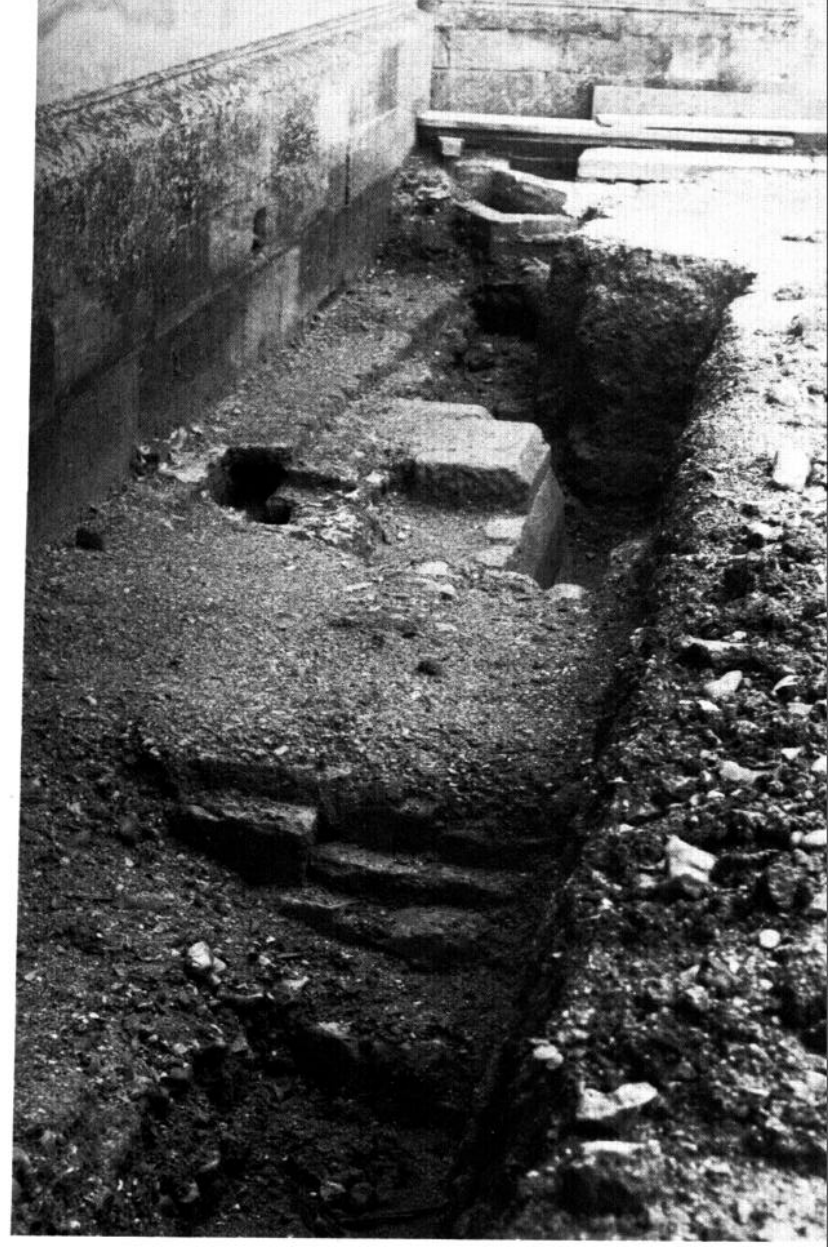


Plate 23 Walden Abbey: the west wall of the west range, N, looking northwards towards the door jamb M, with the later wall O in the foreground. Crown copyright reserved

Plate 24 Walden Abbey: base B on Fig 54, as exposed in 1955, built into walls L and K and cut off flush with the face of wall L. The vaults are the 18th century method of supporting the timber ground floor. Crown copyright reserved